

A large central pivot irrigation system is shown in a field at sunset. The system consists of a long metal arm supported by multiple wheels, with a series of smaller arms branching off it, each ending in a pivot point. The sun is low on the horizon, casting a warm orange glow over the scene. The sky is filled with soft clouds, and the field is a vibrant green.

VEICHI

Central Pivot Irrigation Equipment

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SPRINKLER APPLICATION SCENARIOS



01
Alfalfa grass irrigation ●●●



02
Leaf wheatgrass irrigation ●●●



03
Flower irrigation ●●●



04
Corn irrigation ●●●



05
Commercial turf irrigation ●●●



06
Sugar beet irrigation ●●●



07
Wheat irrigation ●●●



08
Sugarcane irrigation ●●●



09
Potato irrigation ●●●



10
Oilseed rape irrigation ●●●



11
Irrigation for undulating terrain ●●●



12
Reel sprinkler irrigation ●●●

INTERNATIONAL CUSTOMERS



June 2017
Ulaanbaatar

Airport Project, Mongolia
linear system



February 2019
Australia

Tasmania,
linear system



September 2019
Hungary

linear system



May 2018
Zambia

Center pivot sprinklers



April 2017
Ethiopia

Center pivot sprinklers



October 2019
Israel

linear system



March 2019
USA

Center pivot sprinklers



January 2020
Zimbabwe

linear system



May 2016
Russia

Center pivot sprinklers



August 2019
New Zealand

Center pivot sprinklers



CENTER PIVOT SPRINKLER

Center pivot sprinkler is also called pointer type sprinkler, circle irrigation and so on. It is a large sprinkler that rotates around the center of the water supply system by supporting the pipe with sprinklers on a support that can travel automatically. Vodar center pivot sprinkler is divided into fixed type and towable type.

Center pivot fixed

One end of the machine is fixed and other spans more clock wise by motor driven tires, this system is called fixed center pivot system. River water or bore well water is supplied from the fixed point, transfer through main pipes and sprinklers, applied to the field. The advantage of this system is to use less labor and water resources to irrigate 13ha- 130ha from one water feeding point. The special designed steel structure can satisfy different lengths of the machine. The smallest machine is designed only one span plus one overhand (80m in length) which is for small land operation. The heavy duty design can be extend to more than 11 spans (650m). The angles and bolt pivot anchors are strong enough to fight windstorm.



· Equipment running track Circular

One end of the equipment is fixed in the center of the plot, and the body with motor and tires is interconnected and rotates around a central point. Water flows from the center point through the uniformly distributed sprinkler heads on the body to irrigate the ground. It is also known as a circular sprinkler because of its circular trajectory, and is suitable for irrigating square plots.

· Equipment length

Unit span length 50m, 56m or 62m; cantilever length 6m, 12m, 18m, 24m available; optional fence gun available. Different number and length of spans and cantilever and tail gun combinations are used to achieve the required irrigation radius. The length of the equipment can reach 800 meters, and can irrigate 200 hectares of land in a single time.

· Power and water supply

Power supply: buried cable or generator set; water supply: buried pipeline or storage tank secondary water lifting.

· Cross-body

parameters Pipeline diameter 168mm、219mm; nozzle spacing 1.5m, 3m; through the height of 2.9m, 4.6m.

· Main features

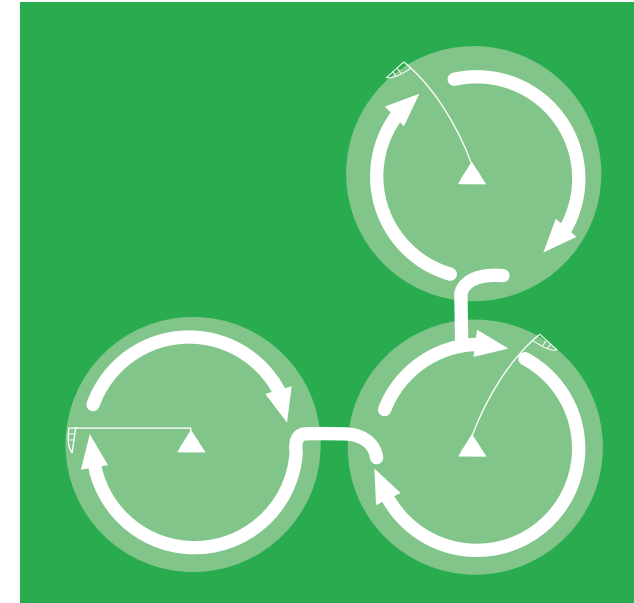
Compared with other forms of irrigation: robust,

easy to operate, simple management and maintenance, uniform irrigation, save a lot of energy and labor. Comparison with large panners: 78% plot utilization, lower equipment purchase, operation and management costs, simple supporting facilities, and short irrigation cycle time.



Center pivot towable

Three or four wheels are assembled on the center part of the pivot. The system can be moved from one place to another by pulling the cables on the pivot point with tractor. This system is called towable center pivot system. The advantage of this design is to use one machine for two or three pieces of lands. The investment is more economical.



· Equipment running track

Circular + dragging. A type of circular sprinkler. The difference from the fixed type is that the center point is equipped with tires, while the hitch tires can also be adjusted to the towable position, and the whole machine is towed to the next plot under the tractor's traction for wheel irrigation operation. Suitable for plots with low irrigation requirements.

· Equipment length

Span and cantilever parameters are the same as fixed center pivot sprinkler. Maximum equipment length: 300m.

· Power and water supply

Power supply method: buried cable or generator set; water supply method: buried pipeline or storage tank secondary water lifting. Cross-body parameters Pipeline diameter 168mm, 219 mm; nozzle spacing 1.5m, 3 m; through height 2.9 m, 4.9 m.

· Main features

1. Under the tractor's traction, the equipment can irrigate in turns between adjacent plots. Increase the area of single machine irrigation. You can irrigate more land without buying more equipment.
2. Compared with other forms of irrigation: robust, easy to manage, uniform irrigation, saving a lot of energy and labor.
3. Compared with large paddlers: 78% plot utilization rate, lower equipment purchase, operation and management costs, simple supporting facilities, and short irrigation cycle time.
4. Especially suitable for irrigating alfalfa, corn, wheat, potato, sugar beet, cereals and other cash crops.

· Product advantages

1. The main electric control box adopts American Eagle percentage meter, Schneider and Siemens and other core components.
2. The walking system adopts international advanced high performance motor and reducer.
3. The spraying system adopts American Nelson D3000 and R3000 series or Austria Komet KPT series nozzles.
4. The cable adopts three-layer 11-core copper cable with armor.

MicroPivot

To distinguish them from large centre pivot sprinklers they are also known as mini centre pivot sprinklers, or small round sprinklers, or simply mini machines. Mini-sprouters are a robust, lightweight and cost-effective alternative for irrigating small and medium-sized farms. Their low energy consumption, efficient use of energy and resources and standardised components make them inexpensive to operate and easy to assemble. The equipment runs in a circular trajectory.

Ideal For:

- 1.Vegetable growers;
- 2. Small to medium forage applications;
- Turf farms;
- Small irregular parcels along streams;
- Unused corners between conventional pivots.

Main Characteristics:

Lightweight, standardized components make it easy to assemble;

- 1.High mobility easy to reposition in multiple fields, grow multiple crops and a reduced cost per-acre investment;
- 2. Low power consumption and efficient use of water make it inexpensive to operate.

The Flexible Alternative:

- 1.4"14-Gauge galvanized pipe;
- 2.Variable span lengths up to 142' in 10' increments;
- 3.Waren truss modular type construction;
- 4.Standardized parts for easy assembly;
- 5.5'sprinkler spacing accepts all current sprinkler package;
- 6.Use 120V,240V,or 480V supply power;
- 7.1/4 HP centre drive 48 volt DC motor 0.25;

Micro Pivot Main Configuration

Ideal For:

- 8.Exclusive, totally enclosed oil bath gearbox and final drive;
- 9.High floatation 12"x 26" tire;
- 10.Three-point hitch/quick-tow pivot point;
- 11.6' crop clearnace standard.9' optional.

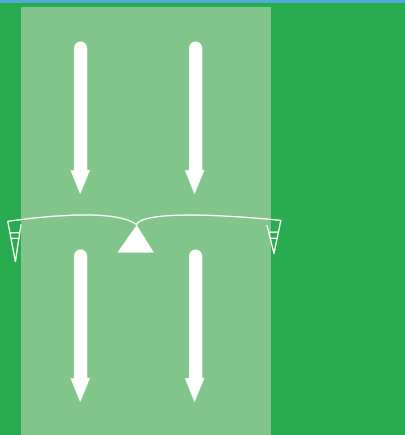




Lateral move System

All the machine works in linear movement by motor driven tires to irrigate rectangle area, this system is called lateral move system or linear system. Unlike center pivot systems, where the area irrigated is dependent only on the length of the machine, lateral system area is determined by two factors: system length and travel distance.

The lateral movement system is the only machine that can irrigate all crops. All spans are consistent with the ground and there is no wind angle. The irrigation rate can be increased to 99%.



· Equipment running trajectory

Translational. The center point and all spans move parallel to each other, and the water flows from the center point through the uniformly distributed nozzles on the body to irrigate the ground. Simply called a panner. Suitable for irrigating long plots of land.

· Equipment length

Unit span length 50m, 56m or 62m; cantilever lengths of 6m, 12m, 18m and 24m are available; optional tail gun can be installed. The maximum length of the equipment is related to the type of equipment, water supply, power supply and guidance method.

· Power and water supply

Power supply method: generator set or dragging cable; water supply method: dragging pipe water supply, canal feeding water supply.

· Main features

Comparison with other forms of irrigation; robust, easy to manage and highest irrigation uniformity. Comparison with large circular machines: 98% plot utilization rate; higher equipment purchase cost; mostly diesel generator power supply, higher operation and management cost; more complicated water and electricity supporting facilities; long irrigation cycle time.

· Product features

1. Wide coverage and flexible movement, single unit can control 200 hectares of land, high degree of automation, simple operation, very low electricity consumption, low labor costs.
2. Uniform irrigation, spraying uniformity coefficient up to 85% or more, low investment cost, service life of 20 years.
3. Suitable for irrigation of cereals, vegetables, cotton, sugar cane, pasture and other economic crops.

· Product advantages

- 1.The main electric control box adopts American Eagle percentage meter, Schneider and Siemens and other core components.
- 2.The walking system adopts international advanced high performance motor and reducer.
- 3.The spraying system adopts American Nelson D3000 and R3000 series or Austria Komet KPT series nozzles.
- 4.The cable adopts three-layer 11-core copper cable with armor.

Universal linear system

· Equipment running track

Linear + Circle This is a new function of irrigation equipment, which can run both like a circular machine and a linear machine. It is called a universal machine for short. It is suitable for irrigation of long plots.

· Equipment length

Span body and cantilever parameters are the same as for the panner, with optional tail gun. Maximum length of equipment: 380m.

The power and water supply are the same as for the lateral move system.

· Main features

Compared to other forms of irrigation: robustness, ease of management, uniform irrigation, and significant energy and labor savings. Compared with large linear translational equipment: 98% plot utilization; irrigates the same plot with half the number of spans, saving purchase costs; maximum length of equipment is less than lateral movement systems; as with lateral movement systems, higher costs for operation, management and support.

Hose Reel Irrigation System

The hose reel irrigation system uses sprinkler pressure water to drive the water turbine rotation, drive the winch rotation by variable speed device, and pull the head, the head automatically move and spray irrigation machinery, it has the advantages of easy to move, simple operation, labor-saving and time-saving, high irrigation accuracy, good water-saving effect, strong adaptability, etc. It is suitable for irrigation of 6.67 ha-20 ha strip plots.

· Product advantages

1. Lifetime maintenance-free, adjustable rotation angle from 0-360°, good atomization effect under low water pressure, designed for modern water-saving irrigation.

2. Water turbine is a new energy efficient axial flow water turbine, with its extraordinary low pressure loss, once again set a new standard for sprinklers to save drive consumption.

(1)The new structure nearly doubles the efficiency of the previous generation water turbine and greatly reduces operating losses.
(2)Strong recovery power and high recovery speed are guaranteed even at low water flow rates.
(3)Precisely integrated control system ensures uniform precipitation within the sprinkler range.



3 The cantilever truss is made of high quality structural stainless steel pipe, easy to install and disassemble. The length of the truss is 26m, the spraying width is 34m, and it is equipped with #11-#19 high quality full-round/semi-round nozzles to achieve excellent misting effect and uniformity of spraying, which is suitable for irrigating delicate crops without damaging the soil and crops.

4. Even on uneven ground, the balance mechanism of the sprinkler automatically adjusts and ensures the correct irrigation angle, thus protecting the crops.

· Product types

1. Spray gun type Super long range, perfect irrigation consistency, simulates artificial rainfall, and irrigates various high and low pole crops in a simple way.

2. Cantilever type Low pressure irrigation of delicate crops, no damage to soil and crops, control bandwidth up to 34 meters.



· Product features

1. Small and medium-sized mobile sprinkler irrigation equipment, suitable for 100-300 acres of strip plots, convenient for rural small plots of water-saving irrigation, can also be used as the center pivot sprinkler four corners of supplementary irrigation.

2. Low one-time investment, the average service life of the whole machine is more than 15 years, and the life of PE pipe is more than 10 years.

3. High degree of automation, save manual labor, precise irrigation, higher uniformity of irrigation.

4. Easy to move, simple operation, good water-saving effect, even spraying, adjustable spraying height and wheelbase.

Description of irrigation equipment components

Motor reducer

1. Using the same quality of UMC VEICHI motor, its adaptability to the environment, extreme cold and heat are not affected, low failure rate, low maintenance rate, safe and reliable;
2. with protection function, for the voltage instability and overload situation, will not appear fuse, broken wire phenomenon.
3. Using aluminum alloy shell, can effectively waterproof sealing.
4. The motor is well sealed, no oil leakage, long service life.



Wheel reducer

1. Adopt the same quality VEICHI reducer of UMC, which is suitable for different field conditions, safe and reliable.
2. Box type input and output oil seal, effectively prevent oil leakage.
3. External dustproof protection for both input and output shafts.
4. Stainless steel full circulation expansion chamber, using extreme pressure gear oil, the worm gear lubrication protection performance is remarkable.



Cross-body connection

1. Cross-body connection adopts the ball and cavity connection method, and the ball and cavity tubes are connected by rubber cylinders, which has strong terrain adaptability and greatly improves the climbing ability.
2. The ball head is directly welded to the short cross body pipe, which greatly increases the strength and can cope with the tensile force of steel in cold weather conditions and avoid collapse of equipment.



Sprinkler main pipe

1. The pipe is made of Q235B, $\Phi 168 \times 3$, with thickening treatment to make it more stable, impact resistant, low temperature resistant and tough.
2. All steel structures are hot-dip galvanized in one go after processing and welding, and the thickness of galvanized layer is $60-80\mu\text{m}$, which is much higher than the industry standard, with high corrosion resistance and service life of more than 20 years.
3. After processing, each main tube is tested by the drawing machine for its welding strength to ensure 100% qualification rate.





Connecting tower

- 1. The tower is V-shaped, which can effectively support the truss and greatly improve the stability of the equipment.
- 2. Double fixation is used at the connection of tower leg and pipe, which greatly improves the running stability of the equipment.



Main electric control box

- 1. The control system adopts American Pierce technology, which is stable and reliable with rich functions.
- 2. key electrical components use American HoneyWell and French Schneider brands to guarantee stable equipment operation performance.
- 3. With rainproof function, the keys have dustproof treatment, which greatly prolongs the service life.
- 4. Before leaving the factory, strict testing is carried out to ensure the stability of the entire control system.



Cable

- 1. Cross-body cable adopts three-layer 11-core pure copper armor cable, with strong shielding signal performance, so that multiple devices running at the same time will not interfere with each other.
- 2. The motor cable adopts three-layer 4-core aluminum armored cable.
- 3. The outer layer is made of high-density natural rubber, which is resistant to high temperature, ultraviolet rays and aging.



Safety protection

- 1.Synchronization protection function can realize the synchronization of the machine walking, deviation angle is too large, automatic stop protection.
- 2.Emergency stop function, once any problem occurs, just press the emergency stop button, the whole equipment can stop running.
- 3.Low voltage protection function, through the low voltage protector control, to achieve low voltage automatic stop.
- 4.Voltage shock automatic shutdown function, when the voltage fluctuates too much, the automatic shutdown function can be realized to protect the electrical components.

SPECIFICATION	Center Pivot 10HA	Center Pivot 20HA	Center Pivot 30HA	Center Pivot 40HA
Configuration	3*56+6	4*56+24	5*60+12	6*56+24
Main Pipe D*Thickness	168mm*3mm	168mm*3mm	168mm*3mm	168mm*3mm
Span Connection	Ball and Socket/Hose	Ball and Socket/Hose	Ball and Socket/Hose	Ball and Socket/Hose
Truss Rod	20mm	20mm	20mm	20mm
Anti-corrosion	Hot Dip Galvanization	Hot Dip Galvanization	Hot Dip Galvanization	Hot Dip Galvanization
Operating Voltage	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ
Power supply	Local power	Local power	Local power	Local power
Tire	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)
Motor	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)
Gear box	Standard 50:1	Standard 50:1	Standard 50:1	Standard 50:1
Sprinkler	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)
Regulator	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI
Span Cable	11C Armored cable	11C Armored cable	11C Armored cable	11C Armored cable
Motor Cable	4C Armored cable	4C Armored cable	4C Armored cable	4C Armored cable
Water Inlet Pressure	0.2MPa	0.2MPa	0.2MPa	0.2MPa
Inlet Flow	30	60	100	140
irrigation system clearance	2.9m (or 4.6m)	2.9m (or 4.6m)	2.9m (or 4.6m)	2.9m (or 4.6m)
Sprinkler Distance	2.96m	2.96m	2.96m	2.96m
Control Panel	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)
Electrical Components	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;
Protective Function	Option : Reverse; Automatic shutoff;	Option : Reverse; Automatic shutoff;	Option : Reverse; Automatic shutoff;	Option : Reverse; Automatic shutoff;
End Gun	Option : SR75+ControlValve + Booster Pump/TWIN101+ Control Valve+ Booster Pump	Option : SR75+ControlValve + Booster Pump/TWIN101+ Control Valve+ Booster Pump	Option : SR75+ControlValve + Booster Pump/TWIN101+ Control Valve+ Booster Pump	Option : SR75+ControlValve + Booster Pump/TWIN101+ Control Valve+ Booster Pump

SPECIFICATION	Center Pivot 50HA	Center Pivot 60HA	Center Pivot 70HA	Center Pivot 80HA
Configuration	7*56+12	4*56+4*50+12	3*50(219mm)+4*50+2*56+12	5*50(219mm)+5*50+6
Main Pipe D*Thickness	168mm*3mm	168mm*3mm	168mm*3mm 219mm*3mm	168mm*3mm 219mm*3mm
Span Connection	Ball and Socket/Hose	Ball and Socket/Hose	Ball and Socket/Hose	Ball and Socket/Hose
Truss Rod	20mm	20mm	20mm/22mm	20mm/22mm
Anti-corrosion	Hot Dip Galvanization	Hot Dip Galvanization	Hot Dip Galvanization	Hot Dip Galvanization
Operating Voltage	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ
Power supply	Local power	Local power	Local power	Local power
Tire	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)
Motor	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)
Gear box	Standard 50:1	Standard 50:1	Standard 50:1	Standard 50:1
Sprinkler	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)
Regulator	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI
Span Cable	11C Armored cable	11C Armored cable	11C Armored cable	11C Armored cable
Motor Cable	4C Armored cable	4C Armored cable	4C Armored cable	4C Armored cable
Water Inlet Pressure	0.25MPa	0.25MPa	0.25MPa	0.25MPa
Inlet Flow	170	200	230	270
irrigation system clearance	2.9m (or 4.6m)	2.9m (or 4.6m)	2.9m (or 4.6m)	2.9m (or 4.6m)
Sprinkler Distance	2.96m	2.96m	2.96m	2.96m
Control Panel	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)
Electrical Components	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;
Protective Function	Option：Reverse; Automatic shutoff;	Option：Reverse; Automatic shutoff;	Option：Reverse; Automatic shutoff;	Option：Reverse; Automatic shutoff;
End Gun	Option：SR75+ControlValve + Booster Pump/TWIN101+ Control Valve+ Booster Pump	Option：SR75+ControlValve + Booster Pump/TWIN101+ Control Valve+ Booster Pump	Option：SR75+ControlValve + Booster Pump/TWIN101+ Control Valve+ Booster Pump	Option：SR75+ControlValve + Booster Pump/TWIN101+ Control Valve+ Booster Pump

SPECIFICATION	Micro Pivot	Center Pivot	Center Pivot pro	Towable Pivot
irrigation system clearance	2m	2.9m	4.6m	2.9m
Main Pipe D*Thickness	102mm*3mm	168mm*3mm/219mm	168mm*3mm/219mm	168mm*3mm/219mm
Span Connection	Standard (option Automatic shutoff/Automatic Reverse)	Standard (option Automatic shutoff/Automatic Reverse)	Standard (option Automatic shutoff/Automatic Reverse)	Standard (option Automatic shutoff/Automatic Reverse)
Motor	48V DC 100W Motors 253:1 Gear Reduction	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)
Gear box	6:1 Bevel Gear Final Drive. Rotatable, Towable Design	Standard 50:1	Standard 50:1	Standard 50:1
Max. slope climbing capacity	10	25	25	25
span lengths	40	50/ 56/ 62m	50/ 56/ 62m	50/ 56/ 62m
span pipe lengths	3m	6m	6m	6m
Tire	26*12-12	14.9-24	14.9-24	14.9-24
overhang lengths	3 6 m	6/12/18/24m	6/12/18/24m	6/12/18/24m
Sprinkler	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)
Operating Voltage	380v 50HZ/220V 50HZ Option:Solar power	380V 50HZ	380V 50HZ	380V 50HZ
Regulator	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI
Span Cable	11C Armored cable	11C Armored cable	11C Armored cable	11C Armored cable
Motor Cable	4C Armored cable	4C Armored cable	4C Armored cable	4C Armored cable
Sprinkler Distance	2.96m	2.96m	2.96m	2.96m
Electrical Components	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;
Protective Function	Option：Reverse; Automatic shutoff;	Option：Reverse; Automatic shutoff;	Option：Reverse; Automatic shutoff;	Option：Reverse; Automatic shutoff;
Remote Control System	Option	Option	Option	Option
Intelligent Irrigation	Option	Option	Option	Option
End Gun	Option：SR75+Control Valve + Booster Pump/TWIN101+ Control Valve + Booster Pump	Option：SR75+Control Valve + Booster Pump/TWIN101+ Control Valve + Booster Pump	Option：SR75+Control Valve + Booster Pump/TWIN101+ Control Valve + Booster Pump	Option：SR75+Control Valve + Booster Pump/TWIN101+ Control Valve + Booster Pump

SPECIFICATION	Lateral Irrigation System	Lateral Irrigation System PRO	pivot linear
irrigation system clearance	2.9m	4.6m	2.9m
Main Pipe D*Thickness	168mm*3mm/219mm	168mm*3mm/219mm	168mm*3mm/219mm
Motor	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)
Gear box	Standard 50:1	Standard 50:1	Standard 50:1
Max. slope climbing capacity	25	25	25
span lengths	50/ 56/ 62m	50/ 56/ 62m	50/ 56/ 62m
span pipe lengths	6m	6m	6m
Tire	14.9-24	14.9-24	14.9-24
overhang lengths	6/12/18/24m	6/12/18/24m	6/12/18/24m
Sprinkler	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)
Regulator	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI
Span Cable	11C Armored cable	11C Armored cable	11C Armored cable
Motor Cable	4C Armored cable	4C Armored cable	4C Armored cable
Sprinkler Distance	2.96m	2.96m	2.96m
Control Panel	Standard (option Automatic shutoff/Automatic Reverse)	Standard (option Automatic shutoff/Automatic Reverse)	Standard (option Automatic shutoff/Automatic Reverse)
Electrical Components	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;
Protective Function	Option: Reverse; Automatic shutoff;	Option: Reverse; Automatic shutoff;	Option: Reverse; Automatic shutoff;
Remote Control System	Option	Option	Option
Intelligent Irrigation	Option	Option	Option
End Gun	Option: SR75+Control Valve + Booster Pump/TWIN101+ Control Valve + Booster Pump	Option: SR75+Control Valve + Booster Pump/TWIN101+ Control Valve + Booster Pump	Option: SR75+Control Valve + Booster Pump/TWIN101+ Control Valve + Booster Pump

SPECIFICATION	100m	150m	200m	250m
Configuration	2*50+D5:D14D5D5:D17	3*50	4*50	5*50
Main Pipe D*Thickness	168mm*3mm	168mm*3mm	168mm*3mm	168mm*3mm
Span Connection	Ball and Socket/Hose	Ball and Socket/Hose	Ball and Socket/Hose	Ball and Socket/Hose
Truss Rod	20mm	20mm	20mm	20mm
Anti-corrosion	Hot Dip Galvanization	Hot Dip Galvanization	Hot Dip Galvanization	Hot Dip Galvanization
Operating Voltage	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ
Power supply	Local Power; Diesel Generators;	Local Power; Diesel Generators;	Local Power; Diesel Generators;	Local Power; Diesel Generators;
Tire	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)
Motor	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)
Gear box	Standard 50:1	Standard 50:1	Standard 50:1	Standard 50:1
Sprinkler	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)
Regulator	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI
Span Cable	11C Armored cable	11C Armored cable	11C Armored cable	11C Armored cable
Motor Cable	4C Armored cable	4C Armored cable	4C Armored cable	4C Armored cable
Water Inlet Pressure	0.2MPa	0.2MPa	0.2MPa	0.2MPa
Inlet Flow	40	60	90	110
irrigation system clearance	2.9m (or 4.6m)	2.9m (or 4.6m)	2.9m (or 4.6m)	2.9m (or 4.6m)
Sprinkler Distance	2.96m	2.96m	2.96m	2.96m
Control Panel	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)
Electrical Components	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;
Protective Function	Option: Reverse; Automatic shutoff;	Option: Reverse; Automatic shutoff;	Option: Reverse; Automatic shutoff;	Option: Reverse; Automatic shutoff;

SPECIFICATION	300m	350m	400m	450m
Configuration	6*50	7*50	8*50	3*50(219mm)+6*50
Main Pipe D*Thickness	168mm*3mm	168mm*3mm	168mm*3mm 219mm*3mm	168mm*3mm 219mm*3mm
Span Connection	Ball and Socket/Hose	Ball and Socket/Hose	Ball and Socket/Hose	Ball and Socket/Hose
Truss Rod	20mm	20mm	20mm	20mm
Anti-corrosion	Hot Dip Galvanization	Hot Dip Galvanization	Hot Dip Galvanization	Hot Dip Galvanization
Operating Voltage	380V 50HZ	380V 50HZ	380V 50HZ	380V 50HZ
Power supply	Local Power; Diesel Generators;	Local Power; Diesel Generators;	Local Power; Diesel Generators;	Local Power; Diesel Generators;
Tire	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)	14.9-24(or 16.9-24)
Motor	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)	Standard 40:1(or 20:1)
Gear box	Standard 50:1	Standard 50:1	Standard 50:1	Standard 50:1
Sprinkler	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)	Nelson D3000 (or Nelson R3000)
Regulator	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI	Nelson 15PSI
Span Cable	11C Armored cable	11C Armored cable	11C Armored cable	11C Armored cable
Motor Cable	4C Armored cable	4C Armored cable	4C Armored cable	4C Armored cable
Water Inlet Pressure	0.25MPa	0.25MPa	0.25MPa	0.25MPa
Inlet Flow	130	150	170	200
irrigation system clearance	2.9m (or 4.6m)	2.9m (or 4.6m)	2.9m (or 4.6m)	2.9m (or 4.6m)
Sprinkler Distance	2.96m	2.96m	2.96m	2.96m
Control Panel	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)	Standard (or Automatic shutoff/Automatic Reverse)
Electrical Components	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;	Schneider;Honeywell; Eagle Signal;Mitsubishi;
Protective Function	Option：Reverse; Automatic shutoff;	Option：Reverse; Automatic shutoff;	Option：Reverse; Automatic shutoff;	Option：Reverse; Automatic shutoff;

SPECIFICATION	JP75-300 End Gun	JP75-400 End Gun	JP90-300 End Gun
PE Pipe D*Length	75mm*300m	75mm*400m	90mm*300m
Irrigation Length	345m	435m	345m
Inlet Flow	13-38m ³ /h	13-38m ³ /h	17.2-64.8 m ³ /h
Work Pressure	0.35-1.0MPa	0.35-1.1MPa	0.5-1.0MPa
Nozzle D.	14-24mm	14-24mm	16 -30mm
Weight with Water	2540kg	3130kg	3160kg
Weight wo Water	1600kg	1880kg	1890kg
Length max.	5300mm	5350mm	5350mm
Width max.	2050mm	2050mm	2050mm
Height max.	2660mm	3060mm	3060mm
Length wo Cart	3650mm	3700mm	3700mm
Wheels Distance of Chassis	1500-1800mm	1500-1800mm	1500-1800mm
Tire Spec.	7.0-12	7.0-12	7.0-12
Tire Pressure	0.35MPa	0.35MPa	0.35MPa
Height to Ground	280mm	290mm	290mm
Standard Height of Traction Ring to Ground	500mm	500mm	500mm
Min.Height of Traction Ring to Ground	235mm	235mm	235mm
Cart Wheels Distance	1500-2800mm	1500-2800mm	1500-2800mm
Cart Tire Spec.	4.5-12	4.5-12	4.5-12
Cart Tire Pressure	0.13MPa	0.13MPa	0.13MPa
Nozzle Model	19#	19#	19#
Nozzle No.	13	13	13

1

Water source selection

Selection of different water sources and consideration of irrigation water quantity



Surface Water



Groundwater

Major crop root depth

Crop	Major root depth(mm)	Crop	Major root depth(mm)	Crop	Major root depth(mm)	Crop	Major root depth(mm)
Alfafa	914-1829	Peas	610	Cucumbers	457-610	Onions	457
Beans	610	Potatose	610	Grain	610-762	Orchard	914-1524
Beets	610-914	Soybeans	610	Sorghum	762	Grasses	457
Cabbage	457-610	Strawberries	304-457	Grapes	914-1829	(WithClover)	610
Carrots	457-610	Sweet	914	Lattuce	305		
Corn	762	Tobacco	610	Melons	762-914		
Cotton	1219	Tomatoes	304-610	Peanuts	457		

Crop and climate conditions

Crop	Cool Climate		Moderate Climate		Hot Climate		Desert Climate	
	Inches/Day mm/day	GPM/Acre m³/hr/ha	Inches/Day mm/day	GPM/Acre m³/hr/ha	Inches/Day mm/day	GPM/Acre m³/hr/ha	Inches/Day mm/day	GPM/Acre m³/hr/ha
Aifafa	0.24 6.10	4.5 2.52	0.27 6.86	5.1 2.86	0.34 8.64	6.4 3.58	0.45 11.43	8.5 4.76
Corn	0.23 5.84	4.3 2.14	0.26 6.60	4.9 2.74	0.32 8.13	6.0 3.36	0.45 11.43	8.5 4.76
Cotton	0.20 5.08	3.8 2.12	0.22 5.59	4.2 2.35	0.27 6.86	5.1 2.86	0.38 9.56	7.2 4.03
Grass	0.24 6.10	4.5 2.52	0.27 6.68	5.1 2.86	0.34 8.64	6.4 3.58	0.47 11.94	8.9 4.98
Wheat	0.20 5.08	3.8 2.12	0.23 5.84	4.3 2.41	0.29 7.37	5.5 3.64	0.36 9.14	6.8 3.81
Potatoes	0.20 5.08	3.8 2.12	0.25 6.35	4.7 2.63	0.34 8.64	6.4 3.58	0.47 11.94	8.9 4.98
Sugar Beets	0.20 5.08	3.8 2.12	0.23 5.84	4.3 2.41	0.30 7.62	5.7 3.19	0.43 10.92	8.1 4.54
Sorghun	0.21 5.33	4.0 2.24	0.26 6.60	4.9 2.74	0.32 8.13	6.0 3.36	0.45 11.43	8.5 4.76
Soybeans	0.22 5.58	4.2 2.35	0.23 5.84	4.3 2.41	0.30 7.62	5.7 3.19	0.45 11.43	8.5 476

Typical peak water use periods

Crop	Peak water use period(days)	Crop	Peak water use period(days)
Aifafa	100-165(Depending on location)	Potatoes	45
Corn	45	Barley	30
Cotton	35-55 (Depending on location)	Sugar bee	65
Grass	155-200(Depending on location)	Sorghum	45
Wheat	30	Soybeans	50

2

Tire selection

The choice of tire depends on the height and soil texture of your crop.



Tire Size(in)	Tread width	Diameter	Contact area
11.2×24	264mm 284mm 368mm 429mm	1,092mm	156,128mm²
11.2×38		1,448mm	206,451mm²
14.9×24		1,265mm	223,225mm²
16.9×24		1,346mm	343,870mm²

Tire Size (in)	Characteristics
11.2×24	Suitable for short-time use on sandy land, with cost-effective features for situations where buoyancy and clear height above ground are not important
11.2×38	Provides good height and float with narrow wheelbase
14.9×24	For heavier and longer spans
16.9×24	For extra heavy loads and longer spans, with better passability and higher buoyancy

3

Nozzle selection



Instantaneous irrigation intensity is an important factor to consider when designing sprinkler heads and is related to the permeability of the soil. General nozzle design to achieve both the crop's water requirements and less than the maximum infiltration of soil water to avoid waste of water and fertilizer runoff. The instantaneous irrigation intensity of the smaller sprinkler for the soil and crop applicability is stronger.

Spraying unit specifications selection

Nozzies	Working pressure range(m)	Spraying type	Spraying radius	Wind resistance	Evaporation loss amount	Land suitability	Instaneous irrigation intensity	Spraying uniformity
R3000	11-21	Slow rotation of multiple water columns	20-24	Strong	Very small	Adaptable to almost all soil types	Low-Medium Low	High
D3000	11-21	Non-rotating nozzle, water column sprayed evenly along the center of gravity	5-12	General	Smaller	Suitable for sandy and loamy soils	Medium	Medium
O3000	11-21	Spraying axis rotation, multi-water column slow rotation	10-16	General	Smaller	Growing a wide range of crops,mainly for plots with poor water quality	Low-Medium Low	Medium-High
I-Wob	11-21	Maximum imitation of natural rainfall	10-17	Strong	Very small	Adaptable to almost all soil types	Low-Medium Low	High

4

Optional Accessories - Guns

· Effective end gun solutions for extra acreage.

Equipped with booster pump and special spray gun for irrigation equipment, it can reduce the dry corner and increase the irrigation area. The range of the spray gun can reach 20-30 meters, and the gun has the function of automatically switching on and off after the sprinkler reaches the four corners, which effectively solves the problem that the four corners of the round sprinkler are difficult to irrigate.

For example, the Nelson A Big Gun® sprinkler (operating through a complete rotation) on a quarter-section pivot can effectively irrigate up to 20 additional acres (8.1ha). Considering the cost-effectiveness of putting this additional land into production, an end gun alternative shouldn't be overlooked.

· Performance comparison of different guns

Vertical swing arm drive mode, the gun rotates slowly during work, stable without violent recoil, minimizing the vibration of the gun connection, the unique flow channel and elevation angle design to make the gun range and spray uniformity to the best, the gun all key moving parts are sealed bearing design, so that the gun does not require regular lubrication, the gun has a longer service life and easier maintenance. All key moving parts of the gun are sealed bearing design, so that the gun does not require regular lubrication, the gun's service life is longer and easier to maintain.

Medium flow rate gun, rotating in a full circle or partial garden way, the gun has several different universal nozzles that can be adjusted to crush the water, which can make the spraying distribution even, the main characteristics are simple structure, universal, and suitable for various field irrigation.

The long spraying distance, the arbitrary adjustment of the gun rotation angle from 0 to 360°, the completely automatic and smooth rotation of the spraying process without manual intervention; the maintenance-free lifetime of the gun due to the frictionless (patented) design of the rotating part of the comet gun, which greatly extends its service life; and the outstanding spraying atomization effect of the comet gun even under low water pressure conditions, which significantly reduces energy costs. The comet gun achieves its excellent spray atomization effect even under low water pressure, thus significantly reducing energy costs.

Nelson Tail Gun

Sime Tail Gun

Komet Tail Gun

Optional Accessories - Water and fertilizer integration system



- 1.The control cabinet is equipped with 7-inch LCD touch screen, with built-in common water soluble fertilizer parameters, simple operation, water and fertilizer application, labor-saving and efficient, and better crop growth.
- 2.Special fertilizer bucket of 2000L, equipped with 0.75KW mixing motor.
- 3.Long life high efficiency fertilizer injection pump 300L/h, 0.37KW
- 4.Base frame + connection accessories

Value Added Services

Power supply options

Precise control

VEICHI precision control is an intelligent system that sets intelligent irrigation parameters for the target area based on the target crop, target soil, and target location weather conditions, and controls a series of electromechanical devices to implement irrigation, and evaluates the irrigation effect based on sensor feedback to achieve scientific planting.

1 Distributed wireless moisture sensor

The system selects intelligent sensors to collect soil water content.



2 Rootstock depth detection sensor

Using the principle of high frequency oscillation, the water content of different soil layers and the depth of plant rhizomes are deduced as a whole.



3 Weather Stations

As the forefront of the entire system, it collects the environmental information of the current farmland from time to time, with meteorological data collection (including important parameters such as soil temperature, soil humidity, CO2 concentration, light intensity, etc.), real-time clock, timing storage, parameter settings, parameters and meteorological history Data query, etc.



Remote Control System

The remote console software system makes it easier to control and monitor remote irrigation equipment than in the past when monitoring and control had to be done in the field, saving a lot of human resources and time spent on field monitoring.

Map display area: This area is used to display the irrigation geography and sprinkler range of sprinklers, which has the function of Baidu map, and can zoom in and out and move in any direction, and can add multiple sprinklers.

Data monitoring area: This area mainly displays the current status of the corresponding equipment, and the data collected by the sensor is displayed on the interface in real time, so that users can understand the site information efficiently.

Equipment control area: This area can control the forward and reverse state, start and stop state, tail gun state, pump state, fertilizer pump state and speed state of the sprinkler, and is equipped with a timing function, which can pre-set the start and stop time of the sprinkler according to the demand.

Computer interface



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Mobile APP interface

Service Flow



Topographic survey

1



Design Solutions

2



Out quotation

3



Signing a contract

4



Spare production

5



Pack and ship

6



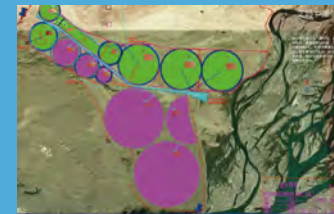
Installation Training

7



After Sales Service

8



Topographic survey



Spare production



Pack and ship



Installation Training