

IRRIFRANCE



IRRIFRANCE GROUPE

Pivots & Lateral moves



L'irrigation made in France

The 10 reasons to choose IRRIFRANCE



1

Irrifrance has more than **60 years of experience** in the services of farmers, know-how recognized worldwide in the market.

2

The **only French manufacturer** who produces **since Paulhan site (Hérault)** in its workshops: laser cutting, folding, welding, painting, mounting, rolling ...

3

A **complete catalog** which includes the product range: **reel machines, pivots and lateral moves, solid set systems, pipes and accessories as well as the localized irrigation with DRIPLI ©system.**

4

Polyethylene pipes, produced on the Paulhan site with 100% virgin resin. With its **own extrusion workshop**, Irrifrance has developed **the Polychem©**, a unique lagging technique that allows **15 year tube warranty.**

5

The **galvanization** of Irrifrance products, to European standards: **hot dip galvanizing in a bath of molten zinc at 450 ° - standard in ISO 1461.**

6

Compliance with all **AFNOR safety standards** and European regulations.

7

Products recognized for their **ergonomics**, their **robustness** and their **longevity**. The **VXP structure** available on the pivots and lateral moves offers **thicknesses greater** than the **market standards**: angles, uprights ...

8

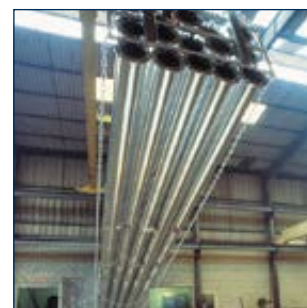
Innovative products for precision irrigation thanks to a high performance of electronic panels, easy to use and the best functionalities on the market.

9

A **project design department** which assesses all parameters to advise you on the optimal solution depending on the culture, type of soil; daily rainfall required, flow m³/h available, topography and area of plots.

10

An **after-sales service** which provides support to the dealers and distributors: guarantees, maintenance, spare parts and training.



Irrifrance Mission



Dedicated in the design, manufacture and sale of equipment for agricultural irrigation since 1967, IRRIFRANCE is a historic French manufacturer established in Paulhan (Hérault) with a factory park spread over 14 hectares.

In a context where water resources are decreasing considerably and where the population is increasing, research for water savings, performance and regularity in yields, is essential.

The company designs products to improve the ability of producers to meet food needs, while preserving water resources and optimizing energy consumption.

Thanks to its team of engineers, IRRIFRANCE is developing its capacity for innovation in its Research and Development department. This is where all of the brand's products are designed. In order to guarantee the high quality of its machines, IRRIFRANCE produces each of them directly in its factory in France, and ensures optimal customer service to the authorized dealer network with personalized assistance, a support team and a dedicated department for technical training.

IRRIFRANCE: made in France.

The company chooses to use French raw materials and employ a local workforce to guarantee the know-how, quality and sustainability of its products, and thus build a bond of trust with its entire network of authorized distributors and end-user customers.

IRRIFRANCE is also the only manufacturer on the market to manage spare parts on all of its products. The stock, production and selection of spare parts are managed directly on the Paulhan industrial site. A dedicated team provides support to all authorized distributors.

Irrifrance, a complete catalog of irrigation equipment for agriculture
In addition to its range of Pivots and front ramps products,

Reel Machines:

The solution is the most versatile irrigation equipment, especially because of its ease of use. This mobile and autonomous machine ensures the watering of plots of all sizes and shapes, a solution particularly suited to crops requiring rotations. The IRRIFRANCE reel machine is a benchmark in the agricultural irrigation market. The longevity of the products and their resale value on the second-hand market bear witness to this. IRRIFRANCE offers 6 ranges of hose reels, all equipped with the best water management automation on the market, with constant innovations.



Accessories, Pipes and Solid Set

Irrifrance offers a large catalog of accessories and pipes and also solid set equipment.

Movable pipes intended for movable installations, perfectly watertight, the possibility of bringing water in great length at a high pressure, Pipes intended for supplying the reel machines.

Solid set system particularly suitable for full-field market gardening or in addition to perimeters irrigated by pivots. This Irrifrance know-how takes benefits from the manufacture of homemade PE.

Localized irrigation: the DRIPLI® system

The DRIPLI® localized irrigation system was created by IRRIFRANCE almost 40 years ago. Water and energy efficient, it brings water around the roots with a flow rate of only 0.5 to 1.5 bars. Used worldwide, DRIPLI® technology is easy to use and provides precision and reliability. It is particularly suitable for perennial crops grown online, and in particular all fruit crops, such as citrus fruits, bananas, dates, apricots, peaches, etc.



THE PIVOT

Central Unit



- Height of the central unit : 3,90 m.
- Tie truss angle : 40 x 40 x 4 (ø 114) 50 x 50 x 5 (ø 127, ø 141 ,ø 168, ø 193, ø 245)
- Available inlet for fertilization on the low elbow (tapped in 3/4").
- Waterproof (tight) polyester main control panel reinforced fiberglass.
- Double door to prevent condensation, complies with european norms.
- Structure legs in 70 x 70 x 7 (ø 114), 80 x 80 x 8 (ø 127, ø 141) and 100 x 100 x 10 (ø 168, ø 193, ø 245).

Pivot Diameter	Feeding Pipe Diameter	Maximum Output*
ø 114	UC ø 4"	108 m3/h
ø 127	UC ø 5"	145 m3/h
ø 141	UC ø 6"	175 m3/h
ø 168	UC ø 8"	255 m3/h
ø 193	UC ø 8"	345 m3/h
ø 245	UC ø 10"	555 m3/h

* recommended for 3,5 m/s

Central Unit's Equipments



1 COLLECTOR

The waterproof collector is positionned on the top of the central unit and is easily serviced.

With 12 tracks, the collector enables a total connexion between the main control panel and mobile spans.

In option collector with 14 tracks.

2 END GUN AND OVERHANG PILOT SYSTEM

Water control system is able to start or stop the irrigation on the overhang sprinklers and/or the end gun.

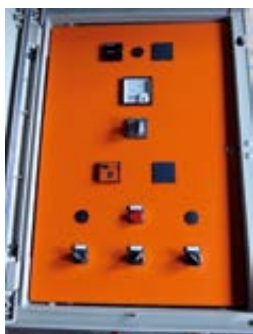
3 AUTOMATIC WATER STOPVALVE

Hydraulic system to stop water slowly at the end of irrigation time.

Avoiding water hammer or auto shut down safety procedure matching with all automatic drives. Available in 2"^{1/2}, 3", 4", 5", 6" ou 8".

THE PIVOT

Control Panel



PANEL TYPE S/L



ELECTRONIC PANEL L TYPE



PIVOCONTROL/PIVODOSEUR PANEL

Panel S/L Type

- Waterproof (tight) polyester main control panel reinforced fiberglass
- Outside dimension 750 x 535 x 300
- Degree of protection IP 65 (Manufacture Telemecanique)
- Double door with painted sheet polyurethane
- On/Off switch
- Voltmeter
- Selector switch (Legrand)
- Timer switch with value displayed in %
- With water/without water running switch
- Front/Back/Auto running switch (Pivot sector)
- Safety indicator and push-button to remove security process
- Main disconnect switch of main control panel
- Safety relays
- Pressure switch relay

Electronic Panel L Type

This electronic control panel is compatible with all pivots Irrifrance. In a streamlined design, the number of internal components is reduced. It allows:

- Direct management of the irrigation dose,
- Set-up of different doses in forward and reverse use,
- To program a time delay for starting,
- To program a time delay in both forward and reverse use,
- To count the number of hours of run and irrigation use.

Also available in basic Panel L Type

Pivocontrol main control panel and Graphic Panel for RM4 VE/ TD

The main control panel contains an electronic panel permitting an expert advanced operating of the machine. It permits in standard :

- Direct programming of irrigated sectors either in application, or in percentage, or in duration.
- Complete circle irrigation or until twenty sectors with different applications.
- Management multicycles or mono
- The reverse delay
- Delayed starts management
- The arrival time display for each sector
- In option : management by GSM or remote VNC link : Cable theft alarm

Option



ENCODEUR

VNC interface option for Graphic Panel

- Viewing and control on PC, tablet or smartphone

GSM option «SMS»

- Start and stop of the lateral move by SMS «START» or «STOP»
- Real time information of the end of the cycle

Counting wheel for lateral moves

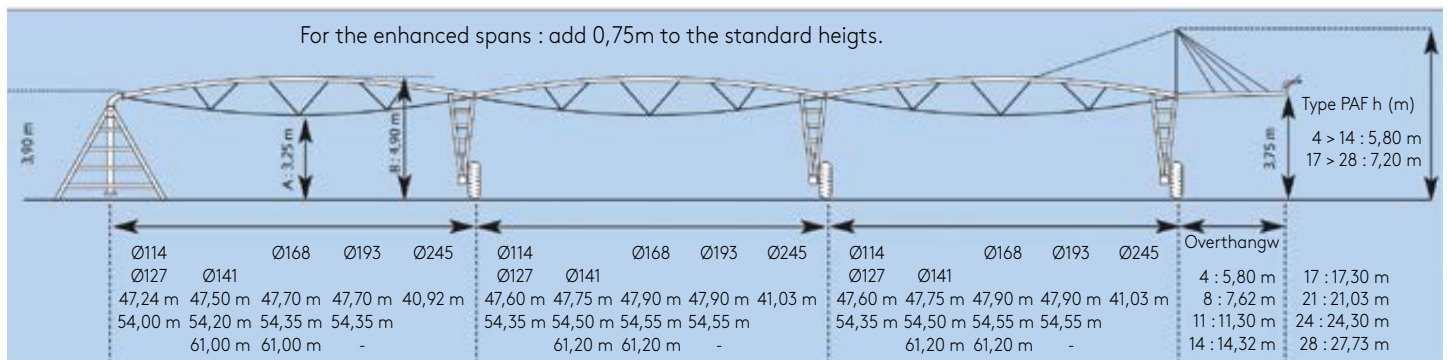
Measurement by absolute encoder 0.1 ° precision in rotation



COUNTING WHEEL

THE PIVOT

VXP Structure



Irrifrance has chosen such a conception for its strenght. The V angle structure enables an uniform distribution of the charge all along the span.

All parts of the structure such as pipe, angles, frame stabilizers and base beam are hot galvanized.

The new conception of the truss rod with forged extremity guarantees a very easy installation, and high strenght.

For the diameter 114 only the PAF of 8, 14 and 17 meters are available. Non-contractual brochure. IRRIFRANCE reserves the right to modify the indicated characteristics according to the evolution of the products.

Antitheft prevention kit of electric cables

To prevent thefts of electrical cables of power supply for motors. Irrifrance developed a new protection to secure your global installation.



THE PIVOT



VXP Structure's Equipment



COUPLING



TOWER ELECTRIC BOX



GEAR MOTOR UMC



WHEEL GEAR BOXES UMC 740



COUPLING

WHEEL

COUPLING

- A «cardan» type U joint is used as a connection between 2 spans. Oversized, it is able to absorb irregularities of the ground.
- Dual-lips Gasket boot included between two half aluminium couplings assuring an integral path of the waterflow, an easy gasket dismantling and a protection against UV.

TOWER ELECTRIC BOX

An articulated connecting stainless steel rod with cam and safety switch ensures a perfect alignment, and a thermal and magnetic protection controlling electric motors according to European safety rules.

TRANSMISSION SHAFTS

Well protected, they are purposely designed to provide the best connection between the gear motor and the wheel gearboxes. Their elasticity is able to absorb shocks when starting and as a consequence doubles life of the wheelgearboxes.

GEAR MOTOR UMC Central cover processed with anti-corrosion

- Ratio of 1/40 - Motor size 3/4 HP - 0,55 kw: the high operational efficiency reduces power requirements of the equipment.

WHEEL GEAR BOXES UMC 740

Heavy duty worm wheel gearboxes, oversized 2" 1/4 axle with taper roller bearings. High strength cast iron bull gear for long life, hardened stress proof worm gear. Expansion chamber to allow oil expansion.

WHEELS

With galvanized rim and valve shield can fit either :
12,4 x 11 x 24 or 14,9 x 13 x 24
and in option for wheels :
11,2 x 10 x ø114 and 12,4 x 11 x 38 and 16,9 x 14 x 24
or other demand sizes.

THE PIVOT

Remote management solutions

IRRIFRANCE MANAGEMENT SYSTEM

Pivot Pack Essentiel

View your pivots from your smartphone by GPS:

- Visualization of pivots on satellite map
- Stopping and restarting your pivots
- Visualization if the pivot is in water or not (detection at the end of the pivot)
- Display of the current direction of rotation
- Receive alert messages
- View current machine status
- 4G network operation
- Multi-operator M2M SIM card included
- 1 year subscription included
- IP67 waterproof
- Compatible with all standard control panel
- Compatible with all brands



GRAPHIC VNC LINK KIT

for graphic panel:

This option allows remote control of your graphic panel:

With the same features as the graphic PIVOCONTROL, namely:

- Visualization on PC, tablet or smartphone of the work screen of your panel, by launching software on your smartphone allowing you to remotely control your pivot.
- This process works with an internet modem on the hub side requiring an "M to M" (machine to machine) SIM card and an internet connection on the pc, tablet or smartphone side.
- In the case of several pivots, a specific kit is to be added per panel, allowing pivot-by-pivot control. To benefit from this option, the purchase of the 2 options is necessary.
- The application is available and free on iOS and Android platforms.

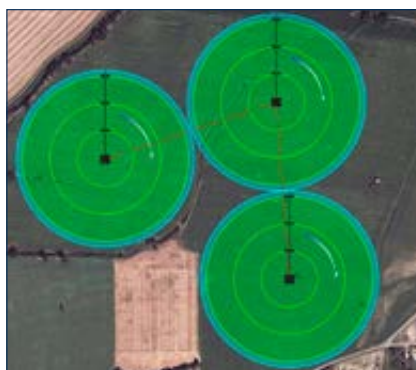


Mobile Pivots



OWABLE PIVOT ON WHEELS.

The movement must be carried out occasionally, for example in the case of rotation once a season.



On four wheels or mounted on skis, this technique, which makes it possible to move the pivot lengthwise, is particularly well suited to watering the plots entering the crop rotation plan.

Towable Pivot

This system which enables the pivot to be towed lengthwise is particularly relevant for plot watering in the rotation plan of farming.

The movement of the machine from one to the next position requires a tractor after the user has turned the wheels of the spans in position to be towed.

THE PIVOT

Solar Pivot



Solar energy is converted into electricity via photovoltaic panels installed on the central unit. The orientation and the tilt of the panels are adjustable to optimize energy production. The energy produced is stored on batteries which supply the electricity to power the pivot.

An economical solution

By producing electrical energy locally, the solar pivot dramatically reduces energy costs for farms. The investment of the solar pivot pays for itself in a few years by reducing the total cost by around 60% compared to a pivot powered by a generator and by more than 20% compared to a pivot powered by electricity from the power grid.

Energy autonomy

During the irrigation season, the solar pivot operates in total autonomy. For example, a 30 ha pivot equipped with an 18m² photovoltaic park allows it to operate 24 hours a day, 7 days a week (or 24/7) and to have an autonomy of 2 days in the case of very cloudy weather.

An ecological alternative

The use of clean and renewable energies is a major challenge for sustainable agriculture. In this context, photovoltaic solar energy stands out as the ideal alternative to fossil fuels by promoting the preservation of the environment while ensuring efficient operation of the pivot.



**French Design
and
Manufacturing.**

THE LATERAL MOVE

RM 2

CART CONTAINING

- 1 axle with 1 UMC gear-motor + 2 wheel gearboxes UMC.
- 2 wheels 14,9 x 13 x 24
- 1 pulling system of PE hose and power feeding cable.
- 1 hydraulic feeding with swivelling elbow (no necessary operating at inversion).
- 1 stop system at the end of the plot and automatical reverse.
- 1 main control panel.



RM 2

RM 2-4 INVERSION AUTO

CART CONTAINING

- 1 axle with 1 UMC gear-motor + 2 wheel gearboxes UMC.
- 4 wheels 14,9 x 13 x 24 fitted on articulated system to increase the ground sticking
- Liquid filling (ballisting) increased by the water volume set in the axle.
- 1 stop system at the end of the plot and automatical reverse.
- 1 main control panel.



RM 2-4 inversion

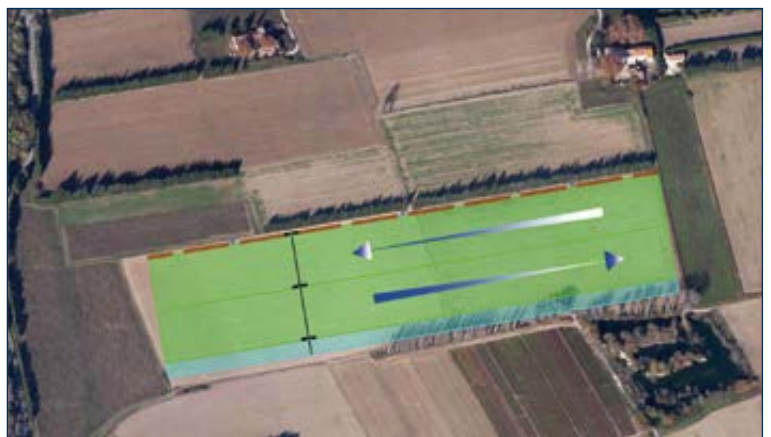
RM 2-4L

CART CONTAINING

- 1 axle with 2 UMC gear-motor + 4 wheel gearboxes UMC.
- 4 wheels 14,9 x 13 x 24 fitted on articulated system to increase the ground sticking
- 1 large axle allowing the installation of the generator and diesel fuel or fertilizer tank.
- Ability of mounting the overhang on the drive.
- 1 hydraulic feeding with swivelling elbow (no necessary operating at inversion).
- 1 stop system at the end of the plot and automatical reverse.
- 1 main control panel.



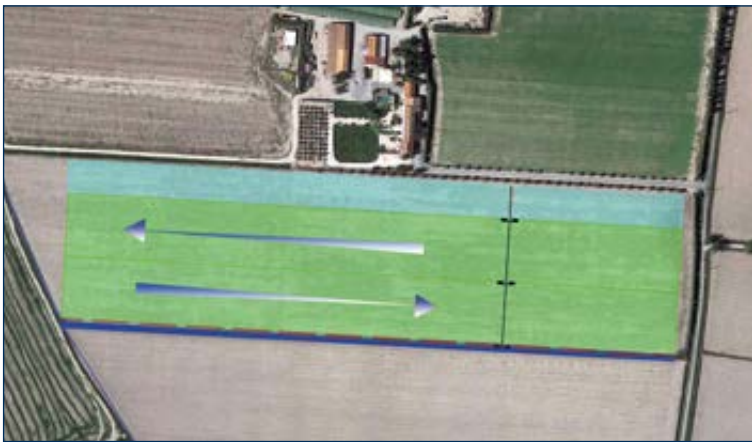
RM 2-4L



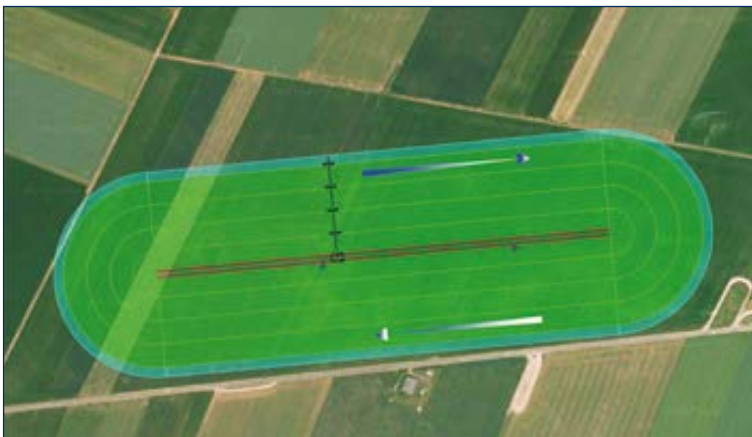
THE LATERAL MOVE



RM 2-4PL



RM 4 VE/L



RM 2-4PL

CART CONTAINING

- 1 axle with 2 UMC gear-motor + 4 wheel gearboxes UMC.
- 4 wheels 14,9 x 13 x 24 fitted on articulated system to increase the ground sticking.
- 1 mixed generator (alternator + diesel fuel motor + pump) intended to electrical and hydraulic feeding.
- 1 tank storage for diesel fuel supply with capacity on request.
- 1 articulated pumping arm intended to feed spans by sucked-in water in channels.
- 1 lifting of pumping arm thanks to a manual winch to facilitate strainer's handling and cleaning
- 1 automatical adjustment to adapt the height of strainer according to the water level changings.
- 1 electrical primer pump (for the pipes feeding before the pump starting).
- 1 manual declutching of the pump to operate lateral move without water.
- 1 stop system at the end of the plot and automatical reverse.
- 1 main control panel

RM 4 VE/L

CART CONTAINING

- 2 half axles (stub axle) with 2 gear-motors UMC + 4 gearboxes UMC (RM4 VE)*.
- 4 wheels 14,9 x 13 x 24
- 1 swivelling head.
- 1 hydraulic feeding with swivelling elbow (no necessary operating at inversion).
- 1 main control panel.

*For RM4 L:

4 gear-motors UMC and 4 gearboxes UMC

THE LATERAL MOVE

RM 4T

PORTIQUE COMPRENANT

Swivel Model

- 2 half axles with 4 gear-motors UMC + 4 fixed gearboxes.
- 1 swivelling head.
- 1 hydraulic feeding with swivelling elbow (no necessary operating at inversion).
- Variable camber.
- Orientation (turning) of the wheels by electric drive.
- 1 main control panel.



RM 4 T

RM 4TD

PORTIQUE COMPRENANT

Swivel and Towable Model

- 2 half axles with 4 gear-motors UMC + 4 fixed gearboxes and declutchable.
- 1 swivelling head.
- 1 hydraulic feeding with swivelling elbow (no necessary operating at inversion).
- Variable camber.
- Orientation (turning) of the wheels by electric drive.
- 1 Pulling drawbar of the driving system.
- 1 main control panel.



RM 4TD



RM 4 T/TD



STANDARDIZATION AND IRRIFRANCE QUALITY

- All the elements making up the pivot are hot-dip galvanized by dipping at 480 °.
- Copper electrical cables from 4G4 mm² + 7x1.5mm² to 4G16 +7 x 2.5mm² Special coating of PVC-based electrical cables for increased resistance against weathering, UVs and rodents.
- All the elements purchased as well as the basic materials used to manufacture the pivots are certified compliant and meet French and European standards relating to irrigation.
- All screws and nuts are quality 8/8 zinc plated and bichromated. The screw diameters range are from M10 to M20 and all the nuts are self-locking.
- Yearly operating costs : low rate about 0.25% of the pivot value
- All IRRIFRANCE pivots and lateral moves structures have 3 years warranty.



ADDITIONAL OPTIONS

Pivoflex

Increase your irrigated area to increase your yield :

PIVOFLEX is an articulated coupling of our VXP range. It allows the spans following this type of coupling to run behind an obstacle (trees, poles, buildings, ponds, etc...) reclaiming lands previously dry, without having to install any other irrigation systems.

The PIVOFLEX system rotates on two teflon supports for an optimum movement, improved liability and a longer life span.

THE PIVOFLEX has the same material and construction qualities as for the VXP range.

A solution adapted to your plot requirements :

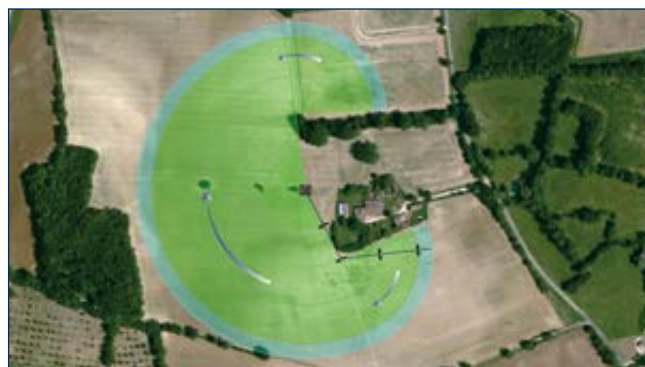
Place the PIVOFLEX system on any tower of the pivot. The selected tower of the pivot becomes the point from which the external spans can cover an additional angle of 160° maximum, in both ways. The external spans can add up to more than 300 m from the PIVOFLEX point.

Gain time with the automatic realignment :

Compared to a standard pivot, the automatic reverse system allows the external spans to come back to their initial position. The PIVOFLEX coupling system realigns the spans and then resume its work just like a standard pivot.

Is compatible with all existing VXP pivots :

The PIVOFLEX system can be installed on any existing VXP pivot.



Retractable Overhang

To enrich its range of pivots and lateral move machines Irrifrance launches the retractable overhang. This system optimizes the irrigated areas by pivots, avoiding obstacles, woods, poles, sheds, etc... Completely automatic and secured, it allows to stop the pivot's advance by releasing the gate at the entry of the obstacle.



Then the water is drained out of the overhang, which will swing around by 90° with an automatic locking in position. The pivot starts its course again, up to the next gate (door), from which the overhang deployment will occur and will start to irrigate again. The swing overhang 28m VXP is compatible with all models of the Irrifrance VX and VXP range pivot : Ø 127, 141 et 168.

With the graphic panel equipped with an encoder, rotations can be managed without a stake.

ADDITIONAL OPTIONS



Polychem®

The polychem® technique a unique process in France :

Internal protection of galvanized steel pipe by a 4,5 mm thick high density polyethylene pipe formed by the hot pressure process.

The pivot hose polyethylene lagging technique eliminates corrosion, brings longer life time, economy, and safety in \varnothing 127, 141, 168, 193.

- Total corrosion protection/Wear protection.
- Improved flow coefficient.
- Impervious to corrosive water.
- Adapted for all modern techniques : chemical and fertilizer distribution.
- Pivot metallic structure and hydraulic performance longevity guaranteed.
- 15 years warranty for the polychem® pipe.
- Optional water rise (water supply tube and upper elbow)

Ferti-Irrigation / Chimigation

The option « fertirrigation/chimigation kit » offers to possibility to inject a fertilizing solution or treating solution at the pivot inlet. The concentration can be regulated with a dosing pump.

The device consists of the following items :

- Tank for storage of the solution (from 250 liters to 2 000 liters)
- Agitator to maintain the solution homogeneous
- Dosing pump to regulate the input of solution into the system (from 5 liters/hour to 2 000 liters/hour)

Irrifrance telematics system (IMS) allows to control the option "« fertirrigation/chimigation kit » and thus to start/stop the dosing pump according to sectors programmed (up to 20 irrigation sectors).

NB : when the solution is corrosive it is recommended to add the "Polychem" option to protect the pivot pipes with internal liner made of polyethylene 4.5mm.



NOZZLE SET



ROTATOR



TWISTER KOMET

The nozzle set defines the way of applying water on the field.

An accurate irrigation is obtained through a well defined nozzle set which must be adapted not only to the structure but also to the climate, topography and agronomical data of the field to irrigate.

Nozzle set choice is also constrained by hydraulic parameters: flow and pressure of the system.

The nozzle set chart indicates sprinkler distribution and nozzle sizes along the spans in order to maximize uniformity of irrigation.



I-WOB



DOBBLE NOZZLE

For a suitable nozzle, IRRIFRANCE offers three brands of sprinklers:

- **Komet TWISTER:** Energy efficiency, homogeneity of drops, pressure range 0.4 to 1.0 bar, installation on downspouts and head up.
- **Senninger IWOB:** Optimum uniformity, low intensity of application, pressure range 0.4 to 1.0 bar, installation on downspouts.
- **Nelson ROTATOR:** Wider irrigation profile, reduction of wind losses, pressure range 0.7 to 3.4 bar, installation on downspouts and overhead.

END GUNS are positioned at the extremity of the machine to increase irrigated surface without extending the structure. Their radius usually reaches 25-30 m (82 - 100 feet) depending on available flow rate and pressure but they need pressure to work properly. A booster pump can be coupled with end gun to boost its inlet pressure without impacting pressure in the rest of the system.



Nelson SR 100



Komet TWIN MAX



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IRRIFRANCE GROUPE

L'irrigation Made in France

Route de Pézenas
34230 PAULHAN France

Tél. +33 467 257 979

Fax +33 467 251 035

www.irrifrance.com



irrifrancegroupe



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N°2309UK