

Afriq Water
Quick Coupling
Sprinkler
Irrigation
Systems are a
durable and
affordable
alternative to
old-fashioned,
expensive steel
pipe systems



Quick Coupling



Afriq Water Management Pty Ltd
Reg No: 2015/103339/07

Afriq Irripipe Pty Ltd
Reg No: 2020/539256/07

Plot 69 Marabeth Tarlton
Krugersdorp Gauteng South Africa

Quick Coupling Definitions

Irrigation

Also known as watering

The supply of water to land or crops.

Quick Coupling

Sprinkler Irrigation

An affordable alternative to steel pipes. A system made from 6m HDPE pipes, with female and male heads friction welded to the ends of the pipes. Plastic fittings are used instead of metal ones, reducing costs drastically. The system consists of pipes, normally 6m, which are joined by ingenious quick coupling latch fittings.

HDPE Pipe

High-Density Poly Ethylene Pipes - very thick and strong pipes, made to handle up to 6 BAR safely.

Latch system

Male fittings come with latches on either side, which grip onto female fittings.

Diameter

The measurement from one side of the pipe to the other, on the outside in mm. Available in 50mm, 63mm, 75mm, 90mm, 110mm, 125mm, 140mm and 160mm.

Quick Coupling Uses

- ◆ Supply water to tri pods using draglines
- ◆ Water transportation
- ◆ Distribute water-soluble fertiliser
- ◆ Preparing areas for seed germination
- ◆ Wash salt, insects etc. from crops
- ◆ Climate control
- ◆ Frost mitigation
- ◆ Fire prevention
- ◆ Plant propagation
- ◆ Sprinkler Irrigation

Manufacturing Quick Coupling Pipes & Fittings

Manufactured on-site at Afriq Water's premises and distributed from the warehouse. Fittings and heads are friction welded to HDPE pipes made from durable, robust plastic materials. Fittings are made from the 2nd most UV-Resistant colour, high-visibility orange, and are extremely durable.



Irrigating for a greener tomorrow

Quick Coupling Benefits

A reliable, durable, cost-effective alternative to wasteful, costly, and labour-intensive irrigation systems.



Lightweight and easy to move; irrigate a field by moving one line where needed



Two latches ensure a quick, hassle-free connection and release, and easy assembly



Fittings friction-welded to pipe and connection sealed with a lip gasket



Ideal for almost all topographies



Impact resistant and super durable



Modular system, customisable

Compatibility

The system can be used to support other irrigation systems e.g. dragline, or on its own as a sprinkler system or as a mainline for water transportation.

System Design

The system consists of HDPE pipes, normally 6m lengths (Afriq Water can manufacture in various pipe lengths) which are friction-welded and sealed with a lip-gasket to **bright orange quick coupling latch fittings**, ideal for almost all topographical conditions.

Durability

Smooth interior ensures low friction loss, increasing the efficiency. Made to last **40+ years in all climate conditions**, from harsh frozen winters to extremely hot summers. UV protected and extremely durable, Southern African harsh weather conditions and direct sunlight poses no challenge for this unique product.

Moveability

A line of the system can be moved and assembled single-handedly as it is made from lightweight HDPE.

Quick Coupling Benefits



Fittings & Installation

Quick Coupling Systems are completely modular - meaning that you can essentially build an irrigation system that suits your needs, whether that is a straight line or a block that suits a specific purpose.

- ◆ Pipes are able to handle max 6 BAR
- ◆ Our Sprinkler Specs are made for 3 BAR



Female Pump Connector

Connects to the pump to start the line of Quick Coupling pipes. Due to the lip-sealing method of our irrigation system, we use a female pump connector at the start of the line.



Quick Coupling Pipes

6m HDPE Pipes with male and female fittings on either side of the pipe, friction-welded on. Various pipe sizes are available, determined by the flow rate. Two pipes of 6m are used between each hydrant set, to get to 12m.



Hydrants/Saddles

A footpiece that latches onto the pipes. The riser pipe is screwed into the top. This piece keeps the sprinkler system itself upright and stable.



Riser Pipes

Screwed into the top of your hydrant, this pipe determines how high above your crop your sprinkler will work.



Sprinklers

Screwed into your riser pipe, your sprinkler determines the amount of water reaching your crop.



Specialised Fittings

Sometimes, depending on the design, T-Pieces, Reducers, Crosses, etc., all specialised fittings, are required.



Male End Caps

Used to end the line of Quick Coupling.

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Fittings & Installation



Maintenance Guidelines

- ◆ Water must be clean - install a sufficient irrigation filter after water source, as well as in before every block, screen or disc
- ◆ Flush the system and filter regularly by opening the end of the line and letting water flush through. This helps with blockages
- ◆ Use only water-soluble fertilizers and flush the system immediately after application

Sprinkler Specifications

- ◆ Manufactured from robust plastic material that is UV resistant
- ◆ Fitted with a Teflon bearing, resulting in smooth rotation
- ◆ Fitted with an adjustable stainless steel spring, allowing the sprinkler to work at all pressure ratings and accommodate various rotation speeds
- ◆ Comes with sets of changeable nozzles, with different flow rates
- ◆ Nozzles are manufactured with grooves and water-spreading pins on the inside, as a result, the water is sprinkled in a cyclone shape and in tiny particles. Therefore the rain is evenly distributed over the whole irrigation area

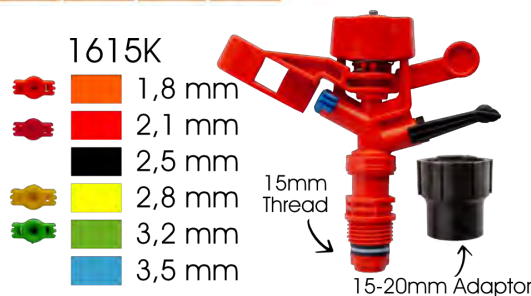


1610 SK High Flow Sprinkler Head							
Nozzle combinations		2 BAR Pressure		2,5 BAR Pressure		3 BAR Pressure	
Left	Right	Flow l/h	Throw Range	Flow l/h	Throw Range	Flow l/h	Throw Range
4,0	5,0	2110	16,00 m	2300	16,00 m	2615	16,50 m
4,0	6,0	2375	16,50 m	2760	16,50 m	3140	17,00 m
3,5	4,5	1890	13,00 m	2070	13,50 m	2255	14,50 m
3,5	6,0	2200	15,50 m	2560	16,00 m	2915	17,00 m

1610 SK Low Flow Sprinkler Head							
2,3	3,8	1050	12,00 m	1200	12,50 m	1300	12,80 m



1610 S Sprinkler Head							
Nozzle combinations		2 BAR Pressure		2,5 BAR Pressure		3 BAR Pressure	
Left	Right	Flow l/h	Throw Range	Flow l/h	Throw Range	Flow l/h	Throw Range
4,0	5,0	2110	16,00 m	2300	16,00 m	2615	16,50 m
4,0	6,0	2375	16,50 m	2760	16,50 m	3140	17,00 m
3,5	4,5	1890	13,00 m	2070	13,50 m	2255	14,50 m
3,5	5,5	2190	15,50 m	2390	16,00 m	2710	16,50 m



1615 K Sprinkler Head							
Nozzle combinations		2 BAR Pressure		2,5 BAR Pressure		3 BAR Pressure	
Left	Right	Flow l/h	Throw Range	Flow l/h	Throw Range	Flow l/h	Throw Range
1,8	2,3	510	11,00 m	580	11,00 m	600	11,00 m
1,8	2,8	690	11,00 m	760	11,00 m	820	11,00 m
1,8	3,2	820	11,50 m	900	12,00 m	980	12,00 m
2,5	3,5	1060	12,25 m	1160	12,50 m	1240	12,75 m

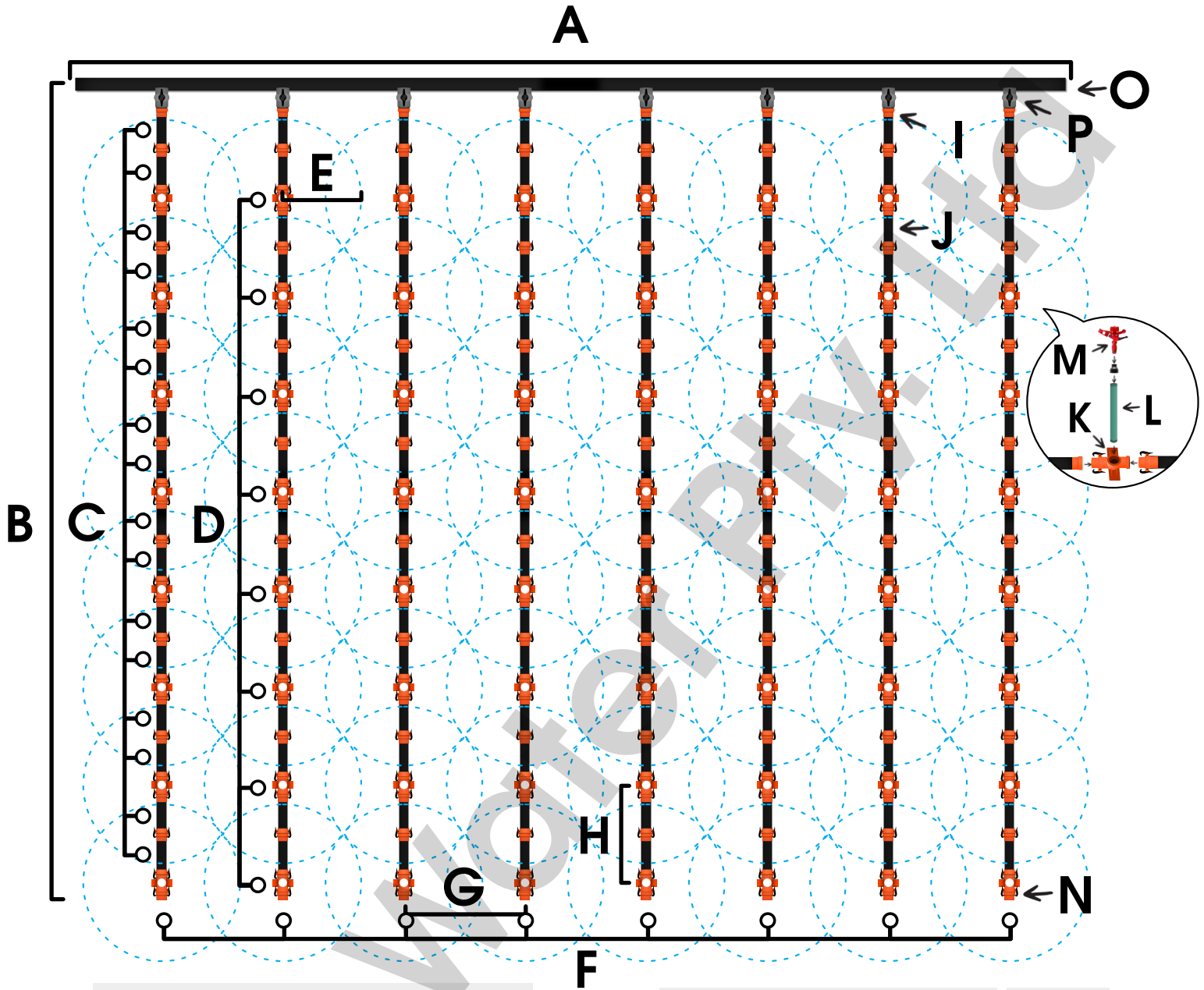




1 Hectare Design Option 1

100m x 100m

Designed with 8 sprinklers per line



A	Width of block	100m
B	Length of each line	96m
C	Pipes per line	16
D	Sprinklers sets per line	8
E	Sprinkler Radius	12-16m
F	Amount of lines	8
G	Space between lines	12m
H	Space between sets	12m

Fittings needed		QTY
I	Female Pump Connectors	8
J	HDPE Class 6 Pipes*	136
K	Hydrants	64
L	PVC Riser Pipes	64
M	Sprinklers	64
N	Male End Cap Fittings	8
O	Metres mainline	100
P	Valves	8
	130 Micron Filter Before every block & after water source	1 +

To determine amount of sprinklers by block:
 Sprinklers required = Length of block / 12**
 i.e. Sprinklers required at 100m = 100 / 12 = 8 Sets (Sprinklers, Risers and Hydrants)
 Lines required = Width of block / 12**
 i.e. Lines required at 100m = 100 / 12 = 8 Lines
 8 lines x 8 sets of sprinklers in each = 64 Sprinkler Sets

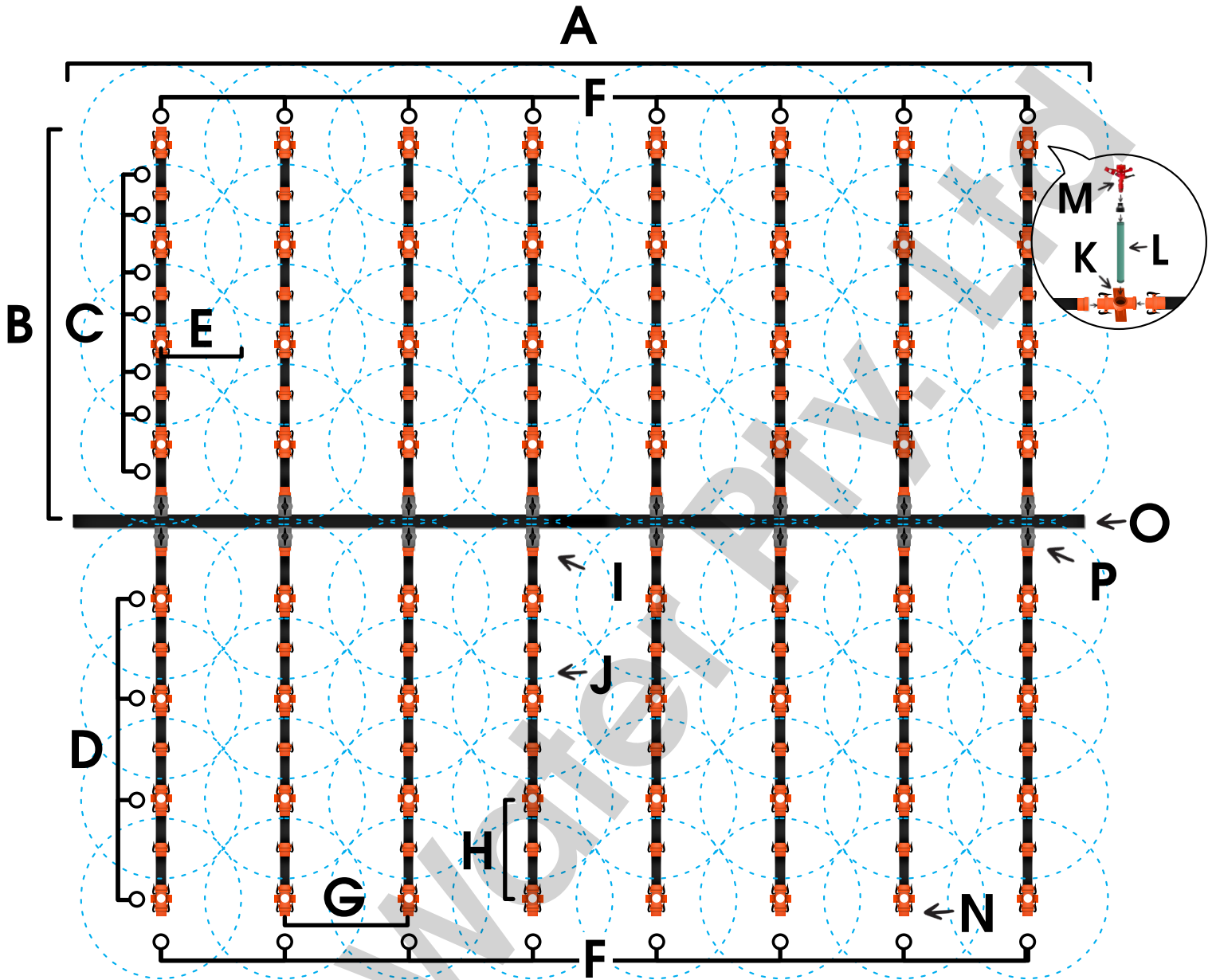
*Afriq Water HDPE Quick Coupling Pipes come with female and male fittings friction-welded to either side of a standard 6m length pipe.
 **12 is used as a standard when determining spacing between lines and sprinklers, as the pipes come standard in 6m lengths, and the sprinklers have a radius of 12-16m.



1 Hectare Design Option 2

100m x 100m

Designed with 4 sprinklers per line, 16 lines



A	Width of block	100m
B	Length of each line	42m
C	Pipes per line	7
D	Sprinklers sets per line	4
E	Sprinkler Radius	12-16m
F	Amount of lines	16
G	Space between lines	12m
H	Space between sets	12m

Fittings needed		QTY
I	Female Pump Connectors	8
J	HDPE Class 6 Pipes*	136
K	Hydrants	64
L	PVC Riser Pipes	64
M	Sprinklers	64
N	Male End Cap Fittings	8
O	Metres mainline	100
P	Valves	8
	130 Micron Filter Before every block & after water source	1 +

To determine amount of sprinklers by block:

Sprinklers required = Length of block / 12**

i.e. Sprinklers required at 100m = 100 / 12 = 8 Sets (Sprinklers, Risers and Hydrants)

Lines required = Width of block / 12**

i.e. Lines required at 100m = 100 / 12 = 8 Lines

8 lines x 8 sets of sprinklers in each = 64 Sprinkler Sets

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**We do not do installations,
we will try our best to refer you to
experts in certain areas.**

Contact Us

