

## **Coverage Irrigation Sprinkler**

#### Introduction:

We must use water correctly, to optimize the harvest as well as to maintain the structure of the soil to cultivate. This kind of irrigation is to reduce the water jet droplet in order to have a suitable one for the crop. For this, it is necessary a sprinkler which gives fine droplets of water.

Its mission is to distribute homogeneously the water, avoiding unwanted water areas or too much water in a field. That means a controlled use and profitable use of water, reducing unnecessary costs.

#### **Advantages:**

- Possibility to use fertilizers or cure diseases with fertigation.
- Homogeneous use of water, only the desired quantity to reduce costs.
- No deterioration of the ground as there are no more puddles or landslide.
- It is the best way to struggle against frost.
- It allows the washing of toxic bacterial leaf layer of the crop.
- It can be used from one crop to another.

#### **Recommended uses:**

Useful in tropical fields like in coffee or cocoa crops, which are very sensitive to low temperatures.

It is proven that it is efficient in field crops and industrial crops like sugar beet, tobacco and cotton) or legumes crops such as beans and lentils.

#### **Characteristics of sprinklers:**

We differentiate sprinkler according to the dispersion angle, flow delivered (low-medium-high), scope of the droplet, the pressure and also the characteristics of the crop. Made in plastic and /or brass.

**Flow:** quantity of water that a sprinkler throws(I/h)

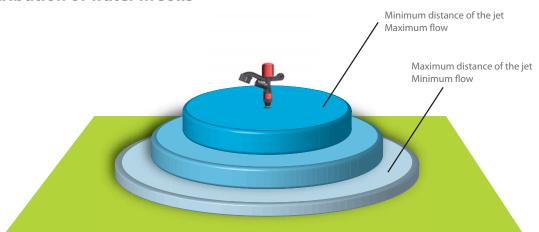
**Water jet angle:** the distance between the ground and the point from which water jet start flowing.

**Scope:** maximum extent of water distribution (m) **Pressure:** pressure of the water jet (BAR, PSI)

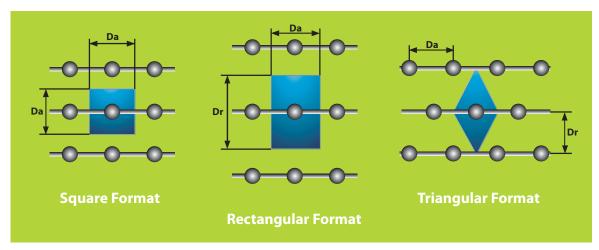




#### Distribution of water in soils



#### **Sprinkler Format**



 $\label{eq:sprinkler} \textbf{SPRINKLER IRRIGATED AREA} \\ \textbf{DISTANCE BETWEEN THE SPRINKLER} \ \ \textbf{x} \ \ \textbf{DISTANCE BETWEEN PIPES} \ = \ \textbf{Da} \ \ \textbf{x} \ \ \textbf{Dr}$ 

#### **Maintenance**

- **External Objects in the irrigation water:** Do not use wires to eliminate possible clogging.
- Oil: The sprinklers are lubricated with water, don't use any other element to lubricate.
- **Erroneous Pressure:** only use the pressure within the range of each sprinkler. Use of Pressure gauge recommended.





## **Unirain F30 - F30F**

## Full Circle Impact Sprinkler Low and Medium flow Brass



#### **Application**

Recommended for agricultural use, and medium flows, it is very suitable for removable pipe systems. It can be assembled with one or two nozzles. It is ideal for farmers, as it is a strong and durable product that reduces evaporation loss and wind effect thanks to its water jet throw radius. It can be assembled with female base thread in order to avoid waste of material.

#### **Advantages**

- Made of brass, its arm and body have a wide impact area that provides longer life.
- Its counterweighted arm provides a steady turn speed.
- It can be assembled with one or two nozzles.
- Three different vanes can be used to achieve the desired coverage and spray balance according to the available system pressure.

#### **Technical specifications**

- Full circle impact sprinkler
- 3/4" base thread male or female(F30F)
- Main and secondary nozzle
- 25° nozzle trajectory angle.
- Pressure range: 20-80 PSI
- Nozzle range: 9/64"-7/32"
- Body, arm and bearing assembly made of brass.
- Fulcrum pin and springs made of stainless steel.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for a better identification (brass nozzles to be optionally assembled).
- Backturn lock between the sprinkler body and the bearing spring.



**F30** 

**F30F** 

**TECHNICAL SHEET 0901** 

	Pressure (psi)	Nozzles	Vanes
HIGH	60	3PRN ó 3FCN	30 V
MEDIUM	40	3PRN ó 3FCN	WITHOUT VANE
LOW	30	3PRN	30RV
VERY LOW	20	3PRN	30BV



F30	PRESSURE (PSI)	NOZ. 9/64" - GPM		NOZ 5/32" - GPM	ZLES + 3/32" R(ft)	NOZ 11/64" GPM	ZLES + 3/32" R(ft)	NOZ 3/16" - GPM (	F 3/32″	NOZ: 3/16" GPM		NOZ: 13/64" GPM	ZLES ' + 1/8" R(ft)	NOZ. 7/32" GPM	ZLES + 1/8" R(ft)
	20			4.31	39.4	4.96	40.0	5.66	40.7	6.65	40.7	7.47	41.0	8.33	41.3
TWO NOZZLES	25	4.18	40.0	4.83	41.0	5.55	41.3	6.31	42.7	7.40	42.7	8.30	43.0	9.25	44.0
	30	4.58	40.4	5.27	42.7	6.07	44.0	6.93	45.6	8.15	45.6	9.15	46.9	10.20	47.9
	35	4.95	41.0	5.71	43.6	6.57	44.9	7.51	46.9	8.83	46.9	9.93	48.6	11.10	49.9
	40	5.29	41.3	6.11	44.0	7.03	45.9	8.03	47.9	9.46	47.9	10.65	49.6	11.90	50.9
	45	5.61	42.0	6.48	44.6	7.46	46.9	8.53	48.9	10.05	48.9	11.30	50.5	12.64	51.8
	50	5.91	42.7	6.82	44.9	7.87	47.6	9.00	49.9	10.60	49.9	11.90	51.5	13.34	53.1
	55	6.20	43.0	7.15	45.6	8.25	47.9	9.45	50.5	11.10	50.5	12.50	51.8	14.00	53.5
	60	6.48	43.6	7.47	45.9	8.60	48.6	9.86	50.9	11.60	50.9	13.00	52.5	14.50	54.4
	65	6.75	44.0	7.78	46.6	8.93	48.9	10.27	51.5	12.10	51.5	13.50	53.1	15.00	54.5
	70	7.00	44.6	8.08	46.9	9.25	49.5	10.66	51.8	12.50	51.8	14.00	53.5	15.45	55.1
	75	7.25	44.9	8.37	47.6	9.56	49.9	11.02	52.5	12.90	52.5	14.40	54.1	15.90	55.4
	80	7.49	45.6	8.65	47.9	9.87	50.5	11.36	53.1	13.25	53.1	14.80	54.5	16.30	56.1

F30P	PRESSURE (PSI)	NOZ 9/6 GPM	ZLES 54" R(ft)	NOZ 5/3 GPM	ZLES 32" R(ft)		ZLES 64" R(ft)		ZLES 16" *) R(ft)	NOZ 13/ GPM		NOZ 7/3 GPM	
	20			3.14	39.4	3.79	40.0	4.49	40.7	5.31	41.0	6.16	41.3
ONE NOZZLE	25	2.88	40.0	3.52	41.0	4.24	41.3	5.00	42.7	5.90	43.0	6.85	44.0
AND PLUG	30	3.15	40.4	3.85	42.7	4.64	44.0	5.50	45.6	6.50	46.9	7.55	47.9
	35	3.40	41.0	4.16	43.6	5.02	44.9	5.96	46.9	7.05	48.6	8.20	49.9
	40	3.64	41.3	4.45	44.0	5.37	45.9	6.38	47.9	7.55	49.6	8.80	50.9
	45	3.86	42.0	4.72	44.6	5.70	46.9	6.78	48.9	8.00	50.5	9.35	51.8
	50	4.07	42.7	4.98	44.9	6.01	47.6	7.16	49.9	8.45	51.5	9.90	53.1
	55	4.27	43.0	5.22	45.6	6.30	47.9	7.52	50.5	8.85	51.8	10.40	53.5
	60	4.46	43.6	5.45	45.9	6.57	48.6	7.85	50.9	9.25	52.5	10.75	54.4
	65	4.65	44.0	5.68	46.6	6.83	48.9	8.18	51.5	9.60	53.1	11.10	54.5
	70	4.83	44.6	5.90	46.9	7.09	49.5	8.50	51.8	9.95	53.5	11.40	55.1
	75	5.00	44.9	6.11	47.6	7.34	49.9	8.80	52.5	10.25	54.1	11.70	55.4
	80	5.17	45.6	6.30	47.9	7.58	50.5	9.09	53.1	10.50	54.5	12.00	56.1

F30V	PRESSURE (PSI)				ZLES + 3/32" R(ft)	NOZ 11/64" GPM		NOZ: 3/16" - GPM (*	⊦ 3/32″	NOZ 3/16" GPM		NOZ 13/64″ GPM	ZLES ' + 1/8" R(ft)	NOZ 7/32" GPM	
	35	4.95	44.3	5.71	46.3	6.57	47.6	7.51	49.5	8.83	49.5	9.93	51.5	11.10	52.5
TWO NOZZLES	40	5.29	45.6	6.11	46.9	7.03	47.9	8.03	50.5	9.46	50.5	10.65	52.5	11.90	53.1
AND VANE TO	45	5.61	45.9	6.48	47.9	7.46	48.9	8.53	51.8	10.05	51.8	11.30	53.1	12.64	54.1
HIGH RANGE	50	5.91	46.6	6.82	48.9	7.87	49.9	9.00	53.1	10.60	53.1	11.90	53.5	13.34	55.1
	55	6.20	46.9	7.15	50.2	8.25	50.9	9.45	54.1	11.10	54.1	12.50	54.1	14.00	56.1
	60	6.48	47.6	7.47	50.5	8.60	51.5	9.86	54.5	11.60	54.5	13.00	55.1	14.50	57.1
	65	6.75	47.9	7.78	50.9	8.93	51.8	10.27	55.1	12.10	55.1	13.50	56.1	15.00	58.1
	70	7.00	48.6	8.08	51.5	9.25	53.1	10.66	55.4	12.50	55.4	14.00	57.1	15.45	59.1
	75	7.25	48.9	8.37	51.8	9.56	54.1	11.02	56.1	12.90	56.1	14.40	58.1	15.90	60.0
	80	7.49	49.9	8.65	52.5	9.87	55.1	11.36	56.4	13.25	56.4	14.80	59.1	16.30	61.0

F30PV	PRESSURE	NOZ 9/6		NOZ 5/3			ZLES 64"	NOZ 3/1		NOZ		NOZ 7/3	
1.301.4	(PSI)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM (	*) <b>R(ft)</b>	GPM	R(ft)	GPM	R(ft)
	35	3.40	44.3	4.16	46.3	5.02	47.6	5.96	49.5	7.05	51.5	8.20	52.5
ONE NOZZLE,	40	3.64	45.6	4.45	46.9	5.37	47.9	6.38	50.5	7.55	52.5	8.80	53.1
PLUG AND	45	3.86	45.9	4.72	47.9	5.70	48.9	6.78	51.8	8.00	53.1	9.35	54.1
VANE TO	50	4.07	46.6	4.98	48.9	6.01	49.9	7.16	53.1	8.45	53.5	9.90	55.1
HIGH RANGE	55	4.27	46.9	5.22	50.2	6.30	50.9	7.52	54.1	8.85	54.1	10.40	56.1
	60	4.46	47.6	5.45	50.5	6.57	51.5	7.85	54.5	9.25	55.1	10.75	57.1
	65	4.65	47.9	5.68	50.9	6.83	51.8	8.18	55.1	9.60	56.1	11.10	58.1
	70	4.83	48.6	5.90	51.5	7.09	53.1	8.50	55.4	9.95	57.1	11.40	59.1
	75	5.00	48.9	6.11	51.8	7.34	54.1	8.80	56.1	10.25	58.1	11.70	60.0
	80	5.17	49.9	6.30	52.5	7.58	55.1	9.09	56.4	10.50	59.1	12.00	61.0

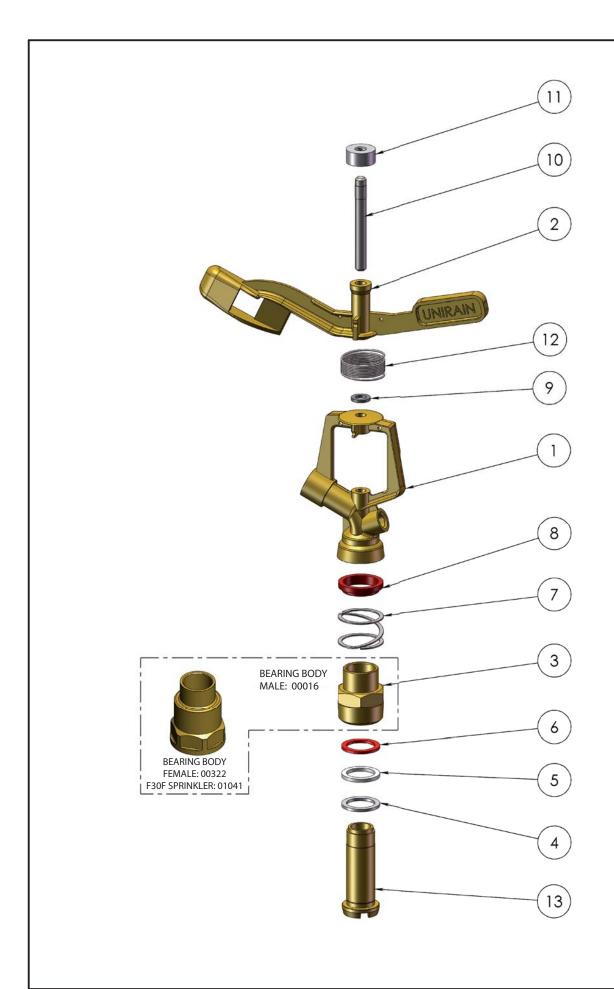
Data obtained under ideal test conditions. It can be affected by wind, bad hydraulic conditions or other adverse factors. Highest point of the jet above the nozzle: 2.8 m (using standard nozzle 5 / 32 "to 35.2 MCA) Throw radius jets achieved with the 0.9m lift. Shaded areas not recommended. (\*) Standard Nozzle.

PSI: Pounds per Square Inch GPM: Gallons Per Minute R(ft): Throw Radius in feet

#### **WARRANTY AND EXCLUSIONS**

The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.



COMPONENT NUMBER	PART NUMBER	DESCRIPTION	MATERIAL	QUANTITY
1	00031	F30 Sprinkler Body	Brass	1
2	00029	F30 Sprinkler Arm	Brass	1
3	00016	F30 Bearing Body	Brass	1
4	07459	Bearing Lower Washer	NBR	1
5	06736	Bearing Intermediate Washer	High Density PE	1
6	00252	Bearing Upper Washer	Anti Hydrolysis PU	1
7	00018	Bearing Spring	Stainless Steel	1
8	00255	Bearing Body Lock	High Density PE	1
9	06162	Arm Support Washer	NBR	1
10	06163	Arm Shaft	Stainless Steel	1
11	06161	Arm Hat	Low/Medium Density PE	1
12	06183	3/4" Series Arm Spring	Stainless Steel	1
13	00017	F30 Bearing Shaft	Brass	1

Notes			

Process/Manufacturer  UNIRAIN	Size A3	Material 	Code 00150
UNINAIN	Scale 1:2	F30 Sprink	ler
PRIVATE AND CONFIDENTIAL THE INFORMATION CONTAINED ON THIS PLAN	15/05/09		
IS FOR UNIRAIN USE ONLY. FORBIDDEN CHANGE OR AMENDMENT OF VALUES OF THE PLAN WITHOUT A CONSENT IN WRITTING.	E.G.B.	G unira	DI IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII

### **Unirain F40 - F40F**

### **Full Circle Impact Sprinkler** Low and Medium flow Brass



#### **Application**

Ideal for agricultural use, medium flows, and suitable for removable pipe systems. It can be assembled with one or two nozzles. Sturdy design confers resistance and a longer wear life.

Suitable for farmers who look for a sturdy and durable product. Its angle water jet assures perfectly balanced performance of the sprinkler reducing evaporation losses and wind effect. It can be assembled with female base thread in order to avoid waste of material.

#### **Advantages**

- Made of brass, its arm and body share a wide impact area provides longer life.
- Its counterweighted arm provides a steady turn speed.
- It can be assembled with one or two nozzles.
- Three different vanes can be used to achieve the desired coverage and spray balance according to the available system pressure.

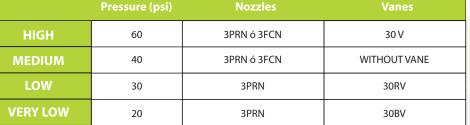
#### **Technical specifications**

- Full circle impact sprinkler
- 34" base thread male or female(F30F)
- Main and secondary nozzle
- 25° nozzle trajectory angle.
- Pressure range: 20-80 PSI
- Nozzle range: 9/64"-7/32"
- Body, arm and bearing assembly made of brass.
- Fulcrum pin and springs made of stainless steel.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for a better identification (brass nozzles to be optionally assembled)
- Backturn lock between the sprinkler body and the bearing spring.



F40

	Pressure (psi)	Nozzles	Vanes
HIGH	60	3PRN ó 3FCN	30 V
MEDIUM	40	3PRN ó 3FCN	WITHOUT VANE
LOW	30	3PRN	30RV
VERY LOW	20	3PRN	30BV





F40	PRESSURE (PSI)	NOZ: 5/32" - GPM	ZLES + 3/32" R(ft)		ZLES + 3/32" R(ft)	NOZ 3/16" - GPM	ZLES + 3/32" R(ft)	NOZ 3/16" GPM (*		NOZ: 13/64" GPM			ZLES + 1/8" R(ft)	NOZ: 15/64" GPM		NOZ 1/4" - GPM	ZLES - 1/8" R(ft)	NOZ 17/64" GPM	ZLES ' + 1/8" R(ft)	NOZ: 9/32" GPM	ZLES + 1/8" R(ft)
THE NOTE IS	20			4.95	41.3	5.66	42.0	6.66	42.0	7.47	42.3	8.33	43.0	9.12	43.3	10.10	44.0	11.18	44.3	12.17	44.6
TWO NOZZLES	25	4.83	42.7	5.55	44.0	6.31	44.9	7.40	44.9	8.30	45.6	9.25	48.6	10.20	46.9	11.30	47.6	12.50	47.9	13.60	48.6
	30	5.28	44.6	6.07	45.9	6.93	47.6	8.15	47.6	9.15	48.9	10.20	49.9	11.20	50.5	12.40	50.9	13.70	51.5	14.90	51.8
	35	5.71	45.9	6.57	47.6	7.51	48.9	8.83	48.9	9.93	50.5	11.10	51.5	12.10	52.5	13.40	53.1	14.80	53.5	16.20	54.1
	40	6.11	46.9	7.03	48.6	8.03	49.9	9.46	49.9	10.65	51.5	11.90	53.1	13.00	53.5	14.40	54.5	15.90	55.4	17.40	56.1
	45	6.48	47.6	7.45	49.5	8.53	50.9°	10.05	50.9	11.30	52.5	12.65	54.1	13.79	55.1	15.30	56.1	16.80	57.1	18.50	58.1
	50	6.82	47.9	7.87	49.9	9.00	51.8	10.60	51.8	11.90	53.5	13.35	55.1	14.60	56.1	16.10	57.1	17.70	58.1	19.50	59.4
	55	7.15	48.6	8.25	50.5	9.45	53.1	11.10	53.1	12.50	54.5	14.00	56.1	15.30	57.1	16.90	58.1	18.60	59.1	20.40	61.0
	60	7.47	48.9	8.60	50.9	9.86	53.5	11.60	53.5	13.00	55.1	14.50	56.4	16.00	58.1	17.70	59.1	19.40	60.0	21.30	62.0
	65	7.78	49.5	8.93	51.5	10.27	54.1	12.10	54.1	13.50	55.4	15.00	57.1	16.60	58.4	18.40	60.0	20.10	61.0	22.20	63.0
	70	8.08	49.9	9.25	51.8	10.66	54.5	12.50	54.5	14.00	56.1	15.45	57.4	17.20	59.1	19.00	60.4	20.80	62.0	22.90	64.0
	75	8.37	50.5	9.56	52.5	11.02	55.1	12.90	55.1	14.40	56.4	15.90	58.1	17.70	59.4	19.60	61.0	21.50	62.7	23.60	64.6
	80	8.65	50.9	9.87	53.1	11.36	55.4	13.25	55.4	14.80	57.1	16.30	58.4	18.20	60.0	20.20	61.4	22.10	63.0	24.30	65.0

F40P	PRESSURE	NOZ 5/3	32"	NOZ:	64"	NOZ 3/1	6"	NOZ 13/	64"	7/3	ZLES 32"		64"		4"		64"	9/3	ZLES 32"
	(PSI)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM (	•) R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)
	20			3.79	41.3	4.49	42.0	5.31	42.3	6.16	43.0	6.98	43.3	7.96	44.0	8.94	44.3	10.02	44.6
ONE NOZZLE	25	3.52	42.7	4.24	44.0	5.00	44.9	5.90	45.6	6.85	48.6	7.80	46.9	8.90	47.6	10.00	47.9	11.20	48.6
AND PLUG	30	3.85	44.6	4.64	45.9	5.50	47.6	6.50	48.9	7.55	49.9	8.60	50.5	9.80	50.9	11.00	51.5	12.30	51.8
	35	4.16	45.9	5.02	47.6	5.96	48.9	7.05	50.5	8.20	51.5	9.30	52.5	10.60	53.1	11.90	53.5	13.30	54.1
	40	4.45	46.9	5.37	48.6	6.38	49.9	7.55	51.5	8.80	53.1	10.00	53.5	11.40	54.5	12.80	55.4	14.30	56.1
	45	4.72	47.6	5.70	49.5	6.78	50.9	8.00	52.5	9.35	54.1	10.60	55.1	12.10	56.1	13.60	57.1	15.20	58.1
	50	4.98	47.9	6.01	49.9	7.16	51.8	8.45	53.5	9.90	55.1	11.20	56.1	12.80	57.1	14.30	58.1	16.00	59.4
	55	5.22	48.6	6.30	50.5	7.52	53.1	8.85	54.5	10.40	56.1	11.70	57.1	13.40	58.1	15.00	59.1	16.80	61.0
	60	5.45	48.9	6.57	50.9	7.85	53.5	9.25	55.1	10.75	56.4	12.20	58.1	13.90	59.1	15.60	60.0	17.50	62.0
	65	5.68	49.5	6.83	51.5	8.18	54.1	9.60	55.4	11.10	57.1	12.70	58.4	14.50	60.0	16.20	61.0	18.10	63.0
	70	5.90	49.9	7.09	51.8	8.50	54.5	9.95	56.1	11.40	57.4	13.20	59.1	15.00	60.4	16.80	62.0	18.70	64.0
	75	6.11	50.5	7.34	52.5	8.80	55.1	10.25	56.4	11.70	58.1	13.60	59.4	15.50	61.0	17.30	62.7	19.20	64.6
	80	6.30	50.9	7.58	53.1	9.09	55.4	10.50	57.1	12.00	58.4	14.00	60.0	16.00	61.4	17.80	63.0	19.70	65.0

F40V	PRESSURE (PSI)	NOZ: 5/32" - GPM		NOZ: 11/64" GPM		NOZ: 3/16" - GPM		NOZ 3/16" GPM (*	+ 1/8"	NOZ: 13/64" GPM		NOZ: 7/32" - GPM		NOZZ 15/64" GPM		NOZ 1/4" - GPM		NOZ: 17/64" GPM		NOZ2 9/32" · GPM	
	35	5.71	48.2	6.57	49.2	7.51	49.5	8.83	49.5	9.93	50.5	11.10	52.2	12.10	53.8	13.40	54.8	14.80	55.4	16.20	56.1
TWO NOZZLES	40	6.11	49.5	7.03	51.5	8.03	51.8	9.46	51.8	10.65	53.5	11.90	55.4	13.00	57.1	14.40	58.4	15.90	59.1	17.40	60.0
AND VANE TO	45	6.48	49.9	7.45	51.8	8.53	53.1	10.05	53.1	11.30	54.5	12.65	57.1	13.79	58.4	15.30	60.4	16.80	61.0	18.50	62.0
HIGH RANGE	50	6.82	50.5	7.87	52.5	9.00	53.5	10.60	53.5	11.90	55.4	13.35	58.4	14.60	60.0	16.10	62.0	17.70	63.0	19.50	64.0
	55	7.15	50.9	8.25	53.1	9.45	54.1	11.10	54.1	12.50	56.4	14.00	59.4	15.30	61.0	16.90	63.0	18.60	64.6	20.40	65.9
	60	7.47	51.5	8.60	53.5	9.86	54.5	11.60	54.5	13.00	57.1	14.50	60.4	16.00	62.0	17.70	64.0	19.40	65.9	21.30	67.9
	65	7.78	51.8	8.93	54.1	10.27	55.1	12.10	55.1	13.50	57.4	15.00	61.0	16.60	63.0	18.40	65.0	20.10	67.6	22.20	69.6
	70	8.08	52.5	9.25	54.5	10.66	55.4	12.50	55.4	14.00	58.1	15.45	61.4	17.20	64.0	19.00	65.9	20.80	68.6	22.90	70.9
	75	8.37	53.1	9.56	55.1	11.02	56.1	12.90	56.1	14.40	58.4	15.90	62.0	17.70	64.6	19.60	66.9	21.50	69.6	23.60	71.9
	80	8.65	53.5	9.87	55.4	11.36	56.4	13.25	56.4	14.80	59.1	16.30	62.7	18.20	65.0	20.20	67.9	22.10	70.5	24.30	73.2

F40PV	PRESSURE	NOZ 5/3	32"	NOZ:	64"		ZLES 16"	NOZ 13/	64"	NOZ:	32"	NOZ 15/	64"	NOZ	4"	NOZ 17/	64"	NOZ 9/3	32"
	(PSI)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM (	) R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)
	35	4.16	48.2	5.02	49.2	5.96	49.5	7.05	50.5	8.20	52.2	9.30	53.8	10.60	54.8	11.90	55.4	13.30	56.1
ONE NOZZLE,	40	4.45	49.7	5.37	51.5	6.38	52.5	7.55	54.5	8.80	56.1	10.00	57.4	11.40	59.4	12.80	60.0	14.30	61.0
PLUG AND	45	4.72	50.5	5.70	52.5	6.78	53.5	8.00	55.4	9.35	58.1	10.60	59.4	12.10	61.4	13.60	62.0	15.20	63.0
VANE TO	50	4.98	50.9	6.01	53.1	7.16	54.5	8.45	56.4	9.90	59.4	11.20	61.0	12.80	63.0	14.30	64.0	16.00	65.0
HGH RANGE	55	5.22	51.5	6.30	53.5	7.52	55.1	8.85	57.4	10.40	60.4	11.70	62.0	13.40	64.0	15.00	65.6	16.80	66.9
	60	5.45	51.8	6.57	54.1	7.85	55.4	9.25	58.1	10.75	61.4	12.20	63.0	13.90	65.0	15.60	66.9	17.50	68.9
	65	5.68	52.5	6.83	54.5	8.18	56.1	9.60	58.4	11.10	62.0	12.70	64.0	14.50	65.9	16.20	68.6	18.10	70.5
	70	5.90	53.1	7.09	55.1	8.50	56.4	9.95	59.1	11.40	62.7	13.20	65.0	15.00	66.9	16.80	69.6	18.70	71.9
	75	6.11	53.5	7.34	55.4	8.80	57.1	10.25	59.4	11.70	63.0	13.60	65.6	15.50	67.9	17.30	70.5	19.20	73.2
	80	6.30	54.1	7.58	56.1	9.09	57.4	10.50	60.0	12.00	63.6	14.00	65.9	16.00	68.9	17.80	71.5	19.70	74.1

Data obtained under ideal test conditions. It can be affected by wind, bad hydraulic conditions or other adverse factors. Highest point of the jet above the nozzle: 3 m (using standard nozzle 3/16 " to 35.2 MCA)

Throw radius jets achieved with the 0.9m lift. Shaded areas not recommended

PSI: Pounds per Square Inch GPM: Gallons Per Minute R(ft): Throw Radius in feet

#### **WARRANTY AND EXCLUSIONS**

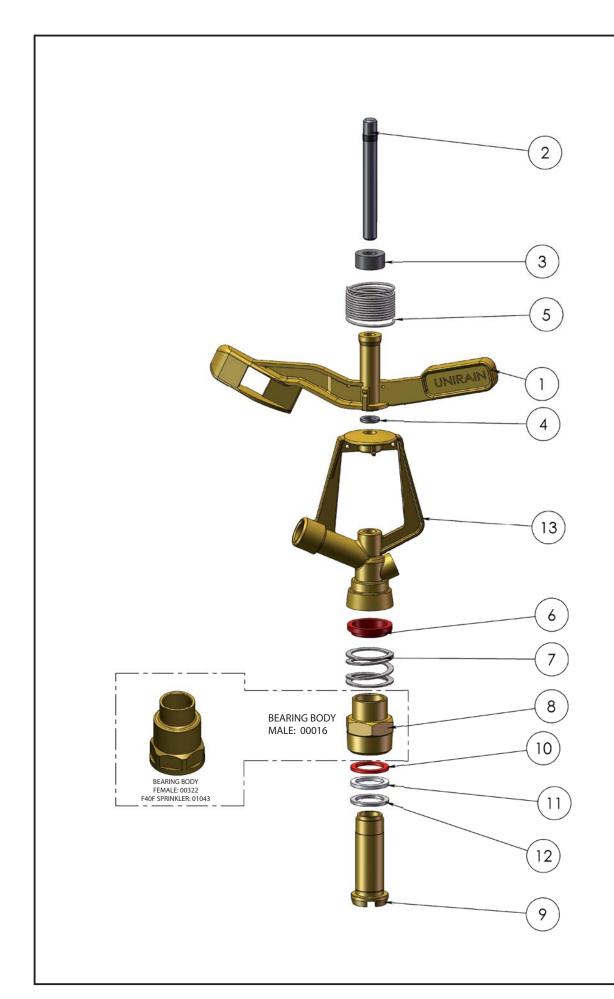
The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES. WHETHER EXPRESS OR IMPLIED. INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.

No agent, employee or representative of the manufacturer is authorised to void, alter or add to the conditions contained in this warranty, nor to take responsibility for, nor to make guarantees not specified herein.

**F40F** 

<sup>(\*)</sup> Standard Nozzle.



				1
COMPONENT NUMBER	PART NUMBER	DESCRIPTION	MATERIAL	QUANTITY
1	00036	F40 Sprinkler Arm	Brass	1
2	06496	Arm Shaft	Stainless Steel	1
3	06494	Arm Hat	PE	1
4	06162	Arm Support Washer	NBR	1
5	06493	F40 Arm Spring	Satinless Steel.	1
6	00255	Bearing Body Lock	High Density PE	1
7	06151	Bearing Spring	Stainless Steel.	1
8	00016	F40 Bearing Body	Brass	1
9	00017	F40 Bearing Shaft	Brass	1
10	00252	Bearing Upper Washer	Anti Hydrolysis PU	1
11	06736	Bearing Intermediate Washer	High Density PE	1
12	07459	Bearing Lower Washer	NBR	1
13	00034	F40 Sprinkler Body	Brass	1

N	O	t	6	S	
	$\mathbf{}$		•	9	

Process/Manufacturer Unirain	Size A3	Material	Code 00151
ASSEMBLY	Scale 1:2	F40 Sprii	nkler
PRIVATE AND CONFIDENTIAL THE INFORMATION CONTAINED ON THIS PLAN	24/06/09		0
IS FOR UNIRAIN USE ONLY. FORBIDDEN CHANGE OR AMENDMENT OF VALUES OF THE PLAN WITHOUT A CONSENT IN WRITTING.	M.R.M.	GÉ UNITE	DID ION PRODUCTS

### **Unirain P35**

### Part Circle Impact Sprinkler Low and Medium Flow Brass



#### **Application**

For agricultural use with medium flows, it has a sand-proof bearing system and can be assembled with one or two nozzles. High resistance with a compact design, its reversing system allows it to be changed in seconds into a full circle sprinkler. Suitable for areas bordering or near elements that should not get wet.

#### **Advantages**

- Made of brass, its arm and body share a wide impact area that provides longer life.
- Its counterweighted arm will provide a steady turn speed.
- Its exclusive reversing system is also sand-proof and can be easily disassembled for cleaning or mainte nance when needed.
- It can be assembled with one or two nozzles.
- Three different vanes can be used to achieve the desired coverage and spray balance according to the available system pressure.

#### **Technical specifications**

 Double use impact sprinkler: 30° to 300° part circle, or full circle.

- 3/4" base thread male.
- Main and secondary nozzle
- 25° nozzle trajectory angle.
- Pressure range: 20-80 PSI
- Nozzle range: 9/64"-7/32"
- Body, arm and bearing assembly made of brass.
- Fulcrum pin and cams, reversing pin and springs made of stainless steel.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for a better identification (brass nozzles to be optionally assembled).
- Backturn lock between the sprinkler body and the bearing spring.



	Pressure (psi)	Nozzles	Vanes
HIGH	60	3PRN ó 3FCN	30 V
MEDIUM	40	3PRN ó 3FCN	WITHOUT VANE
LOW	30	3PRN	30RV
VERY LOW	20	3PRN	30BV





P35	PRESSURE (PSI)	NOZ 9/64" - GPM	ZLES + 3/32" R(ft)	NOZ 5/32" - GPM			ZLES + 3/32" R(ft)	NOZ: 3/16" - GPM		NOZ: 3/16" GPM		NOZ: 13/64" GPM		NOZ 7/32" GPM	
	20					4.96	40.0	5.66	40.7	6.65	40.7	7.47	41.0	8.33	41.3
TWO NOZZLES	25			4.83	41.0	5.55	41.3	6.31	42.7	7.40	42.7	8.30	43.0	9.25	44.0
	30			5.27	42.7	6.07	44.0	6.93	45.6	8.15	45.6	9.15	46.9	10.20	47.9
	35	4.95	41.0	5.71	43.6	6.57	44.9	7.51	46.9	8.83	46.9	9.93	48.6	11.10	49.9
	40	5.29	41.3	6.11	44.0	7.03	45.9	8.03	47.9	9.46	47.9	10.65	49.6	11.90	50.9
	45	5.61	42.0	6.48	44.6	7.46	46.9	8.53	48.9	10.05	48.9	11.30	50.5	12.64	51.8
	50	5.91	42.7	6.82	44.9	7.87	47.6	9.00	49.9	10.60	49.9	11.90	51.5	13.34	53.1
	55	6.20	43.0	7.15	45.6	8.25	47.9	9.45	50.5	11.10	50.5	12.50	51.8	14.00	53.5
	60	6.48	43.6	7.47	45.9	8.60	48.6	9.86	50.9	11.60	50.9	13.00	52.5	14.50	54.4
	65	6.75	44.0	7.78	46.6	8.93	48.9	10.27	51.5	12.10	51.5	13.50	53.1	15.00	54.5
	70	7.00	44.6	8.08	46.9	9.25	49.5	10.66	51.8	12.50	51.8	14.00	53.5	15.45	55.1
	75	7.25	44.9	8.37	47.6	9.56	49.9	11.02	52.5	12.90	52.5	14.40	54.1	15.90	55.4
	80	7.49	45.6	8.65	47.9	9.87	50.5	11.36	53.1	13.25	53.1	14.80	54.5	16.30	56.1

P35P	PRESSURE (PSI)		ZLES 54" R(ft)	NOZ 5/3 GPM	ZLES 32" R(ft)		ZLES 64" R(ft)		ZLES 16" R(ft)	NOZ 13/ GPM		NOZ 7/3 GPM	
	20					3.79	40.0	4.49	40.7	5.31	41.0	6.16	41.3
ONE NOZZLE	25			3.52	41.0	4.24	41.3	5.00	42.7	5.90	43.0	6.85	44.0
AND PLUG	30			3.85	42.7	4.64	44.0	5.50	45.6	6.50	46.9	7.55	47.9
	35	3.40	41.0	4.16	43.6	5.02	44.9	5.96	46.9	7.05	48.6	8.20	49.9
	40	3.64	41.3	4.45	44.0	5.37	45.9	6.38	47.9	7.55	49.6	8.80	50.9
	45	3.86	42.0	4.72	44.6	5.70	46.9	6.78	48.9	8.00	50.5	9.35	51.8
	50	4.07	42.7	4.98	44.9	6.01	47.6	7.16	49.9	8.45	51.5	9.90	53.1
	55	4.27	43.0	5.22	45.6	6.30	47.9	7.52	50.5	8.85	51.8	10.40	53.5
	60	4.46	43.6	5.45	45.9	6.57	48.6	7.85	50.9	9.25	52.5	10.75	54.4
	65	4.65	44.0	5.68	46.6	6.83	48.9	8.18	51.5	9.60	53.1	11.10	54.5
	70	4.83	44.6	5.90	46.9	7.09	49.5	8.50	51.8	9.95	53.5	11.40	55.1
	75	5.00	44.9	6.11	47.6	7.34	49.9	8.80	52.5	10.25	54.1	11.70	55.4
	80	5.17	45.6	6.30	47.9	7.58	50.5	9.09	53.1	10.50	54.5	12.00	56.1

P35V	PRESSURE (PSI)	NOZ: 9/64" - GPM	7	NOZ 5/32" - GPM		NOZ 11/64" GPM		NOZ 3/16" - GPM	ZLES + 3/32" R(ft)	NOZ 3/16" GPM		NOZ 13/64' GPM	ZLES ' + 1/8" R(ft)	NOZ 7/32" GPM	
TWO NOTELES	35	4.95	44.3	5.71	46.3	6.57	47.6	7.51	49.5	8.83	49.5	9.93	51.5	11.10	52.5
TWO NOZZLES	40	5.29	45.6	6.11	46.9	7.03	47.9	8.03	50.5	9.46	50.5	10.65	52.5	11.90	53.1
AND VANE TO	45	5.61	45.9	6.48	47.9	7.46	48.9	8.53	51.8	10.05	51.8	11.30	53.1	12.64	54.1
HIGH RANGE	50	5.91	46.6	6.82	48.9	7.87	49.9	9.00	53.1	10.60	53.1	11.90	53.5	13.34	55.1
	55	6.20	46.9	7.15	50.2	8.25	50.9	9.45	54.1	11.10	54.1	12.50	54.1	14.00	56.1
	60	6.48	47.6	7.47	50.5	8.60	51.5	9.86	54.5	11.60	54.5	13.00	55.1	14.50	57.1
	65	6.75	47.9	7.78	50.9	8.93	51.8	10.27	55.1	12.10	55.1	13.50	56.1	15.00	58.1
	70	7.00	48.6	8.08	51.5	9.25	53.1	10.66	55.4	12.50	55.4	14.00	57.1	15.45	59.1
	75	7.25	48.9	8.37	51.8	9.56	54.1	11.02	56.1	12.90	56.1	14.40	58.1	15.90	60.0
	80	7.49	49.9	8.65	52.5	9.87	55.1	11.36	56.4	13.25	56.4	14.80	59.1	16.30	61.0

P35PV	PRESSURE	NOZ 9/6		NOZ 5/3		NOZ 11/	ZLES 64"	NOZ		NOZ		NOZ	
1 331 V	(PSI)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)
	35	3.40	44.3	4.16	46.3	5.02	47.6	5.96	49.5	7.05	51.5	8.20	52.5
ONE NOZZLE,	40	3.64	45.6	4.45	46.9	5.37	47.9	6.38	50.5	7.55	52.5	8.80	53.1
PLUG AND	45	3.86	45.9	4.72	47.9	5.70	48.9	6.78	51.8	8.00	53.1	9.35	54.1
VANE TO	50	4.07	46.6	4.98	48.9	6.01	49.9	7.16	53.1	8.45	53.5	9.90	55.1
HIGH RANGE	55	4.27	46.9	5.22	50.2	6.30	50.9	7.52	54.1	8.85	54.1	10.40	56.1
	60	4.46	47.6	5.45	50.5	6.57	51.5	7.85	54.5	9.25	55.1	10.75	57.1
	65	4.65	47.9	5.68	50.9	6.83	51.8	8.18	55.1	9.60	56.1	11.10	58.1
	70	4.83	48.6	5.90	51.5	7.09	53.1	8.50	55.4	9.95	57.1	11.40	59.1
	75	5.00	48.9	6.11	51.8	7.34	54.1	8.80	56.1	10.25	58.1	11.70	60.0
	80	5.17	49.9	6.30	52.5	7.58	55.1	9.09	56.4	10.50	59.1	12.00	61.0

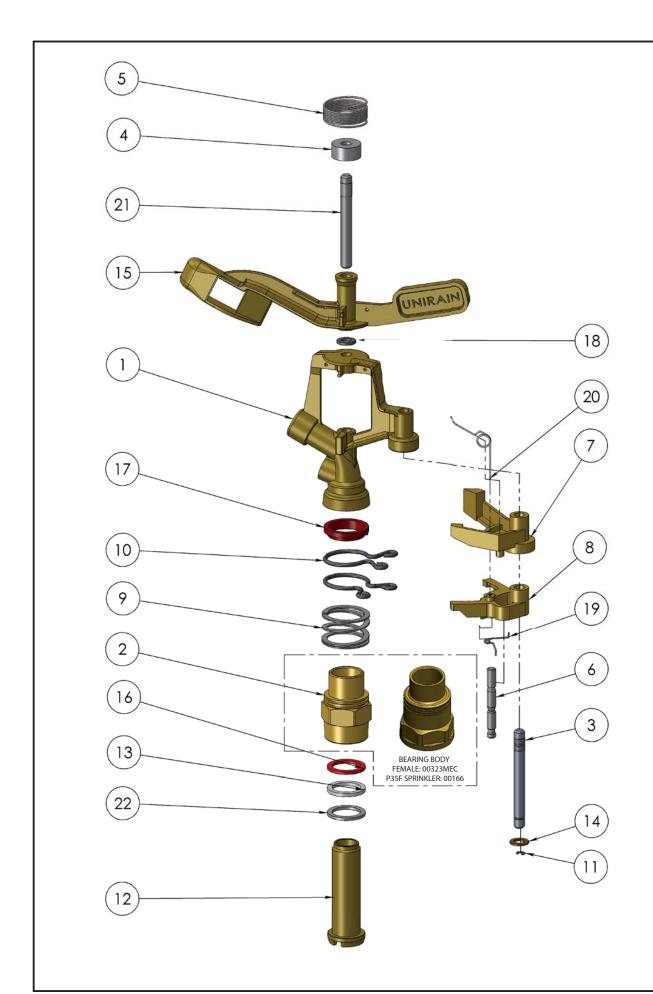
Data obtained under ideal test conditions. It can be affected by wind, bad hydraulic conditions or other adverse factors. Highest point of the jet above the nozzle: 2.8 m (using standard nozzle 5 / 32 "to 35.2 MCA) Throw radius jets achieved with the 0.9m lift. Shaded areas not recommended. (\*) Standard Nozzle.

PSI: Pounds per Square Inch GPM: Gallons Per Minute R(ft): Throw Radius in feet

#### **WARRANTY AND EXCLUSIONS**

The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.



COMPONENT	PART NUMBER	DESCRIPTION	MATERIAL	QUANTITY
NUMBER 1	00813		Brass	1
·		P35 Sprinkler Body		
2	06150	F35 Bearing Body	Brass	1
3	00817	Cams Shaft	Stainless Steel	1
4	06161	Arm Hat	PE	1
5	06183	3/4" Series Arm Spring	Stainless Steel	1
6	00816	P35 Inverter Shaft	Stainless Steel	1
7	00819	P35 Upper Cam	Brass	1
8	00821	P35 Lower Cam	Brass	1
9	06151	Bearing Spring	Stainless Steel	1
10	00815	Inverter Limit Spring	Stainless Steel	2
11	00824	Seal Clip	Stainless Steel	1
12	06147	Bearing Shaft	Brass	1
13	06736	Bearing Intermediate Washer	High Density PE	1
14	00822	Cams Washer	Brass	1
15	00811	P35 Sprinkler Arm	Brass	1
16	00252	Bearing Upper Washer	Anti Hydrolysis PU	1
17	00255	Bearing Body Lock	High Density PE	1
18	06162	Arm Support Washer	NBR	1
19	00823	Inverter Shaft Spring	Stainless Steel	1
20	01687	Inverter Spring	Stainless Steel	1
21	06163	Arm Shaft	Stainless Steel	1
22	07459	Bearing Lower Washer	NBR	1

Process/Manufacturer	Size	Material	Code
UNIRAIN	A3		00165
ONINAIN	Scale	Name	
	1:2	P35 Sprinkler	
PRIVATE AND CONFIDENTIAL THE INFORMATION CONTAINED ON THIS PLAN	25/06/09		
IS FOR UNIRAIN USE ONLY. FORBIDDEN CHANGE OR AMENDMENT	E.G.B.		aim
OF VALUES OF THE PLAN WITHOUT A CONSENT IN WRITTING.		IRAGAT	ION PRODUCTS

### **Unirain F26 - F26W**

## Full Circle Impact Sprinkler Low and Medium flow Plastic



#### **Application**

Full circle impact sprinkler. Output water jet: 23°. Very suitable for for low (F26W) and medium flow (F26), for low growing corps, minimize evaporation losses and wind effect. The F26 model is also recommended for frost-proof irrigation thanks to its configuration and quality of materials. The F26W model is not recommended for frost-proof irrigation.

Sturdy in design, it features significant improvements, notably its durability and its protected bearing sleeve thread, eliminating the possibility of breakage after impact.

Its bearing sleeve thread is protected against breakage after impacts.

The protection of springs reduces the negative effects of ice.

#### **Advantages**

- Sturdy design. Protection cap for shock, dirt and ice.
- Due to an innovative system, the crown that holds the arm spring allows tension variation to adjust the sprinkler to extreme pressure or flow conditions.
- Bearing spring protector guided by the bearing to grant a correct sliding of the sprinkler body on the protector itself.
- Thanks to their bayonet coupling system, it is easy to change and clean the 3Q nozzles.
- Three different vanes can be used to achieve the desired coverage and pulverisation balance according to the available system pressure.

#### **Technical specifications**

- Full circle impact sprinkler.
- Frost protection irrigation (F26W not recommended ).
- 1/2" Male base threaded.
- 23° Nozzle trajectory angle.
- Pressure range: 15-60 PSI.
- Nozzle range: 5/64"-9/64".
- High-resistance thermoplastics protected against UV radiation, and stainless steel.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for a better identification.
- F26W (low pressure model)



#### Typical curves of range and distribution of water depending of the model of vane used









**TECHNICAL SHEET 0907** 



Units Conversion							
FLOW	PRESSURE						
m³/ h (metro cúbico por hora) I / h (litro por hora) GPM (Gallons per Minute) CFM (Cubic Feet per Minute)	mca (metro de columna de agua) PSI (Pounds per Square Inch) kg / cm² (Kilogramo por centimetro cuadrado)						
1 CFM = 1.699 m <sup>3</sup> /h 1 GPM = 227.1192 l/h	1 PSI = 0.70307 mca 1 kg / cm² = 14,22 PSI						

F26	PRESSURE (PSI)	NOZZLE 7/64"  Throw radius depending on vane (ft)							ZZLE 1		ne (ft)	NOZZLE 9/64" Throw radius depending on vane (ft)					
		GPM	30V	without	30RV	30BV	GPM	30V	without	30RV	30BV	GPM	30V	without	30RV	30BV	
	15	1.35	33.8	30.8	29.9	28.2	0.67	34.4	30.8	30.2	27.9	2.65	33.8	30.8	29.9	28.2	
ONE NOZZLE	20	1.56	36.7	32.8	32.2	29.9	0.78	37.7	32.8	32.2	29.5	3.06	36.7	32.8	32.2	29.9	
AND VANE TO	25	1.75	38.7	34.4	33.8	31.2	0.88	40.0	34.4	33.8	30.5	3.43	38.7	34.4	33.8	31.2	
HIGH RANGE	30	1.92	40.0	35.4	35.1	32.2	0.96	41.7	35.8	35.1	31.5	3.76	40.0	35.4	35.1	32.2	
	35	2.07	41.0	36.4	35.8	32.8	1.04	42.7	36.4	35.8	32.2	4.07	41.0	36.4	35.8	32.8	
	40	2.22	42.0	37.1	36.7	33.5	1.11	44.0	37.4	36.7	32.8	4.36	42.0	37.1	36.7	33.5	
	45	2.35	42.7	37.4	37.1	33.8	1.18	44.6	37.7	37.1	33.1	4.63	42.7	37.4	37.1	33.8	
	50	2.48	43.3	37.7	37.4	34.1	1.25	45.3	38.4	37.1	33.5	4.88	43.3	37.7	37.4	34.1	
	55	2.60	43.6	38.4	38.1	34.4	1.31	45.9	38.7	38.1	33.8	5.12	43.6	38.4	38.1	34.4	
	60	2.72	44.3	38.7	38.4	34.8	1.37	46.6	39.4	38.7	34.1	5.35	44.3	38.7	38.4	34.8	

F26W	PRESSURE (PSI)	Throv		ZLE 5		ne (ft)	NOZZLE 3/32" Throw radius depending on vane (ft)							
		GPM	30V	without	30RV	30BV	GPM	30V	without	30RV	30BV			
	15	0.67					1.00	33.1	30.8	29.5	28.2			
ONE NOZZLE	20	0.78	35.4	32.8	31.8	30.8	1.15	36.1	32.8	31.8	30.5			
AND VANE TO	25	0.88	37.1	34.1	33.1	32.2	1.29	38.1	34.5	33.5	32.2			
HIGH RANGE	30	0.96	38.4	35.1	34.4	32.8	1.41	39.4	35.4	34.8	32.8			
	35	1.04	39.0	35.8	35.1	33.5	1.53	40.4	36.1	35.8	33.5			
	40	1.11	39.7	36.4	35.8	34.1	1.63	41.0	36.7	36.4	34.1			
	45	1.18	40.4	36.7	36.1	34.4	1.73	41.3	37.1	36.7	34.4			
	50	1.25					1.83	41.7	37.4	37.1	34.5			
	55	1.31					1.92	42.0	37.7	37.7	34.8			
	60	1.37					2.00							

Shaded areas not recommended to obtain a right distribution.

Throw distance obtained with sprinkler on a 2.95 ft lift.

Tested under ideal conditions. Results can be affected by wind, bad hydraulic conditions or any other adverse factors.

Three different kinds of vanes can be used to achieve the desired throw radius and pulverisation balance depending on the available system pressure. This Unirain exclusive system provides high uniformity.

(	A S	Vane 30V (white)	It increases the sprinkler coverage radius to its maximum. To obtain a good grade of pulverisation, the system pressure must be high (60 PSI).
		Without vane	Using the nozzle without any vane, the throw radius will be slightly reduced compared to the previous option, but it will improve the water distribution. Recommended for medium system pressures (40 PSI).
		Vane 30RV (Red)	Its inner structure creates a slight rotation inside the nozzle, obtaining a good pulverisation grade, but reducing the throw distance. To be used under low pressure conditions (30 PSI).

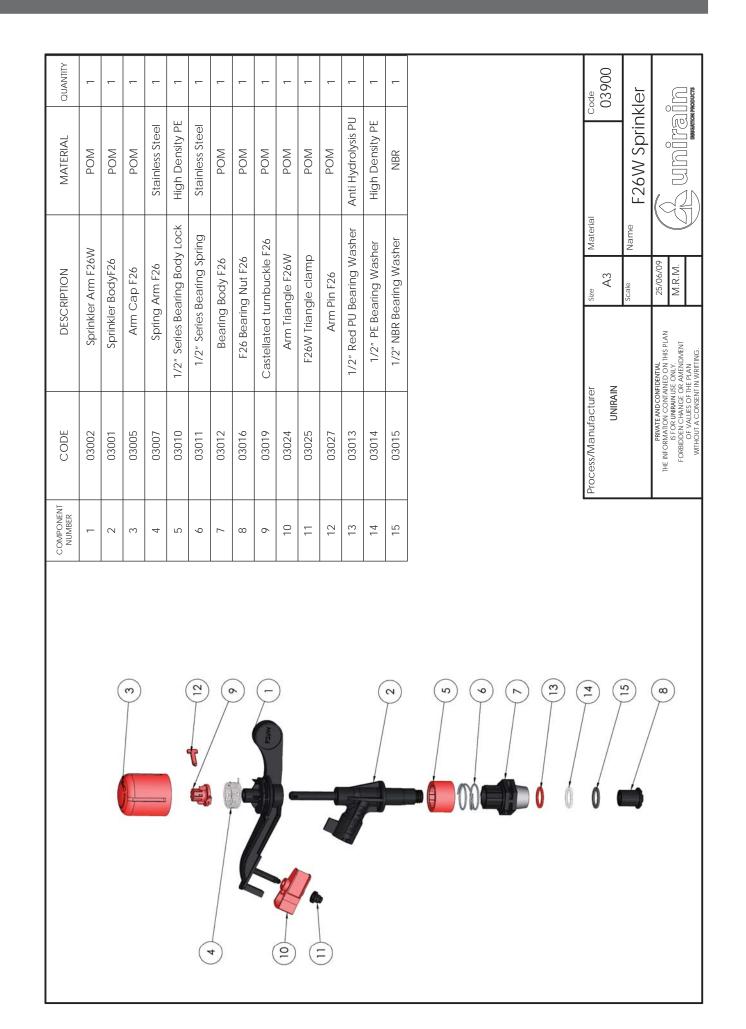
This combination will achieve the highest pulverisation grade , but will also provide the minimum coverage radius. It's used under extreme low pressures (20 PSI).

#### **WARRANTY AND EXCLUSIONS**

Vane 30BV (Blue)

The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, only when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.



## **Unirain F2614 - F2614W**

## Full Circle Impact Sprinkler Low and Medium flow Plastic



#### **Application**

Suitable for low and medium flow irrigation under trees.

Its lower jet radius doesn't directly reach foliage, avoiding fruit deterioration. Indicated also for nurseries and greenhouses.

Sturdy in design, it features significant improvements, notably its durability and its protected bearing sleeve thread, eliminating the possibility of breakage after impact.

Highly recommended for banana plantations for its angle of incidence, anti-UV treatment for exposed parts, protection of delicate parts and accessories, in particular the feed-tube. available in three formats and suitable for rapid installation anywhere.

#### **Advantages**

- Sturdy design. Protective cap against impact and dirt.
- Due to an innovative system, the crown that holds the arm spring allows tension variation to adjust the sprinkler performance to extreme pressure or flow conditions.
- Compression spring protector guided by the bearing to ensure correct sliding between the protector and the sprinkler body.
- Thanks to their bayonet coupling system, the nozzles are easy to change and clean.
- Three different types of water guide vane can be used to achieve the desired coverage and spray balance according to the available pressure.

#### **Technical specifications**

- Full circle impact sprinkler
- 1/2" male thread.
- 14° Nozzle trajectory angle
- Pressure range: 15-60 PSI
- Nozzle range: 5/64"-9/64"
- High-resistance thermoplastics protected against UV radiation, and stainless steel.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for a better identification.
- F2614W (low pressure model)



#### Typical curves of range and distribution of water depending on the model of vane used









**TECHNICAL SHEET 0908** 



Units Co	onversion
FLOW	PRESSURE
m³ / h (metro cúbico por hora) I / h (litro por hora) GPM (Gallons per Minute) CFM (Cubic Feet per Minute)	mca (metro de columna de agua) PSI (Pounds per Square Inch) kg / cm² (Kilogramo por centimetro cuadrado)
1 CFM = 1.699 m <sup>3</sup> /h 1 GPM = 227.1192 l/h	1 PSI = 0.70307 mca 1 kg / cm² = 14,22 PSI

F2614	PRESSURE (PSI)	NOZZLE 7/64"  Throw radius depending on vane (ft)					NOZZLE 1/8" Throw radius depending on vane (ft)					NOZZLE 9/64" Throw radius depending on vane (ft)					
		GPM	30V	without	30RV	30BV	GPM	30V	without	30RV	30BV	GPM	30V	without	30RV	30BV	
	15	1.35	28.5	26.2	25.3	24.0	1.75	29.2	26.2	25.6	23.6	2.19	30.2	27.2	26.2	23.6	
ONE NOZZLE	20	1.56	31.5	28.2	27.6	25.6	2.06	32.5	28.2	27.9	25.6	2.54	33.5	29.2	28.5	25.3	
AND VANE TO	25	1.75	33.8	30.2	29.5	27.2	2.27	35.1	30.2	29.5	26.6	2.84	36.4	30.8	30.5	26.6	
HIGH RANGE	30	1.92	35.8	31.5	31.2	28.5	2.48	37.1	31.8	31.2	28.2	3.11	38.7	32.5	31.8	27.9	
	35	2.07	37.1	32.8	32.5	29.5	2.68	38.7	32.8	32.5	29.2	3.40	40.7	33.8	33.1	28.9	
	40	2.22	38.7	34.1	33.8	30.8	2.88	40.4	34.4	33.8	30.2	3.59	42.3	35.1	34.8	29.9	
	45	2.35	39.7	34.8	34.4	31.5	3.05	41.7	35.1	34.4	30.8	3.81	43.3	35.8	35.1	30.2	
	50	2.48	40.4	35.1	34.8	31.8	3.22	42.3	35.8	35.1	31.2	4.02	44.3	36.4	35.4	30.5	
	55	2.60	41.0	36.1	35.8	32.5	3.38	43.3	36.1	36.1	31.8	4.22					
	60	2.72	42.0	36.7	36.4	33.1	3.53	44.3	37.4	36.7	32.5	4.41					

F2614W	PRESSURE (PSI)	Throv		ZLE 5		ne (ft)	NOZZLE 3/32" Throw radius depending on vane (ft)							
		GPM	30V	without	30RV	30BV	GPM	30V	without	30RV	30BV			
	15	0.67					1.00	28.2	26.2	24.9	24.0			
ONE NOZZLE	20	0.78	30.2	27.9	27.2	26.2	1.15	30.8	28.2	27.2	26.2			
AND VANE TO	25	0.88	32.2	29.5	28.9	27.9	1.29	33.1	30.2	29.2	28.2			
HIGH RANGE	30	0.96	33.8	31.2	30.5	28.9	1.41	35.1	31.5	30.8	29.2			
	35	1.04	35.1	32.2	31.5	30.2	1.53	36.4	32.5	32.2	30.2			
	40	1.11	36.1	33.1	32.5	31.2	1.63	37.7	33.8	33.5	31.2			
	45	1.18	37.4	34.1	33.5	31.8	1.73	38.4	34.4	34.1	32.2			
	50	1.25					1.83	39.4	35.4	35.1	32.5			
	55	1.31					1.92	40.0	35.8	35.8	33.1			
	60	1.37					2.00							

Shaded areas not recommended to obtain a correct distribution.

Throw distance obtained with sprinkler on a 9.25 ft lift.

Tested under ideal conditions. Results can be affected by wind, bad hydraulic conditions or any other adverse factors.

Every model of Unirain sprinkler allows using three different kinds of vanes to achieve the desired throw radius and pulverisation balance depending on the available system pressure. This system, exclusively provided by Unirain, allows obtaining high uniformity.

Vane 30V (white)	It increases the sprinkler coverage radius to its maximum. To obtain a good grade of pulverisation, the system pressure must be high (from 60 PSI).
Without vane	Using the nozzle without any vane, the throw radius will be slightly reduced compared to the previous that it will improve the water distribution. Recommended for medium system pressures (40.P)

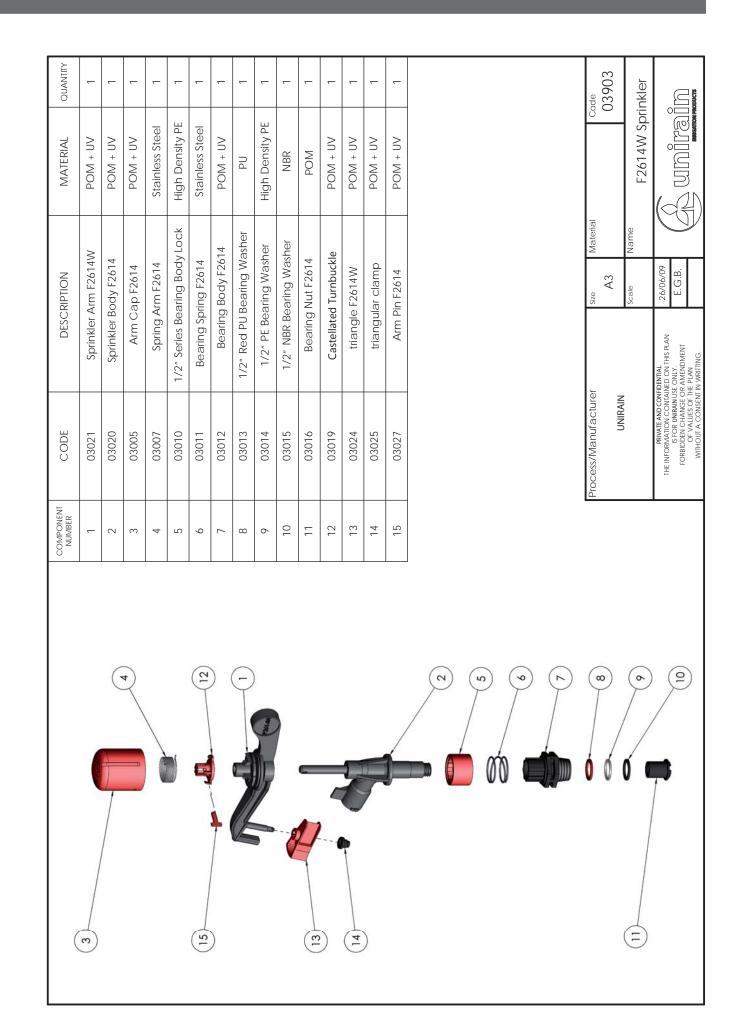
Vane 30RV (Red) Its inner structure creates a slight rotation inside the nozzle, obtaining a good pulverisation grade, but reducing the throw distance. To be used under low pressure conditions (30 PSI).

Vane 30BV (Blue) This combination will achieve the highest pulverisation grade , but will also provide the minimum coverage radius. It's used under extreme low pressures (20 PSI).

#### **WARRANTY AND EXCLUSIONS**

The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, only when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.



### Unirain F44 - F44F

### **Full Circle Impact Sprinkler** Low and Medium flow Plastic



#### **Application**

For general agricultural use on movable or fixed solid sets. This model is very suitable where working conditions are specially hard for plastic sprinklers. Balanced and strong sprinkler; Its swing arm is made of a material different from the body and the bearing, which, along with the counterweights, provides homogeneous and smooth circular movement.

#### **Advantages**

- Very strong sprinkler, reinforcing ribs on the body, a fibreglass added polyamide arm and bearings made of a mixture of acetal resins turning on the stainless steel pin.
- Sand-proof bearing set.
- Can be assembled with one or two nozzles. Sprinkler body adapted to two different model nozzle models: 3Q Bayonet & thread nozzle.
- This model allows using three different type of vane to achieve the desired coverage and spray balance according to the available system pressure.

#### **Technical specifications**

- Full circle impact sprinkler.
- Male or female(F44F) 3/4" base thread.
- Dual nozzle, main and secondary nozzle.
- 23° nozzle trajectory angle.
- Pressure range: 20-80 PSI.
- Nozzle range: 1/8"-7/32".
- Acetal resin body and bearing. Polyamide fibreglass arm.
- Protective treatment against UV radiation.
- Fulcrum pin and springs made of stainless steel.
- Expanded fulcrum pin upper end diameter for a better fitting into the sprinkler body.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for clear identification.
- Backturn lock between the sprinkler body and the compresion spring,
- Acetal resins bearing in arm.



**TECHNICAL SHEET 0909** 

	Pressure (psi)	Nozzles	Vanes
HIGH	60	3PRN ó 3FCN	30 V
MEDIUM	40	3PRN ó 3FCN	WITHOUT VANE
LOW	30	3PRN	30RV
VERY LOW	20	3PRN	30BV





F44	PRESSURE (PSI)	NOZ 1/8"+ GPM		NOZ 9/64" - GPM	ZLES + 3/32" R(ft)	5/32"	NOZZLES 5/32" + 3/32" GPM (*) R(ft)		NOZZLES 11/64" + 3/32" GPM R(ft)		NOZZLES 3/16" + 3/32" GPM R(ft)		ZLES + 1/8" R(ft)	NOZZLES 13/64" + 1/8" GPM R(ft)		NOZZLES 7/32" + 1/8" GPM R(ft	
	20	3.18	38.1	3.74	39.0	4.31	40.7	4.96	42.0	5.66	43.3	6.65	43.3	7.47	44.9	8.33	45.9
TWO NOZZLES	25	3.55	39.0	4.18	40.4	4.83	42.7	5.55	44.0	6.31	45.6	7.40	45.6	8.30	46.9	9.25	48.6
	30	3.90	40.4	4.58	42.7	5.28	44.6	6.07	45.9	6.93	47.6	8.15	47.6	9.15	48.9	10.20	50.5
	35	4.23	41.3	4.95	43.6	5.71	45.9	6.57	47.6	7.51	48.9	8.83	48.9	9.93	50.5	11.10	51.8
	40	4.53	42.0	5.29	44.6	6.11	46.9	7.03	48.6	8.03	49.9	9.46	49.9	10.65	51.5	11.90	53.1
	45	4.81	42.7	5.61	44.9	6.48	47.6	7.46	49.5	8.53	50.9	10.05	50.9	11.30	52.5	12.65	54.1
	50	5.07	43.0	5.91	45.6	6.82	47.9	7.87	49.9	9.00	51.8	10.60	51.8	11.90	53.5	13.35	55.1
	55	5.32	43.6	6.20	45.9	7.15	48.6	8.25	50.5	9.45	52.5	11.10	52.5	12.50	54.5	14.00	56.1
	60	5.56	44.0	6.48	46.6	7.47	48.9	8.60	50.9	9.86	53.1	11.60	53.1	13.00	55.1	14.50	56.4
	65	5.79	44.6	6.75	46.9	7.78	49.5	8.93	51.5	10.27	53.5	12.10	53.5	13.50	55.4	15.00	57.1
	70	6.01	44.9	7.00	47.6	8.08	49.9	9.25	51.8	10.66	54.1	12.50	54.1	14.00	56.1	15.45	57.4
	75	6.22	45.6	7.25	47.9	8.37	50.5	9.56	52.5	11.02	54.5	12.90	54.5	14.40	56.4	15.90	58.1
	80	6.42	45.9	7.49	48.6	8.65	50.9	9.87	53.1	11.36	55.1	13.25	55.1	14.80	57.1	16.30	58.4

F44P	PRESSURE	1/	NOZZLES 1/8"		NOZZLES 9/64"		NOZZLES 5/32"		NOZZLES 11/64"		NOZZLES 3/16"		NOZZLES 13/64"		ZLES 32"
	(PSI)	GPM	R(ft)	GPM	R(ft)	GPM (	*) R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)
	20	2.02	38.1	2.57	39.0	3.14	40.7	3.79	42.0	4.49	43.3	5.31	44.9	6.16	45.9
ONE NOZZLE	25	2.25	39.0	2.88	40.4	3.52	42.7	4.24	44.0	5.00	45.6	5.90	46.9	6.85	48.6
AND PLUG	30	2.47	40.4	3.15	42.7	3.85	44.6	4.64	45.9	5.50	47.6	6.50	48.9	7.55	50.5
	35	2.68	41.3	3.40	43.6	4.16	45.9	5.02	47.6	5.96	48.9	7.05	50.5	8.20	51.8
	40	2.87	42.0	3.64	44.6	4.45	46.9	5.37	48.6	6.38	49.9	7.55	51.5	8.80	53.1
	45	3.05	42.7	3.86	44.9	4.72	47.6	5.70	49.5	6.78	50.9	8.00	52.5	9.35	54.1
	50	3.22	43.0	4.07	44.9	4.98	47.9	6.01	49.9	7.16	51.8	8.45	53.5	9.90	55.1
	55	3.38	43.6	4.27	45.9	5.22	48.6	6.30	50.5	7.52	52.5	8.85	54.5	10.40	56.1
	60	3.53	44.0	4.46	46.6	5.45	48.9	6.57	50.9	7.85	53.1	9.25	55.1	10.75	56.4
	65	3.68	44.6	4.65	46.9	5.68	49.5	6.83	51.5	8.18	53.5	9.60	55.4	11.10	57.1
	70	3.82	44.9	4.83	47.6	5.90	49.9	7.09	51.8	8.50	54.1	9.95	56.1	11.40	57.4
	75	3.96	45.6	5.00	47.9	6.11	50.5	7.34	52.5	8.80	54.5	10.25	56.4	11.70	58.1
	80	4.09	45.9	5.17	48.6	6.30	50.9	7.58	53.1	9.09	55.1	10.50	57.1	12.00	58.4

F44V	PRESSURE (PSI)	NOZ 1/8"+ GPM		NOZ 9/64" - GPM		NOZ 5/32" · GPM(	+ 3/32″	NOZ 11/64" GPM		NOZ: 3/16" - GPM		NOZ: 3/16" GPM		NOZ: 13/64" GPM		NOZ: 7/32" GPM	
TIMO NOTTI EC	35	4.23	42.3	4.95	44.3	5.71	46.6	6.57	48.2	7.51	50.2	8.83	50.2	9.93	52.2	11.10	54.1
TWO NOZZLES,	40	4.53	44.0	5.29	46.6	6.11	49.5	7.03	50.9	8.03	52.5	9.46	52.5	10.65	54.1	11.90	55.4
AND VANE TO	45	4.81	44.6	5.61	46.9	6.48	49.9	7.46	51.8	8.53	53.5	10.05	53.5	11.30	55.1	12.65	57.1
HIGH RANGE	50	5.07	44.9	5.91	47.6	6.82	50.5	7.87	52.5	9.00	54.1	10.60	54.1	11.90	56.1	13.35	58.4
	55	5.32	45.6	6.20	47.9	7.15	50.9	8.25	53.1	9.45	54.5	11.10	54.5	12.50	57.1	14.00	59.4
	60	5.56	45.9	6.48	48.6	7.47	51.5	8.60	53.5	9.86	55.1	11.60	55.1	13.00	57.4	14.50	60.4
	65	5.79	46.6	6.75	48.9	7.78	51.8	8.93	54.1	10.27	55.4	12.10	55.4	13.50	58.1	15.00	61.0
	70	6.01	46.9	7.00	49.5	8.08	52.5	9.25	54.5	10.66	56.1	12.50	56.1	14.00	58.4	15.45	61.4
	75	6.22	47.6	7.25	49.9	8.37	53.1	9.56	55.1	11.02	56.4	12.90	56.4	14.40	59.1	15.90	62.0
	80	6.42	47.9	7.49	50.5	8.65	53.5	9.87	55.4	11.36	57.1	13.25	57.1	14.80	59.4	16.30	62.7

F44PV	PRESSURE (PSI)	NOZ 1/ GPM		NOZ 9/6 GPM		NOZ 5/3 GPM(	32"	NOZ 11/ GPM	ZLES 64" R(ft)	NOZ 3/1 GPM		NOZ 13/ GPM	ZLES 64" R(ft)	NOZ 7/3 GPM	
			K(It)		K(IC)	GFW (	7 K(IC)		K(IC)		N(IC)	GFW	K(IC)	GFM	K(It)
ONE NOTTLE	35	2.68	42.3	3.40	44.3	4.16	46.6	5.02	48.2	5.96	50.2	7.05	52.2	8.20	54.1
ONE NOZZLE,	40	2.87	44.0	3.64	46.6	4.45	49.5	5.37	50.9	6.38	52.5	7.55	54.1	8.80	55.4
PLUG AND	45	3.05	44.6	3.86	46.9	4.72	49.9	5.70	51.8	6.78	53.5	8.00	55.1	9.35	57.1
VANE TO	50	3.22	44.9	4.07	47.6	4.98	50.5	6.01	52.5	7.16	54.1	8.45	56.1	9.90	58.4
HIGH RANGE	55	3.38	45.6	4.27	47.9	5.22	50.9	6.30	53.1	7.52	54.5	8.85	57.1	10.40	59.4
	60	3.53	45.9	4.46	48.6	5.45	51.5	6.57	53.5	7.85	55.1	9.25	57.4	10.75	60.4
	65	3.68	46.6	4.65	48.9	5.68	51.8	6.83	54.1	8.18	55.4	9.60	58.1	11.10	61.0
	70	3.82	46.9	4.83	49.5	5.90	52.5	7.09	54.5	8.50	56.1	9.95	58.4	11.40	61.4
	75	3.96	47.6	5.00	49.9	6.11	53.1	7.34	55.1	8.80	56.4	10.25	59.1	11.70	62.0
	80	4.09	47.9	5.17	50.5	6.30	53.5	7.58	55.4	9.09	57.1	10.50	59.4	12.00	62.7

Data obtained under ideal test conditions. It can be affected by wind, bad hydraulic conditions or other adverse factors. Highest point of the jet above the nozzle: 2.8 m (using standard nozzle 11/64" to 35.2 MCA) Throw radius jets achieved with the 0.9m lift. Shaded areas not recommended.

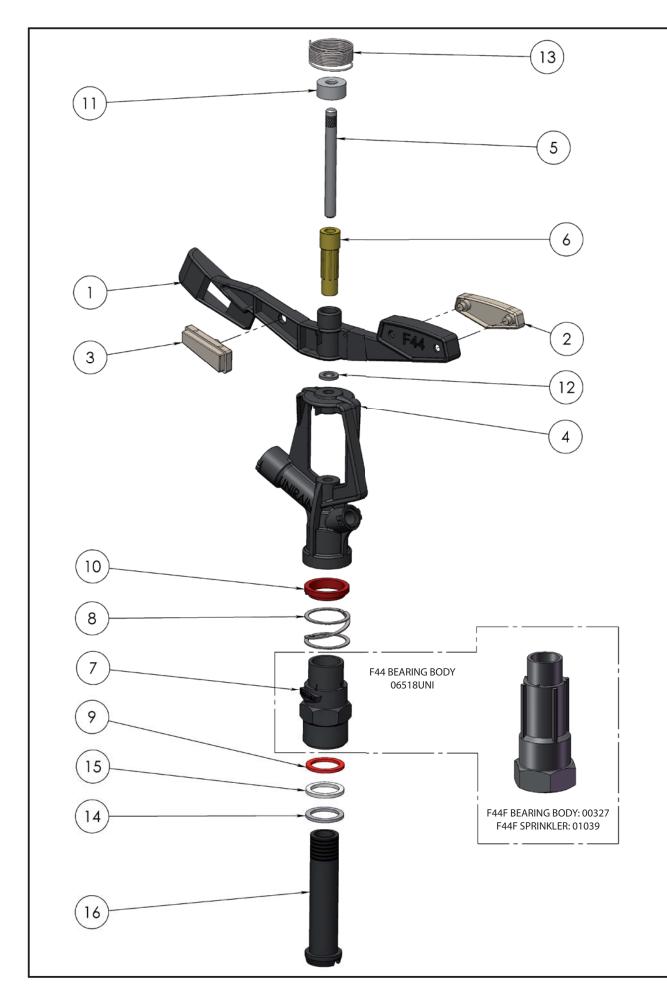
Due to the large number of possible combinations of nozzles, only the most common ones are represented. To find information relating to other combinations, please advise factory.

PSI: Pounds per Square Inch GPM: Gallons Per Minute R(ft): Throw Radius in feet

#### WARRANTY AND EXCLUSIONS

The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, only when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES. WHETHER EXPRESS OR IMPLIED. INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.



COMPONENT NUMBER	CODE	DESCRIPTION	MATERIAL	QUANTITY
1	06514	Swing Arm F44	PA6 + Fiber Glass	1
2	06516UNI	Unirain Back Counterweight	ZAMAK	1
3	06515	Front Counterweight	ZAMAK	1
4	06513UNI	Sprinkler Body F44	POM	1
5	06519	Swing Arm Pin	Stainless Steel	1
6	06636	Swing Arm Bearing	POM	1
7	06518UNI	Bearing body F44	POM	1
8	00018	Bearing Spring	Stainless Steel	1
9	00252	Bearing Upper Washer	Anti Hydrolisis PU	1
10	00255	Bearing Body Lock	Anti Hydrolisis PU	1
11	06161	Swing Arm Cap	PE	1
12	06162	Swing Arm Support Washer	NBR	1
13	06183	Arm Spring Series 3/4"	Stainless Steel	1
14	07459	Bearing Lower Washer	NBR	1
15	06736	Bearing Intermediate Washer	High Density PE	1
16	06517	Bearing Pin P45 / F44	POM	1
16	U6517	Bearing Pin P45 / F44	POM	

Notes

Process/Manufacturer	Size	Material	Code
UNIRAIN	A3		00094UNI
OTANO MIX	Scale	Name	
	1:2	UNIRAIN F44 S <sub>k</sub>	orinkler
PRIVATE AND CONFIDENTIAL THE INFORMATION CONTAINED ON THIS PLAN	24/06/09		0
IS FOR UNIRAIN USE ONLY. FORBIDDEN CHANGE OR AMENDMENT	E.G.B		aim
OF VALUES OF THE PLAN WITHOUT A CONSENT IN WRITTING.		IRRIGAT	ION PRODUCTS

### **Unirain F46L-F46**

### **Full Circle Impact Sprinkler** Low and Medium flow Plastic



#### Application

Designed for general agricultural use and, because of its low cost, it is particularly suitable for solid sets where the amount of sprinklers per hectare is high.

#### **Advantages**

- It features a sand-proof bearing system and reinforcing ribs on its body.
- Perfect inner finishing.
- It can be assembled with one or two nozzles. Sprinkler body accepts two different model nozzles: 3Q Bayonet & thread nozzle.
- This model allows using three different vanes can be used to achieve the desired coverage and spray balance according to the available system pressure.

#### **Technical specification**

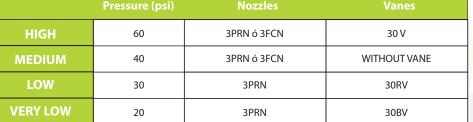
- Full circle impact sprinkler.
- 3/4" base thread male or female(F46F)
- Main and secondary nozzle
- 23° nozzle trajectory angle
- Pressure range: 20-80 PSI
- Nozzle range: 7/64"-7/32"
- Made of acetal resin with UV-protection treatment.
- Fulcrum pin and springs made of stainless steel.
- Expanded fulcrum pin upper end diameter for a better fitting into the sprinkler body.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for a better identification.
- Backturn lock between the sprinkler body and the bearing spring.
- F46L (Low flow model)



**F46F** 

**TECHNICAL SHEET 0911** 

	Pressure (psi)	Nozzles	Vanes
HIGH	60	3PRN ó 3FCN	30 V
MEDIUM	40	3PRN ó 3FCN	WITHOUT VANE
LOW	30	3PRN	30RV
VERY LOW	20	3PRN	30BV





F46L F46	PRESSURE (PSI)	NOZ 7/64" - GPM	-	NOZ 1/8"+ GPM		NOZ. 9/64" - GPM		5/32"	ZLES + 3/32" (*) R(ft)	NOZ 11/64" GPM		NOZ: 3/16" + GPM		NOZ 3/16" GPM		NOZ: 13/64" GPM		NOZ: 7/32" GPM	
	20	2.71	37.1	3.18	38.1	3.74	39.0	4.31	40.7	4.96	42.0	5.66	43.3	6.65	43.3	7.47	44.9	8.33	45.9
TWO NOZZLES	25	3.03	38.1	3.55	39.0	4.18	40.4	4.83	42.7	5.55	44.0	6.31	45.6	7.40	45.6	8.30	46.9	9.25	48.6
	30	3.32	38.4	3.90	40.4	4.58	42.7	5.28	44.6	6.07	45.9	6.93	47.6	8.15	47.6	9.15	48.9	10.20	50.5
	35	3.60	39.0	4.23	41.3	4.95	43.6	5.71	45.9	6.57	47.6	7.51	48.9	8.83	48.9	9.93	50.5	11.10	51.8
	40	3.85	39.4	4.53	42.0	5.29	44.6	6.11	46.9	7.03	48.6	8.03	49.9	9.46	49.9	10.65	51.5	11.90	53.1
	45	4.08	40.0	4.81	42.7	5.61	44.9	6.48	47.6	7.46	49.5	8.53	50.9	10.05	50.9	11.30	52.5	12.65	54.1
	50	4.30	40.4	5.07	43.0	5.91	45.6	6.82	47.9	7.87	49.9	9.00	51.8	10.60	51.8	11.90	53.5	13.35	55.1
	55	4.51	41.0	5.32	43.6	6.20	45.9	7.15	48.6	8.25	50.5	9.45	52.5	11.10	52.5	12.50	54.5	14.00	56.1
	60	4.71	41.3	5.56	44.0	6.48	46.6	7.47	48.9	8.60	50.9	9.86	53.1	11.60	53.1	13.00	55.1	14.50	56.4
	65	4.90	42.0	5.79	44.6	6.75	46.9	7.78	49.5	8.93	51.5	10.27	53.5	12.10	53.5	13.50	55.4	15.00	57.1
	70	5.09	42.7	6.01	44.9	7.00	47.6	8.08	49.9	9.25	51.8	10.66	54.1	12.50	54.1	14.00	56.1	15.45	57.4
	75	5.26	43.0	6.22	45.6	7.25	47.9	8.37	50.5	9.56	52.5	11.02	54.5	12.90	54.5	14.40	56.4	15.90	58.1
	80	5.43	43.0	6.42	45.9	7.49	48.6	8.65	50.9	9.87	53.1	11.36	55.1	13.25	55.1	14.80	57.1	16.30	58.4

F46LP F46P	PRESSURE (PSI)	NOZ 7/6 GPM	ZLES 54" R(ft)	NOZ 1/3 GPM			ZLES 64" R(ft)	5/3	ZLES 32" (*) R(ft)	NOZ 11/ GPM		NOZ 3/1 GPM		NOZ: 13/ GPM		NOZ 7/3 GPM	
	20	1.54	37.1	2.02	38.1	2.57	39.0	3.14	40.7	3.79	42.0	4.49	43.3	5.31	44.9	6,16	45.9
ONE NOZZLE	25	1.73	38.1	2.25	39.0	2.88	40.4	3.52	42.7	4.24	44.0	5.00	45.6	5.90	46.9	6.85	48.6
AND PLUG	30	1.89	38.4	2.47	40.4	3.15	42.7	3.85	44.6	4.64	45.9	5.50	47.6	6.50	48.9	7.55	50.5
	35	2.05	39.0	2.68	41.3	3.40	43.6	4.16	45.9	5.02	47.6	5.96	48.9	7.05	50.5	8.20	51.8
	40	2.19	39.4	2.87	42.0	3.64	44.6	4.45	46.9	5.37	48.6	6.38	49.9	7.55	51.5	8.80	53.1
	45	2.32	40.0	3.05	42.7	3.86	44.9	4.72	47.6	5.70	49.5	6.78	50.9	8.00	52.5	9.35	54.1
	50	2.45	40.4	3.22	43.0	4.07	44.9	4.98	47.9	6.01	49.9	7.16	51.8	8.45	53.5	9.90	55.1
	55	2.57	41.0	3.38	43.6	4.27	45.9	5.22	48.6	6.30	50.5	7.52	52.5	8.85	54.5	10.40	56.1
	60	2.68	41.3	3.53	44.0	4.46	46.6	5.45	48.9	6.57	50.9	7.85	53.1	9.25	55.1	10.75	56.4
	65	2.79	42.0	3.68	44.6	4.65	46.9	5.68	49.5	6.83	51.5	8.18	53.5	9.60	55.4	11.10	57.1
	70	2.90	42.7	3.82	44.9	4.83	47.6	5.90	49.9	7.09	51.8	8.50	54.1	9.95	56.1	11.40	57.4
	75	3.00	43.0	3.96	45.6	5.00	47.9	6.11	50.5	7.34	52.5	8.80	54.5	10.25	56.4	11.70	58.1
	80	3.10	43.0	4.09	45.9	5.17	48.6	6.30	50.9	7.58	53.1	9.09	55.1	10.50	57.1	12.00	58.4

F46LV F46V	PRESSURE (PSI)	NOZ 7/64" - GPM	ZLES + 3/32" R(ft)	NOZ 1/8"+ GPM		NOZ 9/64" - GPM		5/32"	ZLES + 3/32" (*) R(ft)	NOZ 11/64" GPM	ZLES + 3/32" R(ft)	NOZ: 3/16" - GPM		NOZ 3/16" GPM	ZLES + 1/8" R(ft)	NOZ: 13/64" GPM		NOZ2 7/32" - GPM	
TIMO NOTTI EC	35	3.60	40.4	4.23	42.3	4.95	44.3	5.71	46.6	6.57	48.2	7.51	50.2	8.83	50.2	9.93	52.2	11.10	54.1
TWO NOZZLES,	40	3.85	41.3	4.53	44.0	5.29	46.6	6.11	49.5	7.03	50.9	8.03	52.5	9.46	52.5	10.65	54.1	11.90	55.4
AND VANE TO	45	4.08	42.0	4.81	44.6	5.61	46.9	6.48	49.9	7.46	51.8	8.53	53.5	10.05	53.5	11.30	55.1	12.65	57.1
HIGH RANGE	50	4.30	42.7	5.07	44.9	5.91	47.6	6.82	50.5	7.87	52.5	9.00	54.1	10.60	54.1	11.90	56.1	13.35	58.4
	55	4.51	43.0	5.32	45.6	6.20	47.9	7.15	50.9	8.25	53.1	9.45	54.5	11.10	54.5	12.50	57.1	14.00	59.4
	60	4.71	43.6	5.56	45.9	6.48	48.6	7.47	51.5	8.60	53.5	9.86	55.1	11.60	55.1	13.00	57.4	14.50	60.4
	65	4.90	44.0	5.79	46.6	6.75	48.9	7.78	51.8	8.93	54.1	10.27	55.4	12.10	55.4	13.50	58.1	15.00	61.0
	70	5.09	44.6	6.01	46.9	7.00	49.5	8.08	52.5	9.25	54.5	10.66	56.1	12.50	56.1	14.00	58.4	15.45	61.4
	75	5.26	44.9	6.22	47.6	7.25	49.9	8.37	53.1	9.56	55.1	11.02	56.4	12.90	56.4	14.40	59.1	15.90	62.0
	80	5.43	45.6	6.42	47.9	7.49	50.5	8.65	53.5	9.87	55.4	11.36	57.1	13.25	57.1	14.80	59.4	16.30	62.7

F46LPV F46PV	PRESSURE (PSI)	NOZ 7/0 GPM		NOZ 1/ GPM	ZLES 8" R(ft)		ZLES 64" R(ft)	5/3	ZLES 32" (*) R(ft)	NOZ 11/ GPM	ZLES 64" R(ft)	NOZ 3/1 GPM	ZLES 16" R(ft)	NOZ 13/ GPM		NOZ 7/3 GPM	
	35	2.05	40.4	2.68	42.3	3.40	44.3	4.16	46.6	5.02	48.2	5.96	50.2	7.05	52.2	8.20	54.1
ONE NOZZLE,	40	2.19	41.3	2.87	44.0	3.64	46.6	4.45	49.5	5.37	50.9	6.38	52.5	7.55	54.1	8.80	55.4
PLUG AND	45	2.32	42.0	3.05	44.6	3.86	46.9	4.72	49.9	5.70	51.8	6.78	53.5	8.00	55.1	9.35	57.1
VANE TO	50	2.45	42.7	3.22	44.9	4.07	47.6	4.98	50.5	6.01	52.5	7.16	54.1	8.45	56.1	9.90	58.4
HIGH RANGE	55	2.57	43.0	3.38	45.6	4.27	47.9	5.22	50.9	6.30	53.1	7.52	54.5	8.85	57.1	10.40	59.4
	60	2.68	43.6	3.53	45.9	4.46	48.6	5.45	51.5	6.57	53.5	7.85	55.1	9.25	57.4	10.75	60.4
	65	2.79	44.0	3.68	46.6	4.65	48.9	5.68	51.8	6.83	54.1	8.18	55.4	9.60	58.1	11.10	61.0
	70	2.90	44.6	3.82	46.9	4.83	49.5	5.90	52.5	7.09	54.5	8.50	56.1	9.95	58.4	11.40	61.4
	75	3.00	44.9	3.96	47.6	5.00	49.9	6.11	53.1	7.34	55.1	8.80	56.4	10.25	59.1	11.70	62.0
	80	3.10	45.6	4.09	47.9	5.17	50.5	6.30	53.5	7.58	55.4	9.09	57.1	10.50	59.4	12.00	62.7

Data obtained under ideal test conditions. It can be affected by wind, bad hydraulic conditions or other adverse factors. Highest point of the jet above the nozzle: 2.5 m (using standard nozzle 11 / 64 "to 35.2 MCA) Throw radius jets achieved with the 0.9m lift. Shaded areas not recommended (\*) Standard Nozzle.

Due to the large number of possible combinations of nozzles, only the most common ones are represented. To find information relating to other combinations, please advise factory.

PSI: Pounds per Square Inch GPM: Gallons Per Minute R(ft): Throw Radius in feet

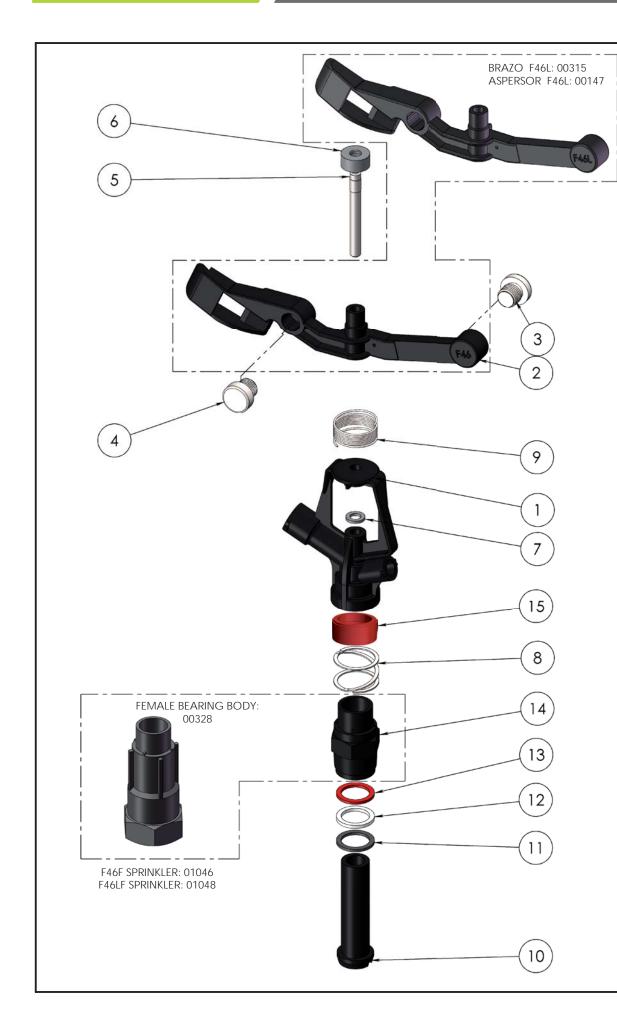




#### WARRANTY AND EXCLUSIONS

The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, only when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES. WHETHER EXPRESS OR IMPLIED. INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.



COMPONENT NUMBER	CODE	DESCRIPTION	MATERIAL	QUANTITY
1	00310	F46 Sprinkler Body	POM	1
2	00311	F46 Sprinkler Arm	POM	1
3	00316	Back Counterweight	ZAMAK	1
4	00314	Front Counterweight	ZAMAK	1
5	06163	Fulcrum Pin	Stainless Steel	1
6	06161	Swing Arm Cap	PE	1
7	06162	Swing Arm Support Washer	NBR	1
8	00018	Bearing Spring	Stainless Steel	1
9	06183	3/4" Series Arm Spring	Stainless Steel	1
10	00313	Bearing Pin F46	POM	1
11	07459	Bearing Lower Washer	NBR	1
12	06736	Bearing Intermediate Washer	High Density PE	1
13	00252	Bearing Upper Washer	Anti Hydrolisis PU	1
14	00312	F46 Bearing Body	POM	1
15	00256	Bearing Body Lock	High Density PE	1
				•

Notes

Process/Manufacturer	Size	Material	Code
Unirain	A3		00146
	Scale	Name	
Assembly	1: 2	F46 Sprinkler	
PRIVATE AND CONFIDENTIAL THE INFORMATION CONTAINED ON THIS PLAN	21/05/09		0
IS FOR <b>UNIRAIN</b> USE ONLY. FORBIDDEN CHANGE OR AMENDMENT	E.G.B.		aĭm
OF VALUES OF THE PLAN WITHOUT A CONSENT IN WRITTING.		IRNIGATI	ION PRODUCTS

## **Unirain F46L-F46 PROTECTED**

## Full Circle Impact Sprinkler Low and Medium flow Plastic



#### **Application**

Like F46, this sprinkler was designed for general agricultural use and, because of its low cost, it is suitable for solid sets where the amount of sprinklers per hectare is high.

Suitable for frost-proof irrigation. There are two key differences from F46: absence of counterweights in the swing arm and protection of the most sensitive areas of the sprinkler, making it more robust and durable.

#### **Advantages**

- Maximum protection of springs against impacts, dirt, foreign bodies, insects and animals, frost, etc.
- Increased frequency / speed of arm swing, improving irrigation uniformity.
- Suitable for frost-proof irrigation.
- It features a sand-proof bearing system and reinforcing ribs on its body.
- Perfect interior finishing.
- It can be assembled with one or two nozzles. Sprinkler body adapted to accept the 3Q bayonet nozzle and the thread nozzle
- This model allows using three different vanes can be used to achieve the desired coverage and spray balance according to the available system pressure.

#### **Technical specification**

- Full circle impact sprinkler.
- 34" base thread male or female(F46F)
- Dual nozzle, Main and secondary nozzle
- 23° nozzle trajectory angle
- Pressure range: 20-80 PSI
- Nozzle range: 7/64"-7/32"
- Made of acetal resin with UV-protection treatment.
- Body and spring protective cap made of HDPE.
- fulcrum pin and springs made of stainless steel.
- Expanded fulcrium pin upper end diameter for a better fitting into the sprinkler body.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for a better identification.
- Bearing body protective cap made of HDPE between the sprinkler body and the compression spring.
- F46L (Low pressure model)



	Pressure (psi)	Nozzles	Vanes
HIGH	60	3PRN ó 3FCN	30 V
MEDIUM	40	3PRN ó 3FCN	WITHOUT VANE
LOW	30	3PRN	30RV
VERY LOW	20	3PRN	30BV





F46LPRO F46PRO	PRESSURE (PSI)	NOZ 7/64" - GPM	-	NOZ 1/8"+ GPM		NOZ 9/64" - GPM		NOZ 5/32" - GPM (		NOZ 11/64" GPM		NOZ 3/16" - GPM	ZLES + 3/32" R(ft)	NOZ 3/16" GPM		NOZ: 13/64" GPM		NOZ 7/32" GPM	
	20	2.71	37.1	3.18	38.1	3.74	39.0	4.31	40.7	4.96	42.0	5.66	43.3	6.65	43.3	7.47	44.9	8.33	45.9
TWO NOZZLES	25	3.03	38.1	3.55	39.0	4.18	40.4	4.83	42.7	5.55	44.0	6.31	45.6	7.40	45.6	8.30	46.9	9.25	48.6
	30	3.32	38.4	3.90	40.4	4.58	42.7	5.28	44.6	6.07	45.9	6.93	47.6	8.15	47.6	9.15	48.9	10.20	50.5
	35	3.60	39.0	4.23	41.3	4.95	43.6	5.71	45.9	6.57	47.6	7.51	48.9	8.83	48.9	9.93	50.5	11.10	51.8
	40	3.85	39.4	4.53	42.0	5.29	44.6	6.11	46.9	7.03	48.6	8.03	49.9	9.46	49.9	10.65	51.5	11.90	53.1
	45	4.08	40.0	4.81	42.7	5.61	44.9	6.48	47.6	7.46	49.5	8.53	50.9	10.05	50.9	11.30	52.5	12.65	54.1
	50	4.30	40.4	5.07	43.0	5.91	45.6	6.82	47.9	7.87	49.9	9.00	51.8	10.60	51.8	11.90	53.5	13.35	55.1
	55	4.51	41.0	5.32	43.6	6.20	45.9	7.15	48.6	8.25	50.5	9.45	52.5	11.10	52.5	12.50	54.5	14.00	56.1
	60	4.71	41.3	5.56	44.0	6.48	46.6	7.47	48.9	8.60	50.9	9.86	53.1	11.60	53.1	13.00	55.1	14.50	56.4
	65	4.90	42.0	5.79	44.6	6.75	46.9	7.78	49.5	8.93	51.5	10.27	53.5	12.10	53.5	13.50	55.4		
	70	5.09	42.7	6.01	44.9	7.00	47.6	8.08	49.9	9.25	51.8	10.66	54.1	12.50	54.1	14.00	56.1		
	75	5.26	43.0	6.22	45.6	7.25	47.9	8.37	50.5	9.56	52.5	11.02	54.5	12.90	54.5				
	80	5.43	43.0	6.42	45.9	7.49	48.6	8.65	50.9	9.87	53.1	11.36	55.1	13.25	55.1				

F46LPPRO F46PPRO	PRESSURE (PSI)	NOZ 7/6 GPM		NOZ 1/ GPM			ZLES 54" R(ft)	5/3	ZLES 32" *) R(ft)	NOZ 11/ GPM	ZLES 64" R(ft)	NOZ 3/1 GPM		NOZ 13/ GPM		NOZ 7/3 GPM	
	20	1.54	37.1	2.02	38.1	2.57	39.0	3.14	40.7	3.79	42.0	4.49	43.3	5.31	44.9	6.16	45.9
ONE NOZZLE	25	1.73	38.1	2.25	39.0	2.88	40.4	3.52	42.7	4.24	44.0	5.00	45.6	5.90	46.9	6.85	48.6
AND PLUG	30	1.89	38.4	2.47	40.4	3.15	42.7	3.85	44.6	4.64	45.9	5.50	47.6	6.50	48.9	7.55	50.5
	35	2.05	39.0	2.68	41.3	3.40	43.6	4.16	45.9	5.02	47.6	5.96	48.9	7.05	50.5	8.20	51.8
	40	2.19	39.4	2.87	42.0	3.64	44.6	4.45	46.9	5.37	48.6	6.38	49.9	7.55	51.5	8.80	53.1
	45	2.32	40.0	3.05	42.7	3.86	44.9	4.72	47.6	5.70	49.5	6.78	50.9	8.00	52.5	9.35	54.1
	50	2.45	40.4	3.22	43.0	4.07	44.9	4.98	47.9	6.01	49.9	7.16	51.8	8.45	53.5	9.90	55.1
	55	2.57	41.0	3.38	43.6	4.27	45.9	5.22	48.6	6.30	50.5	7.52	52.5	8.85	54.5	10.40	56.1
	60	2.68	41.3	3.53	44.0	4.46	46.6	5.45	48.9	6.57	50.9	7.85	53.1	9.25	55.1	10.75	56.4
	65	2.79	42.0	3.68	44.6	4.65	46.9	5.68	49.5	6.83	51.5	8.18	53.5	9.60	55.4		
	70	2.90	42.7	3.82	44.9	4.83	47.6	5.90	49.9	7.09	51.8	8.50	54.1	9.95	56.1		
	75	3.00	43.0	3.96	45.6	5.00	47.9	6.11	50.5	7.34	52.5	8.80	54.5				
	80	3.10	43.0	4.09	45.9	5.17	48.6	6.30	50.9	7.58	53.1	9.09	55.1				

F46LVPRO F46VPRO	PRESSURE (PSI)	NOZ 7/64" - GPM	ZLES + 3/32" R(ft)	NOZ 1/8"+ GPM		NOZ 9/64" - GPM		5/32"	ZLES + 3/32" (*) R(ft)	NOZ 11/64" GPM	ZLES + 3/32" R(ft)	NOZ: 3/16" - GPM		NOZ 3/16" GPM	ZLES + 1/8" R(ft)	NOZ 13/64″ GPM	ZLES ' + 1/8" R(ft)	NOZ 7/32" GPM	
TIMO NOTELES	35	3.60	40.4	4.23	42.3	4.95	44.3	5.71	46.6	6.57	48.2	7.51	50.2	8.83	50.2	9.93	52.2	11.10	54.1
TWO NOZZLES,	40	3.85	41.3	4.53	44.0	5.29	46.6	6.11	49.5	7.03	50.9	8.03	52.5	9.46	52.5	10.65	54.1	11.90	55.4
AND VANE TO	45	4.08	42.0	4.81	44.6	5.61	46.9	6.48	49.9	7.46	51.8	8.53	53.5	10.05	53.5	11.30	55.1	12.65	57.1
HIGH RANGE	50	4.30	42.7	5.07	44.9	5.91	47.6	6.82	50.5	7.87	52.5	9.00	54.1	10.60	54.1	11.90	56.1	13.35	58.4
	55	4.51	43.0	5.32	45.6	6.20	47.9	7.15	50.9	8.25	53.1	9.45	54.5	11.10	54.5	12.50	57.1	14.00	59.4
	60	4.71	43.6	5.56	45.9	6.48	48.6	7.47	51.5	8.60	53.5	9.86	55.1	11.60	55.1	13.00	57.4		
	65	4.90	44.0	5.79	46.6	6.75	48.9	7.78	51.8	8.93	54.1	10.27	55.4	12.10	55.4				
	70	5.09	44.6	6.01	46.9	7.00	49.5	8.08	52.5	9.25	54.5	10.66	56.1	12.50	56.1				
	75	5.26	44.9	6.22	47.6	7.25	49.9	8.37	53.1	9.56	55.1	11.02	56.4	12.90	56.4				
	80	5.43	45.6	6.42	47.9	7.49	50.5	8.65	53.5	9.87	55.4	11.36	57.1	13.25	57.1				

F46LPVPRO F46PVPRO	PRESSURE (PSI)	NOZ 7/6 GPM	ZLES 54" R(ft)	NOZ 1/ GPM			ZLES 64" R(ft)	5/3	ZLES 32" *) R(ft)	NOZ 11/ GPM		NOZ 3/1 GPM		NOZ 13/ GPM		NOZ 7/3 GPM	
	35	2.05	40.4	2.68	42.3	3.40	44.3	4.16	46.6	5.02	48.2	5.96	50.2	7.05	52.2	8.20	54.1
ONE NOZZLE,	40	2.19	41.3	2.87	44.0	3.64	46.6	4.45	49.5	5.37	50.9	6.38	52.5	7.55	54.1	8.80	55.4
PLUG AND	45	2.32	42.0	3.05	44.6	3.86	46.9	4.72	49.9	5.70	51.8	6.78	53.5	8.00	55.1	9.35	57.1
VANE TO	50	2.45	42.7	3.22	44.9	4.07	47.6	4.98	50.5	6.01	52.5	7.16	54.1	8.45	56.1	9.90	58.4
HIGH RANGE	55	2.57	43.0	3.38	45.6	4.27	47.9	5.22	50.9	6.30	53.1	7.52	54.5	8.85	57.1	10.40	59.4
	60	2.68	43.6	3.53	45.9	4.46	48.6	5.45	51.5	6.57	53.5	7.85	55.1	9.25	57.4		
	65	2.79	44.0	3.68	46.6	4.65	48.9	5.68	51.8	6.83	54.1	8.18	55.4				
	70	2.90	44.6	3.82	46.9	4.83	49.5	5.90	52.5	7.09	54.5	8.50	56.1				
	75	3.00	44.9	3.96	47.6	5.00	49.9	6.11	53.1	7.34	55.1	8.80	56.4				
	80	3.10	45.6	4.09	47.9	5.17	50.5	6.30	53.5	7.58	55.4	9.09	57.1				

Data obtained under ideal test conditions. It can be affected by wind, bad hydraulic conditions or other adverse factors. Highest point of the jet above the nozzle: 2.5 m (using standard nozzle 11 / 64 "to 35.2 MCA) Throw radius jets achieved with the 0.9m lift. Shaded areas not recommended.

(\*) Standard Nozzle.

Due to the large number of possible combinations of nozzles, only the most common ones are represented. To find information relating to other combinations , please advise factory.

PSI: Pounds per Square Inch GPM: Gallons Per Minute R(ft): Throw Radius in feet



F46

#### **WARRANTY AND EXCLUSIONS**

The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, only when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.



COMPONENT NUMBER	CODE	DESCRIPTION	MATERIAL	QUANTITY
1	00310	Sprinkler Body F46	POM	1
2	00311	Sprinkler Arm F46	POM	1
3	00318	Protective Cap	High Density PE	1
5	06163	Fulcrum Pin	Stainless Steel	1
6	06161	Swing Arm Cap	PE	1
7	06162	Swing Arm Support Washer	NBR	1
8	00018	Bearing Spring	Stainless Steel	1
9	06183	Arm Spring Series 3/4	Stainless Steel	1
10	00313	Bearing pin F46	POM	1
11	07459	Bearing Lower Washer	NBR	1
12	06736	Bearing Intermediate Washer	High Density PE	1
13	00252	Bearing Upper Washer	Anti Hydrolisis PU	1
14	00312	Bearing Body F46	POM	1
15	00256	Bearing Body Protective Cap	High Density PE	1

Notes

	_		
Process/Manufacturer	Size	Material	Code
Unirain	A3		00146PRO
Assembly	Scale 1:2	Name F46 Sprinkler	
PRIVATE AND CONFIDENTIAL  THE INFORMATION CONTAINED ON THIS PLAN IS FOR UNIRAIN USE ONLY. FORBIDDEN CHANGE OR AMENDMENT OF VALUES OF THE PLAN WITHOUT A CONSENT IN WRITTING	21/05/09 E.G.B.	C unira	E C C C C C C C C C C C C C C C C C C C

### Unirain P45 - P45L

## Part Circle Impact Sprinkler Low and Medium Flow Plastic



#### **Application**

Suitable for general agricultural use. Compact in design, it includes a sand-proof bearing system and reinforcing ribs on the sprinkler body. High resistance and durability, made of plastics and treated against the UV radiation. It is a very versatile sprinkler because of its reversing system and clip which allow the sprinkler switch from part to full circle and vice versa. Ideal for areas bordering or near elements that should not get wet.

#### **Advantages**

- Sand-proof bearing system and reinforcing ribs on its body.
- Perfect interior finish
- Its exclusive reversing system is protected against sand and can be disassembled in seconds without any tools.
- It can be assembled with one or two nozzles. sprinkler body adapted to be coupled to 3Q/2Q bayonet nozzle as well as 3PRN/3PSN thread nozzles.
- Three different types of water guide vane can be used to achieve the desired coverage and spray balance according to the available system pressure.

#### **Technical specifications**

- Double purpose impact sprinkler: part circle ranging from 25° to 325° with 10° steps, or full circle.
- ¾" Male base thread
- MDual nozzle, main and secondary
- 23° nozzle trajectory angle.
- Pressure range: 20-80 PSI
- Nozzle range: 1/8"-1/4"
- Made of acetal resin with UV-protection treatment.
- Fulcrum pin and springs made of stainless steel.
- Expanded fulcrum pin upper end diameter for a better fitting into the sprinkler body.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for clear identification.
- Reverse system protected
- Female thread adapter made of fiber glass reinforced PA.

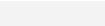


P45/P45L



P45F/P45LF

	Pressure (psi)	Nozzles	Vanes
HIGH	60	3PRN ó 3FCN	30 V
MEDIUM	40	3PRN ó 3FCN	WITHOUT VANE
LOW	30	3PRN	30RV
VERY LOW	20	3PRN	30BV





P45 P45L	PRESSURE (PSI)		ZLES - 3/32" R(ft)	NOZ 9/64" - GPM			ZLES + 3/32" *) R(ft)		ZLES + 3/32" R(ft)	NOZ: 3/16" - GPM			ZLES + 1/8" R(ft)	NOZ: 13/64" GPM		NOZ: 7/32" GPM	
	20			3.74	39.0	4.31	40.7	4.96	42.0	5.66	43.3	6.65	43.3	7.47	44.9	8.33	45.9
TWO	25			4.18	40.4	4.83	42.7	5.55	44.0	6.31	45.6	7.40	45.6	8.30	46.9	9.25	48.6
NOZZLES	30			4.58	42.7	5.28	44.6	6.07	45.9	6.93	47.6	8.15	47.6	9.15	48.9	10.20	50.5
	35	4.23	41.3	4.95	43.6	5.71	45.9	6.57	47.6	7.51	48.9	8.83	48.9	9.93	50.5	11.10	51.8
	40	4.53	42.0	5.29	44.6	6.11	46.9	7.03	48.6	8.03	49.9	9.46	49.9	10.65	51.5	11.90	53.1
	45	4.81	42.7	5.61	44.9	6.48	47.6	7.46	49.5	8.53	50.9	10.05	50.9	11.30	52.5	12.65	54.1
	50	5.07	43.0	5.91	45.6	6.82	47.9	7.87	49.9	9.00	51.8	10.60	51.8	11.90	53.5	13.35	55.1
	55	5.32	43.6	6.20	45.9	7.15	48.6	8.25	50.5	9.45	52.5	11.10	52.5	12.50	54.5	14.00	56.1
	60	5.56	44.0	6.48	46.6	7.47	48.9	8.60	50.9	9.86	53.1	11.60	53.1	13.00	55.1	14.50	56.4
	65	5.79	44.6	6.75	46.9	7.78	49.5	8.93	51.5	10.27	53.5	12.10	53.5	13.50	55.4	15.00	57.1
	70	6.01	44.9	7.00	47.6	8.08	49.9	9.25	51.8	10.66	54.1	12.50	54.1	14.00	56.1	15.45	57.4
	75	6.22	45.6	7.25	47.9	8.37	50.5	9.56	52.5	11.02	54.5	12.90	54.5	14.40	56.4	15.90	58.1
	80	6.42	45.9	7.49	48.6	8.65	50.9	9.87	53.1	11.36	55.1	13.25	55.1	14.80	57.1	16.30	58.4

P45P	PRESSURE	NOZ	ZLES 8"	NOZ:	-	NOZ 5/3	ZLES 32"	NOZ 11/		NOZ:		NOZ:		NOZ:		NOZ:		NOZ	
P45LP	(PSI)	GPM	R(ft)	GPM	R(ft)	GPM (	) R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)
	20			2.58	39.0	3.14	40.7	3.76	42.0	4.46	43.3	5.28	44.9	6.15	45.9	6.97	45.6	7.95	45.9
ONE NOZZLE	25			2.88	40.4	3.52	42.7	4.24	44.0	5.00	45.6	5.90	46.9	6.85	48.6	7.80	46.9	8.90	47.6
AND PLUG	30			3.15	42.7	3.85	44.6	4.64	45.9	5.50	47.6	6.50	48.9	7.55	50.5	8.60	50.5	9.80	50.9
	35	2.68	41.3	3.40	43.6	4.16	45.9	5.02	47.6	5.96	48.9	7.05	50.5	8.20	51.8	9.30	52.5	10.60	53.1
	40	2.87	42.0	3.64	44.6	4.45	46.9	5.37	48.6	6.38	49.9	7.55	51.5	8.80	53.1	10.00	53.5	11.40	54.5
	45	3.05	42.7	3.86	44.9	4.72	47.6	5.70	49.5	6.78	50.9	8.00	52.5	9.35	54.1	10.60	55.1	12.10	56.1
	50	3.22	43.0	4.07	44.9	4.98	47.9	6.01	49.9	7.16	51.8	8.45	53.5	9.90	55.1	11.20	56.1	12.80	57.1
	55	3.38	43.6	4.27	45.9	5.22	48.6	6.30	50.5	7.52	52.5	8.85	54.5	10.40	56.1	11.70	57.1	13.40	58.1
	60	3.53	44.0	4.46	46.6	5.45	48.9	6.57	50.9	7.85	53.1	9.25	55.1	10.75	56.4	12.20	58.1	13.90	59.1
	65	3.68	44.6	4.65	46.9	5.68	49.5	6.83	51.5	8.18	53.5	9.60	55.4	11.10	57.1	12.70	58.4	14.50	60.0
	70	3.82	44.9	4.83	47.6	5.90	49.9	7.09	51.8	8.50	54.1	9.95	56.1	11.40	57.4	13.20	59.1	15.00	60.4
	75	3.96	45.6	5.00	47.9	6.11	50.5	7.34	52.5	8.80	54.5	10.25	56.4	11.70	58.1	13.60	59.4		
	80	4.09	45.9	5.17	48.6	6.30	50.9	7.58	53.1	9.09	55.1	10.50	57.1	12.00	58.4				

P45V P45LV	PRESSURE (PSI)	NOZ 1/8"+ GPM	ZLES 3/32" R(ft)	NOZ 9/64" - GPM		NOZ 5/32" - GPM (-	- 3/32"	NOZ 11/64" GPM	ZLES + 3/32" R(ft)	NOZ: 3/16" - GPM		NOZ 3/16 + GPM		NOZ: 13/64" GPM		NOZ: 7/32" GPM	
TWO NOTES ES	35	4.23	42.3	4.95	44.3	5.71	46.6	6.57	48.2	7.51	50.2	8.83	50.2	9.93	52.2	11.10	54.1
TWO NOZZLES	40	4.53	44.0	5.29	46.6	6.11	49.5	7.03	50.9	8.03	52.5	9.46	52.5	10.65	54.1	11.90	55.4
AND VANE TO	45	4.81	44.6	5.61	46.9	6.48	49.9	7.46	51.8	8.53	53.5	10.05	53.5	11.30	55.1	12.65	57.1
HIGH RANGE	50	5.07	44.9	5.91	47.6	6.82	50.5	7.87	52.5	9.00	54.1	10.60	54.1	11.90	56.1	13.35	58.4
	55	5.32	45.6	6.20	47.9	7.15	50.9	8.25	53.1	9.45	54.5	11.10	54.5	12.50	57.1	14.00	59.4
	60	5.56	45.9	6.48	48.6	7.47	51.5	8.60	53.5	9.86	55.1	11.60	55.1	13.00	57.4	14.50	60.4
	65	5.79	46.6	6.75	48.9	7.78	51.8	8.93	54.1	10.27	55.4	12.10	55.4	13.50	58.1	15.00	61.0
	70	6.01	46.9	7.00	49.5	8.08	52.5	9.25	54.5	10.66	56.1	12.50	56.1	14.00	58.4	15.45	61.4
	75	6.22	47.6	7.25	49.9	8.37	53.1	9.56	55.1	11.02	56.4	12.90	56.4	14.40	59.1	15.90	62.0
	80	6.42	47.9	7.49	50.5	8.65	53.5	9.87	55.4	11.36	57.1	13.25	57.1	14.80	59.4	16.30	62.7

P45PV P45PLV	PRESSURE (PSI)	NOZ 1/ GPM		NOZ 9/6 GPM		NOZ 5/3 GPM (*	32"	NOZ 11/ GPM	ZLES 64" R(ft)	NOZ 3/1 GPM	ZLES 16" R(ft)	NOZ 13/ GPM		NOZ 7/3 GPM		NOZ 15/ GPM			ZLES /4" R(ft)
	35	2.68	44.0	3.40	46.3	4.16	49.2	5.02	50.9	5.96	52.2	7.05	53.5	8.20	54.8	9.30	55.4	10.60	57.4
ONE NOZZLE,	40	2.87	44.6	3.64	46.9	4.45	49.9	5.37	51.8	6.38	53.5	7.55	54.5	8.80	56.1	10.00	57.4	11.40	59.4
PLUG AND	45	3.05	44.9	3.86	47.6	4.72	50.5	5.70	52.5	6.78	54.1	8.00	55.5	9.35	58.1	10.60	59.4	12.10	61.4
VANE TO	50	3.22	45.6	4.07	47.9	4.98	50.9	6.01	53.1	7.16	54.5	8.45	56.4	9.90	59.4	11.20	61.0	12.80	63.0
HIGH RANGE	55	3.38	45.9	4.27	48.6	5.22	51.5	6.30	53.5	7.52	55.1	8.85	57.4	10.40	60.4	11.70	62.0	13.40	64.0
	60	3.53	46.6	4.46	48.9	5.45	51.8	6.57	54.1	7.85	55.4	9.25	58.1	10.75	61.4	12.20	63.0	13.90	65.0
	65	3.68	46.9	4.65	49.5	5.68	52.5	6.83	54.5	8.18	56.1	9.60	58.4	11.10	62.0	12.70	64.0	14.50	65.9
	70	3.82	47.6	4.83	49.9	5.90	53.1	7.09	55.1	8.50	56.4	9.95	59.1	11.40	62.7	13.20	65.0	15.00	66.9
	75	3.96	47.9	5.00	50.5	6.11	53.5	7.34	55.4	8.80	57.1	10.25	59.4	11.70	63.0	13.60	65.6		
	80	4.09	48.6	5.17	50.9	6.30	54.1	7.58	56.4	9.09	58.1	10.50	60.0	12.00	63.6				

Data obtained under ideal test conditions. It can be affected by wind, bad hydraulic conditions or other adverse factors. Highest point of the jet above the nozzle: 2.8 m (using standard nozzle 5 / 32 "to 35.2 MCA)

Throw radius jets achieved with the 0.9m lift. Shaded areas not recommended.

(\*) Standard Nozzle.

PSI: Pounds per Square Inch GPM: Gallons Per Minute R(ft): Throw Radius in feet

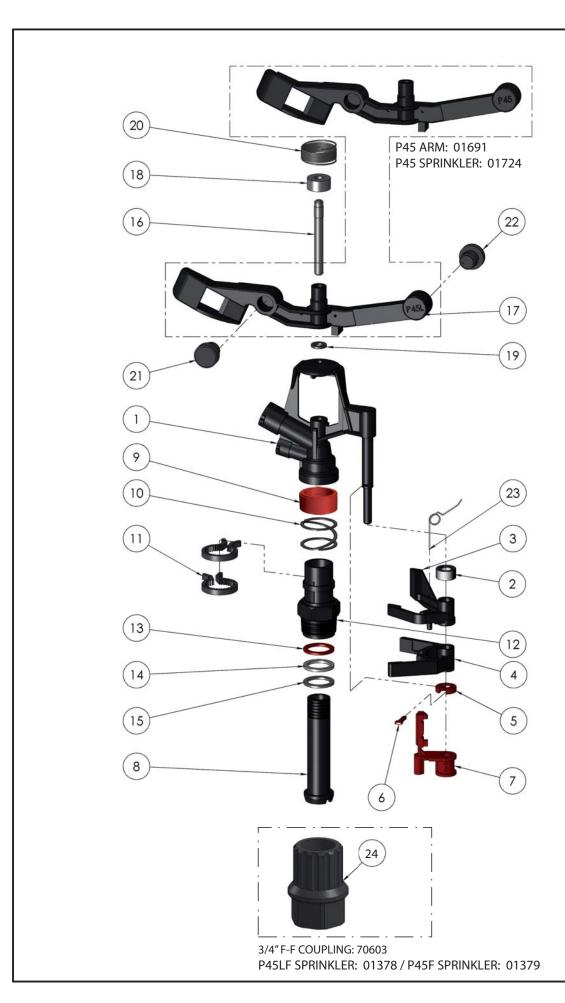
\_\_\_\_ P45L



#### WARRANTY AND EXCLUSIONS

The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, only when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.



COMPONENT NUMBER	CODE	DESCRIPTION	MATERIAL	QUANTITY
1	01681	Sprinkler Body P45	POM	1
2	01695	Reversing Cap	High Density PE	1
3	01685	Upper Yoke	POM	1
4	01686	Lower Yoke	POM	1
5	01688	Pin Washer	POM	1
6	01689	Pin	POM	1
7	01690	Inverter Latch	POM	1
8	06517	Bearing Pin P45 / F44	POM	1
9	00256	Bearing Body Lock	High Density PE	1
10	00018	Bearing Spring	Stainless Steel	1
11	01684	Cogged Sector	POM	2
12	01683	Bearing Body P45	POM	1
13	00252	Bearing Upper Washer	Anti Hydrolisis PU	1
14	06736	Bearing Intermediate Washer	High Density PE	1
15	07459	Bearing Lower Washer	NBR	1
16	06163	Fulcrum Pin	Stainless Steel	1
17	01692	Sprinkler Arm P45L	POM	1
18	06161	Swing Arm Cap	PE	1
19	06162	Arm Support Washer	NBR	1
20	06183	Series Arm Spring 3/4"	Stainless Steel	1
21	00314	Front Counterweight	ZAMAK	1
22	00316	Back Counterweight	ZAMAK	1
23	01687	Reversing Spring	Stainless Steel	1
24	70603	3/4" F-F Coupling	PA66 + Fiber glass	1

Process/Manufacturer	Size	Material	Code			
UNIRAIN	A3		01725			
O WITO WITO	Scale	Name				
	1:2	P45L Sprinklei	ſ			
PRIVATE AND CONFIDENTIAL THE INFORMATION CONTAINED ON THIS PLAN	26/06/09		0			
IS FOR UNIRAIN USE ONLY. FORBIDDEN CHANGE OR AMENDMENT	E.G.B.	(A) umiraim				
OF VALUES OF THE PLAN WITHOUT A CONSENT IN WRITTING.		INNIGAT	ION PRODUCTS			

## **Unirain P45 - P45L PROTECTED**

## Part Circle Impact Sprinkler Low and Medium Flow Plastic



#### **Application**

Suitable for general agricultural use. Compact in design, it includes a sand-proof bearing system and reinforcing ribs on the sprinkler body. High resistance and durability, made of plastics and treated against the UV radiation. It is a very versatile sprinkler because of its reversing system and clip which allow the sprinkler switch from part to full circle and vice versa. Ideal for areas bordering or near elements that should not get wet.

There are 2 key differences from F45: absence of counterweights in the arm and protection of the most sensitive areas of the sprinkler, making it more robust and durable.

#### **Advantages**

- Maximum protection of the spring against impacts, dirt, foreign bodies, insects and animals, frost ...
- Increased frequency / speed of arm swing, improving irrigation uniformity.
- Sand-proof bearing system and reinforcing ribs on its body.
- Perfect inner finish
- Its exclusive reversing system is protected against sand and can be disassembled in seconds without any tools.
- It can be assembled with one or two nozzles. Sprinkler body adapted to be coupled to 3Q/2Q bayonet nozzle as well as 3PRN/3PSN thread nozzle.
- Three different types of water guide vane can be used to achieve the desired coverage and spray balance according to the available water pressure.

#### **Technical specifications**

- Double purpose impact sprinkler: part circle ranging from 25° to 325° with 10° steps, or full circle.
- ¾" Male base thread
- Dual nozzles, Main and secondary.
- 23° nozzle trajectory angle.
- Pressure range: 20-80 PSI
- Nozzle range: 1/8"-1/4"
- made of acetal resin with UV-protection treatment.
- Body and spring protective cap made of HDPE.
- Protective backturn lock for bearing made of HDPE between the sprinkler body and the compression spring.
- Fulcrum pin and springs made of stainless steel.
- Expanded fulcrum,pin upper end diameter for a better fitting into the sprinkler body.
- Color-coded anti abrasive acetal resin nozzles carved in millimetres and inches for a clear identification.
- Reversing system protected
- Female thread adapter made of fiber glass reinforced PA.

	Pressure (psi)	Nozzles	Vanes
HIGH	60	3PRN ó 3FCN	30 V
MEDIUM	40	3PRN ó 3FCN	WITHOUT VANE
LOW	30	3PRN	30RV
VERY LOW	20	3PRN	30BV



P45PRO/P45LPRO



P45FPRO/P45LFPRO





P45PRO P45LPRO	PRESSURE (PSI)		ZLES - 3/32" R(ft)		NOZZLES 9/64" + 3/32" GPM R(ft)		NOZZLES 5/32" + 3/32" GPM (*) R(ft)		NOZZLES 11/64" + 3/32" GPM R(ft)		NOZZLES 3/16" + 3/32" GPM R(ft)		NOZZLES 3/16" + 1/8" GPM R(ft)		NOZZLES 13/64" + 1/8" GPM R(ft)		ZLES + 1/8" R(ft)
	20			3.74	39.0	4.31	40.7	4.96	42.0	5.66	43.3	6.65	43.3	7.47	44.9	8.33	45.9
TWO	25			4.18	40.4	4.83	42.7	5.55	44.0	6.31	45.6	7.40	45.6	8.30	46.9	9.25	48.6
NOZZLES	30			4.58	42.7	5.28	44.6	6.07	45.9	6.93	47.6	8.15	47.6	9.15	48.9	10.20	50.5
	35	4.23	41.3	4.95	43.6	5.71	45.9	6.57	47.6	7.51	48.9	8.83	48.9	9.93	50.5	11.10	51.8
	40	4.53	42.0	5.29	44.6	6.11	46.9	7.03	48.6	8.03	49.9	9.46	49.9	10.65	51.5	11.90	53.1
	45	4.81	42.7	5.61	44.9	6.48	47.6	7.46	49.5	8.53	50.9	10.05	50.9	11.30	52.5	12.65	54.1
	50	5.07	43.0	5.91	45.6	6.82	47.9	7.87	49.9	9.00	51.8	10.60	51.8	11.90	53.5	13.35	55.1
	55	5.32	43.6	6.20	45.9	7.15	48.6	8.25	50.5	9.45	52.5	11.10	52.5	12.50	54.5	14.00	56.1
	60	5.56	44.0	6.48	46.6	7.47	48.9	8.60	50.9	9.86	53.1	11.60	53.1	13.00	55.1	14.50	56.4
	65	5.79	44.6	6.75	46.9	7.78	49.5	8.93	51.5	10.27	53.5	12.10	53.5	13.50	55.4		
	70	6.01	44.9	7.00	47.6	8.08	49.9	9.25	51.8	10.66	54.1	12.50	54.1	14.00	56.1		
	75	6.22	45.6	7.25	47.9	8.37	50.5	9.56	52.5	11.02	54.5	12.90	54.5				
	80	6.42	45.9	7.49	48.6	8.65	50.9	9.87	53.1	11.36	55.1	13.25	55.1				

P45PPRO P45LPPRO	PRESSURE (PSI)	NOZ 1/ GPM	ZLES 8" R(ft)	NOZ 9/6 GPM		5/3	ZLES 32" () R(ft)	NOZ 11/ GPM		NOZ 3/1 GPM		NOZ 13/ GPM		NOZ 7/3 GPM		NOZ 15/ GPM		NOZ 1/ GPM	
	20			2,58	39.0	3.14	40.7	3.76	42.0	4,46	43.3	5,28	44.9	6.15	45.9	6.97	45.6	7.95	45.9
ONE NOZZLE	25			2.88	40.4	3.52	42.7	4.24	44.0	5.00	45.6	5.90	46.9	6.85	48.6	7.80	46.9	8.90	47.6
AND PLUG	30			3.15	42.7	3.85	44.6	4.64	45.9	5.50	47.6	6.50	48.9	7.55	50.5	8.60	50.5	9.80	50.9
	35	2.68	41.3	3.40	43.6	4.16	45.9	5.02	47.6	5.96	48.9	7.05	50.5	8.20	51.8	9.30	52.5	10.60	53.1
	40	2.87	42.0	3.64	44.6	4.45	46.9	5.37	48.6	6.38	49.9	7.55	51.5	8.80	53.1	10.00	53.5	11.40	54.5
	45	3.05	42.7	3.86	44.9	4.72	47.6	5.70	49.5	6.78	50.9	8.00	52.5	9.35	54.1	10.60	55.1	12.10	56.1
	50	3.22	43.0	4.07	44.9	4.98	47.9	6.01	49.9	7.16	51.8	8.45	53.5	9.90	55.1	11.20	56.1	12.80	57.1
	55	3.38	43.6	4.27	45.9	5.22	48.6	6.30	50.5	7.52	52.5	8.85	54.5	10.40	56.1	11.70	57.1	13.40	58.1
	60	3.53	44.0	4.46	46.6	5.45	48.9	6.57	50.9	7.85	53.1	9.25	55.1	10.75	56.4	12.20	58.1	13.90	59.1
	65	3.68	44.6	4.65	46.9	5.68	49.5	6.83	51.5	8.18	53.5	9.60	55.4	11.10	57.1	12.70	58.4	14.50	60.0
	70	3.82	44.9	4.83	47.6	5.90	49.9	7.09	51.8	8.50	54.1	9.95	56.1	11.40	57.4	13.20	59.1	15.00	60.4
	75	3.96	45.6	5.00	47.9	6.11	50.5	7.34	52.5	8.80	54.5	10.25	56.4	11.70	58.1	13.60	59.4		
	80	4.09	45.9	5.17	48.6	6.30	50.9	7.58	53.1	9.09	55.1	10.50	57.1	12.00	58.4				

P45VPRO P45LVPRO	PRESSURE (PSI)	NOZ 1/8"+ GPM		NOZ: 9/64" - GPM		NOZ 5/32" - GPM (-			ZLES + 3/32" R(ft)	NOZ: 3/16" - GPM		NOZ: 3/16 - GPM		NOZ: 13/64" GPM		NOZ: 7/32" GPM	
	35	4.23	42.3	4.95	44.3	5.71	46.6	6.57	48.2	7.51	50.2	8.83	50.2	9.93	52.2	11.10	54.1
TWO NOZZLES	40	4.53	44.0	5.29	46.6	6.11	49.5	7.03	50.9	8.03	52.5	9.46	52.5	10.65	54.1	11.90	55.4
AND VANE TO	45	4.81	44.6	5.61	46.9	6.48	49.9	7.46	51.8	8.53	53.5	10.05	53.5	11.30	55.1	12.65	57.1
HIGH RANGE	50	5.07	44.9	5.91	47.6	6.82	50.5	7.87	52.5	9.00	54.1	10.60	54.1	11.90	56.1	13.35	58.4
	55	5.32	45.6	6.20	47.9	7.15	50.9	8.25	53.1	9.45	54.5	11.10	54.5	12.50	57.1	14.00	59.4
	60	5.56	45.9	6.48	48.6	7.47	51.5	8.60	53.5	9.86	55.1	11.60	55.1	13.00	57.4		
	65	5.79	46.6	6.75	48.9	7.78	51.8	8.93	54.1	10.27	55.4	12.10	55.4				
	70	6.01	46.9	7.00	49.5	8.08	52.5	9.25	54.5	10.66	56.1	12.50	56.1				
	75	6.22	47.6	7.25	49.9	8.37	53.1	9.56	55.1	11.02	56.4	12.90	56.4				
	80	6.42	47.9	7.49	50.5	8.65	53.5	9.87	55.4	11.36	57.1	13.25	57.1				

P45PVPRO	PRESSURE	NOZ	ZLES 8"	NOZ 9/6		NOZ 5/3	ZLES 32"	NOZ 11/		NOZ: 3/1		NOZ:		NOZ:		NOZ: 15/		NOZ	ZLES '4"
P45PLVPRO	(PSI)	GPM	R(ft)	GPM	R(ft)	GPM (	•) R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)	GPM	R(ft)
01151107715	35	2.68	44.0	3.40	46.3	4.16	49.2	5.02	50.9	5.96	52.2	7.05	53.5	8.20	54.8	9.30	55.4	10.60	57.4
ONE NOZZLE,	40	2.87	44.6	3.64	46.9	4.45	49.9	5.37	51.8	6.38	53.5	7.55	54.5	8.80	56.1	10.00	57.4	11.40	59.4
PLUG AND	45	3.05	44.9	3.86	47.6	4.72	50.5	5.70	52.5	6.78	54.1	8.00	55.5	9.35	58.1	10.60	59.4	12.10	61.4
VANE TO	50	3.22	45.6	4.07	47.9	4.98	50.9	6.01	53.1	7.16	54.5	8.45	56.4	9.90	59.4	11.20	61.0	12.80	63.0
HIGH RANGE	55	3.38	45.9	4.27	48.6	5.22	51.5	6.30	53.5	7.52	55.1	8.85	57.4	10.40	60.4	11.70	62.0	13.40	64.0
	60	3.53	46.6	4.46	48.9	5.45	51.8	6.57	54.1	7.85	55.4	9.25	58.1	10.75	61.4	12.20	63.0	13.90	65.0
	65	3.68	46.9	4.65	49.5	5.68	52.5	6.83	54.5	8.18	56.1	9.60	58.4	11.10	62.0	12.70	64.0	14.50	65.9
	70	3.82	47.6	4.83	49.9	5.90	53.1	7.09	55.1	8.50	56.4	9.95	59.1	11.40	62.7	13.20	65.0	15.00	66.9
	75	3.96	47.9	5.00	50.5	6.11	53.5	7.34	55.4	8.80	57.1	10.25	59.4	11.70	63.0	13.60	65.6		
	80	4.09	48.6	5.17	50.9	6.30	54.1	7.58	56.4	9.09	58.1	10.50	60.0	12.00	63.6				

Data obtained under ideal test conditions. It can be affected by wind, bad hydraulic conditions or other adverse factors. Highest point of the jet above the nozzle: 2.8 m (using standard nozzle 5 / 32 "to 35.2 MCA) Throw radius jets achieved with the 0.9m lift. Shaded areas not recommended. (\*) Standard Nozzle.

PSI: Pounds per Square Inch GPM: Gallons Per Minute R(ft): Throw Radius in feet

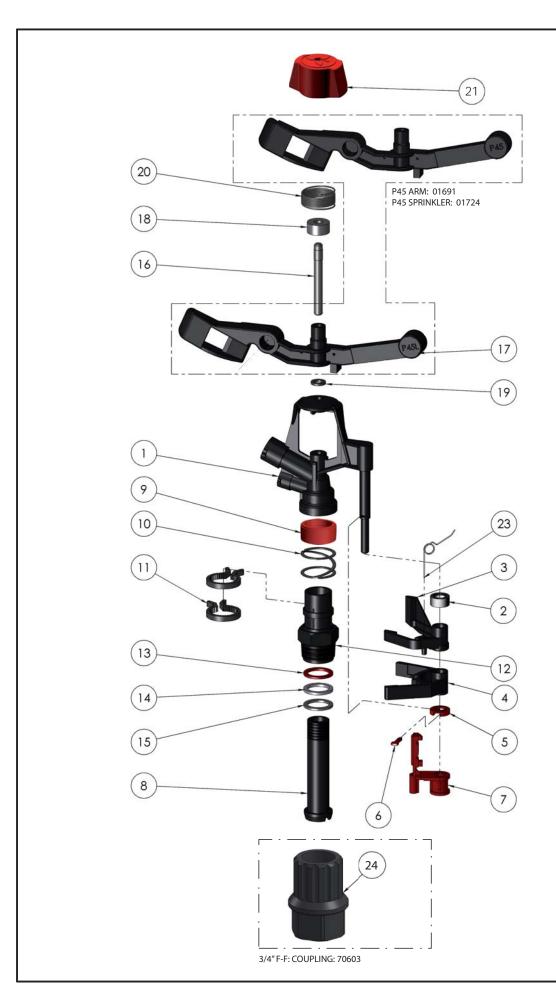
P45L



#### WARRANTY AND EXCLUSIONS

The manufacturer guarantees its products for direct customer against any defects in materials or manufacture for a period of two years from the original date of purchase, only when the products have been used under normal operating conditions. The manufacturer assumes no responsibility for installation, removal or repairs carried out by unauthorised personnel. The manufacturer's liability under this warranty is limited to the replacement or repair of defective parts and the manufacturer does not accept responsibility for damages to crops or any other consequential damages deriving from defects in the products covered by this warranty.

THE PRESENT WARRANTY SUPERCEDES AND VOIDS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.



COMPONENT NUMBER	CODE	DESCRIPTION	MATERIAL	QUANTITY
1	01681	Sprinkler Body P45	POM	1
2	01695	Reversing Cap	High Density PE	1
3	01685	Upper Yoke	POM	1
4	01686	Lower Yoke	POM	1
5	01688	Pin Washer	POM	1
6	01689	Pin	POM	1
7	01690	Reversing Latch	POM	1
8	06517	Bearing Pin P45 / F44	POM	1
9	00256	Protective Bearing Body Lock	High Density PE	1
10	00018	Bearing Spring	Stainless Steel	1
11	01684	Cogged Sector	POM	2
12	01683	Bearing Body P45	POM	1
13	00252	Bearing Upper Washer	Anti Hydrolisis PU	1
14	06736	Bearing Intermediate Washer	High Density PE	1
15	07459	Bearing Lower Washer	NBR	1
16	06163	Fulcrum Pin	Stainless Steel	1
17	01692	Sprinkler Arm P45L	POM	1
18	06161	Swing Arm Hat	PE	1
19	06162	Swing Arm Support Washer	NBR	1
20	06183	Series Arm Spring 3/4"	Stainless Steel	1
21	00318	Protective Cap	High Density PE	1
23	01687	Protective Spring	Stainless Steel	1
24	70603	3/4" F-F Coupling	PA66 + Fiber Glass	1

Process/Manufacturer	Size	Material	Code			
LINUDAIN	A3		01725PRO			
UNIRAIN	Scale 1:2	Name P45/45L Sprin	kler			
PRIVATE AND CONFIDENTIAL THE INFORMATION CONTAINED ON THIS PLAN	26/06/09					
IS FOR <b>UNIRAIN</b> USE ONLY. FORBIDDEN CHANGE OR AMENDMENT	E.G.B.	(A) umiraim				
OF VALUES OF THE PLAN WITHOUT A CONSENT IN WRITTING.		IRRIGAT	ION PRODUCTS			