Creating a Green World

AQua

Impact Sprinklers | 2015

AUTOMAT

Index

Introduction

Impact sprinklers are one of the oldest and still a very popular form of efficient Irrigation. Although a lot of other and more efficient methods of irrigation are finding increased usage, this still remains the largest in terms of installed acreage.

Despite, the skepticists dooms day prediction for the product, the sheer ease of handling makes it preferable for some geographies and crops.

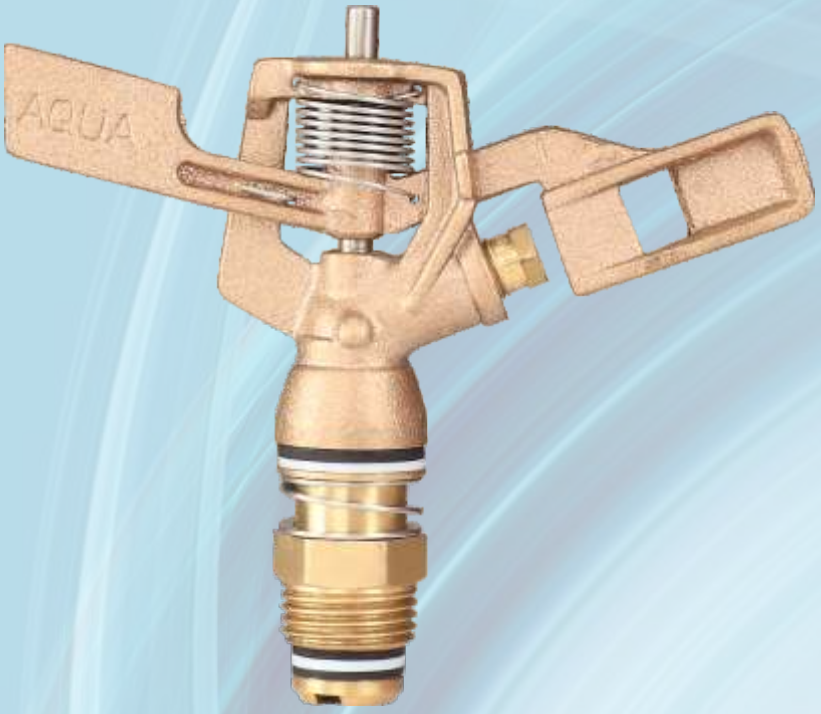
We have over the years not only extended the range of products but worked relentlessly to improve the quality, benchmarking the best globally.

We have over the years worked to be recognized as one of the global leaders in impact sprinklers with a production in excess of 8 million plastic and metal impacts.

TEAM AUTOMAT

AQ - 5N23

Overhead Sprinklers



Features

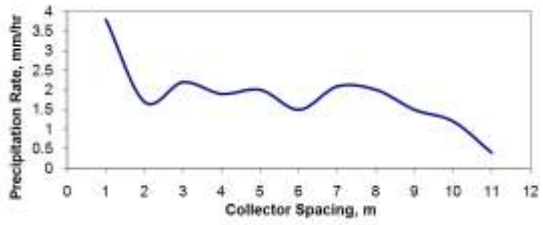
- Available in ½" BSP/NPT Male threaded
- Nozzle size above 3.17mm with stream straightening vane for long range.
- Durable Bronze body and arm
- Heavy duty brass Nut and tube
- Pivot pin and Springs made of Stainless steel.
- **Model 5N23SP available with nozzle size 1.98mm or 5/64"**
- Recommended Pressure 2 - 4.5 kg/cm^2 or 30 -65Psi
- Recommended spacing up to 10m for higher distribution uniformity.
- Trajectory Angle: 23^0

Application

- All row crops irrigation by overhead irrigation on solid set systems - portable or permanent.
- Agriculture fields or landscape application and centre pivots.

Nozzle Size: 3.17mm Pressure: 3.0kg/cm^2

Distribution Curve



Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
2.38	3/32"	2	28.44	20	65.6	5.4	1.43
		2.5	35.55	20.5	67.24	5.95	1.57
		3	42.66	21	68.88	6.5	1.72
		3.5	49.77	21.5	70.52	6.9	1.82
		4	56.88	22	72.16	7.4	1.95
		4.5	63.99	23	75.44	7.9	2.09
2.77	7/64"	2	28.44	20.5	67.24	7.5	1.98
		2.5	35.55	20.5	67.24	8.35	2.21
		3	42.66	21	68.88	8.95	2.36
		3.5	49.77	22	72.16	9.9	2.61
		4	56.88	23	75.44	10.35	2.73
		4.5	63.99	23.5	77.08	10.85	2.87
3.17	1/8"	2	28.44	21	68.88	9.58	2.53
		2.5	35.55	22	72.16	10.8	2.85
		3	42.66	22.5	73.8	11.6	3.06
		3.5	49.77	23	75.44	12.8	3.38
		4	56.88	24	78.72	13.4	3.54
		4.5	63.99	21.5	70.52	13.9	3.67
3.57	9/64"	2	28.44	22	72.16	11.8	3.12
		2.5	35.55	22	72.16	13.2	3.49
		3	42.66	22.5	73.8	14.45	3.82
		3.5	49.77	23	75.44	15.55	4.11
		4	56.88	23	75.44	16.7	4.41
		4.5	63.99	24	78.72	17.25	4.56

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.
**On higher pressure (above 3 Kg/cm2) stream straightener is recommended for all the nozzles.

Spacing	CU	DU	SC(5%)	APR
R8 x 8	90%	82%	1.4	10
R9 x 9	94%	93%	1.1	7.9
R10 x 10	90%	85%	1.2	6.4

AQ - 5N23W

Overhead Sprinklers

Features

- Available in ½" BSP/NPT Male threaded
- Nozzle size above 3.17mm with stream straightening vane for long range.
- Durable Bronze body and arm
- Heavy duty brass Nut and tube
- Energy saving with plastic wedge drive spool.
- Excellent water distribution at low pressure.
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 1.5 - 4.0 kg/cm^2 or 20 -60Psi
- Recommended spacing up to 10m for higher distribution uniformity.
- Trajectory Angle: 23^0

Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
1.98	5/64"	1.5	21.33	18.3	60.02	3.32	0.88
		2	28.44	18.8	61.66	3.74	0.99
		2.5	35.55	19.6	64.29	3.98	1.05
		3	42.66	20	65.60	4.38	1.16
		3.5	49.77	20.2	66.26	4.64	1.23
		4	56.88	20.2	66.26	4.96	1.31
2.38	3/32"	1.5	21.33	20	65.60	5.04	1.33
		2	28.44	20.6	67.57	5.4	1.43
		2.5	35.55	20.6	67.57	5.95	1.57
		3	42.66	21	68.88	6.5	1.72
		3.5	49.77	21	68.88	6.69	1.77
		4	56.88	21.2	69.54	7.4	1.95
2.77	7/64"	1.5	21.33	20.8	68.22	6.74	1.78
		2	28.44	21	68.88	7.5	1.98
		2.5	35.55	21	68.88	8.35	2.21
		3	42.66	21.6	70.85	8.95	2.36
		3.5	49.77	21.8	71.50	9.9	2.61
		4	56.88	22.2	72.82	10.35	2.73
3.17	1/8"	1.5	21.33	21.2	69.54	8.58	2.27
		2	28.44	21.2	69.54	9.58	2.53
		2.5	35.55	21.2	69.54	10.8	2.85
		3	42.66	21.8	71.50	11.6	3.06
		3.5	49.77	22	72.16	12.8	3.38
		4	56.88	22.6	74.13	13.4	3.54

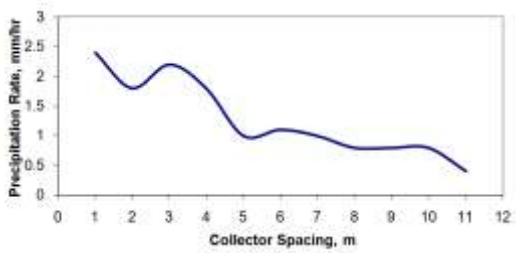
*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.
**On higher pressure (above 3 Kg/cm2) stream straightener is recommended for all the nozzles.

Application

- All crops irrigation compatible by overhead irrigation on solid set systems.
- Low volume, fast rotation at low pressure for irrigation of row crops.
- Smaller nozzles allow low flow & frost protection in vine and overtree.

Nozzle Size: 2.38mm Pressure: 3.0kg/cm^2

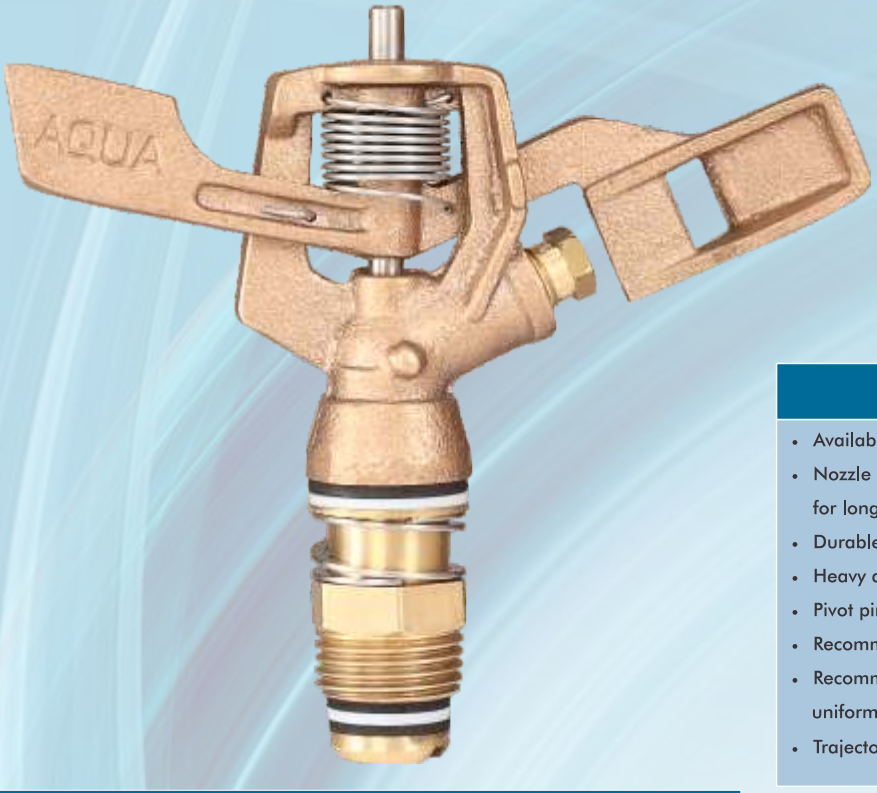
Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R8 x 8	90%	80%	1.4	6.1
R9 x 9	89%	83%	1.2	4.9
R10 x 10	92%	89%	1.2	3.9

AQ - 5N25

Overhead Sprinklers



Features

- Available in ½" BSP/NPT Male threaded
- Nozzle size above 3.17mm with stream straightening vane for long range.
- Durable Bronze body and arm
- Heavy duty brass Nut and tube
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 2.0 - 4.5 kg/cm^2 or 30 - 65Psi
- Recommended spacing up to 12m for higher distribution uniformity.
- Trajectory Angle: 25^0

Application

- All row crops irrigation irrigated by overhead irrigation on solid set systems - portable or permanent.
- Agriculture fields or landscape application and center pivots.

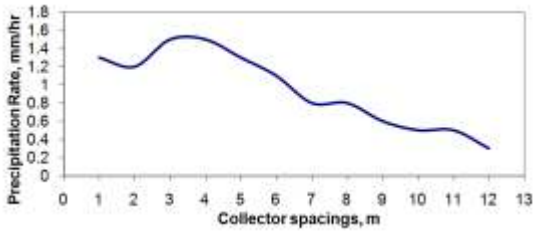
Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
2.38	3/32"	2	28.44	20.5	67.24	5.4	1.43
		2.5	35.55	21	68.88	5.95	1.57
		3	42.66	22	72.16	6.5	1.72
		3.5	49.77	23	75.44	6.9	1.82
		4	56.88	24.5	80.36	7.4	1.95
		4.5	63.99	25	82	7.9	2.09
2.77	7/64"	2	28.44	21	68.88	7.5	1.98
		2.5	35.55	21.5	70.52	8.35	2.21
		3	42.66	22.5	73.8	8.95	2.36
		3.5	49.77	23.5	77.08	9.9	2.61
		4	56.88	24	78.72	10.35	2.73
		4.5	63.99	24.5	80.36	10.85	2.87
3.17	1/8"	2	28.44	21	68.88	9.58	2.53
		2.5	35.55	22.5	73.8	10.8	2.85
		3	42.66	23	75.44	11.6	3.06
		3.5	49.77	24	78.72	12.8	3.38
		4	56.88	25	82	13.4	3.54
		4.5	63.99	25	82	13.9	3.67
3.57	9/64"	2	28.44	21.5	70.52	11.8	3.12
		2.5	35.55	22.5	73.8	13.2	3.49
		3	42.66	23	75.44	14.45	3.82
		3.5	49.77	24	78.72	15.55	4.11
		4	56.88	25	82	16.7	4.41
		4.5	63.99	25.5	83.64	17.25	4.56

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.
**On higher pressure (above 3 Kg/cm2) stream straightener is recommended for all the nozzles.

Nozzle Size: 3.57mm Pressure: 3.5kg/cm^2

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R8 x 8	96%	93%	1.1	5.6
R9 x 9	94%	90%	1.1	4.4
10 x 10	95%	93%	1.1	3.6
R11 x 11	93%	88%	1.1	3
R12 x 12	91%	85%	1.2	2.5

AQ - 5DN (KIWI)

Overhead Sprinklers

Features

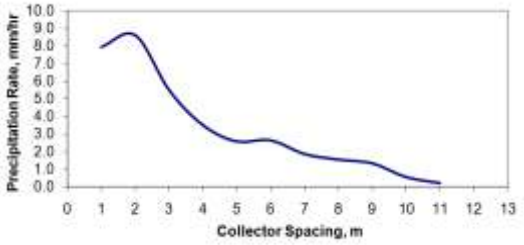
- Available in ½" BSP/NPT Male threaded
- Nozzle size above 3.17mm with stream straightening vane for long range.
- Heavy duty brass body, arm, Nut, tube and nozzles.
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 1.0 - 3.0 kg/cm^2 or 15 - 45Psi
- Recommended spacing up to 12m for higher distribution uniformity.
- Trajectory Angle: 25^0

Application

- All row crops irrigation irrigated by overhead irrigation on solid set systems - portable or permanent.
- Agriculture fields.

Nozzle Size: 3.57 x 2.5mm Pressure: 2.0kg/cm^2

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R8 x 8	87%	81%	1.3	12.8
R9 x 9	86%	85%	1.2	10.1
10 x 10	85%	83%	1.3	8.2
R11 x 11	83%	81%	1.3	6.8
R12 x 12	81%	81%	1.2	5.7

Performance Table

Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm^2	Psi	mtr.	ft.	LPM	GPM
3.17 x 2.5	1	14.22	19	62.32	11.5	3.04
	1.5	21.33	20	65.6	14	3.70
	2	28.44	21	68.88	16	4.23
	2.5	35.55	21.5	70.52	18.2	4.81
	3	42.66	22	72.16	20	5.28
3.57 x 2.5	1	14.22	20	65.6	12.5	3.30
	1.5	21.33	21.5	70.52	15.2	4.01
	2	28.44	22	72.16	17.4	4.60
	2.5	35.55	23.5	77.08	20	5.28
	3	42.66	24	78.72	21.5	5.68
3.96 x 2.5	1	14.22	21	68.88	15	3.96
	1.5	21.33	22.5	73.8	18.2	4.81
	2	28.44	24	78.72	20.7	5.47
	2.5	35.55	24.4	80.032	23.5	6.21
	3	42.66	25	82	25.8	6.81

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

AQ - 22

Overhead Sprinklers

Features

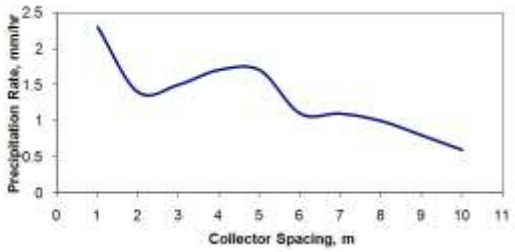
- Available in ½" Male threaded
- Color coded nozzles for easy size identification.
- Nozzle Bayonet connection for easy service in field conditions.
- Nozzles with integrated stream straightening vane for long range.
- Engineering Plastic material for durability and corrosion resistant.
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 2.0 - 4.0 kg/cm^2 or 30 -55Psi
- Recommended spacing up to 12m for higher distribution uniformity.
- Trajectory Angle: 24^0

Application

- All row crops irrigation compatible by overhead irrigation on solid set systems - portable or permanent.
- Agriculture fields and germination of vegetable, flowers and nursery crops.

Nozzle Size: 3.2 x 1.8mm Pressure: 3.0kg/cm^2

Distribution Curve



Performance Table

Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm^2	Psi	mtr.	ft.	LPM	GPM
2.9x1.8	2	28.44	20	65.60	10.08	2.66
	2.5	35.55	20.4	66.91	11.25	2.97
	3	42.66	20.8	68.22	12.33	3.26
	3.5	49.77	21	68.88	13.33	3.52
	4	56.88	21	68.88	14.17	3.74
3.2 x 1.8	2	28.44	21.0	68.88	11.94	3.152
	2.5	35.55	21.6	70.85	13.43	3.548
	3	42.66	21.6	70.85	14.78	3.903
	3.5	49.77	22.0	72.16	15.86	4.188
	4	56.88	22.0	72.16	17.13	4.525
3.5x2.4	2	28.44	21.6	70.85	16.67	4.402
	2.5	35.55	22.0	72.16	18.91	4.996
	3	42.66	22.4	73.47	20.83	5.502
	3.5	49.77	23.0	75.44	22.50	5.943
	4	56.88	23.0	75.44	24.17	6.383
4.0x2.4	2	28.44	22.0	72.16	19.08	5.041
	2.5	35.55	22.4	73.47	21.25	5.613
	3	42.66	23.0	75.44	23.58	6.229
	3.5	49.77	23.6	77.41	25.67	6.779
	4	56.88	24.0	78.72	27.50	7.262

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Spacing	CU	DU	SC(5%)	APR
R8 x 8	93%	90%	1.1	6
R9 x 9	93%	90%	1.1	4.7
10 x 10	89%	85%	1.2	3.8
R11 x 11	87%	83%	1.2	3.2
R12 x 12	87%	81%	1.3	2.7

AQ - 22W

Overhead Sprinklers

Features

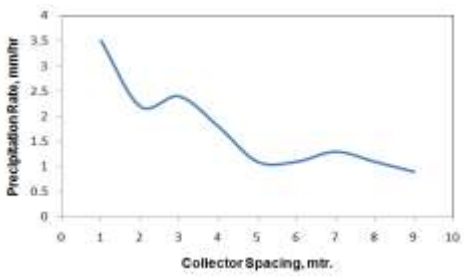
- Available in ½" Male threaded
- Color coded nozzles for easy size identification.
- Nozzle Bayonet connection for easy service in field conditions.
- Nozzles with integrated stream straightening vane for long range.
- Engineering Plastic material for durability and corrosion resistant.
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 1.0 - 3.0 kg/cm2 or 15 - 40Psi
- Recommended spacing up to 10m for higher distribution uniformity.
- Trajectory Angle: 24°

Application

- Irrigation and germination of vegetable & nursery crops by overhead irrigation.
- Efficient irrigation and crop protection by frost.

Nozzle Size: 2.2 x 1.8mm Pressure: 2.0kg/cm²

Distribution Curve



Performance Table

Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm²	Psi	mtr.	ft.	LPM	GPM
2.0x1.8	1	14.22	16	52.48	4.90	1.29
	1.5	21.33	16.8	55.10	5.80	1.53
	2	28.44	18	59.04	6.75	1.78
	2.5	35.55	19	62.32	7.50	1.98
	3	42.66	19	62.32	8.25	2.18
2.2 x 1.8	1	14.22	16.8	55.10	5.15	1.36
	1.5	21.33	18	59.04	6.30	1.66
	2	28.44	18	59.04	7.25	1.91
	2.5	35.55	19	62.32	8.10	2.14
	3	42.66	19.6	64.29	8.80	2.32
2.5 x 1.8	1	14.22	17.2	56.42	6.30	1.66
	1.5	21.33	18	59.04	7.60	2.01
	2	28.44	19.6	64.29	8.80	2.32
	2.5	35.55	20	65.60	9.75	2.58
	3	42.66	20.4	66.91	10.80	2.85

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

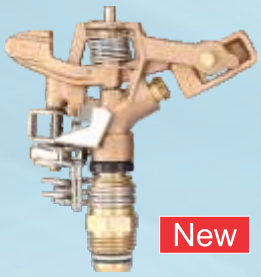
Spray Nozzle: Green Color

Spacing	CU	DU	SC(5%)	APR
R6.0 x 6.0	95%	95%	1.1	10.6
R7.0 x 7.0	87%	76%	1.6	7.8
R8.0 x 8.0	90%	85%	1.3	6
R9.0 x 9.0	92%	86%	1.3	4.7
R10.0 x 10.0	86%	75%	1.5	3.8

AQ - 05PC

Overhead Sprinklers

AQ-05PC-AG



New

- Bronze Body & Arm.
- Inbuilt diffuser arm with body.
- Good gripping of diffuser screw, to prevent unscrewing at high pressure.
- Recommended pressure: 2-4 Kg/cm^2.

Features

- ½" BSP/NPT male threaded
- Durable Bronze body, Zamac Pressure Die Casted Arm, Brass Nut, Tube, nozzle & diffuser screw.
- Stainless Steel Pivot Pin, deflector plate, part circle mechanism.
- Diffusor screw to change the water jet from heavy droplets to fine spray.
- Adjustable deflector plate to change the spray height for adjusting throw.
- Recommended Pressure 2.0 - 3.5 kg/cm^2 or 30 - 50Psi
- Recommended spacing up to 8m for higher distribution uniformity.
- Trajectory Angle: 25^0

Application

- All crops irrigation compatible by overhead irrigation.
- For Efficient irrigation of field edges / turf application.

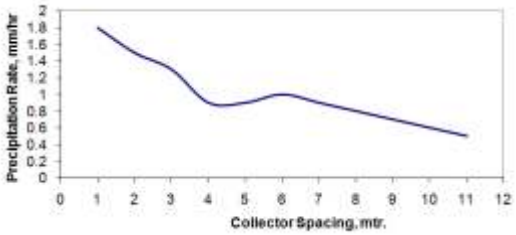
Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
3.17	1/8"	2	28.44	21.2	69.54	9.58	2.53
		2.5	35.55	22.4	73.47	10.8	2.85
		3	42.66	23	75.44	11.6	3.06
		3.5	49.77	23.8	78.06	12.8	3.38
3.57	9/64"	2	28.44	22.9	75.11	11.4	3.01
		2.5	35.55	23.4	76.75	13.2	3.49
		3	42.66	23.8	78.06	14.4	3.80
		3.5	49.77	24.3	79.70	15	3.96
3.97	5/32"	2	28.44	23.5	77.08	13.8	3.65
		2.5	35.55	24	78.72	15.6	4.12
		3	42.66	24.5	80.36	17.4	4.60
		3.5	49.77	25	82.00	19.2	5.07

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 3.17mm Pressure: 3.0kg/cm^2

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R6 x 6	91%	86%	1.2	22.4
R7 x 7	88%	84%	1.2	16.5
R8 x 8	83%	79%	1.3	12.6

AQ - 22PC

Overhead Sprinklers

New

AQ - 22PC-AG

AQ - 22PC-GAG

- **For Garden & landscape**
- Operating at low pressure.
- Diffusor screw to change the water jet from heavy droplets to fine spray.
- Adjustable deflector plate to change the spray height and to reduce throw.

Application

- All agriculture crops and gardens irrigated by overhead irrigation.
- For irrigation and germination of vegetables, flowers, potatoes.
- For Efficient irrigation of field edges.

Features

- Available in ½" BSPT Male threaded
- Color coded nozzles for easy size identification.
- Nozzle Bayonet connection for easy service in field conditions.
- Nozzles with integrated stream straightening vane for long range.
- Engineering Plastic material for durability and corrosion resistant.
- Pivot pin and Springs made of Stainless steel.
- **Part circle assembly made by special grade plastic material for longevity.**
- Recommended Pressure 2.0 - 4.0 kg/cm^2 or 30 - 55Psi
- Recommended spacing up to 8m for higher distribution uniformity.
- Trajectory Angle: 25^0

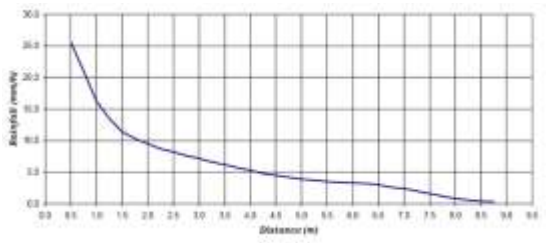
Performance Table

Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm^2	Psi	mtr.	ft.	LPM	GPM
2.5	2.0	28.44	21.0	68.88	6.10	23.09
	2.5	35.55	22.0	72.16	6.80	25.74
	3.0	42.66	21.6	70.85	7.40	28.02
	3.5	49.77	22.6	74.13	8.00	30.29
	4.0	56.88	22.6	74.13	8.55	32.37
2.9	2.0	28.44	23.0	75.44	7.60	28.76
	2.5	35.55	23.0	75.44	8.50	32.18
	3.0	42.66	23.0	75.44	9.30	35.21
	3.5	49.77	23.0	75.44	10.10	38.24
	4.0	56.88	23.0	75.44	10.75	40.70
3.2	2.0	28.44	22.0	72.16	9.40	35.59
	2.5	35.55	23.0	75.44	10.50	39.75
	3.0	42.66	23.0	75.44	11.55	43.73
	3.5	49.77	23.5	77.08	12.45	47.14
	4.0	56.88	24.0	78.72	13.30	50.35
*3.5	2.0	28.44	22.0	72.16	11.70	44.30
	2.5	35.55	23.0	75.44	13.10	49.59
	3.0	42.66	24.0	78.72	14.30	54.14
	3.5	49.77	25.0	82.00	15.40	58.30
	4.0	56.88	26.0	85.28	16.40	62.09

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 2.9mm, Orange Pressure: 2.5kg/cm^2

Distribution Curve

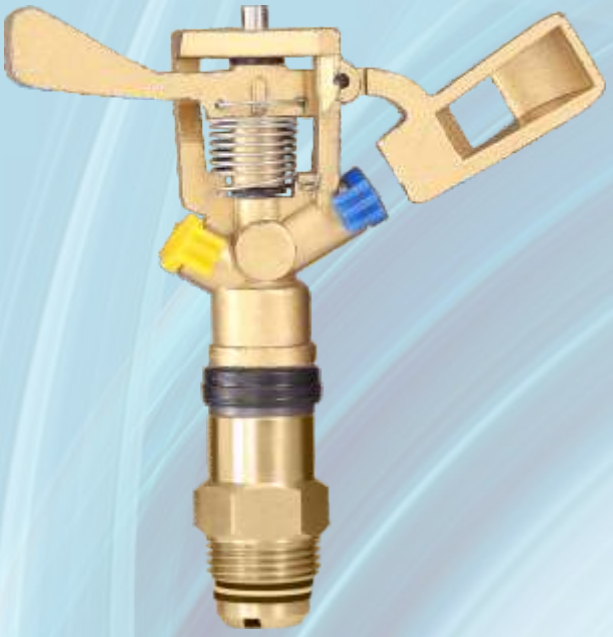


*Model 22PC tested at irstea, France at riser height 750mm

Spacing	CU	DU	SC(5%)	APR
R6.0 x 6.0	88%	83%	1.3	24.4
R7.0 x 7.0	88%	80%	1.3	19.7
R8.0 x 8.0	87%	78%	1.2	16.3
R9.0 x 9.0	86%	75%	1.1	13.7

AQ - 23

Overhead Sprinklers



Features

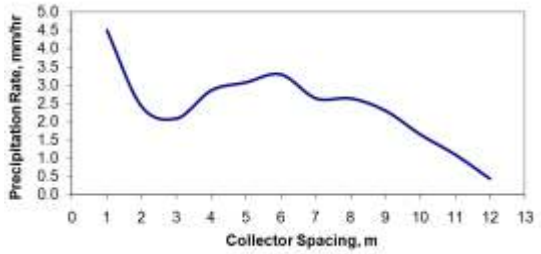
- Available in ½" Male threaded & ¾" Female Threaded
- Hot Chamber Pressure Die casted Zamac body & arm.
- Color coded nozzles for easy size identification.
- Nozzle Bayonet connection for easy service in field condtions.
- Nozzles with integrated stream straightening vane for long range.
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 2.0 - 4.0 kg/cm^2 or 30 -55Psi
- Recommended spacing up to 12m for higher distribution uniformity.
- Trajectory Angle: 30^0

Nozzle Size: 3.5 x 2.4mm **Pressure: 3.0kg/cm^2**

Application

- All row crops irrigation compatible by overhead irrigation on solid set systems - portable or permanent.
- Use for fruit farming, nurseries and vegetable farming.

Distribution Curve



Performance Table

Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm^2	Psi	mtr.	ft.	LPM	GPM
2.9 x 1.8	2	28.44	21	68.88	10.08	2.66
	2.5	35.55	21.4	70.19	11.25	2.97
	3	42.66	21.8	71.50	12.33	3.26
	3.5	49.77	22	72.16	13.33	3.52
	4	56.88	22	72.16	14.17	3.74
3.2 x 1.8	2	28.44	21.8	71.50	11.94	3.15
	2.5	35.55	22.0	72.16	13.43	3.55
	3	42.66	22.4	73.47	14.78	3.90
	3.5	49.77	22.8	74.78	15.86	4.19
	4	56.88	23.2	76.10	17.13	4.53
3.5 x 2.4	2	28.44	22.0	72.16	16.67	4.40
	2.5	35.55	22.6	74.13	18.91	5.00
	3	42.66	23.0	75.44	20.83	5.50
	3.5	49.77	23.2	76.10	22.50	5.94
	4	56.88	23.6	77.41	24.17	6.38
4.0 x 2.4	2	28.44	22.4	73.47	19.08	5.04
	2.5	35.55	23.0	75.44	21.25	5.61
	3	42.66	23.4	76.75	23.58	6.23
	3.5	49.77	24.0	78.72	25.67	6.78
	4	56.88	24.4	80.03	27.50	7.26

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Spacing	CU	DU	SC(5%)	APR
R9 x 9	96%	94%	1.1	12.2
R10 x 10	94%	91%	1.1	9.9
R11 x 11	87%	84%	1.2	8.1
R 12 x 12	85%	81%	1.2	6.8

AQ - 15

Overhead Sprinklers

Features

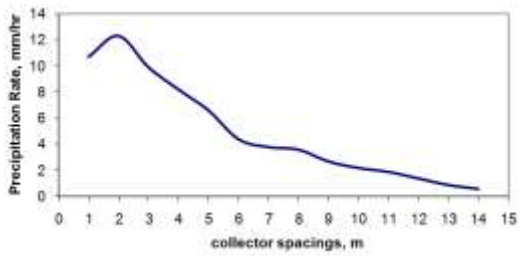
- Available in ½" or ¾" BSP/NPT Female threaded
- Durable Zamac Pressure Die Casted Body & Arm,
- Heavy duty Brass Nut, Tube and nozzles.
- Plastic parts made of engineering plastic for durablity.
- Stainless Steel Pivot Pin and springs
- Recommended Pressure 1.0 - 3.0 kg/cm^2 or 15 - 45Psi
- Recommended spacing up to 12m for higher distribution uniformity.
- Trajectory Angle: 30^0

Application

- All row crops irrigation compatible by overhead irrigation on Solid sets - Portable and permanent systems.

Nozzle Size: 5.0 x 3.0mm Pressure: 3.0kg/cm^2

Distribution Curve



Performance Table

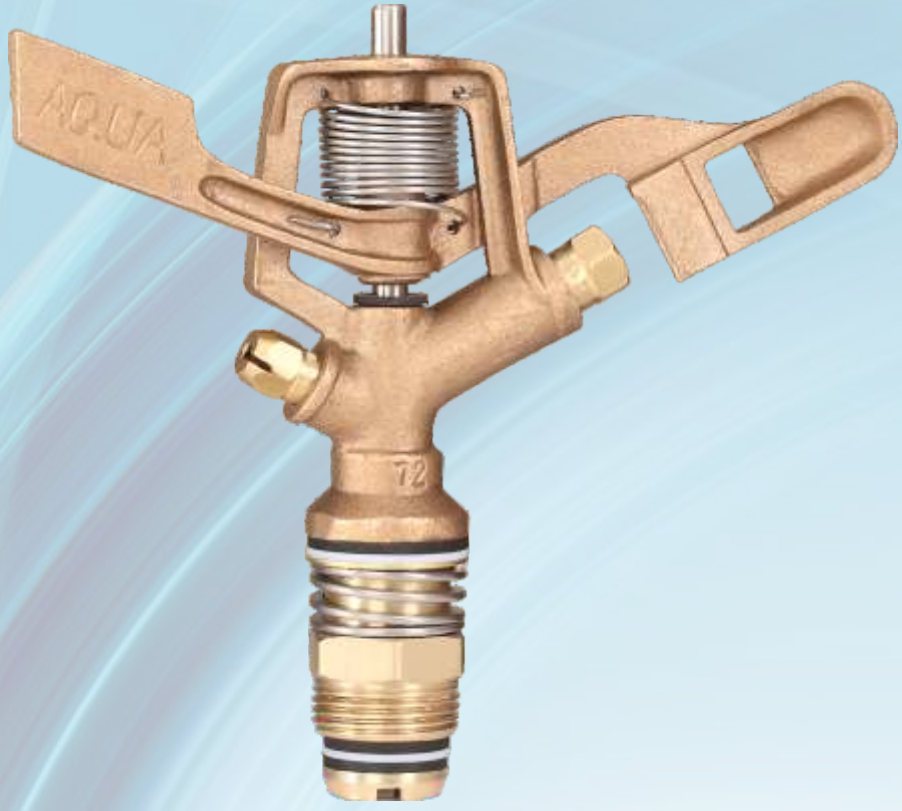
Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm^2	Psi	mtr.	ft.	LPM	GPM
4.0 x 2.5	1	14.22	18	59.04	13	3.43
	1.5	21.33	21	68.88	16.8	4.44
	2	28.44	24	78.72	19.7	5.20
	2.5	35.55	25	82.00	22.2	5.86
	3	42.66	27	88.56	24.7	6.52
4.5 x 2.5	1	14.22	18	59.04	16.7	4.41
	1.5	21.33	22	72.16	20	5.28
	2	28.44	24	78.72	24.2	6.39
	2.5	35.55	25	82.00	26.7	7.05
	3	42.66	27	88.56	29.7	7.84
4.5 x 3.0	1	14.22	18	59.04	17.5	4.62
	1.5	21.33	22	72.16	20.9	5.52
	2	28.44	24	78.72	25	6.60
	2.5	35.55	26	85.28	28.4	7.50
	3	42.66	27	88.56	31	8.19
5.0 x 3.0	2	28.44	25	82.00	29.2	7.71
	2.5	35.55	26	85.28	33.4	8.82
	3	42.66	27	88.56	35.9	9.48
	3.5	49.77	28	91.84	38.4	10.14
	4	56.88	29	95.12	39.2	10.35

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Spacing	CU	DU	SC(5%)	APR
R9.0 x 9.0	94%	89%	1.3	24.4
R10.0 x 10.0	91%	85%	1.3	19.7
R11.0 x 11.0	90%	85%	1.2	16.3
R12.0 x 12.0	90%	87%	1.1	13.7

AQ - 20

Overhead Sprinklers



Application

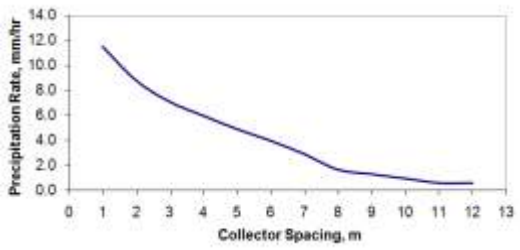
- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines and mechanically moved system such as center pivot.
- Area where strong wind is prevelant, Nozzles with stream straighting vane.

Features

- ¾" BSP/NPT male threaded
- Durable Bronze body and arm,
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs
- Bearing & Sealing washers are made of material for extending life.
- Recommended Pressure 2.0 - 5.0 kg/cm^2 or 30 - 70Psi
- Recommended spacing up to 15m for higher distribution uniformity.
- Trajectory Angle: 27^0

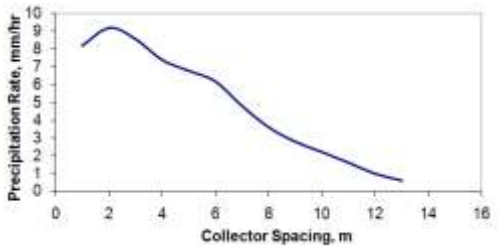
Nozzle Size: 3.96 x 2.38mm Pressure: 3.0kg/cm^2

Distribution Curve



Nozzle Size: 4.36 x 3.17mm Pressure: 3.0kg/cm^2

Distribution Curve



Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter				Discharge Rate	
				Witout Vane		With Vane			
		kg/cm²	Psi	mtr.	ft.	mtr.	ft.	LPM	GPM
3.57 x Plug	9/64" x Plug	2	28.44	20.6	67.57	21.2	69.54	11.8	3.12
		2.5	35.55	21.8	71.50	22	72.16	13.2	3.49
		3	42.66	23	75.44	23.6	77.41	14.45	3.82
		3.5	49.77	24.4	80.03	25.2	82.66	15.55	4.11
		4	56.88	25.6	83.97	26	85.28	16.7	4.41
		4.5	63.99	26.2	85.94	26.6	87.25	17.4	4.60
		5	71.1	26.8	87.90	27.4	89.87	18.6	4.91
3.96 x 2.38	5/32" x 7/64"	2	28.44	21.2	69.54	22.8	74.78	18.6	4.91
		2.5	35.55	22.6	74.13	23.2	76.10	20.2	5.34
		3	42.66	24	78.72	24.6	80.69	22.4	5.92
		3.5	49.77	25.2	82.66	25.8	84.62	24.3	6.42
		4	56.88	26.4	86.59	27.4	89.87	26.5	7.00
		4.5	63.99	27	88.56	27.4	89.87	28.6	7.55
		5	71.1	27.8	91.18	28.2	92.50	30.8	8.14
4.36 x 3.17	11/64" x 1/8"	2	28.44	22.8	74.78	23.4	76.75	25.6	6.76
		2.5	35.55	26	85.28	26.6	87.25	28.8	7.61
		3	42.66	28	91.84	28.8	94.46	32.4	8.56
		3.5	49.77	29	95.12	29.6	97.09	34.3	9.06
		4	56.88	30.2	99.06	31	101.68	36.6	9.67
		4.5	63.99	31	101.68	31.4	102.99	39.2	10.35
		5	71.1	31.6	103.65	32.2	105.62	41.8	11.04
4.76 x 3.17	3/16" x 1/8"	2	28.44	24.2	79.38	25.2	82.66	28.8	7.61
		2.5	35.55	27.4	89.87	28.2	92.50	32.3	8.53
		3	42.66	30.4	99.71	31.2	102.34	36.3	9.59
		3.5	49.77	32.2	105.62	33.2	108.90	39.4	10.41
		4	56.88	33.8	110.86	34.6	113.49	42.2	11.15
		4.5	63.99	34.4	112.83	35	114.80	45.5	12.02
		5	71.1	35	114.80	35.4	116.11	47.8	12.63
5.15 x 3.17	13/64" x 1/8"	2	28.44	27.4	89.87	28.2	92.50	34.5	9.11
		2.5	35.55	28.6	93.81	29.4	96.43	37.2	9.83
		3	42.66	30.4	99.71	31.2	102.34	42.4	11.20
		3.5	49.77	32.2	105.62	33	108.24	44.9	11.86
		4	56.88	34.6	113.49	35.4	116.11	47.8	12.63
		4.5	63.99	35.4	116.11	36	118.08	49.8	13.15
		5	71.1	36	118.08	36.6	120.05	52.6	13.89

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 3.96 x 2.38mm Pressure: 3.0kg/cm²

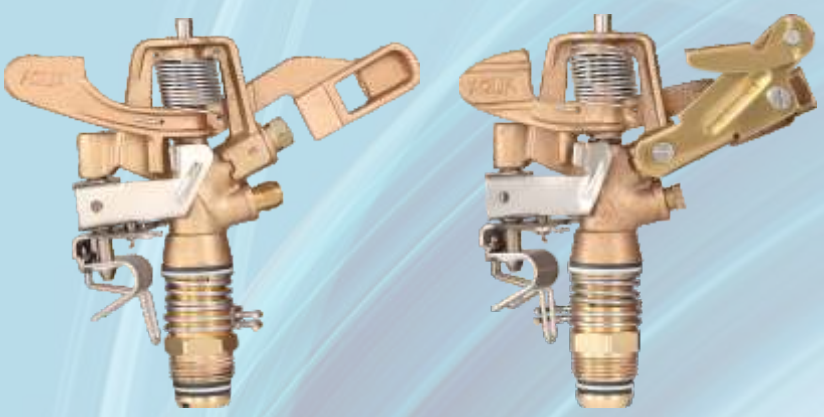
Spacing	CU	DU	SC(5%)	APR
R8.0 x 8.0	96%	95%	1.1	18.7
R9.0 x 9.0	95%	93%	1.1	14.8
R10.0 x 10.0	94%	92%	1.1	12
R11.0 x 11.0	92%	90%	1.2	9.9
R12.0 x 12.0	89%	86%	1.3	8.3

Nozzle Size: 4.36 x 3.17mm Pressure: 3.0kg/cm²

Spacing	CU	DU	SC(5%)	APR
R9.0 x 9.0	98%	98%	1	23.4
R10.0 x 10.0	98%	96%	1.1	18.9
R11.0 x 11.0	98%	96%	1.1	15.7
R12.0 x 12.0	98%	96%	1	13.2
R13.0 x 13.0	98%	96%	1.1	11.2
R14.0 x 14.0	96%	94%	1.1	9.7
R15.0 x 15.0	92%	87%	1.2	8.4

AQ - 20PC

Overhead Sprinklers



Application

- All crops irrigation compatible by overhead irrigation on Solid set - portable and permanent systems.
- For Efficient irrigation of field edges.

Features

- 3/4" BSP/NPT male threaded
- Durable Bronze body and arm,
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, deflector plate, diffusor screw, part circle mechanism.
- Bearing & Sealing washers are made of material for extending life.
- Diffusor screw to change the water jet from heavy droplets to fine spray (AQ20PCDA).
- Adjustable deflector plate to change the spray height for adjusting throw (AQ20PC-ASDA).
- **Special Model available for pressure application upto 6.0kg/cm^2.**
- Recommended Pressure 2.0 - 4.0 kg/cm^2 or 30 - 55Psi
- Recommended spacing up to 15m for higher distribution uniformity.
- Trajectory Angle: 25^0

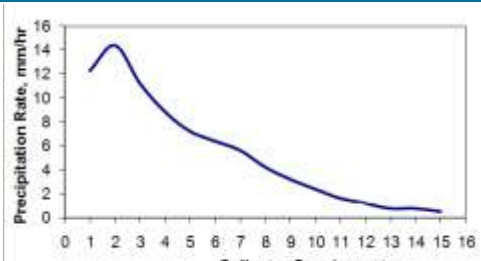
Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
3.96 x Plug	5/32" x Plug	2	28.44	27	88.56	13.8	3.65
		2.5	35.55	28	91.84	15.6	4.12
		3	42.66	29.4	96.43	17.5	4.62
		3.5	49.77	30.2	99.06	18.9	4.99
		4	56.88	30.6	100.37	20.2	5.34
4.36 x 2.38	11/64" x 3/32"	2	28.44	26.8	87.90	22	5.81
		2.5	35.55	29	95.12	23.6	6.23
		3	42.66	30	98.40	25.8	6.81
		3.5	49.77	30.4	99.71	27.9	7.37
		4	56.88	31.4	102.99	30.4	8.03
4.76 x Plug	3/16" x Plug	2	28.44	29	95.12	19.4	5.12
		2.5	35.55	29.8	97.74	22.8	6.02
		3	42.66	30.4	99.71	25.2	6.66
		3.5	49.77	31.2	102.34	26.9	7.11
		4	56.88	32.5	106.60	29.2	7.71
4.76 x 3.17	3/16" x 1/8"	2	28.44	29.2	95.78	28.8	7.61
		2.5	35.55	29.8	97.74	32.3	8.53
		3	42.66	30.4	99.71	36.3	9.59
		3.5	49.77	31.2	102.34	39.4	10.41
		4	56.88	32.8	107.58	42.2	11.15
5.15 x 3.17	13/64" x 1/8"	2	28.44	30.4	99.71	34.5	9.11
		2.5	35.55	31.3	102.66	37.2	9.83
		3	42.66	33.4	109.55	42.4	11.20
		3.5	49.77	32.2	105.62	44.9	11.86
		4	56.88	33.6	110.21	47.8	12.63

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 4.36 x 2.38mm Pressure: 3.0kg/cm^2

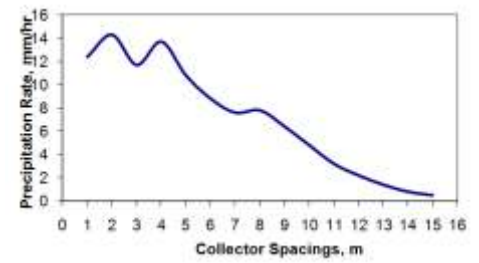
Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R12 x 12	93%	92%	1.1	16.1
R13 x 13	92%	91%	1.1	13.7
R14 x 14	90%	88%	1.2	11.8
R15 x 15	87%	84%	1.3	10.3

Nozzle Size: 4.76 x 3.17mm Pressure: 3.0kg/cm^2

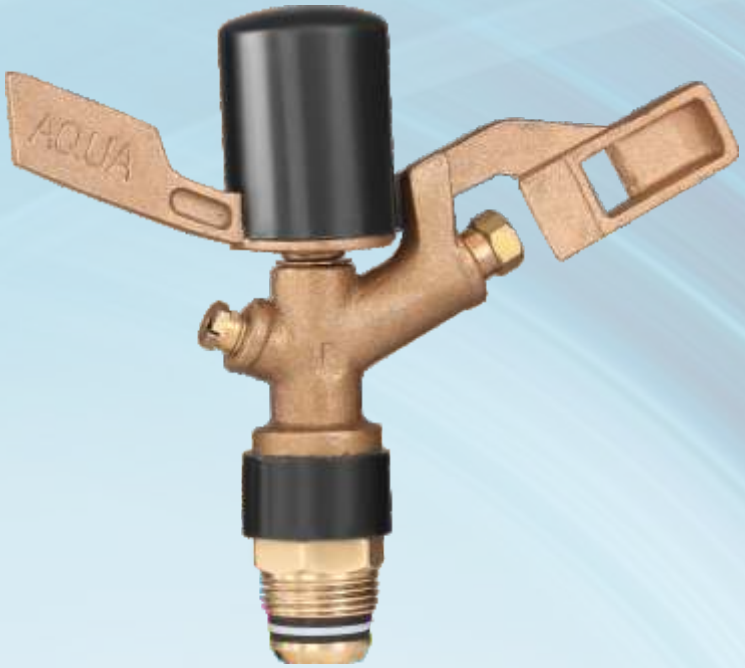
Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R12 x 12	95%	93%	1.1	24.2
R13 x 13	95%	91%	1.1	20.7
R14 x 14	96%	93%	1.1	17.8
R15 x 15	96%	94%	1.1	15.5

AQ - 20AF

Overhead Sprinklers



Features

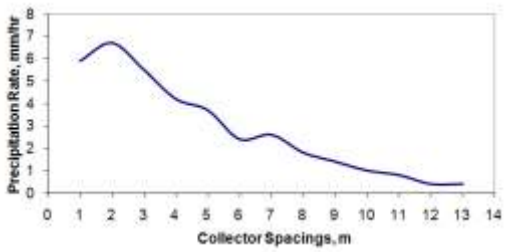
- 3/4" BSP/NPT male threaded
- Durable Bronze body and arm,
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs
- Bridgeless body design for non accumulation of ice on sprinkler.
- Specially designed SS spring for fast rotation to prevent ice formation on leaves.
- Top and bottom springs protect by cap from ice accumulation.
- Top spring cap and bottom cap made of special material to sustain sub zero temp.
- Recommended Pressure 2.0 - 4.0 kg/cm^2 or 30 - 55Psi
- Recommended spacing up to 15m for higher distribution uniformity.
- Trajectory Angle: 27^0

Nozzle Size: 3.96 x 2.38mm Pressure: 4.0kg/cm^2

Application

- All crops irrigation suitable by overhead irrigation under frost conditions in vineyards, orchards and vegetables on solid sets.

Distribution Curve



Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
3.96 x Plug	5/32" x Plug	2	28.44	21.2	69.54	13.8	3.65
		2.5	35.55	22.6	74.13	15.6	4.12
		3	42.66	24	78.72	17.5	4.62
		3.5	49.77	25.2	82.66	18.9	4.99
		4	56.88	26.4	86.59	20.2	5.34
3.96 x 2.38	5/32" x 7/64"	2	28.44	21.2	69.54	18.6	4.91
		2.5	35.55	22.6	74.13	20.2	5.34
		3	42.66	24	78.72	22.4	5.92
		3.5	49.77	25.2	82.66	24.3	6.42
		4	56.88	26.4	86.59	26.5	7.00
4.36 x 3.17	11/64" x 1/8"	2	28.44	22.8	74.78	25.6	6.76
		2.5	35.55	26	85.28	28.8	7.61
		3	42.66	28	91.84	32.4	8.56
		3.5	49.77	29	95.12	34.3	9.06
		4	56.88	30.2	99.06	36.6	9.67
4.76 x 3.17	3/16" x 1/8"	2	28.44	24.2	79.38	28.8	7.61
		2.5	35.55	27.4	89.87	32.3	8.53
		3	42.66	30.4	99.71	36.3	9.59
		3.5	49.77	32.2	105.62	39.4	10.41
		4	56.88	33.8	110.86	42.2	11.15

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Spacing	CU	DU	SC(5%)	APR
R10.0 x 10.0	94%	89%	1.3	18.3
R11.0 x 11.0	91%	84%	1.3	15.1
R12.0 x 12.0	93%	90%	1.2	12.7
R13.0 x 13.0	95%	93%	1.1	10.8
R14.0 x 14.0	93%	88%	1.2	9.3
R15.0 x 15.0	89%	83%	1.3	8.1

AQ - 46

Overhead Sprinklers

New

AQ-46S

Nozzles with spreader arm and screw.

New

AQ-46B

Threaded Brass Nozzles

Application

- All crops compatible for overhead sprinkler irrigation on portable as well as solid set systems.
- Use for agriculture field, fruit farming and vegetable farming.

Features

- Available with ¾" BSPT male/Female threaded
- Durable Engineering plastic Body, Arm, Nut, Tube and nozzels.
- Color coded nozzles for easy size identification.
- Bayonet nozzle connection for easy service in field condtions.
- Brass nozzles are also available with this model.
- Nozzles with integrated spreader screw is available with both nozzles.
- Press fitted plated weight into arm for proper impact and balancing.
- Stainless Steel Pivot Pin and Springs
- Recommended Pressure 1.0 - 4.0 kg/cm² or 15 - 55Psi
- Recommended spacing up to 15m for higher distribution uniformity.
- Trajectory Angle: 23⁰

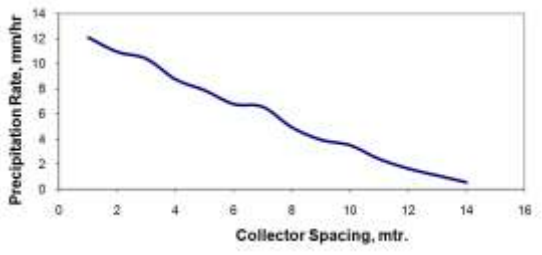
Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm²	Psi	mtr.	ft.	LPM	GPM
3.57 x plug	9/64" x Plug	1	14.22	18	59.04	9.7	2.56
		2	28.44	19.2	62.98	11.8	3.12
		3	42.66	21	68.88	14.5	3.83
		4	56.88	22.4	73.47	16.7	4.41
3.96 x 2.38	5/32" x 3/32"	1	14.22	19.5	63.96	13.2	3.49
		2	28.44	22.5	73.80	18.5	4.89
		3	42.66	25.5	83.64	22.4	5.92
		4	56.88	28.8	94.46	26.5	7.00
4.36 x 2.38	11/64" x 3/32"	1	14.22	21	68.88	17	4.49
		2	28.44	26.8	87.90	22	5.81
		3	42.66	29.8	97.74	25.7	6.79
		4	56.88	32.3	105.94	30.4	8.03
4.76 x 3.17	3/16" x 1/8"	1	14.22	22	72.16	21	5.55
		2	28.44	28	91.84	28	7.40
		3	42.66	31.1	102.01	36	9.51
		4	56.88	33.5	109.88	42	11.09
5.15 x 3.17	13/64" x 1/8"	1	14.22	23.5	77.08	27.5	7.26
		2	28.44	28.7	94.14	32	8.45
		3	42.66	32	104.96	40	10.57
		4	56.88	34.1	111.85	47	12.41
5.55 x 3.17	7/32" x 1/8"	1	14.22	25.2	82.66	32.7	8.64
		2	28.44	29.6	97.09	37.3	9.85
		3	42.66	33	108.24	45.5	12.02
		4	56.88	35	114.80	52.4	13.84

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 4.36 x 2.38mm Pressure: 3.0kg/cm²

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R12.0 x 12.0	97%	97%	1	17.8
R13.0 x 13.0	97%	95%	1.1	15.2
R14.0 x 14.0	97%	95%	1.1	13.1
R15.0 x 15.0	97%	96%	1	11.4

AQ - 46PC

Overhead Sprinklers

Features

- Available in ¾" BSPT Male threaded
- Body, Arm, Nut, Tube and part circle mechanism made of
- engineering plastic material for durability and corrosion resistant.
- **Available in Brass nozzle Threaded / Bayonet nozzles body design.**
- Nozzle Bayonet connection for easy service in field condtions.
- Nozzles with integrated stream straightening vane for long range.
- Pivot pin and Springs, part circle pin made of Stainless steel.
- Recommended Pressure 1.0 - 4.0 kg/cm^2 or 15 - 55Psi
- Recommended spacing up to 15m for higher distribution uniformity.
- Trajectory Angle: 23^0

Application

- All crops irrigation compatible by overhead irrigation on Solid set - portable and permanent systems.
- For Efficient irrigation of field edges.

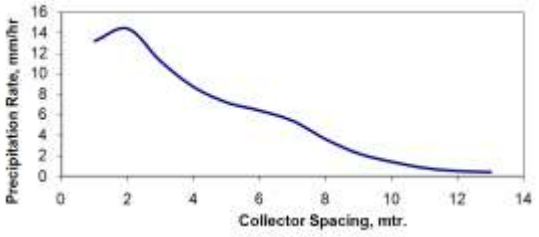
Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
3.96 x 2.38	5/32" x 3/32"	1	14.22	21.5	70.52	13.2	3.49
		2	28.44	23	75.44	18.5	4.89
		3	42.66	26.4	86.59	22.4	5.92
		4	56.88	28.6	93.81	26.5	7.00
4.36 x 2.38	11/64" x 3/32"	1	14.22	22.6	74.13	15.5	4.09
		2	28.44	24.4	80.03	21.5	5.68
		3	42.66	27.8	91.18	25.7	6.79
		4	56.88	29.4	96.43	30.4	8.03
4.76 x Plug	3/16" x Plug	1	14.22	23.6	77.41	13.8	3.65
		2	28.44	26.8	87.90	19.4	5.12
		3	42.66	29	95.12	25.2	6.66
		4	56.88	30.4	99.71	29.2	7.71
4.76 x 3.17	3/16" x 1/8"	1	14.22	23.8	78.06	23.8	6.29
		2	28.44	26.8	87.90	29.4	7.77
		3	42.66	29.2	95.78	36	9.51
		4	56.88	30.4	99.71	42.6	11.25
5.15 x 3.17	13/64" x 1/8"	1	14.22	23.8	78.06	27.4	7.24
		2	28.44	29.2	95.78	36.3	9.59
		3	42.66	30.4	99.71	44.5	11.75
		4	56.88	32.4	106.27	49.3	13.02

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 4.36 x 2.38mm Pressure: 3.0kg/cm^2

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R12 x 12	93%	91%	1.1	13.4
R13 x 13	89%	85%	1.3	11.4
R14 x 14	85%	78%	1.6	9.9
R15 x 15	80%	68%	1.9	8.6

AQ - 25

Overhead Sprinklers

Features

- ¾" BSP/NPT male threaded and 1" Female threaded
- Specially designed for large precipitation rate and spacing.
- Durable Bronze body and arm,
- Heavy duty Brass Nut & Tube.
- Stainless Steel Pivot Pin, Springs
- Recommended Pressure 2.0 - 5.0 kg/cm^2 or 30 - 70Psi
- Recommended spacing up to 18m for higher distribution uniformity.
- Trajectory Angle: 33^0

Application

- All crops irrigation compatible by overhead irrigation on Solid set, permanent set, hard lines, portable lines, wheel lines and
- mechanically moved system such as center pivot.
- Area where strong wind is prevelant, Nozzles with intergal stream straighting vane.

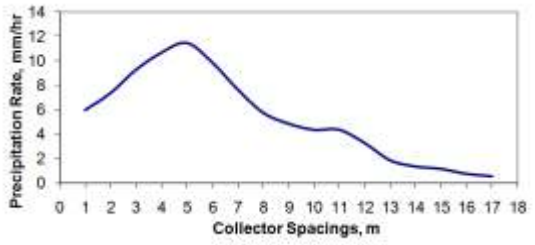
Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
5.55 x 3.17	7/32" x 1/8"	2	28.44	28.2	92.50	37.3	9.85
		2.5	35.55	31	101.68	41.5	10.96
		3	42.66	33.4	109.55	45.5	12.02
		3.5	49.77	35	114.80	48.8	12.89
		4	56.88	36.2	118.74	52.4	13.84
		4.5	63.99	37	121.36	55.2	14.58
		5	71.1	37.6	123.33	58.6	15.48
5.95 x 3.17	15/64" x 1/8"	2	28.44	32.2	105.62	39.5	10.43
		2.5	35.55	33.8	110.86	45.2	11.94
		3	42.66	35.4	116.11	49.6	13.10
		3.5	49.77	36.4	119.39	53.6	14.16
		4	56.88	37	121.36	58.9	15.56
		4.5	63.99	37.6	123.33	61.8	16.32
		5	71.1	38.2	125.30	65	17.17
6.35 x 3.17	1/4" x 1/8"	2	28.44	33	108.24	44.2	11.67
		2.5	35.55	34.2	112.18	49.2	13.00
		3	42.66	35	114.80	54.6	14.42
		3.5	49.77	36	118.08	59.6	15.74
		4	56.88	37.4	122.67	64.3	16.98
		4.5	63.99	37.8	123.98	67.4	17.80
		5	71.1	38.4	125.95	71.2	18.81
6.35 x 4.76	1/4" x 3/16"	2.5	35.55	34.4	112.83	62.4	16.48
		3	42.66	35.8	117.42	67.7	17.88
		3.5	49.77	37	121.36	74.3	19.62
		4	56.88	39	127.92	80.2	21.18
		4.5	63.99	39.4	129.23	85.4	22.56
		5	71.1	39.6	129.89	89.6	23.67

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 5.55 x 3.17mm Pressure: 3.5kg/cm^2

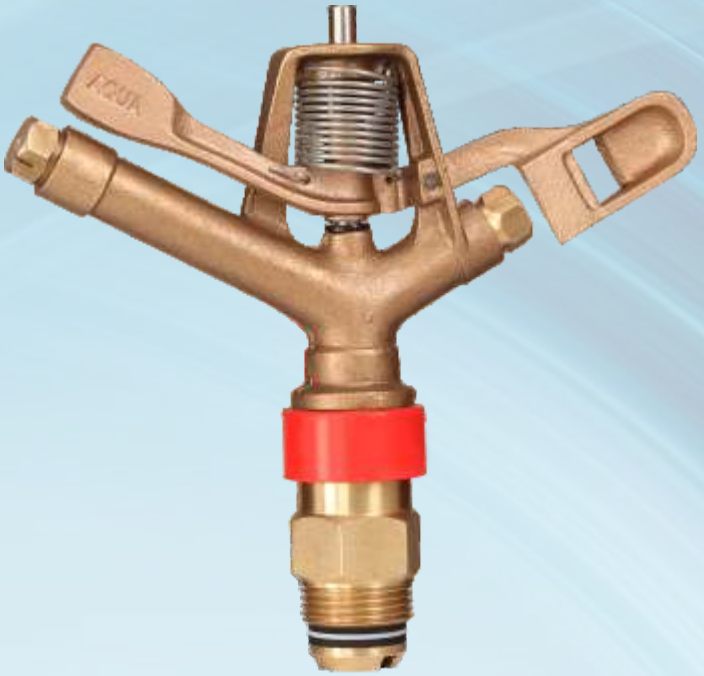
Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R12.0 x 12.0	92%	87%	1.2	24.7
R13.0 x 13.0	93%	87%	1.4	21
R14.0 x 14.0	93%	86%	1.4	18.1
R15.0 x 15.0	91%	84%	1.4	15.8
R16.0 x 16.0	90%	84%	1.5	13.9
R17.0 x 17.0	90%	85%	1.5	12.3
R18.0 x 18.0	89%	83%	1.5	11

AQ - 30

Overhead Sprinklers



Features

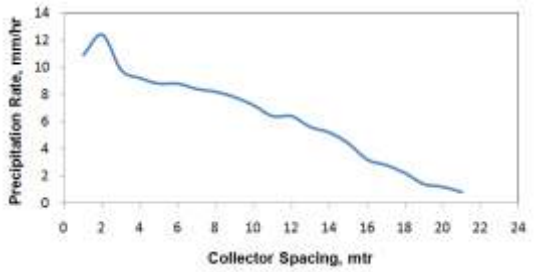
- Available in 1" BSP/NPT Female threaded
- Durable Bronze body and arm,
- Heavy duty Brass Nut, Tube and nozzles.
- Bottom Dust cap for avoiding sand deposition on bottom bearing.
- PU thurst pad for impact wear resistance.
- Stainless Steel Pivot Pin and springs.
- Recommended Pressure 2.5 - 5.0 kg/cm^2 or 35 - 70Psi
- Recommended spacing up to 21m for higher distribution uniformity.
- Trajectory Angle: 27^0

Application

- All crops irrigation compatible by overhead irrigation.

Nozzle Size: 7.94 x 5.55mm Pressure: 4.0kg/cm^2

Distribution Curve



Performance Table

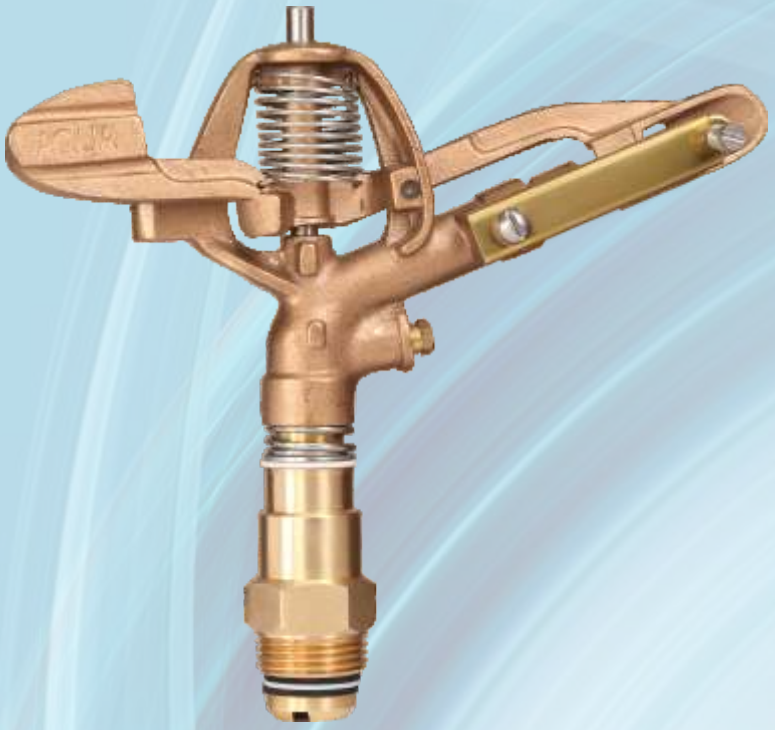
Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
6.35 x 4.76	1/4" x 3/16"	2.5	35.55	38.0	124.64	61.40	16.22
		3.0	42.66	40.0	131.20	66.10	17.46
		3.5	49.77	41.5	136.12	72.20	19.07
		4.0	56.88	42.0	137.76	77.70	20.52
		4.5	63.99	42.5	139.40	82.40	21.76
		5.0	71.1	43.0	141.04	85.80	22.66
7.14 x 5.55	9/32" x 7/32"	2.5	35.55	39.0	127.92	76.50	20.21
		3.0	42.66	40.0	131.20	83.10	21.95
		3.5	49.77	41.5	136.12	88.60	23.40
		4.0	56.88	42.0	137.76	94.40	24.93
		4.5	63.99	43.0	141.04	101.80	26.89
		5.0	71.1	44.0	144.32	106.70	28.18
7.94 x 5.55	5/16" x 7/32"	2.5	35.55	40.0	131.20	86.30	22.79
		3.0	42.66	40.5	132.84	93.40	24.67
		3.5	49.77	41.5	136.12	100.60	26.57
		4.0	56.88	42.5	139.40	107.70	28.45
		4.5	63.99	43.5	142.68	113.80	30.06
		5.0	71.1	45.0	147.60	119.20	31.48
8.73 x 5.55	11/32" x 7/32"	2.5	35.55	41.0	134.48	106.80	28.21
		3.0	42.66	42.0	137.76	117.60	31.06
		3.5	49.77	43.0	141.04	127.20	33.60
		4.0	56.88	43.5	142.68	135.60	35.82
		4.5	63.99	44.0	144.32	144.10	38.06
		5.0	71.1	46.0	150.88	153.80	40.62

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Spacing	CU	DU	SC(5%)	APR
R15 x 15	98%	97%	1	28.6
R18 x 18	94%	92%	1.1	19.8
R21 x 21	93%	90%	1.1	14.6

AQ - 30B

Overhead Sprinklers



Features

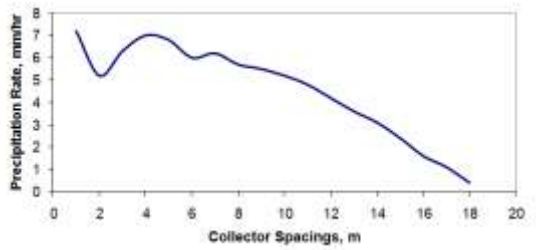
- Available in 1" BSP/NPT male threaded
- Durable Bronze body and arm,
- Heavy duty Brass Nut, Tube and nozzles.
- Stainless Steel Pivot Pin and springs.
- PU thurst pad for impact wear resistance.
- Recommended Pressure 2.5 - 5.0 kg/cm^2 or 35 - 70Psi
- Recommended spacing up to 21m for higher distribution uniformity.
- Trajectory Angle: 23^0

Application

- All crops irrigation suitable by overhead irrigation, ideal for landscape and turf irrigation, waste water treatment and dust suppression applications.
- Designed for full field irrigation of field crops.

Nozzle Size: 6.35x3.17mm Pressure: 4.0kg/cm^2

Distribution Curve



Performance Table

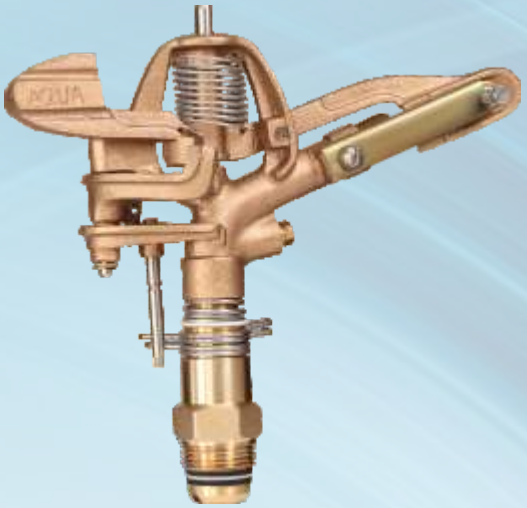
Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
6.35 x 3.17	1/4" x 1/8"	2.5	35.55	31.6	103.65	51.1	13.50
		3	42.66	32.8	107.58	55.8	14.74
		3.5	49.77	33.4	109.55	59.6	15.74
		4	56.88	35	114.80	63.3	16.72
		4.5	63.99	36.2	118.74	67.4	17.80
		5	71.1	37.4	122.67	71.2	18.81
7.14 x 3.17	9/32" x 1/8"	2.5	35.55	33	108.24	59.4	15.69
		3	42.66	34.2	112.18	65.3	17.25
		3.5	49.77	35	114.80	69.3	18.30
		4	56.88	36.4	119.39	74.2	19.60
		4.5	63.99	37.2	122.02	79.5	21.00
		5	71.1	38.4	125.95	83.8	22.13
7.94 x 3.17	5/16" x 1/8"	2.5	35.55	34.8	114.14	70.2	18.54
		3	42.66	35.6	116.77	75.4	19.92
		3.5	49.77	36.4	119.39	79.8	21.08
		4	56.88	37.2	122.02	86.3	22.79
		4.5	63.99	38.6	126.61	92.5	24.43
		5	71.1	40	131.20	97.3	25.70
8.73 x 3.17	11/32" x 1/8"	2.5	35.55	36	118.08	78.8	20.81
		3	42.66	37	121.36	85.2	22.50
		3.5	49.77	38.2	125.30	89.9	23.75
		4	56.88	39.6	129.89	97.6	25.78
		4.5	63.99	40.4	132.51	102.4	27.05
		5	71.1	42	137.76	109.6	28.95

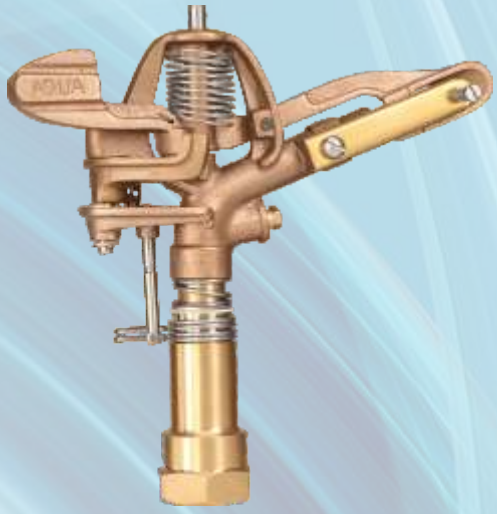
*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Spacing	CU	DU	SC(5%)	APR
R15 x 15	95%	92%	1.1	17
R18 x 18	89%	83%	1.4	11.8
R21 x 21	92%	85%	1.4	8.6

AQ - 30BPC

Overhead Sprinklers





Application

- All crops irrigation suitable by overhead irrigation, ideal for landscape and turf irrigation, waste water treatment and dust suppression applications.
- For Efficient irrigation of field edges.

Features

- Available in 1" BSP/NPT male/female threaded
- Durable Bronze body, Arm and part circle parts.
- Heavy duty Brass Nut, Tube, nozzles and spreader arm.
- Stainless Steel Pivot Pin, part circle changing pin.
- Recommended Pressure 2.5 - 5.0 kg/cm^2 or 35 - 70Psi
- PU thurst pad for impact wear resistance.
- Recommended spacing up to 21m for higher distribution uniformity.
- Trajectory Angle: 23^0

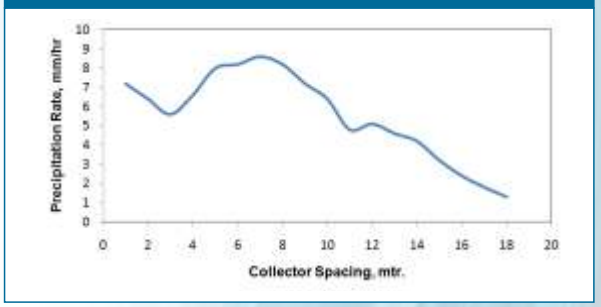
Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
6.35 x 3.17	1/4" x 1/8"	2.5	35.55	30.8	101.02	51.1	13.50
		3	42.66	31.4	102.99	55.8	14.74
		3.5	49.77	32	104.96	59.6	15.74
		4	56.88	33.8	110.86	63.3	16.72
		4.5	63.99	35.2	115.46	67.4	17.80
		5	71.1	36.6	120.05	71.2	18.81
7.14 x 3.17	9/32" x 1/8"	2.5	35.55	32.8	107.58	59.4	15.69
		3	42.66	34	111.52	65.3	17.25
		3.5	49.77	34.8	114.14	69.3	18.30
		4	56.88	35.4	116.11	74.2	19.60
		4.5	63.99	36.6	120.05	79.5	21.00
		5	71.1	37.8	123.98	83.8	22.13
7.94 x 3.17	5/16" x 1/8"	2.5	35.55	34.4	112.83	70.2	18.54
		3	42.66	35.2	115.46	75.4	19.92
		3.5	49.77	36	118.08	79.8	21.08
		4	56.88	37	121.36	86.3	22.79
		4.5	63.99	38.2	125.30	92.5	24.43
		5	71.1	39.6	129.89	97.3	25.70
8.73 x 3.17	11/32" x 1/8"	2.5	35.55	35.4	116.11	78.8	20.81
		3	42.66	36.4	119.39	85.2	22.50
		3.5	49.77	37.6	123.33	89.9	23.75
		4	56.88	38.8	127.26	97.6	25.78
		4.5	63.99	40	131.20	102.4	27.05
		5	71.1	41.8	137.10	109.6	28.95

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 7.14 x 3.17mm Pressure: 4.0kg/cm^2

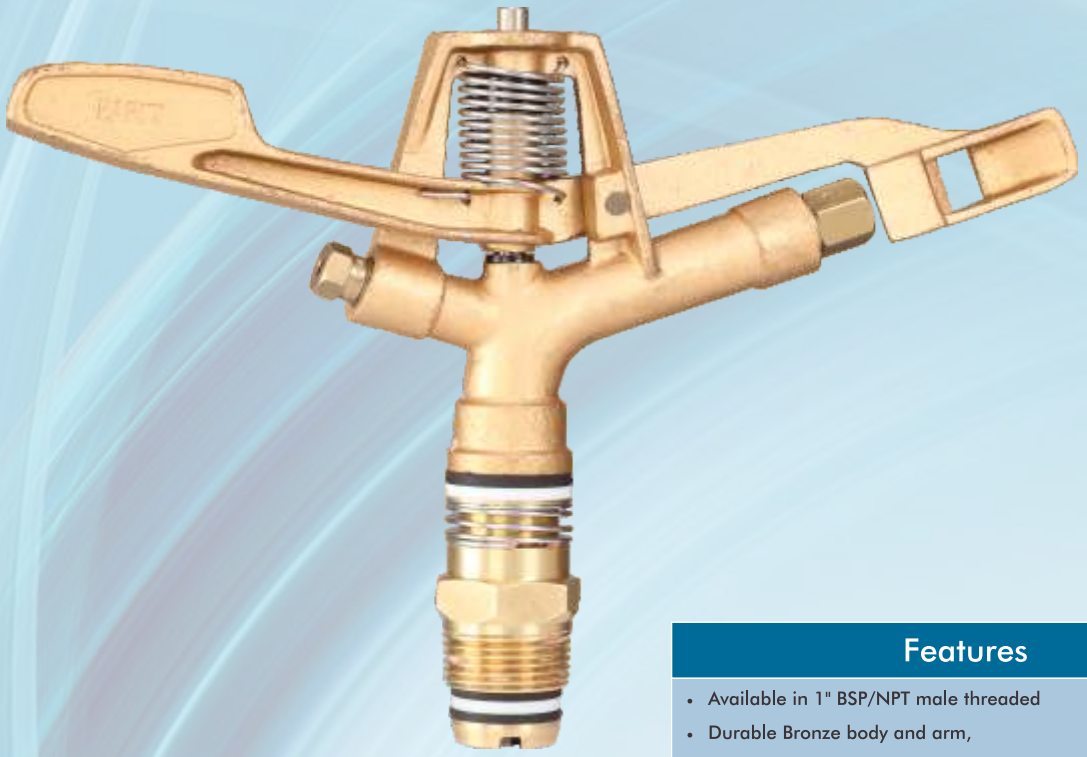
Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R15 x 15	91%	86%	1.2	21.5
R18 x 18	87%	77%	1.4	14.9
R21 x 21	87%	75%	1.7	11

AQ - 30M

Overhead Sprinklers



Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm²	Psi	mtr.	ft.	LPM	GPM
6.35 x 4.76	1/4" x 3/16"	2.5	35.55	35.5	116.44	61.40	16.22
		3.0	42.66	36.0	118.08	66.10	17.46
		3.5	49.77	36.5	119.72	72.20	19.07
		4.0	56.88	37.5	123.00	77.70	20.52
		4.5	63.99	38.0	124.64	82.40	21.76
		5.0	71.1	39.0	127.92	85.80	22.66
7.14 x 4.55	9/32" x 7/32"	2.5	35.55	36.0	118.08	76.50	20.21
		3.0	42.66	37.0	121.36	83.10	21.95
		3.5	49.77	38.0	124.64	88.60	23.40
		4.0	56.88	39.5	129.56	94.40	24.93
		4.5	63.99	41.0	134.48	101.80	26.89
		5.0	71.1	42.0	137.76	106.70	28.18
7.94 x 5.55	5/16" x 7/32"	2.5	35.55	38.0	124.64	86.30	22.79
		3.0	42.66	40.0	131.20	93.40	24.67
		3.5	49.77	41.0	134.48	100.60	26.57
		4.0	56.88	41.5	136.12	107.70	28.45
		4.5	63.99	43.0	141.04	113.80	30.06
		5.0	71.1	45.0	147.60	119.20	31.48
8.73 x 5.55	11/32" x 7/32"	2.5	35.55	39.0	127.92	106.80	28.21
		3.0	42.66	40.0	131.20	117.60	31.06
		3.5	49.77	42.0	137.76	127.20	33.60
		4.0	56.88	43.0	141.04	135.60	35.82
		4.5	63.99	44.0	144.32	144.10	38.06
		5.0	71.1	44.5	145.96	152.60	40.31

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Features

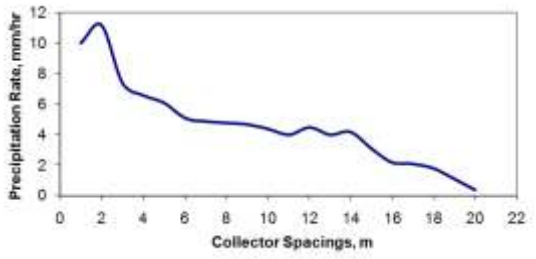
- Available in 1" BSP/NPT male threaded
- Durable Bronze body and arm,
- Heavy duty Brass Nut, Tube and nozzles.
- Stainless Steel Pivot Pin and springs.
- Recommended Pressure 2.5 - 5.0 kg/cm² or 35 - 70Psi
- PU thurst pad for impact wear resistance.
- Recommended spacing up to 21m for higher distribution uniformity.
- Trajectory Angle: 18⁰

Application

- All crops irrigation by overhead irrigation on solid set, permanent set, wheel lines or mechanically moved system such as center pivot.

Nozzle Size: 7.94 x 5.55mm Pressure: 4.0kg/cm²

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R15 x 15	93%	91%	1.1	19.3
R18 x 18	90%	87%	1.2	13.4
R21 x 21	90%	87%	1.1	9.8

AQ - 30P

Overhead Sprinklers

Application

- All crops irrigation compatible by overhead irrigation.

Features

- Available in 1" BSP/NPT Female threaded
- Durable Engineering plastic Body, Arm, Nut and Tube.
- Threaded brass nozzles for durability.
- MS heavy weight inserted in the arm, eliminate arm vibration & good impact.
- Stainless Steel Pivot Pin and springs.
- Recommended Pressure 2.0 - 5.0 kg/cm^2 or 30 - 70Psi
- Recommended spacing up to 18m for higher distribution uniformity.
- Trajectory Angle: 25^0

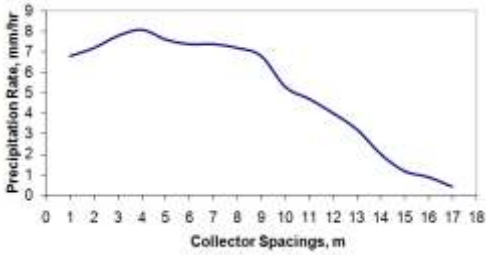
Performance Table

Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm^2	Psi	mtr.	ft.	LPM	GPM
6.5 x 4.5	2	28.44	32	104.96	55.83	14.75
	3	42.66	33.2	108.90	67.6	17.86
	4	56.88	34.2	112.18	79.17	20.91
	5	71.1	35.6	116.77	87.83	23.20
7.0 x 4.5	2	28.44	33.2	108.90	61.33	16.20
	3	42.66	34	111.52	76.17	20.12
	4	56.88	36.4	119.39	88.83	23.46
	5	71.1	38	124.64	96.83	25.58
8.0 x 5.5	2	28.44	34.4	112.83	82.5	21.79
	3	42.66	36	118.08	101.83	26.90
	4	56.88	38.2	125.30	115.33	30.46
	5	71.1	40.2	131.86	129.83	34.29
9.0 x 5.5	3	42.66	37	121.36	117.5	31.04
	4	56.88	39	127.92	136.17	35.97
	5	71.1	41	134.48	152.5	40.28

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 7.0 x 4.5mm Pressure: 3.0kg/cm^2

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R15 x 15	90%	85%	1.3	16.5
R16 x 16	89%	83%	1.4	14.5
R17 x 17	89%	82%	1.5	12.9
R18 x 18	90%	83%	1.5	11.5

AQ - 40M

Big Sprinklers

Features

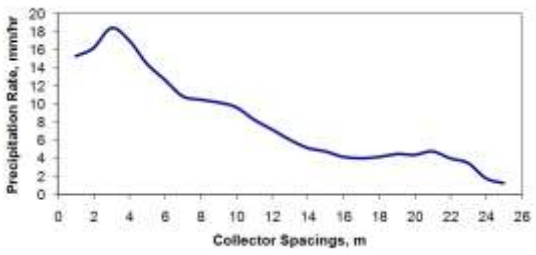
- Available in 1-¼" BSP/NPT male threaded
- Light in weight, robust and reliable design.
- Aluminium Pressure die casted Body and arm.
- Heavy duty brass nut, tube and nozzles.
- Stainless steel pivot pin and springs.
- Plastic parts made of engineering plastic for durability.
- Recommended Pressure 2.5 - 5.0 kg/cm^2 or 35 - 70Psi
- Recommended spacing up to 24m for higher distribution uniformity.
- Trajectory Angle: 22^0

Application

- Suitable for Overtree irrigation of tea, coffee plantation, fodder crops and horticulture also for pastures.
- It can be applied to all kind of land and cultivation.

Nozzle Size: 10.32 x 5.55mm Pressure: 5.0kg/cm^2

Distribution Curve



Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
9.53 x 5.55	3/8" x 7/32"	2.5	35.55	39	127.92	120.7	31.88
		3.5	49.77	42	137.76	129.2	34.13
		4.5	63.99	47.2	154.82	145.6	38.46
		5	71.1	48.2	158.10	153.5	40.54
10.32 x 5.55	13/32" x 7/32"	2.5	35.55	43	141.04	155.3	41.02
		3.5	49.77	46	150.88	165.2	43.63
		4.5	63.99	50.4	165.31	183	48.34
		5	71.1	52.4	171.87	192.6	50.87
12.70 x 6.35	1/2" x 1/4"	2.5	35.55	45	147.60	218.4	57.69
		3.5	49.77	49	160.72	243.3	64.26
		4.5	63.99	54.2	177.78	259.8	68.62
		5	71.1	56	183.68	275.6	72.79
13.49 x 6.35	17/32" x 1/4"	2.5	35.55	48	157.44	239.4	63.23
		3.5	49.77	52	170.56	271.5	71.71
		4.5	63.99	55.8	183.02	286.6	75.70
		5	71.1	58	190.24	302.2	79.82

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Spacing	CU	DU	SC(5%)	APR
R18.0 x 18.0	88%	80%	1.4	35
R21.0 x 21.0	90%	85%	1.3	25.7
R24.0 x 24.0	90%	84%	1.3	19.7

AQ - 40PC

Big Sprinklers

Application

- Overhead irrigation applied to all kind of land and cultivation and horticulture also for pastures.
- Designed for both full field and irrigation of field edges.

Features

- Available in 1-¼" BSP/NPT male threaded
- Aluminium Pressure die casted Body and arm.
- Heavy duty brass nut, tube and nozzles.
- Stainless Steel Pivot Pin, springs and part circle mechanism.
- Plastic parts made of engineering plastic for durablity.
- Recommended Pressure 3.0 - 5.5 kg/cm2 or 40 - 70Psi
- Recommended spacing up to 24m for higher distribution uniformity.
- Trajectory Angle: 22°

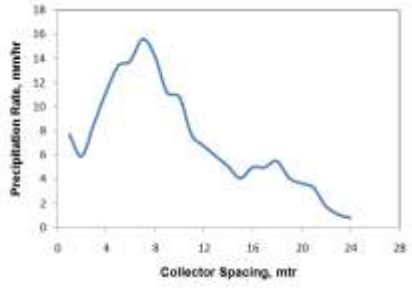
Performance Table

Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm²	Psi	mtr.	ft.	LPM	GPM
10	3	42.66	44.4	145.63	105.2	27.79
	4	56.88	48	157.44	121.9	32.20
	5	71.10	53.4	175.15	136.9	36.16
12	3	42.66	46.4	152.19	148.6	39.25
	4	56.88	50.6	165.97	172	45.43
	5	71.10	55.8	183.02	192	50.71
14	3	42.66	48.8	160.06	213.8	56.47
	4	56.88	53.4	175.15	245.5	64.84
	5	71.10	58.8	192.86	275.6	72.79
16	3	42.66	49.4	162.03	265.5	70.13
	4	56.88	54.4	178.43	305.6	80.72
	5	71.10	60.4	198.11	342.4	90.44

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 12mm Pressure: 4.0kg/cm²

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R18.0 x 18.0	90%	83%	1.3	32.5
R21.0 x 21.0	93%	88%	1.2	23.9
R24.0 x 24.0	87%	80%	1.5	18.3

AQ - 40B

Big Sprinklers

Features

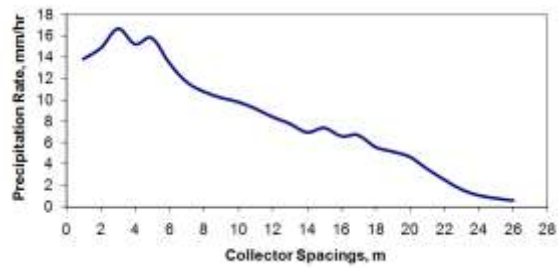
- Available in 1- ¼" BSP/NPT male threaded
- Durable Bronze body and Arm.
- Heavy duty Brass Nut, Tube and nozzles.
- Stainless Steel Pivot Pin and springs.
- Bearing assembly protect by cap for longevity.
- PU thurst pad for impact wear resistance.
- **For center pivot end application 18⁰ trajectory model also available.**
- Recommended Pressure 3.5 - 6.0 kg/cm2 or 50 - 85Psi
- Recommended spacing up to 30m for higher distribution uniformity.
- Trajectory Angle: 23⁰

Application

- Designed for use for full field irrigation in hose reel systems, water reclamation, waste water treatment, mining and dust control.
- Ideal for large turf applications and a great option for solid set, permanent set systems in irregular field shapes and terrain difficulties.

Nozzle Size: 10.32 x 5.55mm Pressure: 5.0kg/cm²

Distribution Curve



Performance Table

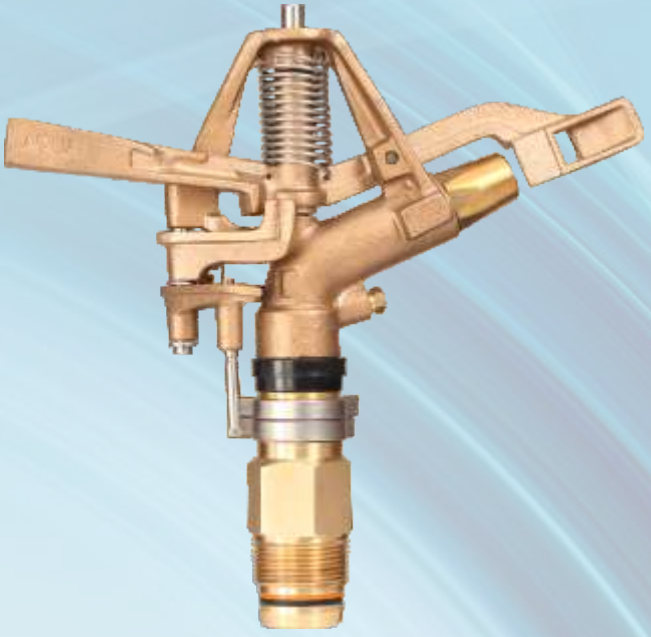
Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm²	Psi	mtr.	ft.	LPM	GPM
9.53 x 5.55	3/8" x 7/32"	4	56.88	45.4	148.91	138.8	36.66
		4.5	63.99	47.2	154.82	145.6	38.46
		5	71.10	48.4	158.75	153.5	40.54
		5.5	78.21	50.3	164.98	162.4	42.89
		6	85.32	52.2	171.22	170.8	45.11
10.32 x 5.55	13/32" x 7/32"	4	56.88	48.2	158.10	174.8	46.17
		4.5	63.99	50.1	164.33	183	48.34
		5	71.10	52.6	172.53	192.6	50.87
		5.5	78.21	54.8	179.74	201.4	53.20
		6	85.32	56	183.68	213.3	56.34
12.7 x 6.35	1/2" x 1/4"	4	56.88	52	170.56	247.3	65.32
		4.5	63.99	54	177.12	259.8	68.62
		5	71.10	56.2	184.34	275.6	72.79
		5.5	78.21	58	190.24	280.4	74.06
		6	85.32	60	196.80	301.2	79.56
15.87 x 6.35	5/8" x 1/4"	4	56.88	56	183.68	345.5	91.26
		4.5	63.99	58.4	191.55	362.4	95.72
		5	71.10	60.6	198.77	392.4	103.65
		5.5	78.21	63	206.64	411.1	108.58
		6	85.32	65.4	214.51	432.4	114.21

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Spacing	CU	DU	SC(5%)	APR
R21.0 x 21.0	95%	92%	1.1	27.4
R24.0 x 24.0	92%	88%	1.2	21
R27.0 x 27.0	95%	93%	1.1	16.6
R30.0 x 30.0	94%	91%	1.1	13.4

AQ - 40BPC

Big Sprinklers



Application

- All crops irrigation by overhead irrigation, ideal for large landscape and turf irrigation, mining and dust control.
- For Efficient irrigation of field edges and at end of center pivot.

Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm²	Psi	mtr.	ft.	LPM	GPM
9.53 x 5.55	3/8" x 7/32"	4	56.88	45	147.60	138.8	36.66
		4.5	63.99	46.6	152.85	145.6	38.46
		5	71.1	47.8	156.78	153.5	40.54
		5.5	78.21	49.2	161.38	162.4	42.89
		6	85.32	51.8	169.90	170.8	45.11
10.32 x 5.55	13/32" x 7/32"	4	56.88	47.8	156.78	174.8	46.17
		4.5	63.99	49.6	162.69	183	48.34
		5	71.1	51.4	168.59	192.6	50.87
		5.5	78.21	53.8	176.46	201.4	53.20
		6	85.32	55	180.40	213.3	56.34
12.70 x 6.35	1/2" x 1/4"	4	56.88	51	167.28	247.3	65.32
		4.5	63.99	53	173.84	259.8	68.62
		5	71.1	55.2	181.06	275.6	72.79
		5.5	78.21	57	186.96	280.4	74.06
		6	85.32	58.8	192.86	301.2	79.56
15.87 x 6.35	5/8" x 1/4"	4	56.88	55	180.40	345.5	91.26
		4.5	63.99	57.6	188.93	362.4	95.72
		5	71.1	59.4	194.83	392.4	103.65
		5.5	78.21	62.4	204.67	411.1	108.58
		6	85.32	64.6	211.89	432.4	114.21

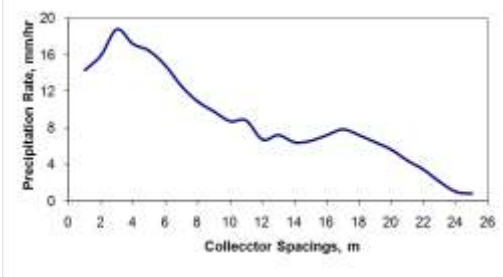
*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Features

- Available in 1-¼" BSP/NPT male threaded
- Durable Bronze body, arm and trip assembly.
- Heavy duty brass Nut, Tube and nozzles.
- Stainless Steel Pivot Pin, springs and part circle pin.
- Bearing assembly protect by cap for longevity.
- PU thurst pad for impact wear resistance.
- **For center pivot end application 18⁰ trajectory model also available.**
- Recommended Pressure 3.5 - 6.0 kg/cm² or 50 - 85Psi
- Recommended spacing up to 30m for higher distribution uniformity.
- Trajectory Angle: 23⁰

Nozzle Size: 10.32 x 5.55mm Pressure: 5.0kg/cm²

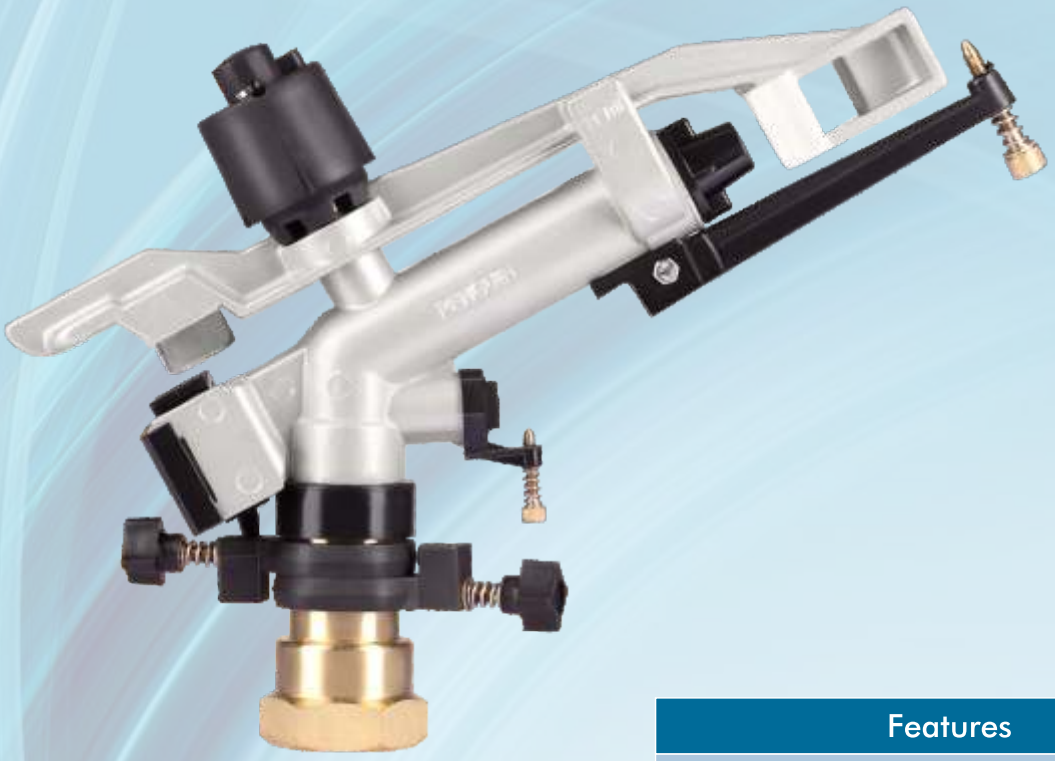
Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R21.0 x 21.0	92%	88%	1.2	28.9
R24.0 x 24.0	87%	78%	1.4	22.1
R27.0 x 27.0	90%	84%	1.2	17.5
R30.0 x 30.0	91%	87%	1.2	14.2

AQ - 40G (PENGUIN)

Water Guns



Application

- Suitable for Overtree irrigation for bigger crops like sugarcane, oats, maize etc., tea, coffee, fodder, landscape and horticultur also for pastures and dust suppresion.
- It can be applied to all kind of land and cultivation.
- Designed for both full field and irrigation of field edges.

Features

- Available in 1-¼" BSP/NPT Female threaded
- Aluminium Pressure die casted Body and arm.
- Heavy duty brass nut, tube, nozzles & Diffusor Screw.
- Stainless Steel Pivot Pin, springs, Nut and bolt.
- Plastic parts made of engineering plastic for durability.
- Available both Full Circle & Part -circle design.
- Jet breaker screw to change the water jet from heavy droplets
- to fine spray.
- Recommended Pressure 2.0 - 5.0 kg/cm² or 30 - 70Psi
- Recommended spacing up to 30m for higher distribution uniformity.
- Trajectory Angle: 30°

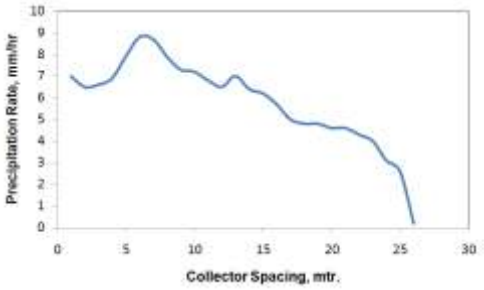
Performance Table

Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm²	Psi	mtr.	ft.	LPM	GPM
10 x 4	2	28.44	38	124.64	106	28.00
	3	42.66	42	137.76	130	34.34
	4	56.88	45	147.60	151	39.88
	5	71.10	47	154.16	170	44.90
12 x 4	2	28.44	42	137.76	149	39.36
	3	42.66	47	154.16	182	48.07
	4	56.88	52	170.56	211	55.73
	5	71.10	56	183.68	236	62.33
14 x 4	2	28.44	45	147.60	197	52.03
	3	42.66	48	157.44	241	63.66
	4	56.88	54	177.12	278	73.43
	5	71.10	58	190.24	311	82.14

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 12 x 4mm Pressure: 4.0kg/cm²

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R24.0 x 24.0	90%	86%	1.2	18.7
R27.0 x 27.0	85%	78%	1.6	14.8
R30.0 x 30.0	88%	79%	1.8	12

AQ - 42G (PELICAN)

Water Guns

Features

- Available in 1-½" BSP/NPT Female threaded
- Aluminium Pressure die casted Body and arm.
- Heavy duty brass nut, tube, nozzles & Diffusor Screw.
- Stainless Steel Pivot Pin, springs, Nut and bolt.
- Plastic parts made of engineering plastic for durablity.
- Available both Full Circle & Part -circle design.
- Jet breaker screw to change the water jet from heavy droplets
- to fine spray.
- Recommended Pressure 2.0 - 5.0 kg/cm^2 or 30 - 70Psi
- Recommended spacing up to 36m for higher distribution uniformity.
- Trajectory Angle: 23^0

Application

- Suitable for Overtree irrigation for coffee, Tea, sugarcane, fodder crop, landscape and horticulture also for pastures and dust suppression.
- It can be applied to all kind of land and cultivation.
- Designed for both full field and irrigation of field edges.

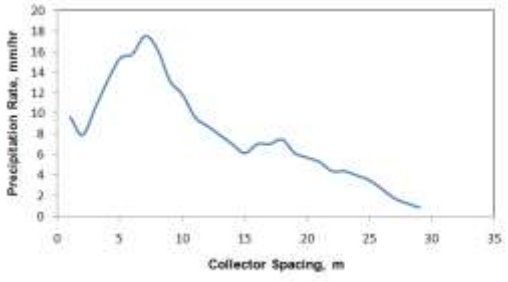
Performance Table

Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate	
	kg/cm^2	Psi	mtr.	ft.	LPM	GPM
12 x 5	2	28.44	40	131.20	152	40.15
	3	42.66	48	157.44	182	48.07
	4	56.88	54	177.12	211	55.73
	5	71.1	60	196.80	236	62.33
14 x 5	2	28.44	42	137.76	195	51.51
	3	42.66	50	164.00	239	63.13
	4	56.88	58	190.24	277	73.16
	5	71.1	62	203.36	309	81.62
16 x 5	2	28.44	44	144.32	247	65.24
	3	42.66	52	170.56	303	80.03
	4	56.88	60	196.80	351	92.71
	5	71.1	66	216.48	391	103.28

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 14 x 5mm Pressure: 4.0kg/cm^2

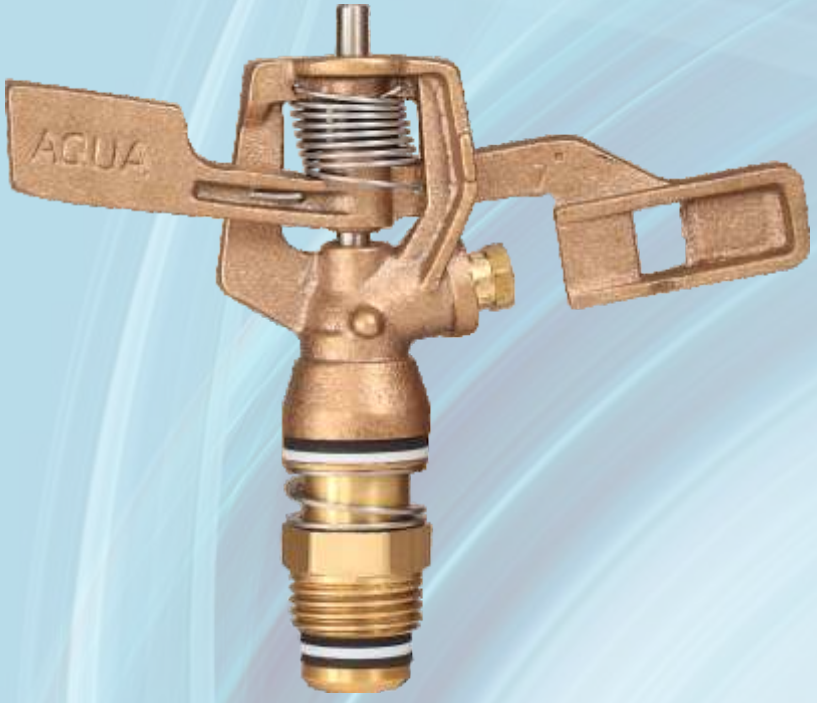
Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R24.0 x 24.0	95%	93%	1.1	27.1
R27.0 x 27.0	91%	83%	1.3	21.4
R30.0 x 30.0	88%	81%	1.5	17.3
R33.0 x 33.0	90%	85%	1.3	14.3
R36.0 x 36.0	86%	80%	1.2	12

AQ - 5LA7

Undertree Sprinklers



Features

- Available in ½" BSP/ NPT Male threaded
- Nozzle above 3.17mm with stream straightening vane for long range.
- Durable Bronze body and arm
- Heavy duty brass Nut and tube
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 2 - 4.5 kg/cm^2 or 30 - 65Psi
- Recommended spacing up to 10m for higher distribution uniformity.
- Trajectory Angle: 7^0

Application

- Low volume, Low angle metal sprinkler for irrigation of undertree, bananas, vineyards, orchirds and plantation.

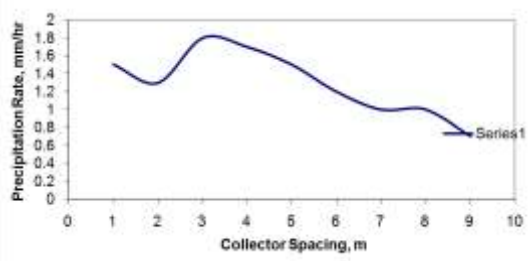
Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
2.38	3/32"	2	28.44	15.5	50.84	5.4	1.43
		2.5	35.55	17	55.76	5.95	1.57
		3	42.66	18	59.04	6.5	1.72
		3.5	49.77	18.5	60.68	6.9	1.82
		4	56.88	19	62.32	7.4	1.95
		4.5	63.99	20	65.6	7.9	2.09
2.77	7/64"	2	28.44	16	52.48	7.5	1.98
		2.5	35.55	17.5	57.4	8.35	2.21
		3	42.66	19	62.32	8.95	2.36
		3.5	49.77	20	65.6	9.9	2.61
		4	56.88	21	68.88	10.35	2.73
		4.5	63.99	21.5	70.52	10.85	2.87
3.17	1/8"	2	28.44	16.5	54.12	9.58	2.53
		2.5	35.55	18	59.04	10.8	2.85
		3	42.66	19.5	63.96	11.6	3.06
		3.5	49.77	20.5	67.24	12.8	3.38
		4	56.88	21	68.88	13.4	3.54
		4.5	63.99	21.5	70.52	13.9	3.67
3.57	9/64"	2	28.44	17	55.76	11.8	3.12
		2.5	35.55	18.5	60.68	13.2	3.49
		3	42.66	19.5	63.96	14.45	3.82
		3.5	49.77	20	65.6	15.55	4.11
		4	56.88	20.5	67.24	16.7	4.41
		4.5	63.99	21.5	70.52	17.25	4.56

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.
**On higher pressure (above 3 Kg/cm2) stream straightener is recommended for all the nozzles.

Nozzle Size: 3.57mm Pressure: 2.0kg/cm^2

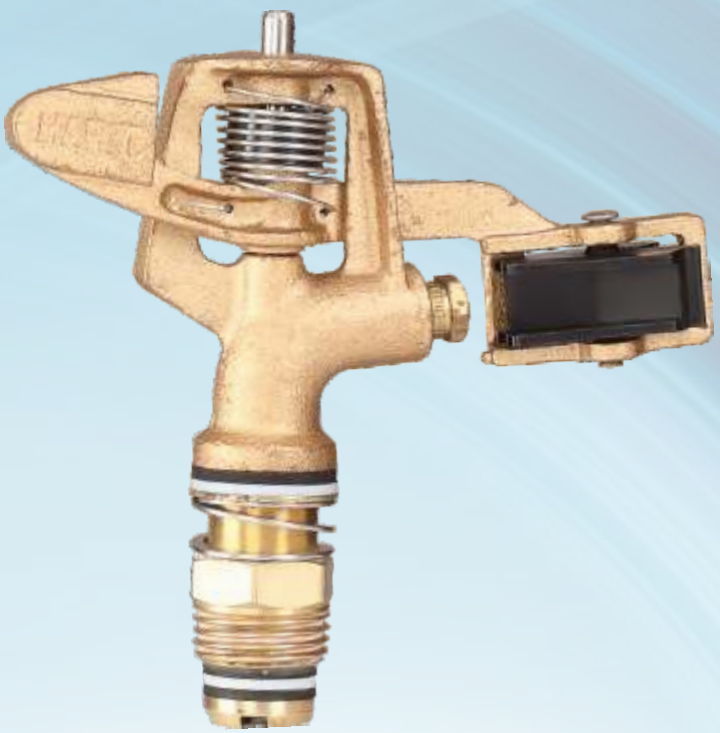
Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R8 x 8	95%	91%	1.1	5.2
R9 x 9	88%	84%	1.2	4.1
R10 x 10	85%	78%	1.5	3.3

AQ - 5N7W

Undertree Sprinklers



Features

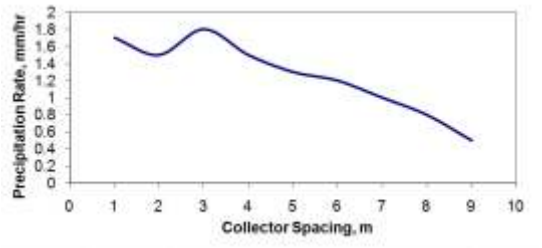
- Available in ½" BSP/ NPT Male threaded
- Nozzle size above 3.17mm with stream straightening vane for long range.
- Durable Bronze body and arm
- Heavy duty brass Nut and tube
- Energy saving with plastic wedge drive spool.
- Excellent water distribution at low pressure.
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 2 - 4.5 kg/cm^2 or 30 -65Psi
- Recommended spacing up to 10m for higher distribution uniformity.
- Trajectory Angle: 7^0

Application

- Low volume, Low angle metal sprinkler for irrigation of undertree, bananas, vineyards, orchirds and plantation.

Nozzle Size: 3.17mm Pressure: 2.0kg/cm^2

Distribution Curve



Performance Table

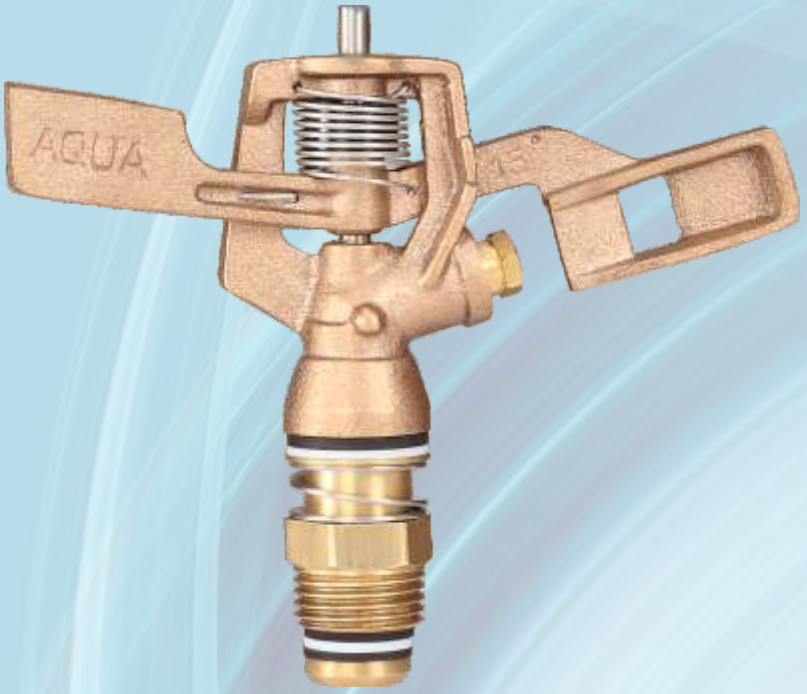
Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
2.38	3/32"	2	28.44	14.2	46.58	5.25	1.39
		2.5	35.55	15.4	50.51	5.75	1.52
		3	42.66	16.2	53.14	6.2	1.64
		3.5	49.77	17	55.76	6.7	1.77
		4	56.88	18.2	59.70	7.4	1.95
		4.5	63.99	19	62.32	7.9	2.09
2.77	7/64"	2	28.44	14.8	48.54	7.5	1.98
		2.5	35.55	16	52.48	8.35	2.21
		3	42.66	17.2	56.42	8.95	2.36
		3.5	49.77	18	59.04	9.9	2.61
		4	56.88	18.8	61.66	10.65	2.81
		4.5	63.99	20	65.60	10.85	2.87
3.17	1/8"	2	28.44	15	49.20	10.25	2.71
		2.5	35.55	16.2	53.14	10.8	2.85
		3	42.66	17.4	57.07	11.6	3.06
		3.5	49.77	18.4	60.35	12.8	3.38
		4	56.88	19.6	64.29	13.4	3.54
		4.5	63.99	20.8	68.22	13.9	3.67

Spacing	CU	DU	SC(5%)	APR
R8 x 8	97%	95%	1.1	4.7
R9 x 9	90%	87%	1.2	3.7
R10 x 10	87%	82%	1.4	3

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.
**On higher pressure (above 3 Kg/cm2) stream straightener is recommended for all the nozzles.

AQ - 5N15

Undertree Sprinklers



Features

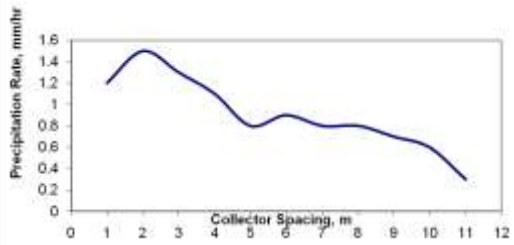
- Available in ½" BSP/NPT Male threaded
- Nozzle above 3.17mm with stream straightening vane for long range.
- Durable Bronze body and arm
- Heavy duty brass Nut and tube
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 2 - 4.5 kg/cm^2 or 30 -65Psi
- Recommended spacing up to 12m for higher distribution uniformity.
- Trajectory Angle: 15^0

Application

- Low volume, Low angle metal sprinkler for irrigation of undertree, bananas, vineyards, orchirds and plantation.

Nozzle Size: 2.77mm Pressure: 3.5kg/cm^2

Distribution Curve



Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
2.38	3/32"	2	28.44	19	62.32	5.4	1.43
		2.5	35.55	19.5	63.96	5.95	1.57
		3	42.66	20	65.6	6.5	1.72
		3.5	49.77	20.5	67.24	6.9	1.82
		4	56.88	21.5	70.52	7.4	1.95
		4.5	63.99	22.5	73.8	7.9	2.09
2.77	7/64"	2	28.44	20	65.6	7.5	1.98
		2.5	35.55	20.5	67.24	8.35	2.21
		3	42.66	21	68.88	8.95	2.36
		3.5	49.77	21.5	70.52	9.9	2.61
		4	56.88	22	72.16	10.35	2.73
		4.5	63.99	22.5	73.8	10.85	2.87
3.17	1/8"	2	28.44	20.5	67.24	9.58	2.53
		2.5	35.55	21	68.88	10.8	2.85
		3	42.66	21.5	70.52	11.6	3.06
		3.5	49.77	22	72.16	12.8	3.38
		4	56.88	22.5	73.8	13.4	3.54
		4.5	63.99	23	75.44	13.9	3.67
3.57	9/64"	2	28.44	21	68.88	11.8	3.12
		2.5	35.55	21.5	70.52	13.2	3.49
		3	42.66	22	72.16	14.45	3.82
		3.5	49.77	22.5	73.8	15.55	4.11
		4	56.88	23	75.44	16.7	4.41
		4.5	63.99	24	78.72	17.25	4.56

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.
**On higher pressure (above 3 Kg/cm2) stream straightener is recommended for all the nozzles.

Spacing	CU	DU	SC(5%)	APR
R8 x 8	89%	79%	1.4	4.7
R9 x 9	92%	89%	1.1	3.7
R10 x 10	93%	88%	1.2	3
R11 x 11	87%	77%	1.4	2.5
R12 x 12	85%	77%	1.5	2.1

AQ - 5N-WSL

Undertree Sprinklers

- UHMW-PE step bearing Seal: For consistent rotation speed, maximum life expantancy.
- Stainless Steel Tube: For less pressure - friction loss, smooth flow & insures longer wear.

Features

- Available in ½" BSP/NPT Male threaded
- Nozzle size above 3.17mm with stream straightening vane for long range.
- **Arm spoon designed allow mutiple trajectory angle of range nozzle.**
- Durable Bronze body and arm
- Heavy duty brass Nut and nozzles.
- Tube, Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 1.5 - 4.0 kg/cm^2 or 20 -55Psi
- Recommended spacing up to 10m for higher distribution uniformity.
- Trajectory Angle: 12^0

Application

- Low angle metal sprinkler for irrigation of undertree, bananas, vineyards, orchirds and plantation.
- Cow washing, where continuous spraying is required.

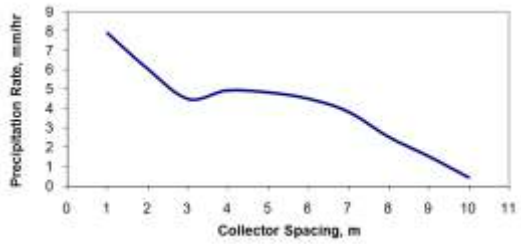
Performance Table

Nozzle (mm)	Nozzle (Inch)	Pressure		Coverage Diameter		Discharge Rate	
		kg/cm^2	Psi	mtr.	ft.	LPM	GPM
2.77 x 2.38	7/64" x 3/32"	1.5	21.33	16	52.48	10.8	2.85
		2	28.44	16.6	54.45	11.8	3.12
		2.5	35.55	17	55.76	13.5	3.57
		3	42.66	17.4	57.07	14.6	3.86
		3.5	49.77	18	59.04	15.7	4.15
		4	56.88	18	59.04	16.8	4.44
3.17 x 2.38	1/8" x 3/32"	1.5	21.33	16.6	54.45	12.4	3.28
		2	28.44	17.2	56.42	14	3.70
		2.5	35.55	17.6	57.73	15.4	4.07
		3	42.66	18	59.04	16.7	4.41
		3.5	49.77	18.4	60.35	18.6	4.91
		4	56.88	18.6	61.01	20.6	5.44
3.57 x 2.38	9/64" x 3/32"	1.5	21.33	17.4	57.07	14.35	3.79
		2	28.44	18.2	59.70	15.6	4.12
		2.5	35.55	18.4	60.35	16.85	4.45
		3	42.66	18.8	61.66	18.9	4.99
		3.5	49.77	19.2	62.98	21.2	5.60
		4	56.88	19.4	63.63	23.3	6.15
3.97 x 2.38	5/32" x 3/32"	1.5	21.33	18	59.04	16.25	4.29
		2	28.44	18.4	60.35	18.4	4.86
		2.5	35.55	19	62.32	19.8	5.23
		3	42.66	19.4	63.63	20.65	5.45
		3.5	49.77	19.6	64.29	23.2	6.13
		4	56.88	20	65.60	25.45	6.72

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Nozzle Size: 3.97 x 2.38mm Pressure: 3.0kg/cm^2

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R8 x 8	95%	94%	1.1	16.6
R9 x 9	90%	88%	1.1	13.1
10 x 10	88%	86%	1.2	10.6
R11 x 11	89%	84%	1.2	8.8
R12 x 12	90%	82%	1.2	7.4

AQ - 22LA

Undertree Sprinklers

Features

- Available in ½" Male threaded
- Color coded nozzles for easy size identification.
- Nozzle Bayonet connection for easy service in field condtions.
- Nozzles with integrated stream straightening vane for long range.
- Engineering Plastic material for durability and corrosion resistant.
- Pivot pin and Springs made of Stainless steel.
- Recommended Pressure 2.0 - 4.0 kg/cm² or 30 - 55Psi
- Recommended spacing up to 10m for higher distribution uniformity.
- Three trajectories 9⁰, 12⁰, 14⁰ can change just by replacing the nozzle.

9⁰ fights wind drift and evaporation.

12⁰ ideal for undertree irrigation.

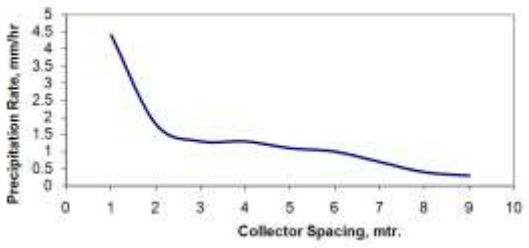
14⁰ ideal for undertree irrigation.

Application

- Low angle with multi trajectory nozzles plastic sprinkler for irrigation of undertree, bananas, vineyards, orchards and plantation.

Nozzle Size: 2.5mm Pressure: 3.0kg/cm² Trajectory: 12deg

Distribution Curve



Performance Table

Nozzle (mm)	Pressure		Coverage Diameter (mtr.)			Discharge Rate	
			9°	12°	14°		
	kg/cm²	Psi				LPM	GPM
2.5	2	28.44	15	15.5	16.5	6.1	1.61
	3	42.66	16.5	17	18	7.5	1.98
	4	56.88	17	18.5	19	8.6	2.27
2.9	2	28.44	16	17	17.5	7.6	2.01
	3	42.66	17	18	18.5	9.3	2.46
	4	56.88	18	19.5	20	10.8	2.85
3.2	2	28.44	17	17.5	18	9.40	2.48
	3	42.66	18	18.5	19	11.55	3.05
	4	56.88	18.5	19.5	20	13.30	3.51
3.5	2	28.44	17.5	18	18.5	11.4	3.01
	3	42.66	18.5	20	20.5	13.9	3.67
	4	56.88	19.5	21	22	15.9	4.20

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

Spacing	CU	DU	SC(5%)	APR
R6.0 x 6.0	87%	87%	1.1	7
R7.0 x 7.0	86%	87%	1.1	5.1
R8.0 x 8.0	87%	87%	1.1	3.9
R9.0 x 9.0	86%	84%	1.2	3.1
R10.0 x 10.0	86%	85%	1.2	2.5

AQ - 22LA-W

Undertree Sprinklers

Features

- Available in ½" Male threaded
- Color coded nozzles for easy size identification.
- Nozzle Bayonet connection for easy service in field conditions.
- Nozzles with integrated stream straightening vane for long range.
- Engineering Plastic material for durability and corrosion resistant.
- Pivot pin and Springs made of Stainless steel.
- Require filtration due to smaller size of nozzles.
- Recommended Pressure 1.0 - 4.0 kg/cm² or 15 - 55Psi
- Recommended spacing up to 10m for higher distribution uniformity.
- Trajectory Angle: 12⁰

Application

- Low angle plastic sprinkler, Low volume, fast rotation, for irrigation of undertree, bananas, vineyards, plantation and **micro-climatic condition for use in orchards.**

Performance Table

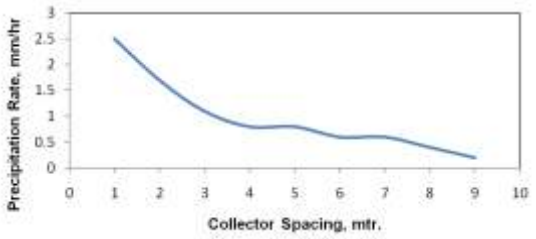
Nozzle (mm)	Pressure		Coverage Diameter		Discharge Rate		MSH
	kg/cm²	Psi	mtr.	ft.	LPM	GPM	cm
1.8	1	14.22	14	45.92	2.42	0.64	80
	1.5	21.33	15	49.20	2.85	0.75	
	2	28.44	16	52.48	3.25	0.86	
	2.5	35.55	17	55.76	3.60	0.95	
	3	42.66	17.5	57.40	4.00	1.06	
	3.5	49.77	18	59.04	4.25	1.12	
	4	56.88	19	62.32	4.65	1.23	
*2	1	14.22	14.5	47.56	2.90	0.77	95
	1.5	21.33	15	49.20	3.55	0.94	
	2	28.44	16.5	54.12	4.05	1.07	
	2.5	35.55	17	55.76	4.50	1.19	
	3	42.66	18	59.04	4.90	1.29	
	3.5	49.77	18.5	60.68	5.35	1.41	
	4	56.88	19	62.32	5.75	1.52	
2.2	1	14.22	15	49.20	3.20	0.85	100
	1.5	21.33	16.5	54.12	4.00	1.06	
	2	28.44	17.5	57.40	4.50	1.19	
	2.5	35.55	18	59.04	5.10	1.35	
	3	42.66	18.5	60.68	5.55	1.47	
	3.5	49.77	19	62.32	6.10	1.61	
	4	56.88	19.5	63.96	6.50	1.72	
2.5	1	14.22	15.5	50.84	4.35	1.15	105
	1.5	21.33	17	55.76	5.25	1.39	
	2	28.44	19	62.32	6.10	1.61	
	2.5	35.55	19.5	63.96	6.80	1.80	
	3	42.66	20	65.60	7.52	1.99	
	3.5	49.77	20	65.60	8.15	2.15	
	4	56.88	21	68.88	8.60	2.27	

*Peformance is based on ideal conditions of Temperature, wind velocity and Humidity.

* Standard Nozzle; msh = Max. Stream Height (above nozzle)

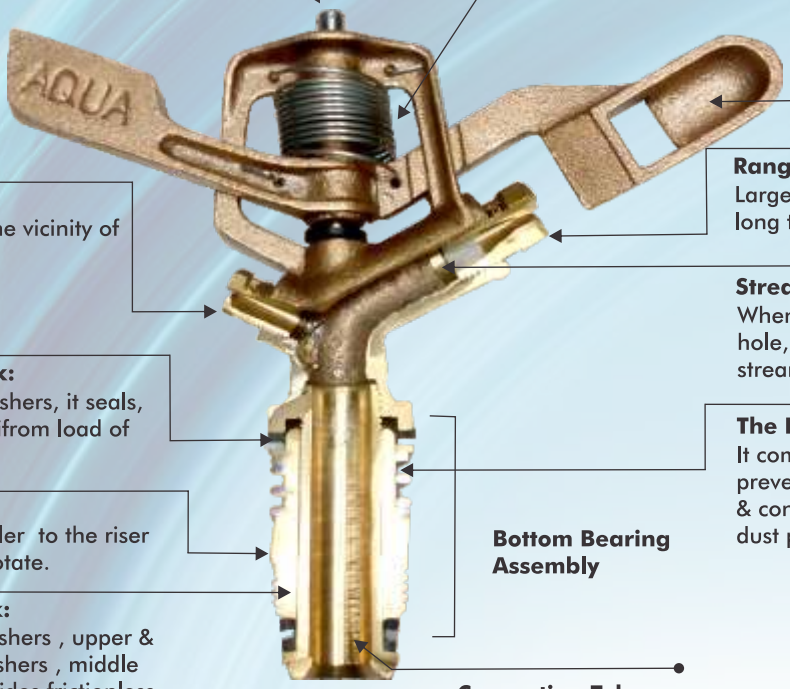
Nozzle Size: 2.0mm Pressure: 2.0kg/cm²

Distribution Curve



Spacing	CU	DU	SC(5%)	APR
R6.0 x 6.0	90%	85%	1.3	5.2
R7.0 x 7.0	87%	81%	1.3	3.8
R8.0 x 8.0	89%	88%	1.1	2.9
R9.0 x 9.0	88%	81%	1.3	2.3
R10.0 x 10.0	87%	82%	1.3	1.9

Sprinkler components



The Impact Drive Arm:
A properly balanced and fixed arm to maintain smooth rotation. It impacts the bridge of the sprinkler causing the body to rotate about its axis.

The Pivot Pin:
It positiones arm to rotate freely.

The Stainless steel Top Spring:
It absorbs energy generate by deflection of arm due to arm spoon which directs water from the nozzle at 90^0 angle which forces the arm away from the body impact bridge. It returns the arm to its original position.

Spoon

Range Nozzle:
Larger Diameter to facilitate the long throw.

Spray Nozzle:
Spreading water in the vicinity of sprinkler.

Stream Straighting Vane:
When water comes out from nozzle hole, it guide & laminate the water stream for enhancing throw.

Upper washer stack:
Combination of 3 washers, it seals, bear and balance unifrom load of spring to body.

The Bottom Bearing Spring:
It compresses the washers which prevents leakage from coupling nut & connecting tube as well as restricts dust particles between washers.

Coupling Nut:
It connects the sprinkler to the riser while allowing it to rotate.

Bottom Bearing Assembly

Lower washer stack:
Combination of 3 washers , upper & lower are sealing washers , middle bearing washer provides frictionless surface for unifrom roation of sprinkler.

Connecting Tube:
It connects the sprinkler body and holds the bottom bearing assembly.

Accessories

Quick Coupling Socket

Socket

Spanner

$^1/_2$" x $^3/_4$"

$^1/_2$" x 1"

$^3/_4$" x 1"

Engineering Formulas

Unit Conversions:

1 inch (in)	25.4mm	1 bar	10 metres	1 kg/cm2	0.981 bar
1 metre (m)	3.28 feet (ft)	1 bar	14.5 psi	1 gal/min (US)	3.786 lit/min
1 bar	100kpa	1 kg/cm2	14.22 psi	1 m3/hr	16.67 lit/min

Equivalent Nozzle Diameter: d>10mm

$$d=2\sqrt{\frac{q}{\pi c\sqrt{0.2gp}}}\ X\frac{1000}{60}$$

Where,

Q = flowrate in cu-m per hr of the sprinkler with nozzle.
c = Flow coefficient of the nozzle (c = 0.9 for the purpose of calculating the equivalent nozzle diameter)
g = Acceleration due to gravity (9.81m/s2)
p = test pressure, in kilopascals.

Coefficient of Distribution Uniformity: (Christiansen Formula)

$$CDU(\%) = [\,1 - \sum |\,Hm - Hi\,|/\ n \times Hm]$$

Where,

Hm = Arthmetic average of readings.
Hi = Individual reading at each collector.
n = number of readings
$\sum |\,Hm - Hi\,|$ = Sum of absolute values of the individual deviations from the average.

Nozzle Discharge

$$\text{Discharge (gpm)} = 29.82\sqrt{P}\,D^2\,C_d$$

P = Nozzle pressure (psi)
D = Nozzle orifice diameter (in.)
C_d = Nozzle discharge coefficient (tapered = .96 to .98)

Precipitation Rate

$$\text{Precipitation Rate (in/hr)} = \frac{96.3Q}{S_p\,S_l}$$

Q = Sprinkler flow (gpm)
S_p = Sprinkler spacing (ft)
S_l = Lateral spacing (ft)

Pipe Velocity

$$\text{Velocity (fps)} = \frac{.4085Q}{ID^2}$$

Q = Pipe flow (gpm)
ID = Pipe inside diameter (in.)

Pipe Friction Loss (Hazen-Williams)

$$\text{Pressure Loss (psi)} = 4.55\ \frac{\left(\frac{Q}{C}\right)^{1.852}}{ID^{4.87}}\ L$$

Q = Pipe flow (gpm)
C = Roughness Coefficient (PVC = 150, Aluminum w/couplers = 120)
ID = Pipe inside diameter (in.)
L = Pipe length (ft)

Distribution Uniformity (DU)

Most Practical Measurement

$$LQDU = \frac{\text{Average of lowest quartile readings}}{\text{Average of total readings.}}\ x100\%$$

CU: Coefficient of Distribution Uniformity
DU: Distribution Uniformity
SC: Scheduling Coefficient
ARP: Average precipitation Rate (mm/hr)

Warranty & Disclaimer

Automat products are warranted for one year from date of original sale to be free of defective materials and workmanship when used within the working specifications for which the product was designed and under normal use and service. The manufacturer assumes no responsibility for installation, removal or unauthorized repair. The manufacturer's liability under this warranty is limited solely to replacement or repair of defective parts, and the manufacturer will not be liable for any crop or other consequential damages resulting from any defects in design or breach of warranty.

AUTOMAT

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