## Creating a Green World TM



Landscape & Turf Irrigation



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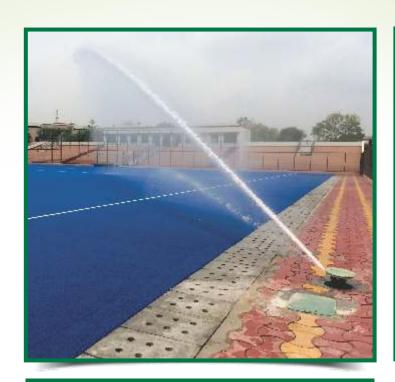








Hospitality



**Sports Facilities** 



Institutional

Short-Range Gear Driven Rotor





The MiniPro provides arc adjustment from 40° to 360°. Sprinkler arc setting adjustment is carried out by rotation of a flat blade screwdriver within top cover adjustment slot. Sprinkler coverage pattern is indicated by degree graduations and an arrow located on top of the sprinkler.

#### Applications:

Residential / Light Commercial

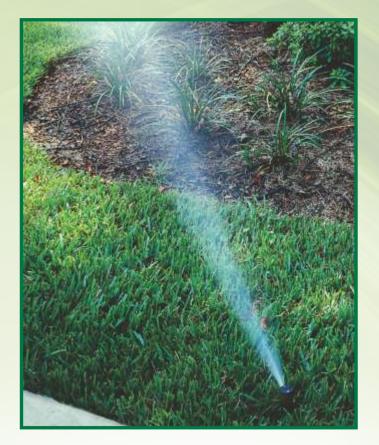
(Perfect for small lawns Landscape areas and for replacing

fixed sprays) Spacing: 5.2 to 9.1 mtr

- Short to Medium Range Watering 5.2 9.1m
- Easily replaces any 1/2" Gear Drive
- K-Rain Patented Easy Arc set
- Arc setting Degrees shown on Top
- Plastic I.D. Cap
- Fixed left starting point
- Set wet or dry
- K-Rain patented reversing mechanism
- 4" (10cm) Riser height
- Advanced Riser Seal
- Multi functional K-key for arc set and or nozzle removal
- Optional check valve Prevents low head discharge

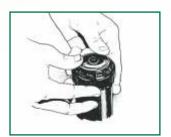






Performance Data					
Nozzle	Pressure	Radius	Flow Rate	Precipitation Rat	
(mm)	(kg/cm <sup>2</sup> )	(mtr)	(ltr/min)	Triangular (mm/hr)	Square (mm/hr)
	2.0	5.2	2.8	7.3	6.3
0.75	3.0	5.2	3.0	7.8	6.8
	3.5	5.5	3.4	7.8	6.8
	2.0	6.1	3.4	6.4	5.5
1.0	3.0	6.4	4.5	7.7	6.7
	3.5	6.4	4.9	8.3	7.2
	2.0	7.0	5.3	7.5	6.5
1.5	3.0	7.3	6.4	8.3	7.2
	3.5	7.3	7.2	9.3	8.1
	2.0	7.6	6.8	8.1	7.0
2.0	3.0	8.2	8.0	8.1	7.0
	3.5	8.2	9.1	9.3	8.0
3.0	2.0	8.5	10.2	9.7	8.4
	3.0	9.1	11.4	9.4	8.1
	3.5	9.1	12.5	10.4	9.0

<sup>\*</sup> Performance is based on ideal conditions of Temperature, Wind Velocity and Humidity.



FIXED LEFT START POSITION



EASY ARC SETTING



SHORT RANGE TURF ROTOR



EASY NOZZLE REMOVAL

#### **Specifications**

• ½" Female Threaded Inlet

• Arc Adjustment Range : 40° to 360°

• Flow Range : 2.8 - 12.5 ltr/min

• Operating Pressure : 2 - 3.5 kg/cm<sup>2</sup>

• Precipitation rate : 6.3 - 10.4 mm/hr

(depending on spacing and nozzle used)

• Overall height (popped down) : 6" (15.24 cm)

• Exposed Top Diameter : 11/4" (3.2 cm)

• Normal Radius : 5.2 - 9.1 m

• Nozzle trajectory : Standard 26°





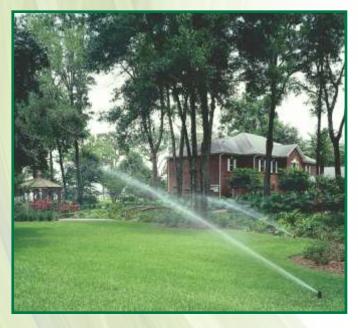


Spacing : 7.6 to 13.7 mtr



#### **Features**

- Right Position Start-Rotor rotates counterclockwise from fixed right start position
- Flow control for reducing the radius by retaining the uniformity of distribution
- Riser fits in existing Hunter® PGP® cans-simply unscrew the existing riser from the PGP® can and replace with the RPS75 riser
- Top adjustment-no training necessary, the RPS75 has the same adjustment procedure as the Hunter® PGP®
- Full and Part circle rotation-provides a full range of adjustment from 40° to 360°
- Non-flushing wiper seal-reduces leaks caused by debris trapped under seal
- ¾" Inlet-Replaces all standard rotors.
- Ideal for low flow applications
- Universal adjustment tool-compatible with existing Hunter® products
- Rubber Cover-Seals out dirt and increases product durability
- Wide Selection of Nozzles-Including standard and low angle, provides flexibility in system design
- Available with Anti-Drain Check Valve option



#### **Specifications**

• ¾" Female Threaded

• Arc Adjustment Range : 40º to 360º

Flow Range : 1.9 - 32.6 l/m
 Pressure Rating : 2 - 4.8 kg/cm²

• Precipitation Rate : 3 to 10 mm/h

• Overall Height (Popped Down) : 7 3/8"

Recommended Spacing : 7.6 to 13.7 mtrRadius : 6.7 to 15.5 mtr

Nozzle Trajectory : 25°
 Low Angle Nozzle Trajectory : 11°

• 8 Standard and 4 Low Angle Nozzles Included

• Riser Height : 4"





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$-\Delta \cup$	

HT-9KRPS75 is the direct replacement for Hunter PGP® Rotors®

Nozzle	Pressure (kg/cm²)	Radius (mtr)	Flow Rate (ltr/min)
	2.1 2.8	8.5 8.8	1.9 2.3
0.5	3.4	8.8	2.7
	4.1	9.1	3.0
	2.1	8.8	2.6
0.75	2.8	9.1	3.0
0.75	3.4	9.1	3.4
	4.1	9.4	3.8
	2.1	9.1	3.4
1	2.8	9.4	3.8
1	3.4	9.4	4.5
	4.1	9.8	4.9
	2.1	9.8	4.5
2	2.8	10.1	5.3
2	3.4	10.4	6.1
	4.1	10.4	6.8
	2.1	11.0	7.6
3 Pre-Installed	2.8	11.6	9.1
5 FTE-ITISTATIEU	3.4	12.2	10.2
	4.1	12.2	11.0
	2.1	11.0	9.8
4	2.8	12.2	11.4
4	3.4	12.8	12.9
	4.1	12.8	14.0
	2.1	11.6	15.9
6	2.8	13.1	18.5
U	3.4	14.0	20.8
	4.1	14.3	22.7
	2.8	13.7	22.7
8	3.4	14.6	25.7
0	4.1	14.9	28.8
	4.8	15.5	31.0

Performance Data - Standard

Performance is based on ideal conditions of Temper	rature Wind
Velocity and Humidity.	

Easy Arc Setting					
Adjust From Right Start	Arc Selection 40º to 360º				

Performance Data - Low Angle						
Nozzle	Pressure (kg/cm²)	Radius (mtr)	Flow Rate (ltr/min)			
	2.0	6.7	4.5			
1	3.0	7.3	6.4			
-	3.5	7.9	6.8			
	4.0	8.5	7.6			
	2.0	8.8	11.4			
3	3.0	9.8	11.7			
5	3.5	10.7	13.2			
	4.0	11.3	14.4			
	2.0	9.4	12.9			
4	3.0	10.4	14.8			
4	3.5	11.3	16.7			
	4.0	11.6	17.8			
	3.0	11.6	24.6			
6	3.5	12.2	27.6			
O	4.0	12.8	30.3			
	5.0	13.4	32.6			

<sup>\*</sup> Performance is based on ideal conditions of Temperature Wind Velocity and Humidity.



#### HT-9KRPSS-RPS SELECT GEAR DRIVEN ROTORS

Mid-Range Gear Driven Rotor





Applications : Residential / Light Commercial

Spacing : 9.8 to 12 mtr

RPS Select sprinkler is the first gear-driven sprinkler that makes matched precipitation fast and easy, without the need for cumbersome changing of nozzles or sprinkler heads in the field. The RPS Select offers a choice of 4 selectable nozzles built-in. With a twist of a screwdriver, quickly select the correct nozzle flow to match the arc setting of the sprinkler, wet or dry. No nozzle trees to carry or lose. Fewer chances for errors. Using a combination of the four nozzles, it's easy to achieve matched precipitation across all arc settings.

#### **FACT**

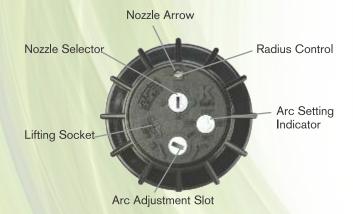
- RPS is the direct replacement for Hunter PGP Rotors®
- The four on-board nozzles also make the RPS Select a convenient universal replacement sprinkler for other brands

#### **Features**

- Four built-in selectable nozzles to match different arc settings. (#1-#4)
- Adjustable arc (40°-360°) All adjustments made from the top-wet or dry.

No special tools needed.

- Balanced precipitation rates when nozzle setting matched to arc.
- Precision-engineered nozzles for water-saving efficiency.
- Standard rubber cover.
- Proven water-lubricated gear-drive design common to RPS 75
   Series. Large dirty-water filter screen for compatibility with reclaimed and recycled water sources.
- Internal assembly interchanges with Hunter® PGP® rotors.
- Low-pressure operation.
- Effluent / reclaimed water identification cover available.









#### Specifications

• Radius : 9.8 to 11m

• Flow rate : 4.5 to 23.1 l/m

• Recommended operating pressure : 2.0 to 5.0 kg/cm<sup>2</sup>

• Optimum nozzle performance : 3.5 kg/cm<sup>2</sup>

• Standard 4" pop-up for lawn areas

• ¾" female-threaded inlet

• Optional drain check valve controls up to 10' of elevation change

Performance Data					
Nozzle	Pressure	Radius	Flow Rate Precipitation Rate*	ion Rate*	
(mm)	(kg/cm²)	(mtr)	(ltr/min)	Square (mm/hr)	Triangular (mm/hr)
	2	10.1	4.9	6	7
#1.0	2.5	10.4	5.3	6	7
#1.0	3	11.3	6.1	6	7
	3.5	11.3	6.8	6	7
	2	11.3	9.8	9	11
#2 O	2.5	11.6	10.6	9	11
#2.0	3	12.2	12.1	10	11
	3.5	12.2	13.6	11	13
	2	11.3	14.4	14	16
#2.0	2.5	12.2	15.5	13	14
#3.0	3	12.5	17.8	14	16
	3.5	13.1	18.5	13	15
	2	11.6	19.6	18	20
#4.0	2.5	12.2	21.5	17	20
#4.0	3	13.7	24.2	15	18
	3.5	14.0	25.7	16	18

<sup>\*</sup>All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.



Mid-Range Gear Driven Rotor





Spacing: 8.5 to 13.4 mtr



#### **Features**

- Revolutionary Patented Easy Arc Set- Easily adjusted from the top with flat blade screwdriver.
- 2N1 Adjustable or Continuous Rotation- Provides a full range of adjustable from 40° to a full 360°.
- Patended Arc Set Degree Markings- Shows the degree of adjustment with the point of an arrow on the top cover.
- Vandal resistant clutch with Auto Reset-Prevents internal gear damage and returns rotor to its prior setting automatically if nozzle turret is forced past its stop.
- Time Proven Patended Reversing Mechanism- Assures continuous reverse and return... over a 20 year history.
- Ratcheting Riser Easily adjust your left stop position by turning the riser.
- Heavy Duty Rubber Cover Protects against physical injury and reduces liability.
- Wide Selection of Nozzles Including standard and low angle, provides flexibility in system design to achieve matched precipitation.
- 5" riser height
- Optional Check Valve Prevents low head rainage, saves water and reduces liability.



#### **Specifications**

• ¾" Female Threaded Inlet

• Arc Adjustment Range : 40° to Continuous 360°

Flow Range : 1.8 to 11.3 ltr/min
 Pressure Rating : 2.0 to 5.0 kg/cm²
 Precipitation Rate : 1.6 to12.9 mm/hr

• Overall Height (Popped Down): 7½"

Recommended Spacing : 8.5 to 13.4 mtrRadius : 8.5 to 15.2 mtr

Nozzle Trajectory : 26°
 Low Angle Nozzle Trajectory : 12°
 Standard and Low Angle Nozzle : Included

• Riser Height







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$-\Lambda$	
-	

K-RAIN founder Carl Kah, holds over 90 patents specific to the irrigation industry. Notable patents include the reversing mechanism and K-RAIN's arc set indicator.

Easy Arc Setting						
Adjust From Left Start	Arc Selection 40º to Continuous 360º					

Performance Data - Standard						
Nozzle	Pressure	Radius	Flow Rate		ion Rate*	
NOZZIE	(kg/cm²)	(mtr)	(ltr/min)	Triangular (mm/hr)	Square (mm/hr)	
	2.0	8.5	1.9	1.8	1.6	
0.5	3.0	8.8	2.3	2.0	1.7	
0.5	3.5	8.8	2.6	2.3	2.0	
	4.0	9.1	3.0	2.5	2.2	
	2.0	8.8	2.6	2.3	2.0	
0.75	3.0	9.1	3.0	2.5	2.2	
0.75	3.5	9.4	3.4	2.6	2.3	
	4.0	9.8	3.8	2.8	2.4	
	2.0	11.3	9.1	4.9	4.3	
1	3.0	12.2	9.5	4.4	3.8	
1	3.5	12.8	11.4	4.8	4.2	
	4.0	13.1	12.5	5.0	4.4	
	2.0	11.3	9.1	4.9	4.3	
2	3.0	12.2	9.5	4.4	3.8	
2	3.5	12.8	11.4	4.8	4.2	
	4.0	13.1	12.5	5.0	4.4	
2.5	2.0	11.6	9.5	4.9	4.2	
	3.0	11.9	10.6	5.2	4.5	
Pre-	3.5	12.2	12.1	5.6	4.9	
Installed	4.0	12.5	13.2	5.9	5.1	
	2.0	11.6	13.6	7.0	6.1	
	3.0	11.9	15.9	7.8	6.8	
3	3.5	12.5	17.4	7.7	6.7	
	4.0	12.8	18.9	8.0	6.9	
	2.0	13.1	16.7	6.7	5.8	
	3.0	13.4	19.3	7.4	6.4	
4	3.5	14.0	21.2	7.5	6.5	
	4.0	14.9	22.3	6.9	6.0	
	3.0	13.7	22.3	8.2	7.1	
	3.5	14.0	22.7	8.0	6.9	
6	4.0	14.6	23.8	7.7	6.7	
	5.0	14.9	25.4	7.9	6.8	
	3.0	12.8	30.3	12.8	11.1	
	3.5	13.7	32.2	11.8	10.3	
8	4.0	14.9	36.0	11.2	9.7	
Performance is	5.0	15.2	37.9 rature Wind Veloc	11.3	9.8	

Performance Data - Low Angle					
	Pressure	Radius	adius Flow Rate	Precipitation Rate*	
Nozzle	(kg/cm²)	(mtr)	(ltr/min)	Triangular (mm/hr)	Square (mm/hr)
	2.0	6.7	4.5	7.0	6.1
1	3.0	7.3	6.4	8.3	7.2
1	3.5	7.9	6.8	7.5	6.5
	4.0	8.5	7.6	7.2	6.2
	2.0	8.8	11.4	10.1	8.7
3	3.0	9.8	11.7	8.5	7.4
5	3.5	10.7	13.2	8.1	7.0
	4.0	11.3	14.4	7.8	6.8
	2.0	9.4	12.9	10.0	8.6
4	3.0	10.4	14.8	9.5	8.2
4	3.5	11.3	16.7	9.1	7.9
	4.0	11.6	17.8	9.2	8.0
	3.0	11.6	24.6	12.7	11.0
6	3.5	12.2	27.6	12.9	11.2
	4.0	12.8	30.3	12.8	11.1
	5.0	13.4	32.6	12.5	10.9

<sup>\*</sup> Performance is based on ideal conditions of Temperature Wind Velocity and Humidity.







K-RAIN'S exclusive patented top arc indication makes their rotors the easiest in the world to adjust.

Applications: Residential / Light Commercial

: 7.9 to 14.9 mtr

#### **Features**

- Revolutionary Patented Easy Arc Set Simplified arc set allows for wet or dry adjustment in seconds.
- 2N1 Adjustable or Continuous Rotation Provides a full range of adjustment from 40° to a continuous 360°.
- Patented Arc Set Degree Markings Clearly indicates the current watering pattern and simplifies arc set adjustment.
- Arc Memory Clutch Prevents internal gear damage and returns rotor to its prior setting automatically if nozzle turret is forced out of adjustment.
- Time Proven Patented Reversing Mechanism Assures continuous reverse and return...over a 35z year history.
- Ratcheting Riser Allows for easy adjustment of your left starting position with a simple turn of the riser.
- Rubber Cover Seals out dirt and increases product durability.
- Optional Check Valve Prevents low head drainage.
- Rugged Stainless Steel Spring .093 gauge 302 stainless steel spring extends the life of the rotor.

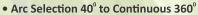




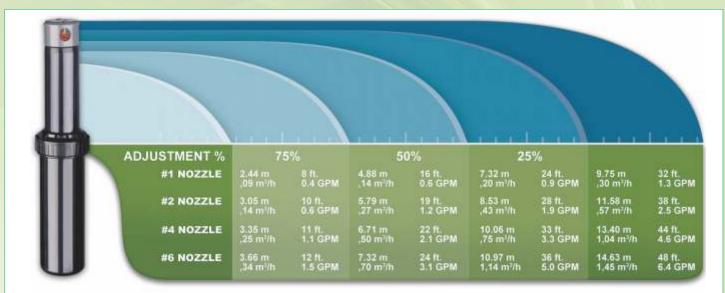
5" riser height



Adjust From Left Start



 Reduces distance and flow rate proportionately Provides full on/off control



"With FLOW SHUT OFF mechanism. Radius reduction can be done up to 75% (No other pop up in the world has this feature). Pattern of spray remain undistorted in case of radius reduction."

Performance Data - Standard							
					ion Rate*		
Nozzle	Pressure	Radius	Flow Rate				
NOZZIC	(kg/cm <sup>2</sup> )	(mtr)	(ltr/min)	Triangular (mm/hr)	Square (mm/hr)		
	2.0	7.9	1.7	1.4	1.2		
0.5	3.0	7.9	1.9	1.7	1.5		
0.5	3.5	8.8	2.3	2.5	2.2		
	4.0	9.1	2.6	2.9	2.5		
	2.0	9.8	2.6	1.9	1.7		
0.75	3.0	9.8	3.0	2.2	1.9		
0.75	3.5	10.1	3.4	2.3	2.0		
	4.0	10.1	3.8	2.6	2.2		
	2.0	9.1	4.2	3.5	3.0		
1	3.0	9.8	4.9	3.6	3.1		
	3.5	10.1	5.7	3.9	3.4		
	4.0	10.1	6.1	4.1	3.6		
	2.0	11.6	8.7	4.5	3.9		
2	3.0	11.6	9.5	4.9	4.2		
2	3.5	12.2	10.2	4.8	4.1		
	4.0	12.8	11.4	4.8	4.2		
2.5	2.0	10.7	9.5	5.8	5.0		
	3.0	11.0	10.6	6.1	5.3		
Pre-	3.5	11.3	12.1	6.6	5.7		
Installed	4.0	11.6	13.6	7.0	6.1		
	2.0	10.7	12.9	7.8	6.8		
3	3.0	11.0	14.9	8.3	7.2		
3	3.5	11.6	15.9	8.2	7.1		
	4.0	11.9	18.2	8.9	7.7		
	2.0	12.8	15.5	6.6	5.7		
4	3.0	13.4	17.4	6.7	5.8		
	3.5	13.7	19.3	7.1	6.2		
	4.0	14.0	21.6	7.6	6.6		
	3.0	14.0	22.0	7.7	6.7		
6	3.5	14.6	24.2	7.8	6.8		
	4.0	14.9	26.5	8.2	7.1		
	5.0	14.9	28.4	8.8	7.6		
	3.0	12.8	28.4	12.0	10.4		
8	3.5	13.7	31.0	11.4	9.9		
3	4.0	14.6	34.1	11.0	9.5		
	5.0	14.6	36.0	11.6	10.1		

#### \* Performance is based on ideal conditions of Temperature Wind Velocity and Humidity.

#### **Specifications**

- Inlet: ¾" (1,9 cm) Threaded NPT
- Arc Adjustment Range: 40° to Continuous 360°
- Flow Range: 1.9 36 LPM
- Pressure Rating: 1.5 5 kg/cm<sup>2</sup>
- Precipitation Rate: 5.39 to 30.89 mm/hr (Depending on Spacing and Nozzle Used)
- Overall Height (Popped Down): 7 ½" (19 cm)
- Recommended Spacing: 28' 44' (8.5 a 13.4 m)
- Radius: 26' 49' (7.9 a 14.9 m) Nozzle Trajectory: 26°
- Low Angle Nozzle Trajectory: 12°
- Standard and Low Angle Nozzles Included
- Riser Height: 4" (10.2 cm)

Performance Data - Low Angle								
	Pressure	Radius	Flow Rate	Precipitation Rate*				
Nozzle	(kg/cm <sup>2</sup> )	(mtr)	(ltr/min)	Triangular (mm/hr)	Square (mm/hr)			
	2.0	7.9	4.9	5.4	4.7			
1	3.0	8.2	5.7	5.8	5.0			
1	3.5	8.2	6.4	6.6	5.7			
	4.0	8.5	7.2	6.8	5.9			
	2.0	8.8	11.0	9.7	8.4			
3	3.0	9.1	12.5	10.4	9.0			
5	3.5	9.4	12.9	10.0	8.6			
	4.0	10.1	15.1	10.4	9.0			
	2.0	8.5	15.1	14.4	12.5			
4	3.0	9.4	17.8	13.8	12.0			
4	3.5	10.4	18.9	12.2	10.6			
	4.0	11.0	22.7	13.1	11.3			
	3.0	9.1	22.7	18.8	16.3			
6	3.5	10.4	26.5	17.1	14.8			
б	4.0	11.3	29.5	16.1	13.9			
	5.0	11.6	31.0	16.0	13.9			

<sup>\*</sup> Performance is based on ideal conditions of Temperature Wind Velocity and Humidity.







Applications : Commercial / Sports Turfs & Golf Courses

Spacing : 12 to 21 mtr

#### **Features**

- Triple Nozzle configuration- Ensures even distribution of water.
- 2N1 Adjustable or continuous rotation- Provides a full range of adjustment from 40 to a continuous full circle.
- Vandal resistant clutch with Auto Reset- Prevents internal gear damage and returns rotor to its prior setting automatically if nozzle turret is forced past its stop.
- Patented Easy Arc Set Degree Marking.
- Heavy duty Rubber Cover.
- Advanced Riser Seal.
- Time proven patented Reversing Mechanism Assures continuous reverse and return....everytime.
- Heavy Duty Rubber Cover.
- Easily retrofit to any other system.
- Factory installed check valve Prevent low head discharge.



#### Specifications

• 1" Female Threaded Inlet.

Arc Adjustment Range : 40° to continuous 360°
 Flow Range : 19.3 to 110.5 ltr/min

• Operating Pressure : 2.7 to 6.2 kg/cm<sup>2</sup>

• Precipitation rate: 7.1 to 60.4 mm/hr

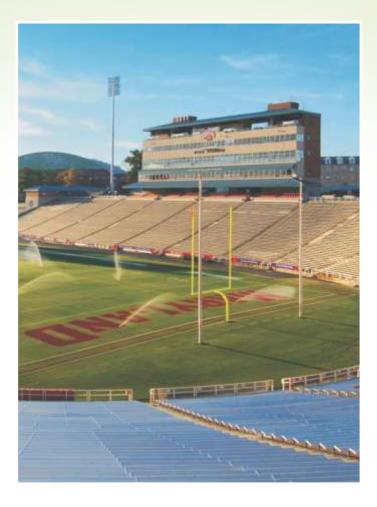
Overall height (popped down) : 9½"Exposed Diameter : 1.85"

• Radius: 13.7 to 21.6 mtr

Nozzle Trajectory : 26°Riser height : 4"







## FACT

K-RAIN'S Revolutionary Patented Easy Arc Set - Simplifies arc set allows for wet or dry adjustment in seconds

	Performance Data - Standard						
Needs	Pressure	Radius	Flow Rate	Precipitat	ion Rate*		
Nozzle	(kg/cm²)	(mtr)	(ltr/min)	Triangular (mm/hr)	Square (mm/hr)		
	2.76	13.7	19.3	7.14	6.18		
5	3.45	14.3	22.3	7.57	6.55		
	4.14	14.3	24.6	8.36	7.24		
	4.83	14.9	26.9	8.37	7.24		
10	3.45	16.2	40.1	10.60	9.18		
Pre-	4.14	15.9	44.3	12.15	10.52		
Installed	4.83	16.2	47.7	12.58	10.90		
<b>O</b>	5.52	16.8	51.1	12.52	10.84		
	3.45	17.4	49.2	11.25	9.74		
15	4.14	18.0	53.8	11.51	9.97		
	4.83	18.0	58.3	12.47	10.80		
.0.	5.52	19.2	62.5	11.75	10.17		
	4.14	19.8	71.5	12.64	10.94		
20	4.83	20.4	77.6	12.93	11.20		
Check	5.52	21.0	82.9	13.01	11.27		
(C)	6.21	21.6	87.8	13.04	11.30		
	4.14	20.4	86.3	14.37	12.45		
25	4.83	21.6	93.9	13.93	12.07		
	5.52	22.9	100.3	13.26	11.48		
90	6.21	23.5	101.4	12.71	11.01		
	4.14	20.4	89.7	14.93	12.93		
30	4.83	21.0	96.9	15.21	13.17		
30	5.52	21.0	104.1	16.37	14.17		
40	6.21	21.6	110.5	16.41	14.21		

<sup>\*</sup> Performance is based on ideal conditions of Temperature Wind Velocity and Humidity.

#### Easy Arc Setting



Adjust From Left Start

Allow to stop the flow right at the head







#### **Co-Molded Wiper Seal**





K-Rain's co-molded wiper seal reduces flow by-pass at start up and provides durability for longer life.

#### **Features**

- Available in 2" and 4" Models-Provides flexibility in system design.
- Accepts female threaded nozzles
- Stainless Steel Retraction Spring-Provides reliable retraction of the riser in all soil conditions.
- Ratcheting Riser-Allows for easy pattern alignment by turning the riser.
- Co-Molded Wiper Seal Ensures leak free, full pop-up operation even under low- pressure situations.
- Narrow Profile Body Easy to retrofit with existing systems.
- Two year limited warranty.

#### Specifications

• ½" Female threaded inlet

Pressure Rating : 1.5 -3.5 Kg/cm²
 Flow Range : 1.9 - 20.4 ltr/min
 Precipitation rate : 7.6 - 101.6 mm/hr
 Nominal Radius : 2.7 - 5.5 mtr

#### Narrow Profile Sprays

K-Rain's RPS pop-up spray heads are ideal for watering Smaller areas, ground cover and shrub areas.

RPS pop-up sprays are built with the contractor in mind. With the narrow profile, replacement is effortless. The RPS Spray is the only narrow profile spray with a co-molded wiper seal. The co-molded wiper seal ensures proper operation year after year with minimal flow by.



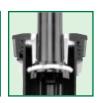
USA USA

Applications : Residential / Commercial









CO-MOLDED WIPER SEAL

Ensures a leak free, full pop-up operation even under low-pressure situations. Unique cartridge design featuring microbe-resistant durable material prevents degradation and stick-ups.







Pre-installed flush cap.

Male threaded body is compatible with all standard female nozzles.



#### **Features**

- Co-Molded Wiper Seal- Ensures a leak free, full pop-up operation even under low-pressure situations. Cartridge design allows for easy removal and cleaning. Treated with UV inhibitors for long life. Seal is microbe resistant to reduce degradation and stick-ups.
- Accepts Female Threaded Nozzles.
- Ratcheting Riser- Permits quick, easy alignment of spray pattern.
- Heavy-Duty Retraction Spring- Strongest spring in the industry for positive retraction in all soil conditions.
- Side and Bottom Inlets- On 6" and 12" models.
- Wide Selection of Sizes- Available in 2", 3", 4", 6" and 12" models.
- Pre-Installed Flush Cap.
- Optional In-stem Pressure Regulator- available for 4", 6" and 12" models.

#### **RUGGED CONSTRUCTION**

The K-Rain Pro-S line of sprays is distinguished by its robust construction, rugged body and cap, co-molded seal and heavy-duty retraction spring.



Models							
78002	2" Pop-up (5 cm)	78006 6" Pop-up (15 cm)					
78003	3" Pop-up (7.5 cm)	78012 12" Pop-up (30 cm)					
78004	4" Pop-up (10 cm)						

OTHER OPTIONS: ADD TO PART NUMBER

- PR Pressure Regulator (4", 6" & 12" Models only)



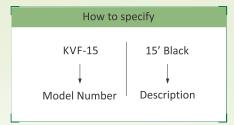




#### Models

**KVF Nozzles** 

KVF - 2 8" Spray, Green KVF - 10 10" Spray, Blue KVF - 12 12" Spray, Brown KVF - 15 15" Spray, Black KVF - 17 17" Spray, Gray



Metric										
PRESSURE	8'GF	REEN	10'E	BLUE	12′BF	ROWN	15'B	LACK	17' GREY	-KV ONLY
ARC	Radius (mtr)	Flow (Itr/min)	Radius (mtr)	Flow (ltr/min)	Radius (mtr)	Flow (Itr/min)	Radius (mtr)	Flow (Itr/min)	Radius (mtr)	Flow (Itr/min)
	2.7	1.5	2.7	1.5	3.0	1.7	4.0	2.1	5.2	3.0
90	2.7	1.6	2.7	1.6	3.4	2.0	4.3	2.4	5.5	3.6
90	3.0	1.7	3.0	1.7	3.7	2.1	4.6	2.6	5.8	4.0
	3.0	1.9	3.0	1.9	3.7	2.3	4.9	3.0	5.8	4.9
	2.7	3.8	2.7	3.8	2.7	4.2	4.0	4.9	5.2	6.4
180	2.7	4.2	2.7	4.2	3.0	4.6	4.3	5.6	5.2	7.3
100	3.0	4.5	3.0	4.5	3.0	5.1	4.6	6.2	5.8	8.1
	3.0	4.7	3.0	4.7	3.4	5.8	4.9	7.6	5.8	9.5
	2.7	6.1	2.7	5.3	2.7	6.1	4.0	7.2	4.9	9.1
270	3.0	6.6	3.0	6.0	3.0	6.6	4.6	8.1	4.9	10.7
2/0	3.0	7.4	3.0	6.6	3.0	7.4	4.6	8.9	5.2	11.4
	3.4	7.8	3.0	7.8	3.4	7.8	4.9	10.2	5.5	13.2
	2.7	8.7	2.7	8.7	2.7	9.1	4.0	10.6	4.9	11.0
360	3.0	9.5	3.0	9.5	3.0	9.9	4.3	12.3	5.2	12.9
360	3.0	10.0	3.0	10.0	3.4	10.5	4.6	13.6	5.2	14.4
	3.4	10.4	3.4	10.4	3.7	11.5	4.6	15.5	5.2	16.7

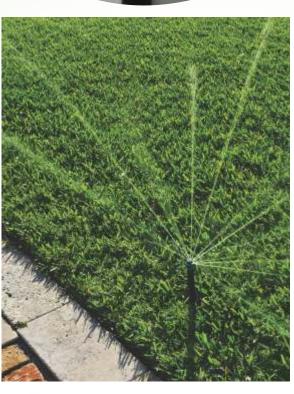
	SPECIAL PATTERNS									
PATTERN	NUMBER	PRESSURE (kg/cm²)	RADIUS (mtr)	FLOW (ltr/min)						
CENTER STRIP	15CS / FN15CS	1.5 2.0	1.2 X 7.3 1.2 X 9.1	3.0 3.8						
END STRIP	15ES / FN15ES	1.5 2.0	1.2 X 7.3 1.2 X 4.6	1.5 1.9						
SIDE STRIP	15SS / FN15SS	1.5 2.0	1.2 X 8.5 1.5 X 9.8	4.2 4.9						
HIGH LOW	15HL / FN15HL	1.5 2.0	4.3 X 1.2 X 8.0 4 6 X 1 5 X 9 8	9.5 11.4						

Data represents test results in zero wind. Adjust for local conditions. Radius may be reduced with nozzle retention screw.











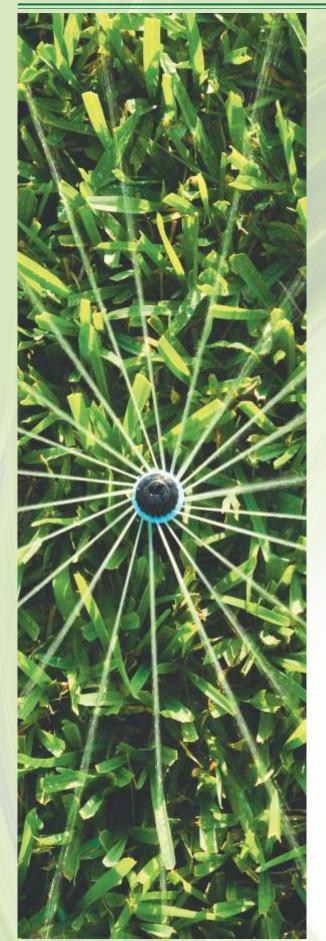
- Water savings- up to 30% more efficient than conventional sprays.
- Low application rate- reduces runoff on slopes and with clay soils.
- **High uniformity-** outstanding coverage, eliminates brown spots.
- Matched precipitation- across every arc, pattern and radius. Mix and match with traditional rotors.
- Multiple stream technology- beautiful to watch, wind-resistant.
- Color Coding- Indicates one of six radius options, easy identification.
- Adjustable Arc and Strip Patterns- Infinite control for all circular patterns from 80° to 360° plus innovative solutions for narrow strips.
- Viscous Control- Only one moving part, patent-pending.
- Flow Control- Allows radius adjustment of up to 25%
- Outstanding Dirt Tolerance- Secondary pop-up provides added protection.
- Fits a Standard Spray Body- Threads onto a standard pop-up spray body.
- **Optional pressure regulated body-** Pro-S pop-up spray body with 40 PSI pressure regulator and innovative rotary nozzle guard.

	Performance Data - Adjustable and Fixed Patterns RN100-ADJ-90-270 (MEDIUM GREEN)								
ARC	Pressure (kg/cm²)	Radius (mtr)	Flow Rate (ltr/min)	Precipitat Square (mm/hr)	rion Rate*  Triangular (mm/hr)				
90°	2 2.5 2.8 3 3.5	3.96 4.27 4.27 4.27 4.27	0.83 0.91 0.94 1.10 1.13	13 12 12 12 12 13	15 13 14 14 15				
180°	2 2.5 2.8 3 3.5	3.96 4.27 4.27 4.57 4.57	1.66 1.78 1.89 2.19 2.27	13 12 12 12 12	15 13 14 14 15				
270°	2 2.5 2.8 3 3.5	3.96 4.27 4.27 4.57 4.57	2.50 2.69 2.84 3.25 3.40	13 12 12 12 12 13	15 13 14 14 15				

RN100-FIX360 (LIGHT GREEN)								
ARC	Pressure	Radius	Flow Rate		ion Rate*			
ARC	(kg/cm²)	(mtr)	(ltr/min)	Square (mm/hr)	Triangular (mm/hr)			
	2 2.5	3.96 4.27	3.33 3.56	13 12	14 13			
360⁰	2.8	4.27	3.78	12	14			
	3	4.57 4.57	4.35 4.54	12	14 15			
	3.5	4.57	4.54	13	15			

<sup>\*</sup>Data represents test results in zero wind. Adjust for local conditions.





Performance Data - Adjustable and Fixed Patterns RN200-ADJ-90-270 (MEDIUM BLUE)									
ARC	Pressure (kg/cm²)	Radius (mtr)	Flow Rate (ltr/min)	Precipitat Square (mm/hr)	ion Rate*  Triangular (mm/hr)				
90°	2	4.87	1.29	13	15				
	2.5	5.18	1.44	13	15				
	2.8	5.48	1.55	12	14				
	3	5.79	1.59	11	13				
	3.5	5.79	1.78	13	15				
180°	2	4.87	2.53	13	15				
	2.5	5.18	2.84	13	15				
	2.8	5.48	3.14	12	14				
	3	5.79	3.18	11	13				
	3.5	5.79	3.56	13	15				
270°	2	4.87	3.82	13	15				
	2.5	5.18	4.28	13	15				
	2.8	5.48	4.69	12	14				
	3	5.48	4.77	13	15				
	3.5	5.79	5.34	13	15				

RN200-FIX360 (LIGHT BLUE)								
	Pressure	Radius	Radius Flow Rate		ion Rate*			
ARC	(kg/cm²)	(mtr)	(ltr/min)	Square (mm/hr)	Triangular (mm/hr)			
360°	2 2.5 2.8 3 3.5	4.87 5.18 5.48 5.79 5.79	5.07 5.68 6.24 6.36 7.11	13 13 12 13 14	15 15 14 15 16			

RN300-ADJ-90-270 (MEDIUM GREY)								
ARC	Pressure	Radius	Flow Rate	Precipitation Rate*				
ARC	(kg/cm²)	(mtr)	(ltr/min)	Square (mm/hr)	Triangular (mm/hr)			
90°	2	7.92	3.03	11	13			
	2.5	7.92	3.22	12	12			
	2.8	8.23	3.40	12	12			
	3	8.53	3.59	11	13			
	3.5	8.53	3.78	11	13			
180°	2	7.92	5.30	11	13			
	2.5	8.23	5.68	11	12			
	2.8	8.23	6.05	12	12			
	3	8.84	6.43	10	12			
	3.5	9.14	6.81	10	12			
270°	2	7.92	9.27	11	13			
	2.5	8.23	9.65	11	12			
	2.8	8.53	10.41	11	13			
	3	8.53	10.98	11	13			
	3.5	8.23	11.73	12	14			

RN300-FIX360 (LIGHT GREY)								
	Pressure	Radius	Radius Flow Rate		Precipitation Rate*			
ARC	(kg/cm²) (mtr)		(ltr/min)	Square (mm/hr)	Triangular (mm/hr)			
	2	7.92	11.73	11	13			
	2.5	8.23	12.11	11	12			
360°	2.8	8.53	13.25	11	13			
	3	8.53	13.43	11	13			
	3.5	9.10	14.00	11	12			

	Performance Data - Special Patterns						
PATTERN NOZZL		PRESSURE (kg/cm²)	WIDTH X LENGTH Meters	FLOW RATE L/M			
Right Eng Strip	RNS-RES-515 Burnt Orange	2 2.5 2.8 3 3.5	1.22 x 4.6 1.5 x 4.6 1.5 x 4.6 1.8 x 4.9 1.8 x 4.9	1.14 1.21 1.32 1.43 1.51			
Left End Strip	RNS-LES-515 Olive	2 2.5 2.8 3 3.5	1.22 x 4.6 1.5 x 4.6 1.5 x 4.6 1.8 x 4.6 1.8 x 4.9	1.14 1.21 1.32 1.43 1.51			
Side Strip	RNS-SS-530 Brown	2 2.5 2.8 3 3.5	1.22 x 8.8 1.5 x 9.1 1.5 x 9.1 1.8 x 9.4 2.1 x 9.7	1.80 2.08 2.30 2.46 2.64			

<sup>\*</sup>Data represents test results in zero wind. Adjust for local conditions.







#### **Applications**

Pop-up sprinkler for underground installation in landscaping, residential park, public lawn irrigation.



#### **Features**

- Interchangeable, bayonet color coded nozzles.
- Heavy-duty plastic case with reinforced ribbed design for excellent gripping.
- Adjustable to full-circle or part circle.
- Diffuser screw for fine droplets & throw control.
- Double-weighted arm for balance and smooth rotation.
- Sand resistant pressure activated wiper seal.
- Excellent distribution uniformity.
- ½" & ¾" female threaded bottom inlet & ½" female threaded side inlet.
- Having provision of bottom inlet filter.

#### **Technical Specifications**

• Discharge: 456-1192 L/H • Diameter: 22.5-25.5 mtr

• Operating pressure: 2.0-4.0 kg/cm<sup>2</sup>

• Bottom Inlet connection ½" & ¾" female threaded

• Nozzles available in sizes 2.9, 3.2, 3.5 & 4.0 mm

• Trajectory Angle: 25°

• Full-circle (360°) OR

Part-circle (adjustable arc from 15° to 345°)

• Spacing between sprinkler: upto 12m for excellent uniformity.

Performance Data						
Nozzle size-Color	Pressure (Kg/cm²)	Flow rate (L/H)	Diameter (mtr.)			
101	2.0 2.5 3.0	456 509 559	22.5 23.5 23.8			
2.9 Orange	3.5 4.0	604 646	24.0 24.5			
	2.0 2.5 3.0	565 636 700	22.8 23.8 24.5			
3.2 Green	3.5 4.0	755 805	25.0 25.2			
101	2.0	680 760	23.0 24.0			
♠ 3.5 Blue	3.0 3.5 4.0	905 975	24.8 25.3 25.5			
4.0 Black	2.0 2.5	865 960	23.2			
	3.0 3.5	1042 1125	25.0 25.5			
4.0 Diack	4.0	1192	25.5			

<sup>\*</sup> Performance is based on ideal conditions of Temperature, Wind Velocity and Humidity.

Standard Nozzle Size

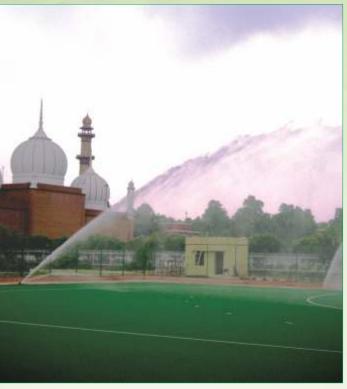








- Maximum operating pressure range 3.0 8.0 kg/cm<sup>2</sup>
- Discharge range 314 1084 ltr/min
- Radius range 29.5 49.5 meters
- Precipitation rate range 6.8 8.8 mm per hour



Applications : Football, Hockey, Cricket, Rugby, Synthetic Turf & Golf courses.

- Uniform water distribution.
- Smooth gear drive operation.
- Large radius reduces heads on playing surface.
- Pop-Up sprinkler for large gardens and parks, manufactured with shock proof outer case and rubber cover.
- Technically built as a turbine big irrigun, it gives a long radius, and it is particularly suitable for golf courses, (can be possible one-two only sprinkler each green), and football grounds.
- The external spinner and the jet-breaker, grant the best water-distribution.
- The Sprinkler arc works with low or high pressures and can mount nozzles from 16 to 24 mm diameter.
- Best Suited for golf courses, Stadium and Big Parks.
- Low operating pressure -> Low HP Pump Set -> Low Operating Cost.
- Low Filtration Cost -> Low Initial Cost -> Low Maintenance.
- Less Number of Sprinklers per unit area, there by lower system cost.
- Precipitation Rate 6.8 8.8 mm per hour.
- Jet Length 29.5 mtr 48.5 mtr.
- Rubber covered cap for player protection.
- Optional synthetic turf top available.







Techn	ical Data
300 mm	Radius 28 to 48 m
140 mm	Height 23° 8 m
	Rotation Speed (360°) 5 Bars : 300 sec 7 Bars : 280 sec
570 mm	Capacity 18 to 65 m³/h
2″ F →	Operating Pressure 3 to 8 Bars

Performance Data						
Nozzle (mm)	Pressure (kg/cm²)	Radius (mtr)	Discharge (ltr/min)	Precipitation (ltr/min)		
	3.0	29.5	314	6.8		
1.5	4.0	32.5	364	6.6		
16 6	5.0	35.0	406	6.3		
	6.0	37.0	446	6.2		
	7.0	39.0	482	6.0		
	3.0	31.0	350	6.9		
10	4.0	34.0	400	6.7		
18 6	5.0	37.0	452	6.3		
	6.0	39.0	496	6.2		
	7.0	40.5	535	6.2		
	4.0	35.0	545	8.5		
20	5.0	39.0	609	7.2		
<b>≜</b> 6 <sup>20</sup>	6.0	43.0	668	6.9		
	7.0	44.0	721	7.1		
	8.0	45.0	773	7.3		
	4.0	36.0	649	9.5		
22	5.0	39.5	726	8.9		
22 6	6.0	44.0	795	7.8		
	7.0	47.0	859	7.4		
	8.0	48.0	920	7.1		
	4.0	37.0	765	10.6		
2.4	5.0	40.5	855	10.0		
24 6	6.0	45.0	937	8.8		
	7.0	47.5	1012	8.6		
	8.0	48.5	1084	8.8		
	4.0	38.0	891	11.7		
26	5.0	41.5	996	11.0		
26 6	6.0	46.0	1092	9.8		
	7.0	48.5	1178	9.6		
	8.0	50.0	1262	9.6		

<sup>\*</sup> Performance is based on ideal conditions of Temperature, Wind Velocity and Humidity.

Standard Nozzle Size

#### **Installation Recommendations**

- Use quality (min. 10 bar rating) 3 or 4 way articulated riser assembly connection between base of sprinkler and supply piping to provide player protection and avoid damage to sprinkler and pipeline.
- Provide an adequate gravel "soak pit" area about each sprinkler base to allow for drainage of any excess water build up during operation.
- Excess water build up may be avoided by multiple operation cycles (at proportionally reduced times).
- Installation of size 2" anti drain check valve at base of sprinkler head / riser assembly is recommended for all low lying areas.







#### **Applications**

• For Uniform irrigation of orchard, flower beds, vineyards, nursery & under tree where undulating terrain and long laterel lengths are challenging.

- Constant Flow between 2 to 4 kg/cm<sup>2</sup> pressure.
- Flow Rate: 20, 28, 39, 62, 72, 95 LPH.
- Range of operating Pressure:
   20, 28, 39, 62 LPH: 2 4 kg/cm²
   72 and 95 LPH: 1.75 3.5 kg/cm²
- Installed in the ground on stake or hang it by wire.
- Recommended Spacing: 3x3, 3.5x3.5 & 4x4m
- Two Stage wetted diameter control.
- Insect proof design.
- Excellent distribution uniformity.
- Optional trunk protector to protect the plant trunk from wetting, restricting fungus, algea growth.
- Quick thread & push fit adopter connection.
- 4x7mm PE/PVC tube.
- UV & Chemical Resistant material.

Performance Chart								
			Swivel Co	lor (Grey)	Swivel Co	lor (Black)		
Nozzle	Nozzle Size	Flow Rate	Short	Diameter	Large D	iameter		
Color	(mm)	(LPH)	Dian	neter (m)	Diameter (m)			
					1 <sup>st</sup> Stage	2 <sup>nd</sup> Stage	1 <sup>st</sup> Stage	2 <sup>nd</sup> Stage
Purple	0.8mm	20	1.2	3.5	1.6	4.5		
Brown	0.94mm	28	1.2	4.0	1.6	5.0		
Green	1.05mm	39	1.4	4.0	2.0	6.0		
Yellow	1.25mm	62	1.6	4.6	2.0	7.0		
Orange	1.35mm	72	1.8	4.8	2.0	7.2		
White	1.6mm	95	2.0	5.2	2.2	7.5		

<sup>\*</sup>Tested at 25cm hight above ground



#### HT-250 Series









#### **Features**

- Reduces temperature and increases humidity in Green area.
- Interchangeable color coded nozzles.
- Connected with LPD and push fit / bayonet.
- Fine droplet size (50-60 Microns @ 4.0 bar).
- A secondary filter (75-100 Microns) is required to operate the product.
- High water distribution uniformity and coverage.
- Easy installation and service.

#### **Applications**

- Evaporative cooling and humidifying control for Greenhouse and long tunnels.
- Provides perfect conditions for plant propagation.
- Organic or Convention fields.

Technical Specifications				
Material Polyacetal				
Pattern 360°				
Droplet Size	50-60 Microns /@ 4Kg/cm <sup>2</sup>			
Operating Pressure 4 Kg/cm <sup>2</sup>				
Operating Range	2-4 kg/cm <sup>2</sup> - Green LPD 3-5 kg/cm <sup>2</sup> - Blue LPD			

Nozzles Flow Rate (LPH)						
Nozzle Color Blue Green						
Single Fogger	5.5	7.5				
2 Way Fogger	11	15				
4 Way Fogger	22	30				

LPD (Leakage Prevention Device)					
Model Opening Pressure Closing Pressure					
MP - LPD (Green)	1.5 bar	1.0 bar			
HP - LPD (Blue)	1.7 bar				





### Features

- Available in 11/4" BSP/NPT Female Thread Connection
- Both Part Circle & Full Circle adjustments
- Adjustable Jet breaker to provide uniform distribution
- Equipped with 3 interchangeable nozzles of different sizes for various applications
- Trajectory Angle 30°

Applications: • Sports Fields, Golf Courses

• Dust Suppression, Green Pastures, Big Parks and Gardens

	Performance Data						
Nozzle (mm)	Pressure (kg/cm²)	Radius (mtr)	Discharge (ltr/min)	Irrigated Area (mtr²)	Precipitation Rate (mm/h)		
	2.00	19.00	106	1134	5.6		
10x4	3.00	21.00	130	1384	5.6		
10X4	4.00	22.50	151	1590	5.7		
	5.00	23.50	170	1734	5.9		
	2.00	21.00	149	1384	6.4		
≜12x4	3.00	23.50	182	1734	6.3		
<b>\$12X4</b>	4.00	26.00	211	2123	5.9		
	5.00	28.00	236	2461	5.8		
	2.00	22.50	197	1590	7.4		
14x4	3.00	24.00	241	1809	7.9		
14X4	4.00	27.00	278	2289	7.2		
	5.00	29.00	311	2640	7.0		

#### HT-42G

#### 11/2" Water Gun PELICAN



#### **Features**

- Available in 1½" BSP/NPT Female Thread Connection.
- Both Part Circle & Full Circle adjustments.
- Adjustable Jet breaker to provide uniform distribution.
- Equipped with 3 interchangeable nozzles of different sizes for various applications.
- Trajectory Angle 23°

Applications: • Sports Fields, Golf Courses

• Dust Suppression, Green Pastures, Big Parks and Gardens

	Performance Data					
Nozzle (mm)	Pressure (kg/cm²)	Radius (mtr)	Discharge (ltr/min)	Irrigated Area (mtr²)	Precipitation Rate (mm/h)	
	2.00	20	152	1256	7.2	
12x5	3.00	24	182	1809	6.0	
12X5	4.00	27	211	2289	5.5	
	5.00	30	236	2826	5.2	
	2.00	21	195	1384	8.4	
4 1 AVE	3.00	25	239	1962	7.3	
≜14x5	4.00	29	277	2640	6.3	
	5.00	31	309	3017	6.1	
16x5	2.00	22	247	1519	9.7	
	3.00	26	303	2123	8.6	
	4.00	30	351	2826	7.5	
	5.00	33	391	3419	6.9	

<sup>\*</sup> Performance is based on ideal conditions of Temperature, Wind Velocity and Humidity.

Manufactured as per ISO-7749-1&2 specifications







#### **Features**

- Available in 1½" BSP/NPT Female Thread Connection
- Both Part Circle & Full Circle adjustments
- Adjustable Jet breaker to provide uniform distribution
- Equipped with interchangeable nozzles of different sizes for various applications
- Innerrotating system supported by stainless steel ball bearing to guarantee no strain and no oxidation due to humidity



Applications: • Sports Fields, Golf Courses

- Dust Suppression, Green Pastures
- Suitable in Landscape / Horticulture in Big Parks and Gardens

Performance Data						
Nozzle (mm)	Pressure (kg/cm²)	Radius (mtr)	Discharge (ltr/min)	Irrigated Area (mtr²)	Precipitation Rate (mm/h)	
	2.0	22	159	1519	6.2	
12x6	3.0	25	194	1962	5.9	
1280	4.0	28	224	2461	5.4	
	5.0	31	252	3017	5.0	
	2.0	24	195	1808	8.5	
14x6	3.0	27	251	1289	6.5	
14x0	4.0	30	290	2826	6.2	
	5.0	33	324	3419	5.7	
	2.0	26	2857	2123	7.2	
≜16x6	3.0	29	315	2640	7.1	
\$10X0	4.0	32	364	2217	6.8	
	5.0	35	406	3846	6.3	
	2.0	28	318	2641	7.7	
18x6	3.0	31	404	3017	8.0	
1000	4.0	34	471	3629	7.8	
	5.0	37	521	4298	7.3	
	2.0	30	354	2826	7.5	
2046	3.0	33	490	3419	8.6	
20x6	4.0	37	571	4298	8.0	
	5.0	41	617	5278	7.0	
k D						

<sup>\*</sup> Performance is based on ideal conditions of Temperature, Wind Velocity and Humidity.

Manufactured as per ISO-7749-1&2 specifications







Performance Data						
Nozzle	Pressure	Coverage	Diameter	Dischar	ge Rate	
mm	Kg/cm <sup>2</sup>	mtr.	ft.	LPM	GPM	
	2	52	170.56	230	60.75	
1470	3	62	203.36	280	73.96	
14X8	4	66	216.48	325	85.84	
	5	70	229.60	365	96.41	
	2	58	190.24	282	74.48	
4 1CV0	3	66	216.48	345	91.13	
<b>▲</b> 16X8	4	72	236.16	400	105.65	
	5	76	249.28	445	117.54	
18X8	2	62	203.36	342	90.33	
	3	70	229.60	435	114.90	
	4	78	255.84	505	133.39	
	5	82	268 96	560	147 91	

\* Performance is based on ideal conditions of Temperature, Wind Velocity and Humidity.

**△ Standard Nozzle Size** 







#### **Features**

- Available in 2½" BSP/NPT Female Thread Connection.
- Both Part Circle & Full Circle adjustments.
- Adjustable Jet breaker to provide uniform distribution.
- Equipped with interchangeable nozzles of different sizes for various applications.
- Inner rotating system supported by stainless steel ball bearing to guarantee no strain and no oxidation due to humidity.



Applications: • Sports Fields, Golf Courses

• Dust Suppression, Green Pastures, Big Parks and Gardens

Performance Data								
Nozzle (mm)	Pressure (kg/cm²)	Radius (mtr)	Discharge (ltr/min)	Irrigated Area (mtr²)	Precipitation Rate (mm/h)			
	3.0	42	800	5538	7.0			
26	4.0	47	926	6939	6.9			
20	5.0	51	1036	8167	6.8			
	6.0	54	1135	9156	6.8			
	3.0	45	917	6361	8.6			
20	4.0	49	1061	7539	8.4			
28	5.0	52	1186	8494	8.3			
	6.0	55	1300	9498	8.2			
	4.0	50	1207	7853	9.2			
<b>≜</b> 30	5.0	54	1350	9156	8.8			
<b>~</b> 50	6.0	57	1479	10200	8.7			
	7.0	61	1594	11683	9.6			
32	4.0	52	1361	8494	9.6			
	5.0	56	1522	9847	9.3			
	6.0	59	1668	10930	9.1			
	7.0	62	1798	12070	8.9			
24	5.0	57	1708	10200	10.0			
	6.0	61	1872	11683	9.6			
34	7.0	64	2018	12860	9.4			
	8.0	67	2162	14095	9.2			

<sup>\*</sup> Performance is based on ideal conditions of Temperature, Wind Velocity and Humidity. **Standard Nozzle Size** 

Manufactured as per ISO-7749-1&2 specifications











#### **Applications**

• Ideal for mature widely spaced fruit trees, orchards, ornamental trees, shrubs and flowerbed.

#### Features and Specifications

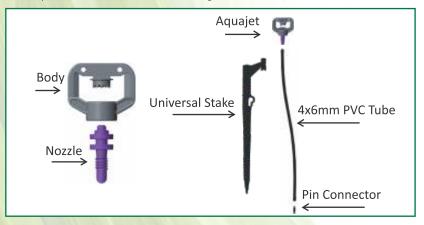
- Quick thread connection.
- 2 parts design.
- 2 Color Coded nozzles for flow rates from 24-75 l/h.
- Excellent Distribution with wide range of spacing.
- Jet characterized by 8, 9 & 12 long pointed teeth.

Wetted Diameter (m)												
Nozzle Size/Color	Pressure	Flow Rate	貒	樂	樂	<b>%</b>	貒		3	K		
			12 x 360°	9 X 270°	8 X 210°	8 X 180°	16 X 360°	22 X 360°	12x	360°	11x	330°
(mm)	kg/cm <sup>2</sup>	LPH	F	U	С	Н	J2	E	Α		N	
									High	Low	High	Low
	0.5	24	2.8	3.8	4	3.8	2.6	3.0	4.2	3.0	4.2	3.0
Purple	1	34	4.0	5.2	5.5	5.4	3.8	4.0	5.0	4.0	5.0	4.0
(1.0mm)	1.5	42	4.8	6.2	6.5	6.5	4.6	4.6	5.8	4.6	5.8	4.6
	2	48	5.6	7.2	7.5	7.4	5.4	5.4	6.5	5.5	6.5	5.5
	0.5	34	3.8	4.4	4.6	4.6	3.6	3.6	5.4	4.0	5.4	4.0
Orange (1.2mm)	1	52	5.4	6.4	6.7	6.6	5.2	4.6	6.2	4.8	6.2	4.8
	1.5	64	6.4	7.2	7.5	7.4	6.2	5.8	6.8	5.4	6.8	5.4
	2	75	7.2	8.4	8.6	8.5	7.0	6.6	8.0	6.6	8.0	6.6

<sup>\*</sup> Tested at 25cm height above ground

#### Flow Coefficient & Flow Constant

For Purple Nozzle: K=11, X=0.5 / For Orange Nozzle: K=16, X=0.5



Assembly / Exploded View					
Parts	arts Parts Description Material				
1	Body	POM			
2	Nozzle	POM			



#### Adjustable Bubbler



#### Pressure Compensating Bubbler





#### **Specifications**

Operating range : Flow: 0 to 5.5 GPM

(0 to 1.25 m3/h; 0 to 20 l/m)

Spacing : 1 to 3 feet (0.3 to 0.9m)

Pressure : 20 to 40 PSI (1.4 to 2.8 Bar)

• Inlet : ½" Female Thread

#### Specifications

• Flow : 1.0 GPM (0.227 m3/h; 3.8 l/m)

Spacing : 1 to 3 feet (0.3 to 0.9m)Pressure : 20 to 40 PSI (1.4 to 2.8 Bar)

Inlet: ½" Female Thread

Applications: · Point-Source Medium Flow Emitters for Watering Large Shrubs and Trees

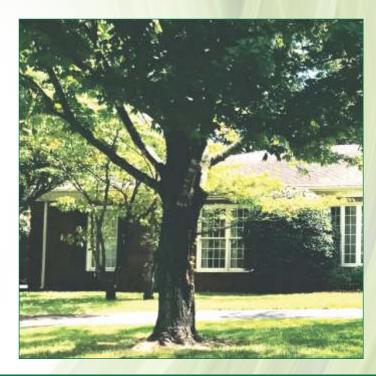
· Use as a bubbler on a ½" PVC Riser

K-Rain's pressure compensating bubblers are ideal for tree and large shrub watering.

Pressure compensation ensures consistent flow rates over lower pressure ranges.

- ½" FPT thread screws onto a variety of risers, spray heads and fittings, delivering point-source, pressure compensating flow.
- Uniform flow throughout a wide pressure range (20 to 40 psi : 1.4 to 2.8 bar).
- Robust Design durable plastic construction is UV and impact resistant.







Applications: For irrigation of shrubs Ground covers,

Trees and plants.

## Aries<sup>™</sup> (Non Pressure Compensating)





#### **Specifications**

- Recommended filtration: 130 micron/120 Mesh.
- ullet Turbu next  ${}^{\text{TM}}$  labyrinth with superior performance.
- Injected dripper, very low CV.
- AriesTM drippers meet ISO 9261 Standards with production by the Israel Standards Institute (SII).

#### **Features**

- Largest filter in each dripper. Wide Filtration area to ensure optimal performance even under harsh water conditions.
- Aries dripper having 37% to 41% higher
- filtration area as compare to Typhoon dripper depending upon flow rate.
- Turbu next<sup>™</sup> labyrinth assures wide water passages large deep and wide, cross section improves clogging resistance. Widest water passages within the dripper.
- The water is drawn in to the dripper from the stream centre, preventing the entrance of sediments in to drippers.
- Injection moulded dripper construction, ensuring uniform drippers and very low CV.
- Aries dripper having 29% to 39% more cross sectional Area as compare to Typhoon dripper depending upon flow rate

Dripper's technical data								
Standard flow rate* (LPH)	Water passages dimensions width-depth-length (mm)	Filtration Area (mm) <sup>2</sup>	Constant K	Exponent X				
1.00	0.60x0.75x65	49	0.331	0.48				
2.00	0.76x1.03x65	54	0.663	0.48				
3.00	0.90x1.20x65	54	0.995	0.48				

\*Flow rate at 1.0 bar pressure





Applications: • For irrigation of shrubs, Ground covers,

Trees and plants.

 Also suitable for sloppy landscape or system working ith variable pressure.

## Compact integral pressure- compensating, Continuously self- cleaning dripper

#### **Specifications**

- Pressure- compensating range: 0.4-2.5/3.0 bar (according to flow rate model).
- Recommended filtration: according to drippers flow rate.
- Turbu NetTM labyrinth with large water passage.
- To be "welded" into thick-walled dripperlines (0.9,1.0 and 1.2mm).
- Injected dripper, very low CV.
- Injected silicon diaphragm.
- $\bullet~$  UV resistant, Resistant to standard nutrients used in agricultural.
- Drip Net PCTM drippers meet ISO 9261 Standards with production certified by the Israel standards Institute (SII).

- Pressure compensated: Precise and equal amounts of water are delivered over a broad pressure range. 100% uniformity of water and nutrient distribution along the laterals.
- Continuously self flushing: flushes debris as it is detected, through out operation, not just at the beginning or end of a cycle, ensuring uninterrupted dripper operation.
- Self-flushing system with wide filtration area improves resistance to clogging.
- Turbu next<sup>™</sup> labyrinth assures wide water passages large deep and wide, cross section improves clogging resistance. Widest water passages within the dripper.
- The water is drawn in to the dripper from the stream centre, preventing the entrance of sediments in to drippers.
- Aries dripper having 29% to 39% more cross sectional Area as compare to Typhoon dripper depending upon flow rate.

Drippers technical data									
flow rate* (LPH)	Working Pressure range (LPH)	Water passages dimensions width-depth-length (mm)	Filtration Area (mm)²	Constant K	Exponent X	Recommended Filtration (Micron/Mesh)			
0.6	0.4 - 2.5	0.52x0.60x22	39	0.6	0	130/120			
1.0	0.4 - 2.5	0.61x0.60x8	39	1.0	0	130/120			
1.6	0.4 - 2.5	0.76x0.73x8	39	1.6	0	200/80			
2.0	0.4 - 3.0	0.76x0.85x8	39	2.0	0	200/80			
3.0	0.4 - 3.0	1.02x0.88x8	39	3.0	0	200/80			
3.8	0.4 - 3.0	1.02x0.88x8	39	3.8	0	200/80			





AMICO 2<sup>+</sup>



Applications: Amico<sup>† ™</sup> Taptimer has been studied to be the most userfriendly and a high quality produa in the market. Programming has never been so easy, the large display 3" allows to see all the data in one look. The backlit display and the large characters allow to program the controller during the day and the night.

Applications: Amico 2<sup>+</sup> TM Tap timer has been studied to be the most user friendly and a high quality product in the market. Using the same programming of Amico<sup>+</sup>, Amico 2<sup>+</sup> allows to set 2 different valves completely independent. The backlit display allows to program the controller during the day and the night without problems.



#### **Features**

- 1 program.
- Run time min/max: 1/240 minutes.
- Watering frequenry: from every 6 hours up to once 15 days.
- Current time indication.
- Start time indication.
- Duration of watering indication.
- Frequency indication.
- Next irrigation indication.
- · Watering countdown.
- Low battery function.

# 1.Removable Control Unit

3.3" Backlit Lcd Display





5.Start Time



6.Duration



2. Easy Readable



7.Frequency



**PROGRAM WITH 3 SIMPLE STEPS.** 







#### **Specifications**

- 1 Zone (Amico+) & 2 Zone (Amico 2+)
- Inlet thread ¾"-1"
- Outlet thread ¾"
- Max working pressure 8 bars
- Max flow 40 l/m
- Diaphragm 9 VDC electric valve
- Removable control unit
- ABS Body
- Hard plastic cover for LCD display protection
- Wide backlit 3" LCD display
- Powered by 2 alkaline 1.5 volt (AA)





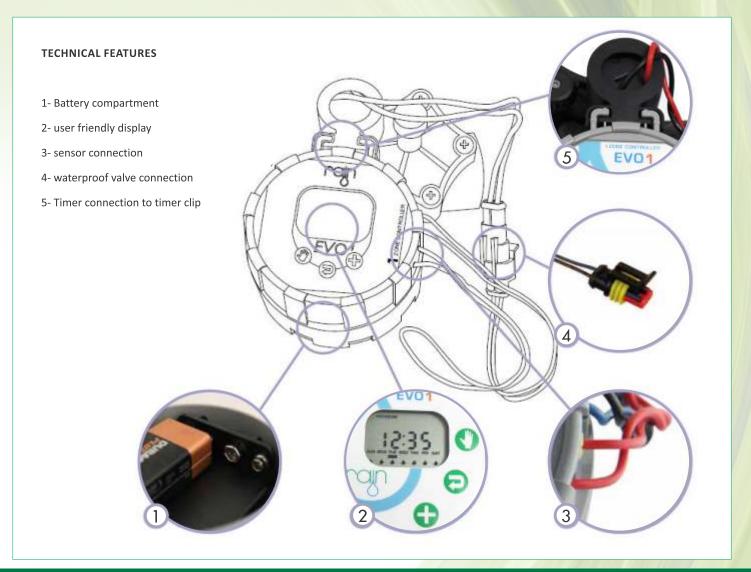
Applications: • Suitable for remote location.

- System operating with gravity flow.
- Cable less irrigation

- 1 Zone
- Battery powered
- 1 Program
- 2 daily start-time
- Weekly calendar
- Run time min/max: 1/360 minutes
- Watering count-down
- Freeze-program function
- Low-battery function
- Rubber cover
- Body in ABS
- Double OR seal

- Fully waterproof Ip68
- Sensor connection
- Compatible with mechanical sensor
- Sensor active indicator
- Waterproof valve connection
- 2x9 volt alkaline batteries [not included]
- Operating DC latching solenoids only
- Solenoid wire length up to 30 m







Applications: • Suitable for remote location.

- System operating with gravity flow.
- Cable less irrigation

#### **Features**

- 2 & 4 Zones
- Battery powered
- 1 Program
- 4 daily start-times
- indipendent irrigation duration
- Weekly calendar
- Run time min/max: 1/100 minutes Waterproof valve connection
- Watering count-down
- Freeze-program function
- Low-battery function

- Body in ABS
- Double OR seal
- Fully waterproof Ip68
- Sensor connection
- Compatible with mechanical sensor
- Sensor active indicator
- 4x1.5 volt alkaline batteries
- [not included]
- Operating DC latching solenoids only
- Budget function (50% 150%) • Solenoid wire length up to 30 m



#### **TECHNICAL FEATURES**



101.3507000.

- 2. DISPLAY- 2" display with "battery saver" feature for batteries longer life.
- 3. WATERPROOF VALVE CONNECTION
- 4. BATTERY COMPARTMENT- Double OR seal and 2 screws.
- **5. PROGRAM-** User frandly programming with smart bottons sequence















## **Electrical Specifications**

- Power Input: 110VAC ± 10% 60Hz, 240V AC ± 10% 50Hz
- Power Output: 24V AC 1.25 Amp
- Power Backup: Lithium coin-cell battery maintains time and date during primary power outages, 4 AAA batteries allow for remote programming and LCD viewing.
- Multi-Valve Operation: Up to three 24V AC, 7 VA solenoid valves

## **Operating Specifications**

- Station Run Times: 1 second to 6 hours for all stations
- Number of Programs: 3
- Number of Automatic Start Times: 4 per program
- Program Watering Schedules: Custom (day of the week), Interval (1-31 days), Odd (odd calendar days), Even (even calendar days)

The Pro EX 2.0 Wi-Fi Enabled Controller offers proven power and functionality with the convenience of worldwide control through your smart phone, tablet or web browser!

K-Rain has transformed the robust, reliable, featurepacked Pro EX 2.0 into an intelligent, multi-tasking, productivity enhancing tool every contractor will want! Easily and securely sync with homeowners' or business' Wi-Fi, manage multiple accounts and increase your productivity tenfold! You will appreciate the easy programming and installation too!

#### Features and Benefits

- Hot-Swappable 4 Station Modules Simple controller upgrades from 4 to 16 stations while controller is in operation.
- Large Backlit LCD Screen Permits maximum viewing for all installations.
- AM/PM or 24 Hour Clock Settings Allows user to choose the time format desired.
- Full Program Screen Display Watering days, number of start times, number of stations and special programming.
- Flexible Operation Manual or remote operation.
- System Test Allows a full system check for valve operation.
- Manual Start Allows manual program operation at the push of a button.
- Wire Management System Vertical station terminal strips allows full use of cabinet.
- Permanent Memory Non-volatile memory saves program during power outages.
- Wireless Module Connector Allows for optional installation of wireless communication.
- Diagnostic Circuit Breaker Identifies and isolates stations with valve or wiring problems while remaining program continues.
- Advanced Diagnostic Visual and/or audible alerts when programming errors or other conditions have been detected and are preventing operation.
- Locate Feature Aids in locating buried valves in field.
- Station Delay/Overlap Permits additional time between stations or dual operation for everyday hydraulic issues like well recovery, slow closing valves and water hammer.







## Description

C-DIAL is a new and unique electronic controller 4-6 station indoor for residential application. The C-dial family is available at the same price both 24 VAC or 9 VDC solenoid.

It follows the Rain's controllers philosophy and it allows to easily set the programming in 3 steps: start time, duration, frequency.





3 PROGRAM WITH 3 SIMPLE STEPS.

1 START TIME

2 DURATION

3 FREQUENCY

TECHNICAL CHARACTERISTICS				
FEATURES	DIAL 9VDC INDOOR	DIAL 24 VAC INDOOR		
Indoor Model	V	×		
Operating 9 VDC latching solenoids only	V	×		
Electrical Power Supply 4 x 1.5 volt AA alkaline batteries (not included)	V	×		
2 independent programs	V	V		
2 independent start times (1 per each program)	V	V		
Run Times: 1 min. to 240 min per station	V	V		
Next start time visualization	V	V		
Watering cycles: from 4 per day, up to 1 each 19 days	V	V		
Watering Schedule: 7 day calendar	V	V		
Water Budgeting Mode from 10% to 200%	V	V		
Rain Sensor Inlet	V	V		
Freeze - program function (OFF)	V	V		
Low - battery function	V	V		
Permanent Memory. It saves programs also without power	V	V		
Master Valve/Pump 24 VAC outlet can be enabled or disabled by station.	V	V		
Power Failure: 2 x 1.5 volt AA alkaline battery permanently	V	V		
maintains programs. (not included)	V	V		
Pump Start Relay	V	V		
Permanent Memory Saves programs during power outages	V	V		
Indoor Models with External Transformer	×	V		
Electrical Power Supply: 220 VAC 50Hz	×	V		
Electrical Outputs: 24 Volts AC, 0.8 AMP	×	V		





## **Specifications**

#### **PRO-Two Controller system**

- Use minimum 1.5 sq. mm Wire with a maximum of 2000' wire run.
- System wiring shall allow for unlimited tees and crosses in field two wire path.

#### Controller

- Controller to have up to 16 Stations.
- A maximum of 2 Decoders can operate simultaneously of same or different numbers plus a Master Valve or Pump Start Relay.
- Controller to have 6 independent programs.
- Water Budget feature operates from 5%-250% increments by Program.
- Maximum of 6 start times per program.
- Will operate each valve number either, Automatically, semi-Automatic or Manually.
- Programmed Rain Delay.
- Outdoor model has lock and keys in weather Resistant box.

## Decoders

- Decoders is programmable at controller to any station number from 1-16 and MV/PS.
- Decoder has two red wires to connect to system two wire field path and two black wires to connect to any standard 24VAC
- Decoder to be shipped with two approved waterproof wire connectors to be used for connections to two wire path
- Decoders to be shipped 16 per container with identification tags #1-#16 and MV/PS
- Decoders are purchased separate from Controller

## LOGIC PLUS 2-WIRE DECODER BASED TECHNOLOGY CONTROLLER





LOGIC PLUS 2-WIRE TECHNOLOGY CONTROLLER

- Available in 2 Models: Logic Plus 42S, Logic Plus 128S
- 42 station capability / 128 station capability.
- 8 programs / 16 programs.
- 8 start times per program / 16 start times per program.
- Looping feature on program 6 and remote sensor relay to activate program 6.
- 1 minute to 10 hr 59 minutes run time per station (all programs except 5 and 6 which are 1 second to 59 minutes 59 seconds).
- Water budget 0-250% (5% increments) increasing run times per station to over 24 hours.
- Semi automatic and programmable manual operations.
- Programmable pause between stations per program 0-59 seconds.
- Programmable rain delay up to 31 days.
- Programmable master valve.
- Fertigation control relays with fertigation programming.
- Date/leap year sensitive scheduling options weekly, 1-28 day interval.
- Odd /even calendar day capabilities.
- Programmable test cycle.
- "Bounce back" technology allows programs to immediately continue on schedule after power outage.

- Radio remote ready.
- Program start input.
- Clear function for each independent programer entire controller.
- Displays real time operation.
- Up to 8 valves may operate simultaneously, same or different valve numbers.
- 4 field wire outputs, wire run lengths up to 3.6 km each in four different directions.
- Field wires may be installed with tee, crosses and star wire configurations.
- Each valve has dedicated unique programmable receiver.
- Receivers can be programmed at controller or by way of portable programming unit, Model #LP-HHRP.
- Compatible with any standard 24 VAC industry solenoid.
- Equipped with modular, replaceable surge protection package.
- Short wire and short valve sensing capabilities.
- Easy wire trouble shooting procedures.
- Locking stainless steel enclosure, wall mount or pedestal options.
- Capable to operate 3 Master Valves or Pumps simultaneously.





#### Models

7115 1 1/2" Female Thread, NPT 7115-BSP 1 1/2" Female Thread, BSP 7102 2" Female Thread, NPT 7102-BSP 2" Female Thread, BSP









#### SYSTEM FLEXIBILITY

Removable inlet cap allows for easy conversion from globe to anglestyle valve.



## **Specifications**

#### **Operation Specifications**

## **Electrical Specifications**

• Pressure range: 20-150 psi

• Standard Solenoid: 24 VAC 60 Cycle

• Flow Range: 5-120 GPM

• Inrush current: .4 amp

Holding current: .2 amp

Proseries 150 11/2" VALVE 7115

Dimensions: HEIGHT: 8" WIDTH: 41/4" LENGTH: 51/2"

Proseries 150 2" VALVE-7102

Dimensions: HEIGHT:87/8" WIDTH: 47/8" LENGTH:

61/3'

#### **PROSERIES 150 VALVES**

The 1.5" and 2" models featurea removable inlet cap to easily modify the configuration from globe to angle style. They also have a removable metering pin and external bleed screw promoting easy maintenance and manual operation.



#### How to specify

7102 2"Thread Model Number

## FEATURES Pro series 150 - 11/2" & 2" valves

• Heavy Duty, corrosion and UV Resistant PVC construction increases the life of the valve.

Size

- External Bleed Screw with Removable Metering Pin-Allows for easy cleaning of the metering pin without disassembling the valve.
- Manual External Bleed Screw-Provides for manual operation in system start up.
- Manual Internal Bleed through Solenoid-Provides for manual operation without discharging water outside the valve.
- Removable Inlet Cap-Allows for easy conversion from globe to angle-style valve.
- Flow Control-Allows for precise flow adjustment and manual shut off.
- Captured Plunger-Allows for the solenoid to be removed without losing the internal plunger.
- Heavy Duty Santoprene" Diaphragm-Unique design improves durability of diaphragm.
- Five Year Limited Warranty.

## **Operating Specifications**

Proseries 150 1½" VALVE

Flow Rate-GPM 20 30 40 50 60 80 PSI Loss Globe 3.0 2.6 2.3 2.9 4.1 5.5

Angle 2.7 2.2 1.9 2.2 3.0 4.4

Proseries 150 2" VALVE

Flow Rate-GPM 20 30 40 50 60 80 100 120 PSI Loss Globe 2.0 1.9 1.7 1.5 1.6 2.9 4.8 6.2 Angle 1.9 1.9 1.7 1.5 1.5 2.1 3.2 4.6

Pressure range: 10-150 psi



- Material of Construction: Nylon Glass Filled 30%.
- Self cleaning stainless- steel metering pin.
- Stainless-steel diaphragm differential spring for smooth closing.
- Solenoid certificate CE.IP 689.
- PN 12 tested piece by piece at 14 bar.
- Bleed handle for manual opening with internal bleed.
- Energy efficient solenoid 0.2 amp.4.8 VA.
- Flow control.
- Pressure: Min 1.0 bar Max 12.0 bar.
- Temperature: +4oC/700C.
- Standard solenoid 24 VAC.



## Rain RN160 PLUS



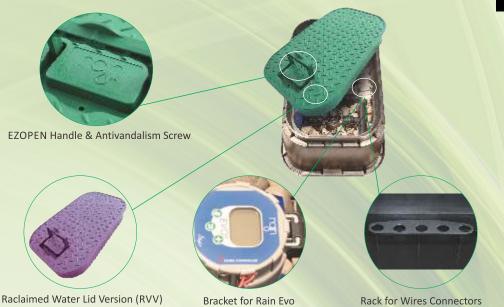
Friction Loss (kg/cm² or bar)						
Flow rate	1"	11/4"	11/2"	2"		
75 l/min	0.20	0.20				
100 l/min	0.27	0.20	0.20	0.16		
125 l/min	0.32	0.21	0.20	0.16		
150 l/min	0.42	0.27	0.20	0.16		
175 l/min	0.58	0.30	0.21	0.18		
200 l/min	0.75	0.40	0.25	0.21		
225 l/min		0.48	0.29	0.23		
250 l/min		0.58	0.34	0.28		
375 l/min		0.69	0.39	0.32		
300 l/min			0.45	0.38		
325 l/min				0.41		

## Rain RN180



Friction Loss (kg/cm² or bar)				
Flow rate	2"	3"		
200 l/min	0.07	0.05		
300 l/min	0.09	0.07		
400 l/min	0.12	0.09		
500 l/min	0.14	0.12		
600 l/min	0.16	0.14		
700 l/min	0.19	0.16		
800 l/min	0.25	0.18		
900 l/min	0.31	0.23		
1000 l/min	0.38	0.28		
1100 l/min	0.47	0.35		





#### Rain Round Valve Boxes

Rain family of round valve boxes is studied to face all the needs of the professional irrigation.

They are easy to install, strong and durable and they are engineerded to mantain their integrity (horizontal and vertical) under load even with the cover removed.

- PZC RN 15 D. 148/240x H 230mm
- PZC RN 25 D. 243/330x H 260mm
- Material: 100% polypropilene



Size (6" and 10")

## Rain Rectangular Valve Boxes "EzOPEN"

Rain is proud to introduce a new line of Valve Boxes with "EzOpen" handle. The new valve box is opened by simply lifting and pulling a discreet handle embedded in the lid. Each valve box has an anti vandal bolt for additional security.

A specially designed model bracket inside the box allows easy and tidy wire installation to fit Rain Evo battery controller.

This is an unique, patented product in the irrigation market,

Valve boxes available in standard rectangular 12 In. And Jumbo 20 In.

- PZRM 113 12 IN: 520X400X330 mm
- PZRM 115 20 IN: 670X490X330mm
- Material: 100% polypropylene
- UNIEN 124 A class A 15 (Peak load >15Kn)



Size (12", 20" and 24")





Adjustable pressure regulator grants complete adjustment flexibility. It is not preset for specific performances but operating on the screw it provides the specific setting required by the operator. Its pressure gauge offers always a clear indication of the outlet pressure. Rain pressure regulator can be used on all Rain electric valves.

## **Specifications**

- Pressure output: min 1.0 bar max 7.0 bar
- Pressure input: max 12 bar
- Mini differential pressure 1.0 bar
- Temperature: min +4°C max 70°C



#### **Rain Sensor**

- Rain STOP is an electronic rain sensor.
- All its components are high quality electronics from Japan.
- Its working principle is studied to start to work immediately in case of rain.
- Rain stop stops irrigation as soon as 4 mm of precipitation are reached, preventing the irrigation system from working while it is raining.

#### Two different models of Rain stop are available:

- Rain stop 3 wires and Rain stop 4 wires.
- Rain stop 3 (three) wires allows to connect a rain sensor to all 24 vac controllers as it is not needed for its installation to have a sensor dedicated port, on the controller.
- Rain stop 4(four) wires is the professional rain sensor for the 24 vac controllers equipped with sensor control feature.

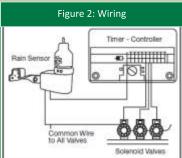


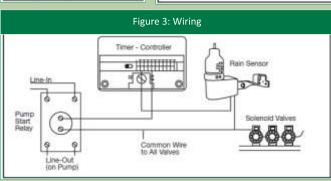
## R 200 (Gutter & Surface Mount Rain Sensor)

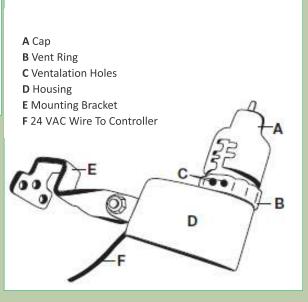
- During rainfall, hygroscopic discs absorbs the water and after a set amount of rain has fallen, the sensor engages a switch that will prevent the controller from watering. Once the rain sensor has dried sufficiently, the sensor allows normal sprinkler operation.
- For use with all types of 24Volt.
- Available in 2 mounting options:
- Rain Gutter
- Flat Surface











#### WATER LEVEL CONTROLLER



This prevents the dry run of pump in event of the low water level in storage tank.

#### Low Level Sensor

It will switch of the booster pump in the event of water goes below the set level of sensor it will avoid the dry run of the pump.

## High & Low Level Sensor

High & Low water level pump controller is recommended to switch on and off the pump by maintaining water level in the tank in case of using booster pump for filling the tank. Once the water goes below the low level sensor of controller will allow the pump switch on automatically. Moreover, once the water level is on high set level the sensor will shut off the pump automatically. It also has the provision for manual operation through which pump can be operated manually by pressing the toggle switch to manual position.

#### **PUMP START RELAY**



Type MPC Enclosed Version Plug-in-connection

Coil-data (All values at 27°C+2°C ambient)					
Nominal	Resistance in	Must			
Voltage	DC Relays	AC Relays	operate voltage		
6	30	7	5		
12	200	30	10		
18	390	_	15		
24	500	110	20		
48	2250	440	40		
110	10,000	2400	90		
220	30,000	_	180		
240	_	9500	180		

Specifications			
Contact Material	Silver Alloy		
Inital Contact Resistance	0.050 ohms(max.)		
Ambiet Temp	-25°C to +55°C		
Di- electric Strengh	2KV between contacts or coil to ground		
Insulation Resistance	100 Meg-ohms min. at 500 VDC at 270C & 65% R.H.		
OperateTime	0.020 sec. max. at voltage		
Release Time	0.010 sec. max. at voltage		
Life Expectancy	106 operations at rated load		
Max. Weight	MCO 60gms. MCC 80gms. MPC 90gms.		
Impulse	5KV		











- One piece body design.
- Strong corrosion resistant stainless steel spring prevents leakage.
- Yellow thermoplastic cover for durability over years.
- Stainless steel spring loaded covers for positive closing and protection of valve's sealing components.
- 'Spiral Turn & Lock' key with in-built handle designed for gripping.

## Plastic QCVs



## Aluminium QCVs



# Swing Joints



#### **Features**

- Click Lock on lid.
- Stainless Steel Spring .
- Specially designed grommet .
- UV Stabilized
- Rugged two piece valve body design.
- "Push & Lock" Key
- Specially designed for application in public area
- Plasson Compatible.
- Maximum working pressure 6 Bar.

Model No.	Product Name		
HT-70PM	¾" Plastic QCV		
HT-70PMK	Opener for HT-70PM		
HT-70SEP	¾" X ¾" Swivel Elbow		
HT-71PM	1" Plastic QCV		
HT-71PMK	Opener for HT-71PM		

## Features

- Auto Close lid made of rubber when QCV is not in use.
- Single piece construction for 76A & double piece construction for 77A.
- Stainless Steel Spring.
- Brass valve.
- Steel key with Handle.
- Maximum working pressure 10 Bar.

Model No.	Product Name
HT-76A	1" Aluminium QCV
HT-76AK	Opener for HT-76A
HT-77A	1¼" Aluminium QCV
HT-77AK	Opener for HT-77A

- Full 3 way adjustability including hight.
- Durable polyethylene construction used for ½" & ¾".
- HI-impact PVC material used for construction for 1".
- High quality EPDM O-ring threads used for seals.
- Full 360° adjustment.
- Heat resistant operates at 50° C also.

Model No.	Product Name
HT-2ASJ	½" X ½" Swing Joint
HT-2BSJ	¾" X ¾" Swing Joint
HT-2CSJ	1" X 1" Swing Joint

## **IRRIGATION ACCESSORIES**

Plastic Air Release Cum Vacuum Relief Valve

34", 1", 11/2", 2" & 3"





#### Specification

- Durable, Weather Resistant and Non corrosive Made of reinforced Polypropylene.
- Maximum working pressure: HT-87P, 88P-100 psi & 5-175psi
   HT-89P,90P & 91P 175psi.
- Seals at 5 Psi.
- Available in :
  - 3/4" BSPT Male Thread Connection: HT-87P
  - 1" BSPT Male Thread Connection: HT-88P
- 1" BSP/NPT Male Thread Connection: HT-88PM
- 11/2" BSPT Male Thread Connection: HT-89P
- 2" BSPT Male Thread Connection: HT-90P
- 3" BSPT/NPT Female Thread Connection: HT-91P

## Continuous Acting Air Release Cum Vacuum Relief Valve

2"



#### **Specification**

- Available in:
- 1" BSP/NPT Male Thread Connection: HT-88CPM.
- 2" BSPT Male Thread Connection : HT-90CP.
- Manufactured out of Durable, Weather Resistant and Non-Corrosive reinforced Polyamide (Nylon).
- Minimum sealing Pressure : 5 psi.
- Working Pressure: HT-88CPM: 5-175psi & HT-90CP: 5-224 psi.
- Threaded Elbow Outlet.



## IRRIGATION ACCESSORIES

## Metal Air Release Cum Vacuum Relief Valve

1/2", 3/4", 1", 11/2", 2", 3" & 4"





### **Specification**

- Simple Design Ensures trouble- free Performance.
- Cast Aluminium Body Combines the Dual advantage of being Lightweight as well as Provides Corrosion resistance.
- Synthetic Rubber Seal Assures Positive Rubber Seal Even with Low Head Application.
- Available :

½" BSPT Male Thread Connection: HT-86 3/4" BSPT Male Thread Connection: HT-87 1" BSPT Male Thread Connection: HT-88

11/2" BSPT Male Thread Connection: HT-89 2" BSPT/NPT Female Thread Connection: HT-90

3" BSPT/NPT Female Thread Connection: HT-91

4" BSPT/NPT Female Thread Connection: HT-92

## Pressure Relief Valve



HT-102CLM Male Threaded Female Threaded



HT-102CLF

## **Technical Specifications**

- Pressure Relief Setting: 1.5kg/cm² to 5.5kg/cm² (20psi to
- Specify Pressure Setting: Factory Set & Sealed under actual hydraulic conditions.
- Pressure Relief Valve comes with preset pressure from factory at 4kg /cm² (60 psi) which can be changed in field as per requirement by using a Pressure Gauge.

- Available in:
  - 2" BSP Male Threaded Connection: HT-102CLM. 2" BSP Female Threaded Connection: HT-102CLF.
- Aluminium Cover with 1½" BSP/NPT Female Threaded
- Orange Color powder coated cover for easy visibility on unit and longer life.



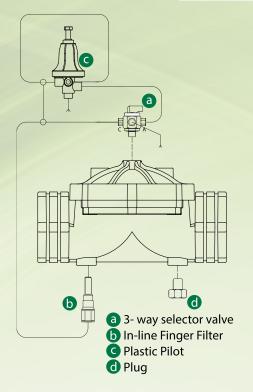




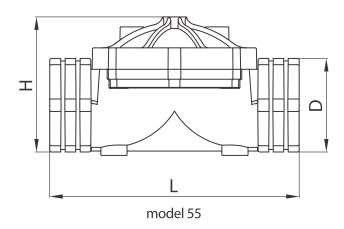
- Description: Armas "QR" model quick pressure relief valve is the safety control valve designed to protect system by releasing pressure surges in water network elevation lines to atmosphere quickly, which are caused by sudden changes in water speed due to pumps put into/out of service. When network pressure exceeds set point, valve opens by itself quickly and protects system by releasing over pressure. When line pressure decreases to normal level, it is closed slowly and automatically as fully tight without causing surge.
- Applications : Use 55QR for avoiding an unwelcome high pressure.
- Standards: 55QR 3-way plastic pilot, polytethylene plastic tubing system and nylon fittings.
- Options : Pressure Gauge.

Specifications				
Pressure Range	Standard	0,7 - 10 bar (10 - 160 psi)		
Connection	Threaded	BSPT-NPT		
Hydraulic Connections	Standard	Reinforced Nylon (Air Brake) Hydraulic Pipe-SAE J 844		
Actuator Type	Standard	Diaphragm Closing Type with Single Control Chamber and Diaphragm Actuator model		

Sizes Available							
D	DN		)	ι	-	H	4
inch	mm	inch	mm	inch	mm	inch	mm
1½"	40	2½"	62	7 7/8"	200	4 <sup>3</sup> /8"	110
1"	50	3"	75	7 7/8"	200	4 <sup>3</sup> /8"	110
2½"	65	3¾"	95	9 7/8"	250	5 <sup>3</sup> /8"	138
3"	80	4¼"	109	9 7/8"	250	5 <sup>3</sup> /8"	145



Available Models				
Connection	Threaded			
Material	Glass Reinforce	Glass Reinforced Polyamide		
Body	Globe			
Maximum Working Pressure	10 bar 160 psi			
	inch	mm		
	1½"	40		
Available Sizes	2"	50		
	2½"	65		
	3"	80		







Hydraulically operated valve for green house irrigation system as well as turf and field crop irrigation.

- Simple and robust design, only 4 parts involved.
- Bronze Body and cover plate for durability and corrosion resistant.
- Metal reinforced rubber valve lid designed for smooth operation without deformation at high pressure with drop tight shutoff.
- Very less down time.
- Minimum Head loss due to very efficient internal design.
- Arrow for correct installation of hydraulic valve.
- Compatible with most irrigation controllers available in market.
- Inlet/ Outlet connection: 1", 1½" & 2" BSP/ NPT Female Threaded.
- Operating Pressure Range: 0.6 10 kg/cm² (8 145Psi).
- Pressure Rating: PN-10.
- Temperature Range: (with water) Upto 60°C.

## **Metal Pilot**



## **Plastic Pilot**



## **Technical Specifications**

- Funcion: Universal (Pressure Reducing, Sustaining or Relief).
- Operating System: 3 -way.
- Ports connection: ¼" BSP/ NPT Female Threaded.
- 3 Way Pilot Port: Female threaded ¼" -19 BSP or ¼"-18NPT
- 3 different Pilot available with Max. Operating & Pressure adjustment range.

## Technical Specifications

- 3 Way Pilot Port: Female threaded <sup>1</sup>/<sub>8</sub>" -28 BSP or <sup>1</sup>/<sub>8</sub>"-27NPT
- Pressure Adjustment Range: Blue Body: 0.5 -2.5 kg/cm² (7 - 36Psi)
   Red Body: 0.7 - 5.5 kg/cm² (7 - 80Psi)
- Max. Oprt Press:10 Bar
- Suitable for Valve Sizes: 20mm to 150mm (¾" to 6")

- Simple design for easy pressure adjustment.
- Light in weight for easy installation and maintenance.
- Glass Reinforced plastic Base & Body for strength.
- Pilot designed for quick sensing of line pressure and work for pressure reducing, pressure sustaining /Pressure relief.
- Very less down time.
- Marking for correct installation of hydraulic valve.
- Compatible with all hydraulic valves available in market.
- Color Coding Body for identification of Pressure adjusting range.
- UV & chemical resistant for long life.
- PE/PVC tubing & accessories are compatible for high pressure.





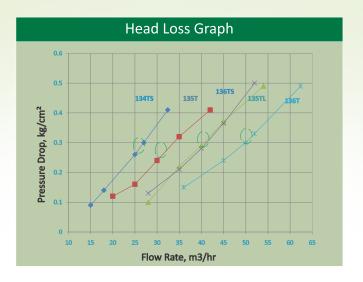






Disc Size Available 100 Microns, 130 Microns

Specifications							
Model	HT-134TS	HT-135T	HT-135TL	HT-136TS	HT-136T		
Max. Working Pressure	8 kg/cm <sup>2</sup>	8 kg/cm <sup>2</sup>	8 kg/cm <sup>2</sup>	8 kg/cm²	8 kg/cm <sup>2</sup>		
Max. Recommended Flow	417 ltr/min (25 m³/h)	500 ltr/min (30 m³/h)	667 ltr/min (40 m³/h)	667  tr/min (30 m³/h)	833 ltr/min (50 m³/h)		
Range of Flow Rate	18-27 m³/h	25-35 m³/h	35-45 m³/h	35-45 m³/h	45-52 m³/h		
Filtration Surface Area	878 cm <sup>2</sup>	878 cm <sup>2</sup>	1193 cm <sup>2</sup>	1193 cm <sup>2</sup>	1690 cm <sup>2</sup>		
Inlet/Outlet Connection		2½" BSP/NPT male thread	2½" BSP/NPT male thread	3" BSP/NPT male thread			



- Stainless Steel Clamp for better Durability.
- Polymide (Nylon) of Filter Body (PN-10
- PPGF Slip on flange for easy installation (Optional).
- Bigger drain port with  $\frac{3}{4}$ " ball valve for quick drainage.
- Disc filters are made with special Helix system which gives better performance & results.



Vacuum Breaker



Drain Port



Hybrid Clamp



Slip on Flange









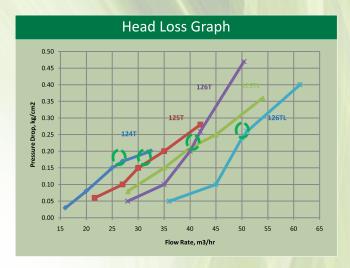
HT-87VB Specially designed Vaccum Breaker



Size Available 100, 130, 200 Microns

Specially designed cartridge skeleton for giving extra ordinary strength to screen element.

Specifications							
Model	HT-124T	HT-125T	HT-125TL	HT-126T	HT-126TL		
Max. Working Pressure	8 kg/cm <sup>2</sup>	8 kg/cm <sup>2</sup>	8 kg/cm <sup>2</sup>	8 kg/cm²	8 kg/cm <sup>2</sup>		
Max. Recommended	417 ltr/min	500 ltr/min	667 ltr/min	667 ltr/min	833 ltr/min		
Flow	(25 m³/h)	(30 m³/h)	(40 m³/h)	(40 m³/h)	(50 m³/h)		
Range of Flow Rate	20-27 m³/h	27-35 m³/h	35-45 m³/h	35-45 m³/h	45-51 m³/h		
Filtration Surface Area	480 cm <sup>2</sup>	480 cm <sup>2</sup>	817	817	1048		
Inlet/Outlet Connection			2½" BSP/NPT male thread		3" BSP/NPT male thread		



- Outside Inside filteration.
- For upside installation.
- Bigger port for water drainage.
- Special SS-316 single mesh for strength and corrosion resistance.
- Provided with specially designed vacuum breaker valve for quick drain and to avoid vacuum / air trapping.
- $\bullet\,$  The filters are made from special chemically banded polymer which are weather resistant.
- Clamp made out of re-inforced Nylon with plated steel lock assembly for durability.
- Specially designed long handle for easy clamp opening & closing.





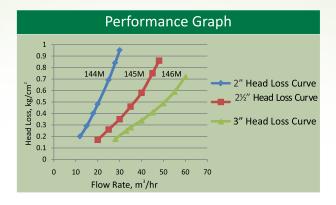
- · Body made of reinforced engineering plastic for durability.
- Hydro dynamically designed to create maximum centrifugal action.
- Dirt can be easily flushed out through drain port.
- · Collector chamber can be easily cleaned by opening
- Hybrid Nylon Clamp with SS Lock used to open/close collector cover from collector chamber.
- Easy to install and low maintenance.
- Stand for Height Increase.
- Specially designed High Wear Resistant Special Plastic inserted in the bottom of cone to avoid wear due to strong sand vortex.

## **Specifications**

• Available in

: HT-144M 21/2" : HT-145M : HT-146M

- Material of Construction : Reinforced Polypropylene/Nylon.
- Available Connections : BSP Male Threaded/Flange/Victaulic.
- Maximum Operating Pressure: 6 kg/cm<sup>2</sup>



	Performance Data									
Model	Inlet / Outlet	Rec. Range of Flow	Nominal Flow Rate				Capacity of	Gross		
No.	No. Inch/mm		m³/hr	А	В	С	D	Е	Underflow Chamber (ltr)	Weight
144M	2"/50	15-25	25	940	808	206	151	395	8	7.6 kg.
145M	2½"/65	25-40	30	940	815	206	151	395	8	7.8 kg.
14614	146M 3"/80 35-50		990	868	248	175	395	8	9.4 kg.	
1401/1		35-50	50	990	868	248	175	482	10	9.6 kg.



Applications: AutoFlush® is the ideal solution for agricultural and municipal filtration due to its large filtration area, reliable operation mechanism and simple structure. AutoFlush® works on differential pressure and cleans itself automatically without any external intervention. AutoFlush® has electronically activated models besides hydraulically controlled models. Due to suction nozzles, cleaning is achieved with little water consumption. Besides the standart 130 micron filter size, different screen sizes are available for different dirt levels.

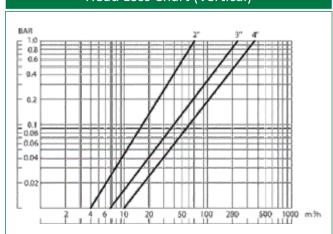
## Electric Activated Automatic Screen Filter



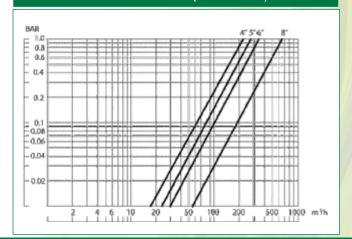
#### Hydraulic Controlled Automatic Screen Filter



## Head Loss Chart (Vertical)



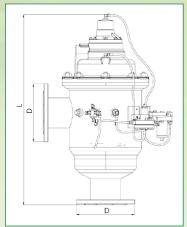
## Head Loss Chart (Horizontal)



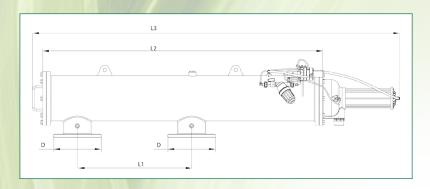








Model	Connection Size	Connection Type	Control Unit	Screen Degree
VH-80	4"	Flanged (F)	Hydraulic	130 micron
HE-120	6"	Flanged (F)	Electric	130 micron



	Sizes Available							
MODEL	D	L	L1	L2	L3			
MODEL	inch	mm	mm	mm	mm			
VH-25	2"	630	-	-	-			
VH-40	3"	623	-	-	-			
VH-60	3"	727	-	-	-			
VH-80	4"	720	-	-	-			
VH-100	4"	-	900	1894	2400			
VH-120	5"	-	900	1894	2400			
VH-160	6"	-	900	1894	2400			
VH-180	8"	-	900	1894	2400			

	Available Models								
Filher Mandal Carda	VH-25	VH-40	VH-60	VH-80	HH-100	HH-120	HH-160	HH-180	
Filter Model Code	VE-25	VE-40	VE-60	VE-80	HE-100	HE-120	HE-160	HE-180	
Max. Flow Rate	25 m³/h	40 m³/h	60 m³/h	80 m³/h	100 m³/h	120 m³/h	160 m³/h	180 m³/h	
Inlet/Outlet Dimension	2"	3"	3"	4"	4"	5"	6"	8"	
Standard Filtration Degree	130 micron								
Min. Operation Pressure	2,5 bar								
Max. Operation Pressure	8 bar								
Max. Operation Temperature	60°C								
Cleaning Cycle Time	10-16 sn	10-16 sn	10-16 sn	10-16 sn	15-22 sn	15-22 sn	15-22 sn	15-22 sn	
Cleaning Criteria	Differential Pressure (DP) 0.5 bar								
Filtration Area	500 cm <sup>2</sup>	500 cm <sup>2</sup>	1000 cm <sup>2</sup>	1000 cm <sup>2</sup>	4500 cm <sup>2</sup>	4500 cm <sup>2</sup>	4500 cm <sup>2</sup>	4500 cm <sup>2</sup>	

## **Automatic Disc Filter Systems**



Back flushing control valves adjusting filtration and back flushing positions of AutoFlush® automatic disc filters connected parallel to the manifold collector system are programmed by differential pressure sensor (DP) for pressure and by control device for timedependent parameters.

Mesh No	Micron	Effective Filtering Surface (%)	Disc Color
80	200	%39	
120	130	%39	
150	100	%40	

## **Specifications**

- Back-flushing pressure is 1 bar.
- Back flushing process is completed in automated manner.
- Water supply is not interrupted during back flushing process.
- As it can be cleaned within short time, very low amount of water is used in back flushing process.
- Due to discs with varying dimensions, desired filtration degree is ensured.
- Maintenance during operation is very easy.
- As it is used in modular filter systems, filtration at desired rates can be performed.
- Due to body and framework reinforced against corrosion, it has long operation life.
- Controller, connection equipments, air valves and pressure gauges are included in the system.
- Fertilizer kit and fertilize tank are not included in the system.
- Package: Wooden crate

### Applications:

- Filtration of well water
- Filtration of river, lake and reserve water
- Filtration of applications such as process water and cooling water
- Upwards the ultra-filtration systems
- Agricultural drip and micro-irrigation systems
- For recreational irrigation system practices

BACK-FLUSHING PRESSURE

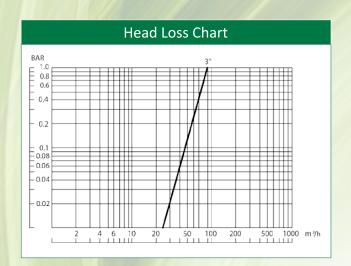
1BAR

AutoFlush® automatic disc filter system								
Code	Collector Size (inch)	Disc Filter Quantity	Connection Type	Recommended Flow Rate (m³/h)				
ADF-02	4	2	Grooved End or Flanged	50				
ADF-03	4	3	Grooved End or Flanged	75				
ADF-04	5	4	Grooved End or Flanged	100				
ADF-05	6	5	Grooved End or Flanged	125				
ADF-06	6	6	Grooved End or Flanged	150				
ADF-07	8	7	Grooved End or Flanged	175				
ADF-08	8	8	Flanged	200				

## Automatic Plastic Disc Filter



	Material List						
Part no	Part name	Material					
1	Body	Polyamide (PA6.6 %30 GFR)					
2	Lid	Polyamide (PA6.6 %30 GFR)					
3	Hydrocyclone Wing	PET – P					
4	Manual Filter Frame	PET – P					
5	Disc	Nylon Reinforced PP					
6	Bolt	8.8Js-500 Steel					
7	Collar	SST					





	Available Models and Recommended Flow Rates								
Modules pcs	Recommended Flow (m³/h)	Min. Back-Flushing Flow Rate (m³/h)	Max. Operating Pressure (bar)	Min. Back-Flushing Pressure (1 bar)	Filtering Area (cm²)	Connection			
2 module	60 m³/h	18 m³∕h	8 bar	1 bar	3040 cm <sup>2</sup>	Grooved End			
3 module	90 m³/h	27 m³/h	8 bar	1 bar	4560 cm <sup>2</sup>	Grooved End			
4 module	120 m³/h	36 m³∕h	8 bar	1 bar	6080 cm <sup>2</sup>	Grooved End			
5 module	150 m³/h	45 m³∕h	8 bar	1 bar	7600 cm <sup>2</sup>	Grooved End			
6 module	180 m³/h	54 m³/h	8 bar	1 bar	9120 cm <sup>2</sup>	Grooved End			

Technical Specifications							
Max. Operating Pressure	Min. Back-Flushing Pressure	Min. Back-Flushing Flow Rate	Temperature	Connection			
8 ( bar ) 120 ( psi )	1 ( bar ) 14 ( psi )	9 – 11 m³/h	0 °C - 60 °C (32 °F - 132 °F)	3" (80 mm) Grooved End			





## Pressure Gauge Valve



## Pressure Gauge



## Lateral Valve



#### **Features**

- ¼" BSP/NPT Male X Female Threaded Connection.
- Install Valve Underneath The Pressure Gauge.
- Increase The Life Of Pressure Gauges.
- Vibration Of Pressure Gauge Needle Will Reduce.
- Pressure Rating: 6 Bar.

#### **Features**

- Thread Size : ¼" BSP Male (HT-320)
- Rugged Construction
- Glycerine Filled
- Standard follower in General EN 837-1/ General EN 837-1
- Warranty: 12 months
- Dial: 21/2"

#### Barb x Barb

12mm x 12mm 12mm x 16mm 12mm x 20mm

#### ½" Male Thread x Barb

%" Male Thread x 12mm %" Male Thread x 16mm %" Male Thread x 20mm

#### ¾" Male Thread x Barb

¾" Male Thread x 12mm¾" Male Thread x 16mm¾" Male Thread x 20mm

## Barb x Barb

16mm x 16mm 16mm x 20mm 20mm x 20mm

#### ¾" Female Thread x Barb

3/4" Female Thread x 12mm 3/4" Female Thread x 16mm 3/4" Female Thread x 20mm

#### Male Thread x Male Thread

 $\frac{1}{2}$ " Male Thread x  $\frac{1}{2}$ " Male Thread  $\frac{1}{2}$ " Male Thread x  $\frac{1}{2}$ " Male Thread

## **Compression Drip Fittings**



Compression Coupler



Compression Tee



Compression x MPT Adaptor



Compression Elbow

## Technical Specification

- Made of ABS.
- Pressure Rating- PN6.
- Sizes available: 0.62" or 16mm and 0.70" or 18mm OD drip tubing.

Product	Model No.	Size	Model No.	Size
Coupler	HT-416CC	0.62" x 0.62"	HT-418CC	0.7" x 0.7"
Tee	HT-416CT	0.62" x 0.62" x 0.62"	HT-418CT	0.7" x 0.7" x 0.7"
Elbow	HT-416CE	0.62" x 0.62"	HT-418CE	0.7" x 0.7"
Adopter	HT-416CMPT	0.62" x ½" MPT	HT-418CMPT	0.7" x ½" MPT

- Color Coded gripper for easy identification.
- Faster and easier to install, simply push drip tubing into fittings for tight connection and get unobstructed flow.
- Very tight fit with no tools, gluing or clamps required.
- Superb gripping of PE tubing, no slipping at high pressure and no leakage at low pressure.
- Ultra sonic welded grippers for no leakage and longer life.
- Impact, UV and Chemical Resistant.



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