TURF IRRIGATION



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RPS75

RPS75™ Rotor

The RPS75™ gear drive is designed for basic residential and light commercial applications and is a direct replacement for Hunter® PGP® rotors. The reversing mechanism, a K-Rain patented feature, is the same mechanism used in the Hunter PGP (K-Rain currently licenses this patent to Hunter.) With K-Rain's wide selection of standard and low angle nozzles, the RPS75 provides even water distribution.



Features:

- Direct Replacement for Hunter® PGP®.
- Right Position Start Rotor rotates counterclockwise from fixed right start position.
- 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.
- 3/4" 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.
- · Key and check disc also included in master cases.
- FULL 5 YEAR WARRANTY. Subject to all standard warranty conditions that apply to all K-Rain rotors.





ARC selection 40°- 360°. Adjusts from RIGHT start.

Find performance data on following page.

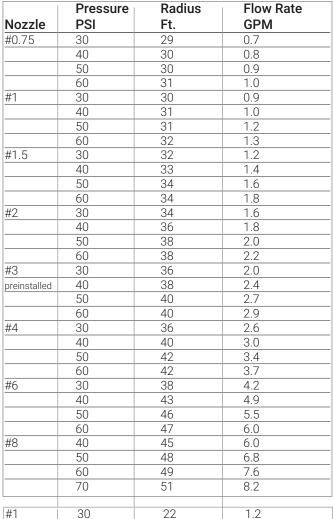
- Inlet 3/4" female threaded NPT
- Arc Adjustment Range: 40° to 360°
- Flow range: 0.75 8.2 GPM
- Pressure Rating: 30-70 PSI
- Precipitation Rate: 0.12 to 1.16 inches/hour
- Overall height popped down: 7 3/8"
- Recommended spacing: 25' to 45'
- Radius: 22' to 51'
- Nozzle trajectory: 25°standard or 11°low angle
- 8 standard and 4 low angle nozzles included
- Riser Height: 4"

Part Number	Description	Ctn Qty	List Price
RPS75	RPS Standard Rotor	20	\$ 26.37



RPS75™ Rotor Performance Data

STANDARD ANGLE





LOW ANGLE

	/0	51	8.2
#1	30	22	1.2
	40	24	1.7
	50	26	1.8
	60	28	2.0
#3	30	29	3.0
	40	32	3.1
	50	35	3.5
	60	37	3.8
#4	30	31	3.4
	40	34	3.9
	50	37	4.4
	60	38	4.7
#6	40	38	6.5
	50	40	7.3
	60	42	8.0
	70	44	8.6

Data represents test results in zero wind.

Adjust for local conditions.

Radius may be reduced with nozzle retention screw.





RPS SELECT

RPS® SELECT Rotor

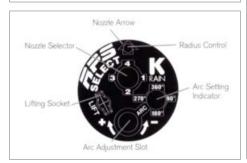
The RPS® SELECT rotary sprinkler is gear-driven for basic residential and light commercial applications. With 4 selectable built-in nozzles, matched precipitation is fast and easy without the need to change nozzles in the field.



Features:

- Four built-in selectable nozzles to match arc settings 90° to 360°
- Adjustable Arc (40° to 360°) made from the top with no special tools needed.
- Matched precipitation rate when nozzle setting matched to arc.
- 3/4" Inlet Replaces all standard rotors.
- · Low pressure operation.
- · Standard Rubber Cover
- Proven gear-drive design common to the popular RPS75® series.
- Riser assembly interchanges with Hunter® PGP® rotors
- · Key and check disc also included in master cases.
- FULL 5 YEAR WARRANTY. Subject to all standard warranty conditions that apply to all K-Rain rotors.

- Inlet 3/4" female threaded NPT
- Arc Adjustment Range: 40° to 360°
- Flow range: 1.3 6.8 GPM
- Pressure Rating: 30-70 PSI
- Precipitation Rate: 0.23 to 0.71 inches/hour
- Overall height popped down: 7 3/8"
- Recommended spacing: 31' to 44'
- Radius: 33' to 46'



Nozzle	Pressure PSI	Radius Ft.	Flow Rate GPM
#1 90°	30	33	1.3
	35	34	1.4
	40	37	1.5
	45	37	1.6
	50	37	1.8
#2 180°	30	37	2.6
	35	38	2.8
	40	39	3.0
	45	40	3.2
	50	40	3.6
#3 270°	30	37	3.8
	35	40	4.1
	40	41	4.5
	45	41	4.7
	50	43	4.9
#4 360°	30	38	5.2
	35	40	5.7
	40	44	6.0
	45	45	6.4
	50	46	6.8

Part Number	Description	Ctn Qty	List Price
RPS SELECT	RPS Select Rotor	20	\$ 32.80







MiniPro™ Rotor

Perfect for small lawn and landscape areas and for replacing fixed sprays. Direct replacement for the Toro Mini8.

Features:

- Gear driven, rotary type sprinkler capable of covering an area of 17' to 30'.
- · Revolutionary patented easy arc set is easily adjusted from the top with a flat blade screwdriver. Stainless steel radius adjustment screw.
- Adjustable rotation provides a full range of adjustments from 40° to 360°. Patented arc set degree markings clearly indicate current watering pattern and simplifies adjustment
- Adjustable in all phases of installation before, after while static or while in operation.
- Time proven patented reversing mechanism assures continuous reverse and return.
- · Ratcheting riser easily adjusts your left start position by turning the riser.
- Supplied with 5 numerically coded interchangeable nozzles. Wide selection of nozzles provides flexibility in system design to achieve matched precipitation.
- · Heavy duty rubber cover seals out durt and increases durability.
- FULL 5 YEAR WARRANTY. Subject to all standard warranty conditions that apply to all K-Rain rotors.



- Inlet 1/2" NPT
- Arc adjustment range 40° to 360°
- Flow range: 0.75 3.3 GPM
- Pressure Rating: 20-70 PSI
- Precipitation Rate: 0.22 to 0.41 inches/hour (depending on spacing and nozzle used)
- Overall height popped down: 6"
- · Recommended spacing: 17' to 28'
- Radius: 17' to 30'
- Nozzle trajectory: 26°
- Riser Height: 4", 6" or 12".



Find performance data on following page.



ARC selection 40°-360°. Adjusts from LEFT start.

Part Number	Description	Ctn Qty	List Price
13003	MiniPro short range rotor 4"	25	\$ 28.04
13006	MiniPro short range rotor 6"	20	41.74
13012	MiniPro short range rotor 12'	' 12	69.92



MiniPro™ Rotor Performance Data STANDARD ANGLE

Red Nozzle

Performance Data:				
	Pressure	Radius	Flow Rate	
Nozzle	PSI	Ft.	GPM	
#0.75	30	17'	.75	
	40	17'	.8	
	50	18'	.9	
#1	30	20'	.9	
	40	21'	1.2	
	50	21'	1.3	
#1.5	30	23'	1.4	
preinstalled	40	24'	1.7	
	50	24'	1.9	
#2	30	25'	1.8	
	40	27'	2.1	
	50	27'	2.4	
#3	30	28'	2.7	
	40	30'	3.0	
	50	30'	3.3	





ProPlus™ 11003 Rotor

Appropriate for medium to large landscape areas with high level risers and shrubs.

Direct replacement for the Toro Super800.



Features:

- Gear driven, rotary type sprinkler capable of covering an area of 22' to 50'
- Revolutionary patented easy arc set is easily adjusted from the top with a flat blade screwdriver. Stainless steel radius adjustment screw.
- 2N1 adjustable or continuous rotation provides a full range of adjustments from 40° to a full 360°. Patented arc set degree markings show the degree of adjustment with the point of an arrow on the top cover.
- Arc memory clutch returns rotor to its preset position automatically even after being tampered with. Time proven patented reversing mechanism assures continuous reverse and return.
- Ratcheting riser easily adjusts your left start position by turning the riser.
- Supplied with 9 numerically coded interchangeable nozzles including 4 low angle nozzles. Wide selection of nozzles provides flexibility in system design to achieve matched precipitation.
- Heavy duty rubber cover seals our dirt and increases durability.
- FULL 5 YEAR WARRANTY. Subject to all standard warranty conditions that apply to all K-Rain rotors.







ARC selection 40° to continuous 360°. Adjusts from LEFT start.

Find performance data on following page.

Specifications:

- Inlet 3/4" threaded NPT
- Arc Adjustment Range: 40° to continuous 360°
- Flow range: 0.5 10.0 GPM
- · Pressure Rating: 20-70 PSI
- Precipitation Rate: 0.06 to 0.50 inches/hour (depending on spacing and nozzle used)
- Overall height popped down: 7 1/2"

17" for High pop

- Recommended spacing: 28' to 44'
- Radius: 22' to 50'
- · Nozzle trajectory: 26°standard or 12°low angle
- Riser Height: 5"

Part Number	Description	Ctn Qty	List Price
11003	ProPlus mid-range rotor	20	\$ 33.28



ProPlus™ 11003 Rotor Performance Data

STANDARD ANGLE

Red Nozzle

Pressure Radius Flow Rate **PSI** Nozzle Ft. **GPM** #0.5 30 28 0.5 40 29 0.6 50 29 0.7 60 30 0.8 #0.75 29 0.7 30 40 30 0.8 50 31 0.9 32 60 1.0 #1 30 32 1.3 40 33 1.5 50 34 1.6 60 35 1.8 #2 30 37 2.4 40 40 2.5 50 42 3.0 43 3.3 60 #2.5 2.5 30 38 preinstalled 40 39 2.8 50 40 3.2 3.5 60 41 #3 30 38 3.6 40 39 4.2 50 41 4.6 60 42 5.0 #4 30 43 4.4 40 5.1 44 50 5.6 46 5.9 60 49 40 45 5.9 #6 50 6.0 46 60 48 6.3 70 49 6.7 #8 40 42 8.0 50 45 8.5 60 49 9.5

50

10.0

LOW ANGLE

Green Nozzle

	Pressure	Radius	Flow Rate
Nozzle	PSI	Ft.	GPM
#1	30	22	1.2
	40	24	1.7
	50	26	1.8
	60	28	2.0
#3	30	29	3.0
	40	32	3.1
	50	35	3.5
	60	37	3.8
#4	30	31	3.4
	40	34	3.9
	50	37	4.4
	60	38	4.7
#6	40	38	6.5
	50	40	7.3
	60	42	8.0
	70	44	8.6

70



10003

K-Rain® Rotors

SuperPro™ 10003 Rotor

With flow control, appropriate for residential or light commericial. Direct replacement for the Toro Super 800.



Features:

- Riser fits in existing Toro Super800 cans.
- Gear driven, rotary type sprinkler capable of covering an area of 26' to 49'.
- Patented flow control valve inside the rotor allows individual head to be turned off or be partially closed to reduce the distance by up to 75%. Additionally it simultaneously reduces the flow rate creating an added water savings.
- Revolutionary patented easy arc set is easily adjusted from the top with a flat blade screwdriver. Stainless steel radius adjustment screw.
- 2N1 adjustable or continuous rotation provides a full range of adjustments from 40° to continuous 360°. Patented arc set degree markings show the degree of adjustment with the point of an arrow on the top cover.
- Arc memory clutch returns rotor to its preset position automatically even after being tampered with. Time proven patented reversing mechanism assures continuous reverse and return.
- Ratcheting riser easily adjusts your left start position by turning the riser.
- Supplied with 9 numerically coded interchangeable nozzles including 4 low angle nozzles.
- · Heavy duty rubber cover seals our dirt and increases durability.
- 5 year limited warranty.



- Inlet 3/4" threaded NPT
- Arc Adjustment Range: 40° to continuous 360°
- Flow range: 0.5 10.0 GPM
- Pressure Rating: 20-70 PSI
- Precipitation Rate: 0.05 to 0.74 inches/hour (depending on spacing and nozzle used)
- Overall height popped down: 7 1/2"
- Recommended spacing: 28' to 44'
- Radius: 26' to 49'
- Nozzle trajectory: 26°standard or 12°low angle
- · Riser Height: 5"

Part Number	Description	Ctn Qty	List Price
10003	SuperPro rotor	20	\$ 34.73





ARC selection 40° to continuous 360°. Adjusts from LEFT start.

Find performance data on following page.



SuperPro™ 10003 Rotor Performance Data

STANDARD ANGLE

Nozzle PSI Ft. GPM #0.5 30 30 0.45 40 29 0.5 50 26 0.6 60 26 0.7 #0.75 30 32 0.8 50 33 0.9 60 33 1.0 #1 30 30 1.1 40 32 1.3 50 33 1.5 60 33 1.6 #2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 3.2 60 38 3.6 3.8 50 37 3.2 3.4 40 36 3.8 3.6 #3		Pressure	Radius	Flow Rate
40 29 0.5 50 26 0.6 60 26 0.7 #0.75 30 32 0.8 40 32 0.8 50 33 0.9 60 33 1.0 #1 30 30 1.1 40 32 1.3 50 33 1.5 60 33 1.6 #2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 46 5.7 #6 40 <th>Nozzle</th> <th>PSI</th> <th>Ft.</th> <th>GPM</th>	Nozzle	PSI	Ft.	GPM
50 26 0.6 60 26 0.7 #0.75 30 32 0.7 40 32 0.8 50 33 0.9 60 33 1.0 #1 30 30 1.1 40 32 1.3 50 33 1.5 60 33 1.6 #2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44	#0.5	30	30	0.45
#0.75		40	29	0.5
#0.75 30 32 0.7 40 32 0.8 50 33 0.9 60 33 1.0 #1 30 30 1.1 40 32 1.3 50 33 1.5 60 33 1.6 #2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 37 3.2 60 38 4.2 40 36 3.8 #4 40 36 3.8 50 37 3.2 60 49 4.8 #4 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 80 9.0		50	26	0.6
40 32 0.8 50 33 0.9 60 33 1.0 #1 30 30 1.1 40 32 1.3 50 33 1.5 60 33 1.6 #2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49		60	26	0.7
50 33 0.9 60 33 1.0 #1 30 30 1.1 40 32 1.3 50 33 1.5 60 33 1.6 #2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49	#0.75	30	32	0.7
#1 30 30 1.1 #1 30 30 1.1 #1 30 32 1.3 50 33 1.5 50 33 1.6 #2 30 38 2.3 #40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 #3 40 36 3.8 #4 40 36 3.8 #4 40 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 40 42 7.5 #8 9.0		40	32	0.8
#1 30 30 1.1 40 32 1.3 50 33 1.5 60 33 1.6 #2 30 38 2.3 #40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 #4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2		50	33	0.9
40 32 1.3 50 33 1.5 60 33 1.6 #2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 3.2 60 38 3.6 3.8 #3 30 35 3.4 40 36 3.8 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		60	33	1.0
50 33 1.5 60 33 1.6 #2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 3.2 60 38 3.6 3.8 #3 30 35 3.4 40 36 3.8 3.2 60 39 4.8 4.2 60 39 4.8 4.2 #4 30 42 4.1 40 44 4.6 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0	#1	30	30	1.1
60 33 1.6 #2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		40	32	
#2 30 38 2.3 40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		50	33	1.5
40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		60	33	1.6
40 38 2.5 50 40 2.7 60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0	#2	30	38	2.3
60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		40	38	
60 42 3.0 #2.5 30 35 2.5 preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		50	40	2.7
preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		60	42	
preinstalled 40 36 2.8 50 37 3.2 60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0	#2.5	30	35	2.5
60 38 3.6 #3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0	preinstalled	40	36	
#3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		50	37	3.2
#3 30 35 3.4 40 36 3.8 50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		60	38	3.6
50 38 4.2 60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0	#3	30	35	
60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		40	36	3.8
60 39 4.8 #4 30 42 4.1 40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		50	38	4.2
40 44 4.6 50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0				4.8
50 45 5.1 60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0	#4	30	42	4.1
60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		40	44	4.6
60 46 5.7 #6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		50	45	5.1
#6 40 46 5.8 50 48 6.4 60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0			46	
60 49 7.0 70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0	#6			
70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0		50	48	6.4
70 49 7.5 #8 40 42 7.5 50 45 8.2 60 48 9.0			49	7.0
#8 40 42 7.5 50 45 8.2 60 48 9.0				
50 45 8.2 60 48 9.0	#8			7.5
60 48 9.0				8.2
70 48 9.5				
		70	48	9.5

LOW ANGLE

Nozzle	Pressure PSI	Radius Ft.	Flow Rate GPM
#1	30	26	1.3
	40	27	1.5
	50	27	1.7
	60	28	1.9
#3	30	29	2.9
	40	30	3.3
	50	31	3.4
	60	33	4.0
#4	30	28	4.0
	40	31	4.7
	50	34	5.0
	60	36	6.0
#6	40	30	6.0
	50	34	7.0
	60	37	7.8
	70	38	8.2



K-Rain[®] Sprays



K Spray Series

K-Spray Series Spray Bodies

Ideal for watering smaller areas, ground cover and shrub areas.

Features:

- Available in 3", 4" 6" and 12" models which provide flexibility in design.
- Accepts MALE threaded nozzles.
- Stainless steel retraction spring provides reliable retraction of the riser in all soil conditions.
- Ratchet riser allows for easy pattern alignment by turning the riser.
- Heavy duty wiper seal ensures leak free, full pop-up operation even under low pressure situations.

- Inlet 1/2" NPT female thread
- Flow range: 0.5 4.6 GPM
- · Pressure Rating: 20-50 PSI
- Precipitation Rate: 0.4 to 1.91 inches/hour

Part Number	Part Number Description		List Price
74001	4" Pop-up Spray body (less nozzles)	50	5.86
76001	6" Pop-up Spray body (less nozzles)	50	11.62
71201	12" Pop-up Spray body (less nozzles)	25	31.48



K-Rain[®] Sprays



PRO-S Spray





Co-molded wiper seal

Pro-S Pop-Up Sprays

A rugged, contractor friendly spray line designed to be compatible with ALL standard female threaded nozzles.

Direct replacement for RainBird® 1800 Series sprays.

RAIN

Features:

- Available in 2", 3", 4" 6" and 12" models which provide flexibility in design.
- · Accepts FEMALE threaded nozzles.
- Co-Molded wiper seal ensures a leak free, full pop up operation 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.
- Ratcheting riser allows for easy pattern alignment by turning the riser.
- Heavy duty retraction spring for positive retraction in all soil conditions.
- Side and bottom inlet on 6" and 12" models.
- · Pre-installed flush cap.
- 5 year Limited Warranty.



Specifications:

- Inlet 1/2" NPT Female Thread
- Flo range: 0 @ 8 psi, 0.10 gpm
- Pressure Rating: 20-70 psi
- Precipitation Rate: 0.4-4 inches/hour
- Overall Body Height: 2" pop up 4"

3" pop up - 47/8"

4" pop up - 6"

6" pop up - 9 3/8"

12" pop up - 16"

Part Num	ber Description	Ctn Qty	List Price
70000	2" Don un oprov	FO	Ċ 7.40
78002	2" Pop up spray	50	\$ 7.49
78003	3" Pop up spray	50	7.49
78004	4" Pop up spray	50	4.60
78006	6" Pop up spray	50	12.62
78012	12" Pop up spray	25	23.99





RN Rotary Nozzle



Fixed Pattern Rotary Nozzle

Provides increased uniform coverage over conventional fized spray nozzles while delivering matched precipitation.

Features:

- Perfect for upgrading old irrigation systems by solving low pressure and coverage problems.
- Matched precipitation across various radii and patterns.
- Low precipitation rate reduces run off.
- Low flow rate means less material and fewer zones.
- 25% radius reduction for patented flow control, no tools required.
- Unique speed control maintains the speed of rotation over varying pres sure ranges.
- Any pattern can be combined in the same zone with matched precipitation.
- Larger filter prolongs product life.
- 2 year Limited Warranty.

Specifications:

- Spacing: 13-17 ft
- Pressure Rating: 20-45 psi
- Precipitation Rate: 0.67 0.99 inches/hour depending on head spacing.

Part Number	Description	Ctn Qty	List Price
RN100-ADJ	Rotary Nozzle - Adjustable 80-360°10-17'	10	\$ 18.91
RN200-ADJ	Rotary Nozzle - Adjustable 80-360°17-21'	10	18.91
RN300-ADJ	Rotary Nozzle - Adjustable 80-360°21-26'	10	18.91

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FIXED PATTERN ROTARY NOZZLES - PERFORMANCE SPECS

Part Number	Nozzle Pattern	Pressure PSI	Radius Ft.	Flow Rate GPM	Flow GPH	Precip	Precip
RN200-90	90°	25	13	0.38		0.99	0.86
		30	14	0.41		0.93	0.81
		35	15	0.45		0.89	0.77
		40	16	0.48		0.84	0.72
		45	17	0.51		0.78	0.68
RN200-180	180°	25	13	0.74		0.97	0.84
		30	14	0.81		0.92	0.80
		35	15	0.90		0.89	0.77
0		40	16	0.96		0.83	0.72
		45	17	1.00		0.77	0.67
RN200-360	270°	25	13	1.50		0.99	0.85
		30	14	1.70		0.96	0.83
		35	15	1.80		0.89	0.77
		40	16	2.00		0.87	0.75
		45	17	2.10		0.81	0.70





KV Nozzles

KV Variable Arc Nozzles

KV adjustable nozzles have a MALE thread configuration to fit K-Spray bodies.

n to fit K-Spray bodies.

Features:

- Superior spray pattern ensures proper precipitation rates throughout the adjustment.
- · Color coded by distance.
- · Extra long filters provide longer time between cleaning.

Find performance data on following page.

Part Number	Description	Color	Ctn Qty	List Price
10.00		0	0.5	^ .
KV8	8' Variable arc nozzle male thread	Green	25	\$ 2.42
KV10	10' Variable arc nozzle male thread	Blue	25	2.42
KV12	12' Variable arc nozzle male thread	Brown	25	2.42
KV15	15' Variable arc nozzle male thread	Black	25	2.42
KV17	17' Variable arc nozzle male thread	Gray	25	2.42

KVF Nozzles

Find performance data on following page.

KVF Variable Arc Nozzles

KVF adjustable nozzles have a FEMALE thread configuration to fit RPS and PROS spray bodies.

Features:

- Superior spray pattern ensures proper precipitation rates throughout the adjustment.
- · Color coded by distance.
- Extra long filters provide longer time between cleaning.

Part Number Price	Description	Color	Ctn Qty	List
KVF8	8' Variable arc nozzle female thread	Green	25	\$ 2.42
KVF10	10' Variable arc nozzle female thread	Blue	25	2.42
KVF12	12' Variable arc nozzle female thread	Brown	25	2.42
KVF15	15' Variable arc nozzle female thread	Black	25	2.42

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VARIABLE ARC NOZZLES - PERFORMANCE SPECS FOR KV NOZZLES



	Pressure	8' GREEN	Flow	10' BLUE	Flow	12' BROWN	l Flow	15' BLACK	Flow	17' GRAY	Flow
Arc	PSI	Radius Ft.	GPM	Radius Ft.	GPM	Radius Ft.	GPM	Radius Ft.	GPM	Radius Ft.	GPM
90°	20	9	0.7	12	0.7	12	1.1	15	1.3	18	1.7
	30	9	1.1	12	1.1	13	1.3	17	1.6	18	1.8
	40	10	1.4	13	1.4	14	1.5	18	1.8	19	2.0
	50	11	1.5	14	1.5	15	1.7	19	2.0	20	2.2
180°	20	8	1.4	11	1.4	11	1.6	14	1.8	17	1.9
	30	8	1.6	11	1.6	12	1.8	15	2.3	18	2.4
	40	9	1.8	12	1.8	13	2.2	16	2.6	19	2.6
	50	10	2.0	13	2.0	14	2.4	18	2.8	19	2.6
270°	20	8	1.7	10	1.7	11	1.9	14	2.7	16	2.9
	30	8	2.0	10	2.0	12	2.4	15	3.2	17	3.4
	40	8	2.3	11	2.3	12	2.6	16	3.6	18	4.0
	50	9	2.6	12	2.6	13	3.0	16	4.0	18	4.0
360°	20	8	2.2	10	2.2	11	2.8	13	3.4	15	3.5
	30	8	2.7	10	2.7	12	3.1	15	4.2	17	4.4
	40	8	3.0	11	3.0	12	3.5	15	4.7	17	4.9
	50	8	3.5	12	3.5	13	3.9	16	5.3	18	5.4

VARIABLE ARC NOZZLES - PERFORMANCE SPECS FOR KVF NOZZLES



	Pressure	8' GREEN	Flow	10' BLUE	Flow	12' BROWN	l Flow	15' BLACK	Flow	17' GRAY	Flow
Arc	PSI	Radius Ft.	GPM	Radius Ft.	GPM	Radius Ft.	GPM	Radius Ft.	GPM	Radius Ft.	GPM
90°	20	9	0.40	9	0.40	10	0.45	13	0.55	17	0.80
	25	9	0.42	9	0.42	11	0.52	14	0.63	18	0.94
	30	10	0.45	10	0.45	12	0.55	15	0.70	19	1.05
	40	10	0.50	10	0.50	12	0.60	16	0.80	19	1.30
180°	20	9	1.00	9	1.00	9	1.10	13	1.30	17	1.70
	25	9	1.10	9	1.10	10	1.21	14	1.49	17	1.92
	30	10	1.20	10	1.20	10	1.35	15	1.65	19	2.15
	40	10	1.25	10	1.25	11	1.53	16	2.00	19	2.50
270°	20	9	1.40	9	1.40	9	1.60	13	1.90	16	2.40
	25	10	1.59	10	1.59	10	1.74	15	2.15	16	2.82
	30	10	1.75	10	1.75	10	1.95	15	2.35	17	3.00
	40	10	2.05	10	2.05	11	2.05	16	2.70	18	3.50
360°	20	9	2.30	9	2.30	9	2.40	13	2.80	16	2.90
	25	10	2.51	10	2.51	10	2.61	14	3.26	17	3.40
	30	10	2.65	10	2.65	11	2.78	15	3.60	17	3.80
	40	11	2.75	11	2.75	12	3.03	15	4.10	17	4.40



K-Rain[®] Nozzles







Fixed Nozzles

Fixed Pattern Female Nozzles

Matched precipitation female nozzles are compatible with ALL available male threaded bodies.

Features:

- · Color coded for easy identification.
- Four distances plus eight fixed patterns provides an array of configurations.
- · Matched precipitation allows for even water distribution.

Series Number	r Description	Color	Ctn Qty	List Price
FN8 *	8' Fixed pattern female nozzle	Green	25	\$ 2.48
FN10 *	10' Fixed pattern female nozzle	Blue	25	2.48
FN12 *	12' Fixed pattern female nozzle	Brown	25	2.48
FN15*	15' Fixed pattern female nozzle	Black	25	2.48

^{*} Add nozzle pattern reference letter to complete part number.

Fixed Pattern FEMALE THREADED Nozzles Performance & Pricing











Pattern Letter*	Nozzle Pattern	Pressure PSI	Radius Ft.	Flow Rate GPM	Ctn Qty	Part Number	List Price
Q	90°	15	5	0.18	25	FN8Q	\$ 2.48
<u>Q</u>	90	20	6	0.10	20	TNOQ	Ų 2.40
		25	7	0.24			
		30	8	0.26			
	180°	15	5	0.37	25	FN8H	2.48
		20	6	0.41		-	
		25	7	0.47			
		30	8	0.52			
F	360°	15	5	0.74	25	FN8F	2.48
		20	6	0.86			
		25	7	0.95			
		30	8	1.05			
Н	180°	15	7	0.58	25	FN10H	2.48
		20	8	0.65			
		25	9	0.72			
		30	10	0.79			
TQ	270°	15	7	0.87	25	FN10TQ	2.48
		20	8	0.98			
		25	9	1.08			
		30	10	1.18			



Fixed Pattern THREADED Nozzles Performance & Pricing

MALE (P)

FEMALE (FN)











			VIALE	(P)	Г	CIVIAL	.E (FIN)			
Pattern Letter*	Nozzle Pattern	Pressure PSI	Radius Ft.	Flow Rate GPM	Pressure PSI	Radius Ft.	Flow Rate GPM	Ctn Qty	MALE/FEM Part No	IALE List Price
Н	180°	20	11	0.9	15	9	0.90	25	P12H	2.48
		25	12	1.1	20	10	1.05			
		40	13	1.4	25	11	1.20			
		50	14	1.5	30	12	1.30			
F	360°	20	10	1.6	15	9	1.80	25	P12F	2.48
		25	12	1.8	20	10	2.10			
		40	13	2.1	25	11	2.40			
		50	14	2.4	30	12	2.60			
Q	90°	20	15	0.7	15	11	0.65	25	P15Q	2.48
		30	16	0.9	20	12	0.75		FN15Q	2.48
		40	17	1.1	25	14	0.82			
		50	18	1.2	30	15	0.92			
Н	180°	20	14	1.4	15	11	1.30	25	P15H	2.48
		30	15	1.7	20	12	1.50		FN15H	2.48
		40	16	2.0	25	14	1.65			
		50	17	2.2	30	15	1.85			
F	360°	20	13	2.9	15	11	2.60	25	P15F	2.48
		30	15	3.6	20	12	3.00		FN15F	2.48
		40	16	4.1	25	14	3.30			
		50	17	4.6	30	15	3.70			
		+			-					

Special Pattern Nozzles Performance & Pricing





			•					
Pattern	Nozzle	Pressure	Radius	Flow Rate	Ctn	MALE	FEMALE	List
Letter*	Pattern	PSI	Ft.	GPM	Qty	Part No	Part No.	Price
CS	CENTER	20	4' X 24'	0.8	25	P15CS		\$ 248
	STRIP	30	4' X 30'	1.0			FN15CS	2.48
SS	STRIP	30	4' X 32'	1.3	25		FN15SS	2.48



K-Rain® Solenoid Valves

Pro Series 100 Solenoid Valves

A contemporary tilt diaphragm makes this the perfect choice for residential, light commercial and dirty water applications.



Features:

- Heavy duty, corrosion & UV resistant PVC construction increases the life of the valve.
- Combination 1" and 1 1/4" connections provide the option to increase the pipe size to the valve increasing the flow rate.
- Tilted diaphragm/piston assembly allows for a straight flow path of the water increasing the flow rate while reducing the friction loss.
- Debris tolerant design provides flexibility for use in potable or dirty water applications.
- Manual external bleed through bleed screw allows for manual operation in system start-up.
- Manual internal bleed through solenoid allows for manual operation without leaking water.
- Flow control with removable handle allows for precise flow adjustment, manual shut-off and allows you to remove the handle to prevent tampering.
- Captured plunger solenoid allows for the solenoid to be removed without losing the plunger.
- Self cleaning metering screen is in the turbulent flow of water allowing self cleaning action during operation.
- 5 year Limited Warranty.



7001 Series

7001-NFC Series

Specifications:

Dimensions: 4" H x 3" W x 5 1/4" L

Flow range: 0.75-35 GPMPressure Rating: 20-150 PSI

• Pressure Loss @ 30 gpm - 5 psi

• Solenoid: 24 VAC 60 cycle

• Inrush Current: 0.43 Amps

• Holding Current: 0.25 Amps



7001-MXB Series
Designed for polyethylene piping
systems, requires fewer fittings
and can be installed quickly.



Flow Through

Self Cleaning Screen

Part Number	Description	Ctn Qty	List Price
7001	1" Female thread or 1 1/4" Male slip	12	\$ 47.92
7001-SL	1" Female slip or 1 1/4" Male slip	12	46.21
7001-NFC	1" Female th or 1 1/4" Male sl NO FLOW CONT	ROL 12	45.59
7001-SL-NFC	1" Female sl or 1 1/4" Male sl NO FLOW CONTI	ROL 12	44.89
7001-MXB	1" Male x Barb	12	47.92
7001-MXB-NFC	1" Male x Barb NO FLOW CONTROL	12	43.59



K-Rain® Solenoid Valves



7101 and 7101-J Series

Pro Series 150 1" Solenoid Valves

Offer the professional a wide array of features and benefits. Use for residential, light commercial, dirty water applications.

RAIN

Features:

- Heavy duty, corrosion & UV resistant PVC construction increases the life of the valve.
- External bleed screw with removable metering pin allows for cleaning of the pin without disassembling the valve.
- Threaded jar top allows for quick removal of the cap for easy servicing.
 The glass filled nylon screw cap increases durability.
- 7101-J Series is direct replacement for Irritrol 2400.
- Manual external bleed screw allows for manual operation in system start-up.
- Manual internal bleed through solenoid allows for manual operation without leaking water.
- Captured plunger solenoid allows for the solenoid to be removed without losing the plunger.
- 5 year Limited Warranty.





No tools needed with Jar Top





Manual External Bleed Screw

- Dimensions: 5 1/4" H x 3 1/8" W x 5"
 - 5 1/4" H x 3" W x 4 3/8" Jar Top
- Flow range: 0.25-30 GPM
- Pressure Rating: 10-150 PSI
- Solenoid: 24 VAC 60 cycle
- Inrush Current: 0.4 Amps
- · Holding Current: 0.2 Amps

Performance Data:							
GPM	5	10	15	20	30		
ProSeries 150	1" valve						
PSI LOSS	2.9	2.1	1.8	3.0	5.0		
ProSeries 150 1" valve with jar top							
PSI LOSS	3.3	3.9	2.9	3.2	6.1		

Part Number	Description	Ctn Qty	List Price
7101	1" Female thread NPT	12	\$ 43.49
7101-SL	1" Female Slip	12	44.38
7101-J	1" Female Thread Jar Top, NPT	12	43.50
7101-J-SL	1" Female Slip Jar Top	12	44.38



K-Rain® Solenoid Valves



7102 and 7115 Series

Pro Series 150 1 1/2" and 2" Solenoid Valves Feature a removable inlet cap to easily modify the configuration from globe to angle style.

Alternate to Irritrol 216b and 217b.

RAIN

Features:

- Heavy duty, corrosion & UV resistant PVC construction increases the life of the valve.
- External bleed screw with removable metering pin allows for cleaning of the pin without disassembling the valve.
- Manual external bleed screw allows for manual operation in system start-up.
- Manual internal bleed through solenoid allows for manual operation without leaking water.
- Removable inlet cap allows for easy conversion from globe to angle style valve.
- Flow control allows for precise flow adjustment and manual shutoff.
- Captured plunger solenoid allows for the solenoid to be removed without losing the plunger.
- · Heavy duty santoprene diaphragm design improves durability.
- 5 year Limited Warranty.









System Flexibility

Specifications:

• Dimensions: 1 1/2" valve: 8" H x 4 1/4" W x 5 1/2" L 2" valve: 8 7/8" H x 4 7/8" W x 6 1/3" L

Flow range: 5-120 GPM
Pressure Rating: 20-150 PSI
Solenoid: 24 VAC 60 cycle
Inrush Current: 0.4 Amps
Holding Current: 0.2 Amps

Performance Data:									
GPM		20	30	40	50	60	80	100	120
ProSeries ¹	ProSeries 150 1 1/2" valve								
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 ²	150 2" va	alve							
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

Part Number	Description	Ctn Qty	List Price
7115	1 1/2" Female Thread, NPT	6	\$ 168.96
7102	2" Female Thread, NPT	6	221.54





K-Rain® Controllers



RPS46 Series

RPS46 Controller

Designed for residential applications the RPS46 has four individual programs to allow for efficient watering on separate programs.



Features:

- · 4 and 6 station models for residential lawns.
- 4 fully independent programs allowing up to 4 starts per program, maximum of 16 starts per day.
- · Indoor models with external transformer and plug.
- Seasonal adjustment allows adjustment of watering durations from 25% to 150%.
- Rain sensor ready accepts rain sensor signal and is controlled by a bypass switch.
- · Flexible manual operations to run a program, station or test.
- · Battery back-up holds programs during power outages.
- 2 year Limited Warranty.

Specifications:

- Dimensions: 5.7" H x 4.5" W x 1.7" D
- Station run times: 1 min 12 hours 59 min.
- Programs: 4
- Start Times: 4 per program
- · Water Schedules:
 - 7 day calendar w/ individual day selection Odd/Even day or interval watering.
- Rain sensor ready inhibits automatic watering when wet conditions are detected by a rain sensor.
- Master valve / pump start signal.
- Automatic, semi-automatic and single station manual operation.

Electrical Specifications:

- Electrical Power Supply: 110-120 VAC/ 60 Hz/ 230 VAC 50 Hz.
- Electrical Outputs: 24 Volt AC, 0.85 amp.
- To Solenoid Valves: 24 VAC 50/60 Hz 0.5 amp max.
- Total output load must not be exceeded by the valves and pump requirements.
- · Overload protection: Standard 20mm 1 amp fuse.
- Power failure: 9 volt standard alkaline battery maintains clock and programs for up to 2 weeks.
- Wiring: The output circuits should be installed and protected in accordance with wiring rules.

Part Number	Description	Ctn Qty	List Price
3504	4 station, 110 volt external transformer	1	\$ 174.35
3506	6 station, 110 volt external transformer	1	179.00



K-Rain® Controllers



PRO LC Series

Specifications:

- Dimensions: 7" H x 7" W x 3.5" D
- Station run times: 1 sec 6 hours for all stations
- · Programs: 3
- · Automatic Start Times: 4 per program
- Program Water Schedule: Custom (day of the week) Odd or Even (calendar days)

Electrical Specifications:

- Power Input: 110 V AC +/- 10% 60 Hz
- Power Output: 24 V AC, 1.0 amp.
- Power Backup: Lithium coin-cell battery maintains time and date during primary power outages.
- Multi-Valve Operation: Up to 4 24V AC, 7VA solenoid valves.

PRO LC Modular Controller For residential and light commercial applications. Now wifi ready.



The Pro LC is available in fixed 4, 8, or 12 station outdoor models. Compact controllers offer an array of user-friendly features including easy to follow programming, full program screen display, large LCD display, rain/freeze sensor compatibility, seasonal adjust, buried valve locator and more.

Features:

- Patented Full Program Display with one screen shows watering days, start times, stations and special programing.
- Now comes wi-fi ready. Wifi requires the BRIDGE module, sold separately.
- Short Circuit protection identifies and isolates stations with short circuits while programs continue.
- Station delay/overlap programming permits additional time between stations or dual operation for maintenance issues.
- AM/PM or 24 hour clock settings.
- System Test allows a full system check for valve operation.
- · Manual Start allows manual program operation.
- Permanent Memory saves programs during power outages.
- · Location feature aids in locating buried valves.
- · Sensor bypass switch for global override.
- Master valve/pump start relay permits individual station programming.
- Dedicated Sensor enables direct sensor installation for maximum watering control.
- Default programming saves and recalls programs.
- · Permanent day off watering feature.
- Seasonal adjust of watering times from 10-200% conserves water.

Part Number	Description	Ctn Qty	List Price
3104W	4 Station 110V AC internal transformer	1	\$ 287.84
3108W	8 Station 110V AC internal transformer	1	350.34
3112W	12 Station 110V AC internal transformer	1	487.94
3100-BRIDGE	ProLC WIFI bridge	1	272.33



K-Rain[®] Controllers



2000 Series

2000 Series Single Station Controller
Single station controllers stay safe with rain-tight enclosures.

Features:

- 24 hour programmable time dial with multiple start times and a wide variety of timing periods including skip-a-day 14 day program.
- · UL approved components.
- · Perfect for nursery or mist applications.
- 2200 models have 10 minute programmable dial with a wide variety of timing periods in multiples of 1.5, 3 and 6 seconds and multiple start times.
- 2500 models are prewired for easy connection of a rainswitch and allows manual overide of rainswitch from controller face.
- 2520 model allows operation of 24 volt rainswitch and 2 hp 220 volt pump with same controller.
- 2 year Limited Warranty.

Part Number	Voltage Input	Voltage Output	Rating	Ctn Qty	List Price	
2100 Single St	tation Controllers				_	
2110	110 VAC, 60 Hz	110 VAC, 60 Hz	Single Pole, up to 1 HP	6	\$ 275.46	
2112	110 VAC, 60 Hz	110 VAC, 60 Hz	Double Pole, up to 2 HP	6	319.31	
2114	110 VAC, 60 Hz	24 VAC, 30 VA	Built in Transformer	6	312.99	
2120	220 VAC, 60 Hz	220 VAC, 60 Hz	Double Pole, up to 2 HP	6	319.31	
2210	ration Single Station Co 110 VAC, 60 Hz	110 VAC, 60 Hz	up to 1 HP	6	360.43	
2214	110 VAC, 60 Hz	24 VAC, 30 VA	Built in transformer	6	364.65	
2500 Rainswitch Ready Controllers 2510						
2514	110 VAC, 60 Hz	24 VAC. 30 VA	Built in transformer	6	480.49	
2520	220 VAC, 60 Hz	220 VAC, 60 Hz	Double Pole, up to 2 HP	6	415.05	

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K-Rain® Pump Start Relays



1500 Series

1500 Series Pump Start Relays

Features:

- Industrial, rain tight, secure, rustproof industrial grade enclosure ensures long product life and deters tampering. UV resistant and shockproof.
- UL approved components.
- · Large easy access enclosure provides easy accessibility during wiring.
- Enclosure has 8 recessed knock-outs to provide easy connections from any direction.
- 24 or 110 VAC coils for applications up to 10 hp.
- 4 plastic inset cover screws provide extra system security reduces liability and deters tampering.
- 2 year Limited Warranty.

- Dimensions: 7" H x 5" W x 4 5/8" D
- 24 VAC, 60 Hz or 110 VAC, 60 Hz
- · Double pole, single throw

	Model #1522	Model #1521	Model #1552	Model #1551
Inrush:	35 VA	42 VA	60 VA	77 VA
 Sealed: 	7.0 VA, 3 watts	8.5 VA, 3.6 watt	s7 VA, 2.3 watts	10 VA, 4 watts
 Resistance (±10%): 	11 ohms	210 ohms	5.61 ohms	89.5 ohms
Inductive:	20 amp	20 amp	40 amp	40 amp
Resistive:	30 amp	30 amp	50 amp	50 amp
 Input 120 V: 	up to 3 hp	up to 3 hp	up to 3 hp	up to 3 hp
 Input 240 V: 	up to 3 hp	up to 3 hp	up to 5 hp	up to 5 hp



Part Number	Description	Volts	Ctn Qty	List Price
1522	3 hp pump start relay	24 VAC	8	\$ 212.95
1521	3 hp pump start relay	110 VAC	8	340.36
1552	5 hp pump start relay	24 VAC	8	299.06
1551	5 hp pump start relay	110 VAC	8	304.30



K-Rain[®] Rain Sensor



3208 Rain Sensor Features:

- Turns irrigation controllers into water managers by suspending watering during rain and/or freeze periods.
- Weather resistant. Made of UV resistant polymer for outdoor exposure.
- · Maintenance free. No batteries to replace.
- 2 in 1 mounting provides flexible installation with standard flat and gutter mounting.
- HRFS includes a freeze sensor that prevents the system from starting when temperatures drop to 37° F or below.







Part Number	Description	List Price
3208-HRS	Hardwired Rain Sensor	\$ 75.97
3208-HRFS	Hardwired Rain/Freeze Sensor	113.86



K-Rain[®] Indexing Valves



4000 Series

4000 Series Indexing Valves Features:

- Automates multiple zoned residential and small commerical irrigations systems.
- Ideally suited for both city water and pump applications.
- ABS Polymer body construction is high strength, non-corrosive for long product life.
- Available in 4 and 6 outlet models to easily change from two to six watering zones.
- Operates at low 10 gpm at pressures of 25-75 psi.
- Simplicity of design and few moving parts ensures easy maintenance and long life.
- 2 year Limited Warranty.

- ABS polymer construction
- Dimensions: 5 3/4" H x 5 3/4" W
- Flow Range: 10-40 gpm
- Pressure rating: 25-75 psi
- Pressure Loss

4 outlet valve	Flow gpm	10	20	30	40
	PSI loss	2.0	3.0	4.5	6.4
6 outlet valve	Flow gpm	10	20	30	
	PSI loss	2.5	4.5	7.5	

Part Number	Description	Zones	Ctn Qty	List Price
4400	4 outlet index valve	NO cam	8	\$ 163.16
4402	4 outlet index valve	2 zones	8	181.45
4403	4 outlet index valve	3 zones	8	204.05
4404	4 outlet index valve	4 zones	8	210.11
P6107042	2 zone cam only		5	27.41
P6107043	3 zone cam only		5	27.41
P6107044	4 zone cam only		5	27.41
4600	6 outlet index valve	NO cam	8	164.75
4602	6 outlet index valve	2 zones	8	212.00
4603	6 outlet index valve	3 zones	8	212.00
4604	6 outlet index valve	4 zones	8	212.00
4605	6 outlet index valve	5 zones	8	212.00
P6107063	3 zone cam only		5	27.41
P6107065	5 zone cam only		5	27.41
P6107066	6 zone cam only		5	27.41
P6200400	Cam screws - set of 2	per bag	5	3.82



K-Rain[®] Indexing Valves



KR6000 Series

KR6000 Series Indexing Valves Features:

- Automates multiple zoned residential and small commerical irrigations systems with high pressure.
- Recommended for pump fed or high-flow city water systems.
- Metal die-cast body is durable, long lasting and capable of high pressure applications.
- Available in 4 and 6 outlet models to easily change from two to six watering zones.
- Operates at 15 gpm at pressures of 25-150 psi.
- Built-in atmospheric vacuum breaker releases any vacuum created between the pump and valve on shut down.
- 2 year Limited Warranty.



- Die-cast medal valve top/housing, ABS polymer outlets.
- Dimensions: 7" H x 8" W
- Inlet: 1 1/2" threaded NPT connection
- Outlet: Slip and glue connections to 1 1/2" PVC pipe
- Flow Range: 15-150 gpm
- Pressure rating: 25-150 psi
- Pressure Loss

1 1 0 0	ourc Loo	0						
4 outle	t valve	Flow gpm	20	40	60	80	100	
		PSI loss	2.5	3.5	5.0	7.5	10.0	
6 outle	t valve	Flow gpm	20	40	60	80	100	
		PSI loss	3.0	4.0	6.0	9.0	11.0	

Part Number	Description	Zones	Ctn Qty	List Price
KR6402	4 outlet index valve	2 zones	4	\$ 423.86
KR6403	4 outlet index valve	3 zones	4	429.68
KR6404	4 outlet index valve	4 zones	4	434.28
KR6605	6 outlet index valve	5 zones	4	438.44
KR6606	6 outlet index valve	6 zones	4	445.09



Irrigation Solenoid Valves



TFV and TFV-F Series



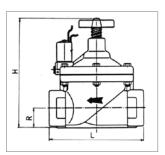
H701

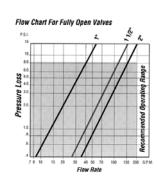
TFV Irrigation Solenoid Valve Features: Rugged glass-reinforced nylon construction.

- For residential, commercial and agricultural irrigation systems only.
- High strength, long life natural rubber diaphragm.
- In line globe design.
- Normally closed valve provides slow and smooth opening and closing.
- Quarter turn downstream bleed lever allows manual operation without external water spills.
- · High flow rate with low head loss.
- Flow control available for exact water flow adjustment.
- · Accurate operation over a wide range of pressure flows.
- In line maintenance No need to remove valve from line for service.
- · Standard and flow control models available.
- Available with standard 24 volt or optional 110 volt solenoid.

TFV Series irrigation solenoid valves are designed and intended for use in turf irrigation applications only. While these valves may operate in applications other than they are intended, the AGI warranty will not apply for those uses.

** NO RETURNS on special order N/O valves.





Specifications:

Voltage	24 Volts AC 3 Watts
Current	Inrush .48 AMPS;
	Holding .24 AMPS
Max. Working Temp	
Max. Operating Pressure	150 PSI
Min. Operating Pressure	10 PSI
Recommended minimum	
pressure differential	7 PSI
Valve Body	Glass reinforced Nylon
Inner Plastic Parts	Acetal
Diaphragm	Natural rubber
Seals	Buna-N
Metal Parts and Screws	Stainless Steel 303

	Size		Flow		Dimen	sions			Ctn	
Part Number	(FPT)	Volts	Control	Weight	L	Н	R	Width	Qty	List Price
TFV100T	1"	24	No	12.5 oz	4 5/16	2 1/2	7/8	3 1/16	20	\$ 174.25
TFV100T110V	1"	110	No	12.5 oz	4 5/16	2 1/2	7/8	3 1/16	20	187.07
TFV100TF	1"	24	Yes	12.5 oz.	4 5/16	4 1/2	7/8	3 1/16	20	190.55
TFV100TF110V	1"	110	Yes	12.5 oz.	4 5/16	4 1/2	7/8	3 1/16	20	203.21
TFV150TF	1 1/2"	24	Yes	2.2 lbs.	6 5/16	7 3/16	15/16	5	5	343.96
TFV150TF110V	1 1/2"	110	Yes	2.2 lbs.	6 5/16	7 3/16	15/16	5	5	356.33
TFV200TF	2"	24	Yes	2.2 lbs,	6 3/4	7 3/8	1 1/2	5	5	446.16
TFV200TF110V	2"	110	Yes	2.2 lbs,	6 3/4	7 3/8	1 1/2	5	5	458.42

Replacement Solenoid Assemblies

H701-24	24 volt	42.39
H701-110	110 volt	65.43

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Irrigation Installation Accessories



94-11



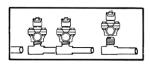
1376-010



HMT70-1G

Irrigation Valve Manifold Tee Features:

- Uniformly spaced installation of manifolds for 1" irrigation valves.
- Designed to be mounted horizontally for electric globe valves or installed with the threaded outlet upright to accommodate angle valves.
- Schedule 40 PVC.



94-11, 1376 Series Manifold Tees:

- · Aligns valves with integral notch and key design on 1376-010.
- · Preset spacing of valves.
- · Sch 40 wall thickness.
- Full flow 1" main line with 1" mpt (94-11) or 1" fpt (1376-010).
- Presure rated at 315 psi, tested to over 1000 psi.

HMT70-1G Manifold Tee:

- 1" IPS threads compatible with all 1" valves.
- Hand tight assembly in series for a uniformly spaced sprinkler manifold.
- Riser always positions correctly, self aligning when tightened until threads no longer show.
- Schedule 40 PVC with Buna N o-ring seal.

Part Number	Description	Ctn Qty	List Price
94-11	1" soc x 1" slip x 1" mpt	50	\$ 7.84
1376-010	1" soc x 1" slip x 1" fpt	6	14.48
HMT70-1G	1" fpt x 1" mpt x 1" mpt	12	11.55



HMRA Adapter Features:

• 1/2" x 3/4" mipt Reducing Adapter

Part Number	Description	Ctn Qty	List Price
HMRA 1/2 x 3/4	1/2" x 3/4" мірт Reducing Adapter	50	\$ 3.00



Irrigation Installation Accessories

P73 Cut-off Nipples Features:

- Patented design 4 in 1 nipple allows choice of length, excess becomes additional useable nipples.
- 100 PSI (max) and 201°F max temperature.
- Green

Poly Cut-off Nipple, Riser Extension and Poly Nipple Features:

· Black poly

SW500 Nipple Extractor Features:

- For 1/2" or 3/4" plastic nipples.
- Easy to remove broken plastic riser from sprinkler pipe and fittings.
- Insert tip and turn.



P73 Series



PCO Series



RE Series



RECO Series



PN Series





SW500C

Part Number	Description	Ctn Qty	List Price
Cut-off Nipples			
P73-1/2	1/2" MIPT x 1/2" MIPT x 6"	50	\$ 1.14
P73-3/4	3/4" mipt x 3/4" mipt x 6"	25	2.73
P73-3/4x1/2	Reducing, 3/4" mipt x 1/2" mipt, 6"	40	2.15

Poly Cut-off Nipple	es es		
PC01/2X4	1/2" x 4" MPT x MPT	500	0.61
PC01/2X6	1/2" x 6" mpt x mpt	500	0.73
PC01/2X3/4X6	1/2" x 3/4" x 6" mpt x mpt	400	1.12
PC03/4X4	3/4" x 4" mpt x mpt	400	0.87
PC03/4X6	3/4" x 6" mpt x mpt	400	1.37

Riser Extensions			
RE1/2X1	1/2" x 1" fpt x mpt	1000	0.41
RE1/2X11/2	1/2" x 1 1/2" fpt x mpt	1000	0.44
REC01/2X4	1/2" x 4" fpt x mpt	500	0.91
REC03/4XSHORT	3/4" x Short fpt x mpt	500	1.06
RECO3/4X4	3/4" x 4" fpt x mpt	400	1.20

Poly Nipples			
PN1/2XCLOSE	1/2" x close	1000	0.31
PN1/2X3/4XCLOSE	1/2" x 3/4" x close	1000	0.44
PN3/4XCLOSE	3/4" x close	1000	0.48
PN1/2X2	1/2" x 2"	1000	0.33
PN1/2X3	1/2" x 3"	500	0.41
PN1/2X4	1/2" x 4"	500	0.47
PN1/2X5	1/2" x 5"	500	0.61
PN1/2X6	1/2" x 6"	500	0.73
PN1/2X8	1/2" x 8"	50	2.83
PN1/2X10	1/2" x 10"	50	2.75
PN1/2X12	1/2" x 12"	50	3.05
PN1/2X18	1/2" x 18"	50	4.29
PN1/2X24	1/2" x 24"	50	5.59

Nipple Extractor	'S		
SW500C	Stub Wrench	50	12.69
•			





Irrigation Installation Accessories

Garden Hose Thread Fittings

• Material: PVC Type I White, or brass



Part Number	Size	Connections	Ctn Qty	List Price
Garden Hose	Thread Fitting	ns - MAI F		
MHT-101	3/4" x 1/2"	MHT x Slip	25/200	\$ 1.31
MHT-102	3/4" x 1/2"	MHT x FIPT	25/200	1.31
MHT-103	3/4"	MHT x Slip	25/200	1.31
MHT-104	3/4" x 1/2"	MHT x MIPT	25/200	1.31
MHT-105	3/4" x 1/2"	MHT x Spigot	25/200	1.31
MHT-106	3/4"	MHT x MIPT	25/200	1.31



Garden Hose	Thread Fitting	gs - FEMALE		
FHT-201	3/4" x 1/2"	FHT x Spigot	25/200	2.00
FHT-202	3/4" x 1/2"	FHT x Slip	25/200	2.00
FHT-203	3/4" x 1/2"	FHT x MIPT	25/200	2.00
FHT-204	3/4"	FHT x MIPT	25/200	2.00
FHT-205	3/4"	FHT x Slip	25/200	2.00
FHT-206	3/4"	FHT x FIPT Swivel	25/200	2.00
BFHT-206	3/4"	FHT x FIPT Swivel BRASS	5/60	29.81
FHT-207	3/4"	FHT x FHT swivel	20/500	2.00
FHT-301	3/4"	FHT CAP	25/200	0.82



Irrigation Installation Accessories



NO LEAD Bronze Float Valve Features:

- NO LEAD bronze body
- · Buna-N Disc
- Heavy Duty
- Tapped for 1/4-20SAE rod
- Threaded outlet
- · Rated at 125 psi
- Third party certified to NSF/ANSI 372.







BFV Series

Part Number	Size	Inlet	Outlet	Tapped	Ctn Qty	List Price
BFVNL1/2	1/2"	1/2" mpt	1/2" mpt	1/4"-20SAE	10/100	\$ 62.12
BFVNL3/4	3/4"	3/4" mpt	3/4" mpt	1/4"-20SAE	10/80	69.14
BFVNL1	1"	1" mpt	1" mpt	1/4"-20SAE	10/40	108.03
·						

Stainless Steel Rods Features:

- · Stainless Steel SAE
- Male thread both ends
- Third party certified to NSF/ANSI 372.





BFVR Series

Part Number	Length	Thread	Fits Valve Size	Ctn Qty	List Price
BFVR8	8"	1/4"-20SAE	1/2" - 1"	50/400	\$ 8.28
BFVR10	10"	1/4"-20SAE	1/2" - 1"	50/300	9.59
BFVR12	12"	1/4"-20SAE	1/2" - 1"	50/300	10.74



BFVFP Series

Plastic Float Features:

- PVC, Corrosion resistant.
- Lightweight
- Up to 175°F
- For open tank service only
- Bronze or NO LEAD bronze threaded connection.
- Third party certified to NSF/ANSI 372.





Part Number	Float Diam.	Buoyancy	Female Connection	Ctn Qty	List Price
BFVFPNL5	5"	2.17 lbs.	1/4"-20SAE	100	\$ 30.16
BFVFPNL6	6"	3.8 lbs.	1/4"-20SAE	100	37.40
BFVFPNL8	8"	9.87 lbs.	1/4"-20SAE	20	66.45



Saddle Tees - Bronze, Plastic for Poly Pipe



DST Saddle Tee

HARVARD CONTRACTOR'S Plastic Saddle Tees for Polyethylene Pipe:

- Heavy duty PVC saddle tee bodies with glass-reinforced nylon T-bolts and nuts.
- Molded barb seal for superior sealing to poly pipe. Barb seals deeper and tighter as the poly pipe pressurizes. No o-rings or gaskets needed.
- Withstands over 400 psi without leaking.
- 2 1/2" length protects seal area if pipe is kinked or damaged near saddle tee.
- · NO FLOW RESTRICTION
- · NOT for use on RIGID PVC Pipe.

Part Number	Pipe Size	Color	Outlet FPT	Bag/Ctn Qty	List Price
HARVARD CONT	TRACTOR'S PI	astic Sadd	le Tees		
DST3/4x1/2	3/4"	Gray	1/2"	10/250	\$ 4.73
DST3/4x3/4	3/4"	Gray	3/4"	10/250	5.38
DST1x1/2	1"	White	1/2"	10/250	5.22
DST1x3/4	1"	White	3/4"	10/250	5.44
DST11/4x1/2	1-1/4"	White	1/2"	10/250	6.94
DST11/4x3/4	1-1/4"	White	3/4"	10/200	7.68



ND Series



HC Series

HARVARD CONTRACTOR'S Plastic Saddle Tee Installation Tool Features:

ND Series Nut Driver:

Glass-reinforced nylon for durability and strength.

HC Series Coring Tool:

- · Spring-loaded self-retracting blade.
- · Cuts a clean, burr-free, sawdust-free hole in seconds.





HBST Saddle Tee

HARVARD BRONZE Saddle Tees for Polyethylene Pipe:

- Bronze (81% copper) body to prevent material breakdown when buried.
- · Stainless steel slotted screws.
- · Leakproof, rubber gasket seal.
- NOT for use on RIGID PVC pipe.

Part Number	Pipe Size	Outlet FPT	Bag/Ctn Qty	List Price
HARVARD Bronze	Saddle Tees			
HBST3/4X3/4	3/4"	3/4 "	200	13.74
HBST11/4X1/2	1-1/4"	1/2"	120	16.46
HBST2X1/2	2"	1/2"	80	26.88



HARVARD





Saddle Tees - PVC for Rigid Plastic Pipe



Clamp-It™ PVC Saddle Tees for Rigid Pipe Features:

- Use for turf and irrigation systems, golf courses, athletic fields.
- Use for water service lines, mines, landfills.
- Provides full and equal support around the entire circumference of the pipe.
- Easy to install hinge and clamping wedge eliminates need for metal screws.
- · Made of high impact type II PVC.
- · EPDM O-ring seal.
- Rated at 200 PSI at 72°F.
- For use on cold water lines only, 2" 8" PVC.





Clamp-It™ PVC Saddle Tee



1. Place saddle on desired location and mark. Drill hole according to Drill Chart and deburr.



2. Place saddle over hole and attach easy clamping hinge around pipe.



3. Apply wedge half way by hand and finish off with a slight tap of a rubber mallett. Ideal for new installations or additions.



4. Saddle should be pressure tested prior to burial to assure system integrity. Long lasting EPDM o-ring seal assures a leak free installation. Note: wedge does not need to be flush with saddle body to seal.

Saddle Drill Sizes: Outlet size	
over 2 1/2" pipe	Drill Size
3/4" IPS Slip & Fipt	3/4"
1" IPS Slip & Fipt	1"
1 1/4" IPS Slip & Fipt	1 1/4"
1 1/2" IPS Slip & Fipt	1 3/8"
* For 2 1/2" IPS saddle with a size must be 1 3/4" due to pi	

Part Number	IPS Pipe Size	Tap Size	Ctn Qty	List Price			
Clamp-It™ PVC Saddle Tees							
421507	1 1/2	3/4 fipt	5	\$ 103.41			
421510	1 1/2	1 fpt	5	103.41			
422007	2	3/4 fipt	5	119.75			
422010	2	1 fipt	5	123.67			
422012	2	1-1/4 fipt	5	123.67			
422015	2	1-1/2 fipt	5	123.67			
432010	2	1 slip	5	110.67			
432012	2	1-1/4 slip	5	110.67			
432015	2	1-1/2 slip	5	110.67			
422507	2-1/2	3/4 fipt	5	123.00			
432510	2-1/2	1 slip	5	150.02			
432515	2-1/2	1-1/2 slip	5	150.02			
432520	2-1/2	2 slip	5	150.02			

See next page for 3" - 8" CLAMP IT Saddle Tees.



Saddle Tees - PVC for Rigid Plastic Pipe

Part Number	IPS Pipe Size	Tap Size	Ctn Qty	List Price
453007	3	3/4 slip	5	\$ 150.02
453010	3	1 slip	5	150.02
453012	3	1-1/4 slip	5	150.02
453015	3	1-1/2 slip	5	150.02
453020	3	2 slip	5	150.02
443007	3	3/4 fipt	5	169.07
443010	3	1 fipt	5	169.07
443012	3	1-1/4 fipt	5	169.07
443015	3	1-1/2 fipt	5	169.07
443020	3	2 fipt	5	169.07
454010	4	1 slip	5	192.25
454015	4	1-1/2 slip	5	192.25
454020	4	2 slip	5	192.25
444007	4	3/4 fipt	5	206.24
444010	4	1 fipt	5	212.91
444012	4	1-1/4 fipt	5	212.91
444015	4	1-1/2 fipt	5	212.91
444020	4	2 fipt	5	212.91
456010	6	1 slip	5	311.28
456015	6	1-1/2 slip	5	311.28
456020	6	2 slip	5	311.28
446007	6	3/4 fipt	5	310.30
446010	6	1 fipt	5	310.30
446012	6	1-1/4 fipt	5	310.30
446015	6	1-1/2 fipt	5	310.30
446020	6	2 fipt	5	299.52
458015	8	1-1/2 slip	5	376.60
458020	8	2 slip	5	364.88
448010	8	1 fipt	5	376.60
448020	8	2 fipt	5	364.88





Clamp-It™ PVC Saddle Tee





Replacement O-rings available for all size PVC Saddle Tees. Contact your customer service representative for sizing and pricing.



Funny Pipe, MARLEX[™] Fittings









Swing Riser Fittings for Funny Pipe

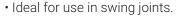
- For use with Funny Pipe and other thick walled 1/2" ID tubing.
- Use in drip irrigation, home sprinkler systems & other residential irr. applications.
- · Spiral barb design allows guicker twist-on installation.
- Made of Celcon® plastic resin providing long term durability.

Part Number	Size	Connections	Ctn Qty	List Price
90° Elbow				
SRE1/2	1/2" x 1/2"	MIPT x funny pipe barb (FPB)	100/1500	\$ 0.45
SRE3/4	3/4" x 1/2"	MIPT x FPB	50/1000	0.45
Male Adapter				
SRMA1/2	1/2" x 1/2"	MIPT x FPB	100/500	0.45
SRMA3/4	3/4" x 1/2"	MIPT x FPB	50/500	0.45
Coupling				
SRC1/2	1/2" x 1/2"	FPB x FPB	50/500	0.40
Tee				
SRT1/2	1/2" x 1/2"	FPB x FPB x FPB	50/250	0.89

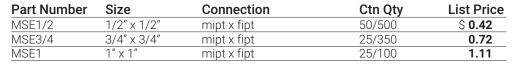
LASCO Swing Riser Fittings for Funny Pipe with Double Helix design

Part Number	Size	Connections	Ctn Qty	List Price
90° Elbow				
3300-005	1/2" x 1/2"	MIPT x funny pipe barb	500	\$ 1.41
3300-007	3/4" x 1/2"	MIPT x funny pipe barb	500	1.41
Male Adapter				
3400-005	1/2" x 1/2"	MIPT x funny pipe barb	100	1.50
3400-007	3/4" x 1/2"	MIPT x funny pipe barb	100	1.50





More than 27% heavier than other elbows, providing added strength & durability.





Transition Fittings for Irrigation Applications

- · Save money on material and labor cost.
- Faster, easier installation.
- Retaining spikes to prevent movement on Dawn fittings.
- · Double helix design on LASCO fittings.



- One piece design to go from Poly to swing/funny pipe.
- Use instead of a combo insert tee and a swing elbow.
- · Available in 3/4" and 1".
- Westlake/LASCO double helix fitting pipe connection.

	., —		
Part Numbe	er Description	Ctn Qty	List Price
LASCO - Po	ly to Swing/Funny Pipe Double Helix Design		
1429-099	3/4" Insert x Swing /Funny Pipe Coupling	10	\$ 3.55
1429-129	1" Insert x Swing /Funny Pipe Coupling	10	3.70
1401-099	3/4" Insert x Swing/Funny Pipe Tee	10	4.04
1401-129	1' Insert x Swing/Funny Pipe Tee	10	4.15







LASCO Double Helix SW Series

www.americangranby.com Ph: 800-776-2266 Fax: 800-729-3299 **W**estlake

Pipe & Fittings



Swing Joint Assemblies, Poly Swing Pipe



SWING JOINT ASSEMBLIES

- · Fully assembled swing assemblies with funny pipe.
- Includes marlex elbow.
- Available in additional lengths or without marlex elbow by special order.

Part Number	Size x Length	Connection	Ctn Qty	List Price
SA125050	1/2" x 1/2" x 12"	mipt x mipt (marlex ell)	50	\$ 2.58
SA125075	1/2" x 3/4" x 12"	mipt x mipt (marlex ell)	50	2.67
SA127575	3/4" x 3/4" x 12"	mipt x mipt (marlex ell)	50	2.60



POLY SWING PIPE

- · Highly flexible.
- Use with swing riser fittings for a flexible swing joint assembly.
- LLDPE for increased flexibility.
- Up to 100 psi working pressure at 72°F.
- · Shrink wrapped coils.



Part Number	Size	Ctn Qty	List Price
PSP50-100	1/2" x 100' roll	1	\$ 159.56



Direct Bury Splice Connectors

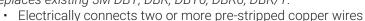
3M® DBO/B-6 and DBR/Y-6 Direct Burial Splice Connector Features:



UL Listed for Direct Burial, Rated for 600V. Replaces existing 3M DBY, DBR, DBY6, DBR6, DBR/Y.



ISO 9002



- Provides moisture seal of the connections for the direct burial.
- Ideal for splicing wires and cables in irrigation and low voltage lighting systems.
- · For residential, commercial, golf andother green industry applications.
- Smaller profile DBO/B-6 Series connectors are used when a larger size range of wires is not needed.
- May be installed above or below ground, inside a valve box or buried next to a valve-in-head sprinkler or light fixture.
- · Not recommended for submersible applications.
- Each kit includes a 3M Performance Plus guick biting wire connector O/B+ or R/Y+ and a high impact, UV resistant polypropylene tube prefilled with moistureresistant grease.
- The gel filled tube includes a lid that compresses the wire insulation when closed. This applies pressure, known as "strain relief" that keeps the connection inside the tube when the wires are pulled-upon. The conenctor tube includes channels for three sets of wires.
- 3M Electrical products are manufactured for AGI in an ISO 9002 facility.



HDBR/Y-6 Splice Tube and Connector



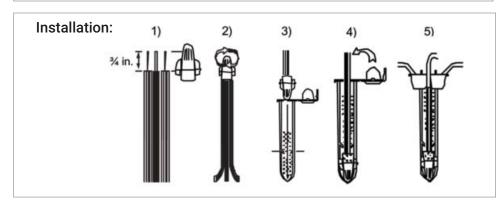
Specifications:

Maximum voltage rating: 600 volts. UL Listed, File No. E102356 UL Listed 98U1 UL Standard 486D Application temperature: 32°F to 120°F Operating temperature: -40°F to 221°F.

Construction:

Tube: Impact and UV Resistant Polypropylene Grease: 711B (DBO) Mineral Oil Based, EG3 (DBR) O/B+ or R/Y+ Connector: Steel Spring, Flame Retardant Insulator

DBO		DBR	
2-3 #16 sol/str	1 #18 to 1-2 #14 sol/str	2 - 7 #18	1-3 #12 w/ 1 #18
2-3 #14 sol/str	1 #18 to 1-2 #12 sol/str	2 - 6 #16	1-2 #10 w/ 1 #18
2 #12 sol/str	1 #16 to 1-2 #14 sol/str	2 - 4 #14	1-3 #12 w/ 1 #16
1 #14 to 1 #12 sol/str	1 #16 to 1-2 #12 sol/str	2 - 4 #12	1-2 #10 w/ 1 #12
		2 - 3 #10	1-2 #14 w/ 1 #18



Part Number	Description	Ctn Qty	Pallet Qty	List Price
CHDBO/B-6	3M® Direct Bury Splice Kit, Bulk	100		\$ 9.32
CHDBR/Y-6	3M® Direct Bury Splice Kit, Bulk	100	7500	5.61
HDBR/Y2-6	3M® Direct Bury Splice Kit, 2 per package	25	-	13.26

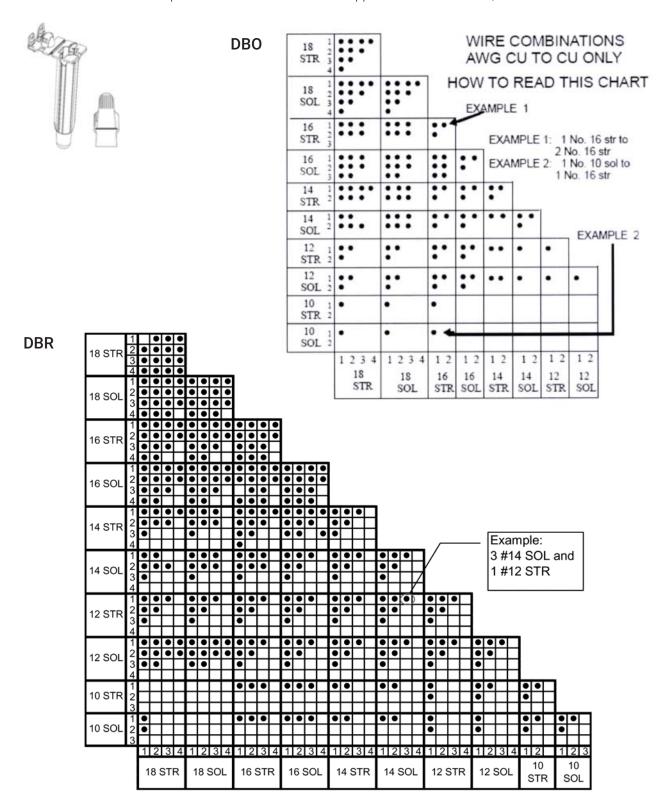
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Direct Bury Splice Connectors

Combination Chart

• The connectors accept a multitude of direct burial copper wire combinations, as listed in the tables below.





Electrical Installation Accessories





SSP314

3M® SSP Series Insulation Displacement Connector Features:

- Used to electrically connect two or three wire ends & insulate the connection.
- #22-#14 AWG range on SSP314. SSP314 is UL and CSA listed.
- #22-#16 AWG range on SSP316.
- · Also used for pigtail 2- and 3-wire splicing.
- Connector provides a moisture-resistant seal and is flame retardant.



Part Number	Description	Ctn Qty	List Price
SSP314	3M® Insulation Displacement Connectors #22-#14 AWG	1000	\$ 3.23
SSP316	3M® Insulation Displacement Connectors #22-#16 AWG	300	3.02



VI 1

CLICK-IT™ Valve Locator Features:

- Water resistant.
- · Compact design.
- For location of solenoid valve quickly and easily.
- · Practical and cost effective.

Part Number	Description	Ctn Qty	List Price
VL1	Click-It Valve Locator	10	\$ 200.73



Electrical Installation Accessories







HARVARD CONTRACTOR'S

Power Cord Features:

- Three prong right angle (115V, 220V) molded plugs.
- 16 gauge, 3 conductor, 13 amp, 125 Volt rating.
- 14 gauge, 3 conductor, 15 amp, 250 Volt rating.
- · Six foot cord length.
- Free end is split, stripped 3/8".
- · SJTW Indoor/Outdoor rated.
- · UL and CSA listed in US and Canada.

PTC163-6 Series





PTC143-6RA220











Part Number	Description	Wire Gauge	Volt Rating	Ctn Qty	List Price
PTC163-6ST	Straight plug cord	16	125 V	50	\$ 23.86
PTC163-6RA	Right angle plug cor	d 16	125 V	50	23.86
PTC143-6RA220	Right angle plug cor	d 14	250 V	50	38.84



HARVARD CONTRACTOR'S

Anchor Kit Features:



- Anchor kits complete with 100 plastic anchors, 100 screws and 1/4" masonry drill bit in a plastic case.
- Plastic gray ribbed anchors with lip design for electronic timer, pump start relay installations. Use with concrete block, brick and wallboard.
- Anchors have internal ribs for better centering of screws, locking lugs against pull and twist. Exterior design prevents fall out in overhead holes.
- Kit available with combination slotted/phillips head or tri-combination, slotted/phillips/hex head #10 x 1" screws.
- Kits complete with 1/4" x 4" masonry drill bit.
- Clear, unbreakable plastic case with molded-in hanging tab.



Head



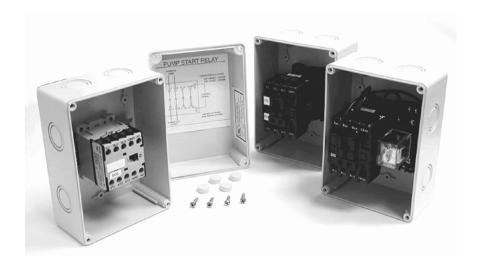
Head



Part Number	Description	Ctn Qty	List Price
AK10CSPR	Ribbed Combo Head	36	\$ 24.55
AK10TCR	Ribbed Tri Combo Head	36	24.63



Pump Start Relays



Pump Start Relay Features:

- Contactors are UL and UL Canada rated.
- Wide coil operating range, +10% to -30% of rated 60 hz coil voltage. Contactors will start on low voltage as follows:

Single phase: 24 VAC coil will pull in at 17 volts.

120 VAC coil will pull in at 84 volts. 230 VAC coil will pull in at 161 volts.

- Finger safe design.
- One normally open auxiliary contact for powering a pilot light or alarm.
- Pressure screw terminals accept 18 through 10 AWG wire.
- Interposing relay units accept 24 through 10 AWG wire.
- Mechanical life up to 10 million operations.
- · Long electrical life.
- PSR567 Series with interposing relay designed for low voltage and low controller output.

Industrial Non-metallic Enclosure Features:

- Gray enclosures are UL, CSA listed.
- Rated NEMA 4X for indoor or outdoor use.
- To maintain 4X enclosure rating use required 4X connectors.
- · Watertight, dust tight, oil tight and rain tight.
- High impact, durable insulated Noryl thermoplastic.
- Neoprene gasketed cover.
- Resistant to shock, corrosion, chemicals and atmospheric agents.
- 8 conduit knockouts (1/2", 3/4" NPT combination.)
- Service temperature -40° to 260°F.
- Stainless steel cover screws (max tightening torque: 7 in-lbs.)
- Sealing plugs provided to waterproof mounting screws.
- 5.9" H x 4.3" W x 3.9" D



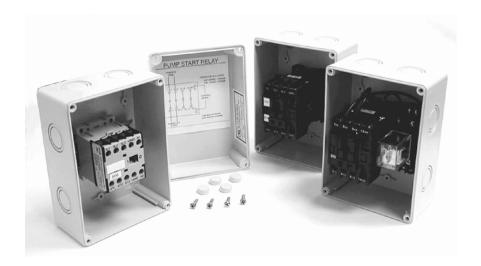








Pump Start Relays



Part	INPUT Volts		TART RELAY oil Power	CONTACTOR Coil		MOTOR Phase*	HP (MAX) Three Phas	se	LIST
Number	VAC	Close	Hold	Voltage	120 v	230 v	200/230v	460 v	PRICE**
Direct Contro	ol Style Co	ontactor							
PSR575-24	24	70 VA	12 VA	24	2 HP	5 HP	7.5 HP	15 HP	206.00
PSR575-230	230	70 VA	12 VA	230	2 HP	5 HP	7.5 HP	15 HP	228.43

Notes:

1. Direct Control Style: The **input volts** must match the controller output voltage.

The **contactor coil voltage** must match the controller voltage.

2. Interposing Relay Style: The **input volts** must match the controller output voltage.

The **contactor coil voltage** must match the controller voltage.

3. VA=Volt Amps. To determine the operating amperage needed by the coil, divide the VA by the controller output voltage.

* Single Phase systems require **motor overload protection** within the motor.

** Three phase systems: May require **motor overload protection** within the motor. For proper **overload protection** consult the NEC (National Electrical Code) and local building codes before installation.



Valve Boxes





Valve Box Features:

- Bodies made from structural polyolefin.
- Covers made with UV inhibitors to prevent discoloration and deterioration.
- Nestable for easy storage.
- 10" round and all rectangular boxes include brass insert so bolts may be added for easy lock down.
- ICV cover design, green covers for water applications.





6" Round Economy

Part		Pallet	
Number	Description	Qty	List Price
6" Round Eco with overlapped D109-G	onomy Box oing lip snap-on green cover Box w/ cover	600	\$ 12.36
D109-G	Cover only	1	6.31



6" Round

6" Round Box with overlapping lip snap-on green cover

min o romapi	pgp oap o g. oo oo to.		
107BCH	Box w/ cover	250	14.00
107CH	Cover only	1	7.38
107BCS	Box w/ sewer cover	250	16.43
107BC	ICV Box w/ cover	250	13.09
107C	ICV cover only	800	5.79



10" Round Box

10" Round Box with bayonet twist-on overlapping lip green cover

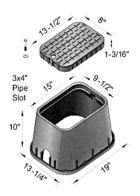
111BC	Box w/ cover	180	34.34
111C	Cover Only	1	16.75
111BCS	Box w/ sewer cover	180	44.55

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Valve Boxes



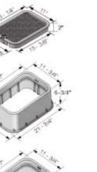


10" x 15" Standard Rectangular Valve Box

· Standard drop-in green cover

Part		Pallet	
Number	Description	Qty	List Price
10" x 15" Rect	angular Valve Box		
D1000-SG	10" x 15" x 10" Box w/ drop in cover	96	\$ 60.31
D1000-SGL	Cover Only	1	22.91

10" Standard Rectangular Box



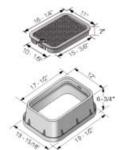


14" x 19" Standard Rectangular Valve Box

• Overlapping lip snap-on green cover

6-34	
12	

Part		Pallet	
Number	Description	Qty	List Price
1 <i>4</i> " v 10" Stan	dard Rectangular Valve Box		
113BC	14" x 19" Box w/ overlapping cover	78	\$ 74.00
113C	Overlapping Cover Only	1	45.98
113-6	Extension - no cover	49	54.01



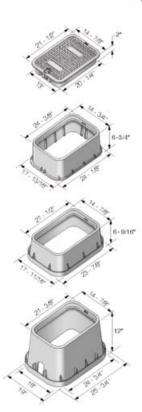
14" x 19" x 6" Tapered Low Profile Rectangular Valve Box

· Overlapping lip snap-on green cover

Part		Pallet	
Number	Description	Qty	List Price
14" x 19" x 6"	Tapered (Low Profile) Rectangular Box		
115TBC	14" x 19" x 6" Tapered Box w/ cover	96	\$ 71.90
115	14" x 19" x 6" Tapered Extension w/ cover	49	69.33



Valve Boxes







13" x 20" Jumbo Rectangular Valve Box

- Overlapping lip snap-on green cover
- "Water Meter" labeled cover available.

Part		Pallet	
Number Description		Qty	List Price
13" x 20" Jum	nbo Rectangular Valve Box		
117BC	13" x 20" Jumbo Box w/ cover	56	\$ 141.99
117C	Jumbo cover only	1	88.70
117CW	Jumbo Black "WATER METER" cover only	1	116.53
117B	13" x 20" Jumbo Box only	56	126.06
117-6	Jumbo Extension - no cover	32	108.35

13" x 20" x 6" Tapered Low Profile Jumbo Valve Box

• Overlapping lip snap-on green cover

Part Number	Description	Pallet Qty	List Price
13" x 20" x 6" T	Tapered Low Profile Jumbo Valve Box		
119TBC	13" x 20" x 6" Tapered Jumbo Box w/ cover	56	\$ 124.21
119	13" x 20" x 6" Tapered Jumbo Extension w/ cove	r 32	186.46





17" x 30" x 18" Pro-Spec Jumbo Rectangular Valve Box

- HDPE green body, green cover.
- Includes stainless steel bolts.
- LID dimensions: 32 1/8" x 19 1/4" outer rim.
- BOX dimensions: 32 1/2" x 19 1/2" top, 18" high, 40 3/8" x 27 1/2" base

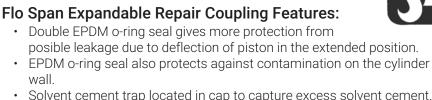
Part		Pallet		
Number	Description	Qty	List Price	
		-		
17" x 30" x 18	" Jumbo Rectangular Box			
326BCB	17" x 30" x 18" Jumbo Box w/ cover	10	\$ 1027.95	

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Expandable Repair Couplings



- Solvent cement trap located in cap to capture excess solvent cement.
- Made from PVC type I grade I material meeting ASTM D-1784
- 118 Series does not have union end.



118 Series

NEW Part Number **IPS Size Body Length** Ctn Qty List Price PVC Flo-Span Expansion Couplings - NO UNION S x SPG 1/2" 7 1/2" 28 \$ 15.91 3/4" 118-07 7 3/4" 24 17.59 1" 118-10 9 1/2" 15 20.39 118-12 10 3/4" 1-1/4 10 38.37 1-1/2" 12 3/4" 118-15 16 42.08 118-20 13 1/2 12 64.32 118-25 2-1/2 18 3/4" 3 99.95 118-30 3" 21" 124.84 118-40 4" 22 3/4" 218.30 QF-6000 6" S x S 26 1/4" 812.24

Poly-Stretch Repair Coupling Features:

- For repair of polyethylene irrigation pipe.
- · Avoid extra digging and buckled pipe.
- · Couplings are made of ABS
- O-ring seal is made of Buna 70
- Pressure rated at 160 psi.
- Designed for irrigation operation pressures of polyethylene pipe and more.

Instructions for Installation:

Part

- · Cut out approximately 4" of pipe where repair is needed.
- · Place clamps over ends of pipe
- Insert end marked with "END FIRST" arrow by pushing and turning at same time.
- · Insert other end by pushing &
- · Place clamps over ribbed ends & tighten.

Dimens	sions:	t D	A E	THE STATE OF THE S	
	Α	В	С	D	Ε
3/4"	4.0	.575	.820	1.50	5.625
1"	4.0	.770	1.075	1.50	5.625
1 1/4"	5.0	1.109	1.415	1.755	6.70
1 1/2"	5.0	1.310	1.63	1.755	6.70
2"	5.0	1.825	2.125	1.755	6.70

PSC Series
NO LEAD

LEAD-FREE

Number	Description	Ctn Qty	List Price
PSC07	3/4" Poly-stretch coupling	50	\$ 15.97
PSC10	1" Poly-stretch coupling	50	17.00

PS 3 15.97 P. 17.00 PSC12 1 1/4" Poly-stretch coupling 26.66 PSC15 1 1/2" Poly-stretch coupling 25 29.66 PSC20 2" Poly-stretch coupling 20 44.53



Repair Fittings for Sch 40 Pipe

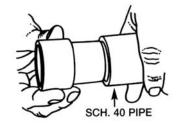


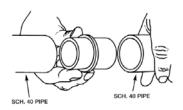
PEX Series



PIC Series







Pipe Extender and Inside Connector Repair Fitting Features:

- · For Sch 40 pipe.
- · Saves labor.
- Invisible after installation.
- · Permanent repair.
- · Insignificant flow restriction.
- · PVC Construction.
- PIC Series connects two pieces of Sch 40 pipe with flush joint.

Description	IPS Size	Ctn Qty	List Price
epair Fitting			
Pipe Extender	1/2"	48	\$ 3.32
Pipe Extender	3/4"	48	4.32
Pipe Extender	1"	48	5.49
Pipe Extender	1 1/4"	48	6.42
Pipe Extender	1 1/2"	48	7.57
Pipe Extender	2"	48	8.57
Pipe Extender	2 1/2"	96	11.63
Pipe Extender	3"	96	16.81
Pipe Extender	4"	48	19.64
	epair Fitting Pipe Extender Pipe Extender	epair Fitting Pipe Extender 1/2" Pipe Extender 3/4" Pipe Extender 1" Pipe Extender 1 1/4" Pipe Extender 1 1/2" Pipe Extender 2" Pipe Extender 2 1/2" Pipe Extender 3"	epair Fitting Pipe Extender 1/2" 48 Pipe Extender 3/4" 48 Pipe Extender 1" 48 Pipe Extender 1 1/4" 48 Pipe Extender 1 1/2" 48 Pipe Extender 2" 48 Pipe Extender 2 1/2" 96 Pipe Extender 3" 96

Inside Connector Repair Fitting							
PIC100	Inside Connector	1"	48	5.49			
PIC150	Inside Connector	1 1/2"	48	7.57			
PIC200	Inside Connector	2"	48	8.57			



Turf Irrigation Pinch Clamps





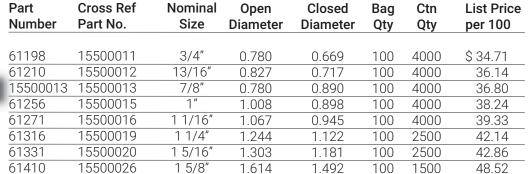
Single Ear Pinch Clamps with Mechanical Interlock Features and Benefits:

- 300 series stainless steel material for excellent corrosion resistance.
- Mechanical interlock provides superior strength.
- Quick, easy installation provides a uniform 360° seal.
- · Permanent seal is tamper proof.
- 61 series clamps are compatible with most clinching tools.
- Fits most popular polyethylene and polybutylene water service lines.
- · Perfect for irrigation applications.

1 11/16"

1 7/8"





1.673

1.909

1.551

1.787

100

100

1500

1500





61001-51



61001-52

61001-51	Standard Jaw Pinch tool	List EACH	
	for all size pinch clamps	10	61.88
61001-52	Side Jaw Pinch tool		
	for all size pinch clamps	10	77.93

To identify proper clamp size:

15500027

15500031

Measure actual OD of the hose on the fitting. Select the nominal size clamp nearest but always larger than the OD of the hose on the fitting.

Quantities:

61425

61485

Bag quantities required.

49.57

53.14



Utility Pumps





91025 & 91330

Submersible Utility Pump Features:

- 1/5 & 1/3 HP motors, 120 v, 60 Hz
- · Corrosion resistant construction.
- 8' waterproof power cord.
- Clog resistant open type impeller.
- Capacities of 26 & 40 gpm.
- 3 year limited warranty.

Specifications:

C UL US

Discharge: 1 1/4" MNPT or 3/4" GHT

Housing & Base: Glass reinforced ABS Impeller: Non-clogging open type Bearing: Permanently lubricating Motors: Permanent split capacitor,

continuous duty, thermally protected

		Gallons per minute at discharge height in feet					Max.	Min.		
Model No.	HP	0'	5'	10'	15'	20'	25'	Head	Amps	List Price
SP91025	1/5	26	21	14	10	7	1	25'	3.6	\$ 261.19
SP91330	1/3	40	34	28	22	12	2	25'	4.1	324.29

Note: Use of smaller diameter pipe, or long runs of pipe, will result in lower flow rates than those shown.