



MP ROTATOR[®]

A Matched Precipitation Sprinkler for Turf & Landscape

**the ideal 2.5-9 m solution
for GOLF APPLICATIONS**





MP ROTATOR®

FACING THE CHALLENGE

Golf course bunker faces, slopes, tee boxes and the areas surrounding greens can be some of the most challenging spots to irrigate. For developers, designers and superintendents, these challenges are compounded by ever greater restrictions on water use for course irrigation as well as by the high expectations of golfers who have little patience for excessively wet or dry areas. For all these reasons, it is imperative that sprinkler heads operate at optimum efficiency — high uniformity, no runoff, no standing water and effective wind resistance. As the most efficient, water-saving sprinkler in its class, the MP Rotator is up to the challenge.

MP ROTATOR — AN EFFICIENT SOLUTION.

The high uniformity, low application rate MP Rotator sets a new standard of performance in the 2.5-9 m range. Its multiple rotating streams apply water more slowly and evenly than conventional sprays and rotors — especially after arc and radius adjustment. MP Rotators help save water, solve problems and do a better job of irrigating.

A WATER CONSERVATION TOOL

- Multiple rotating streams provide superior uniformity
- Automatic matched precipitation even after arc & radius adjustment
- Low precipitation rate reduces runoff on slopes & tight soils

A FLEXIBLE DESIGN TOOL

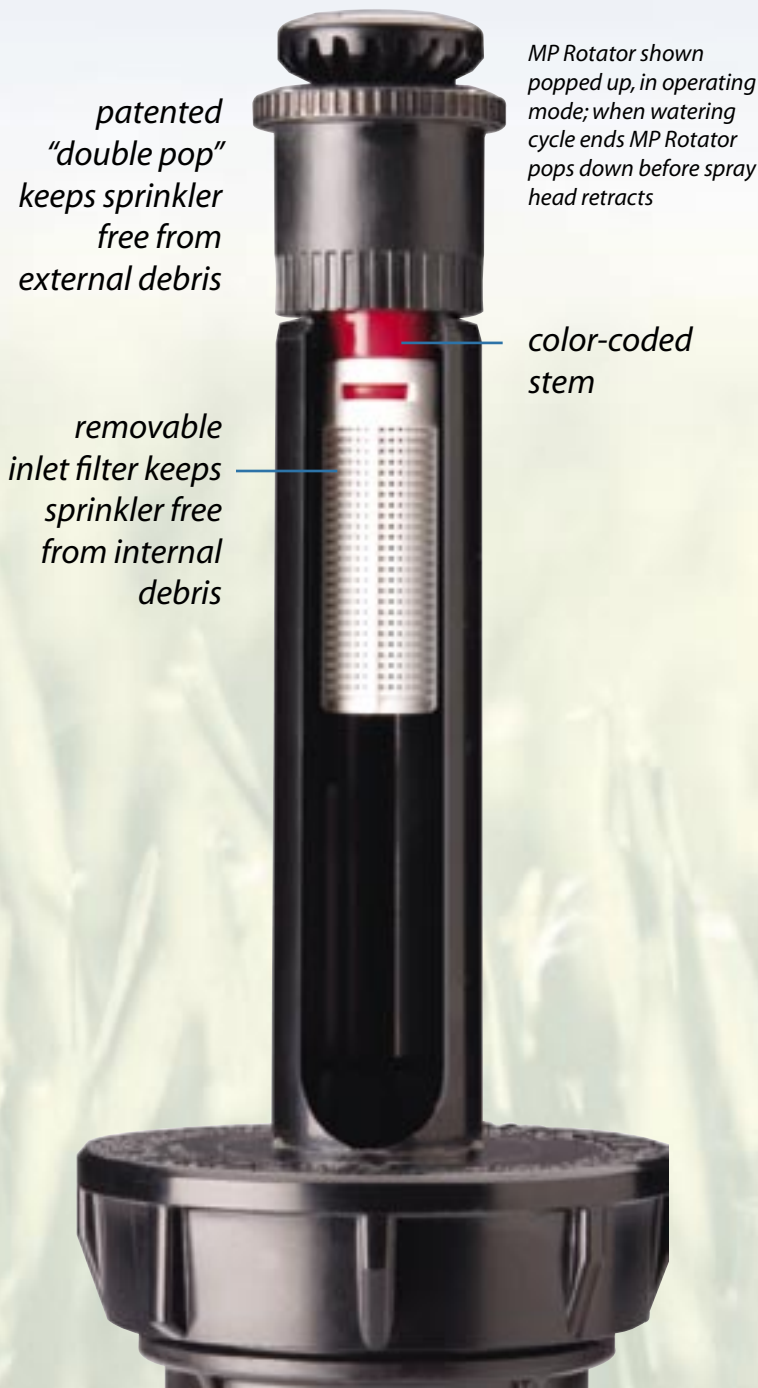
- Ideal for 2.5-9 m spacings — any model can be combined on the same zone
- Eliminates the uncertainty associated with nozzle trees and rotor nozzling

PROVEN DURABILITY & RELIABILITY

- Rotator® Technology proven in demanding agricultural conditions since 1987
- One moving part
- “Double-pop” flushes on start-up and shut-down

SIMPLE AND QUICK ADJUSTMENTS

- Easy arc adjustment
- Easy radius adjustment — up to 25%
- No nozzle to change



KEYS TO EFFICIENCY:

low application rate, high uniformity

A comparison of the drawbacks of conventional sprinklers with the benefits of MP Rotators shows the keys to efficiency are low application rate and high uniformity.

High Application Rate Sprays



Sprays are susceptible to misting, runoff and poor uniformity causing erosion, ponding, crusting and costly maintenance.



Low Application Rate MP Rotators



MP Rotators eliminate runoff, resist wind, and provide superior uniformity.

THE PROOF IS IN THE FLOW RATE

Compared to sprays, MP Rotators throw further and cover more evenly with significantly lower flow rates. (See chart at right).

The design choice becomes yours: more heads per zone and fewer zones or smaller pipe, fewer fittings and valves. Either way, costs are reduced.

MP ROTATOR STREAMS RESIST WIND

The MP Rotator features unique stream types that together, deliver unsurpassed uniformity and wind resistance. The tight, high-energy "distance" streams fight the wind better than any spray or short range rotor while the mid-range and short range streams combine to effectively fill in the pattern. In fact, independent water audits have shown potential water savings of up to 30% when conventional sprays are replaced with MP Rotators.*

	BAR	LPM	radius
MP2000	2.0 0	2.35	5.2 m
15H Spray	2.00	6.88	4.6 m
MP3000	2.75	6.88	9.1 m

NOTE: Data from 180 degree models.

* See *Uniformity and Water Conservation Potential of Multi-Stream, Multi-Trajectory Rotating Sprinklers for Landscape Irrigation* by Kissinger & Solomon. Available at www.mprotator.com.

BENEFITS OF USING MP ROTATORS



Low application rate MP Rotators have many advantages over conventional sprays and rotors. MP Rotators apply water at a slower rate which can be absorbed by a variety of soils, even on slopes. The multiple streams apply water gently and constantly throughout the pattern, eliminating runoff and ponding. MP Rotators maintain highly uniform, matched precipitation performance even when arc and radius are adjusted. Other important MP Rotator benefits include: excellent wind resistance, spacing from 2.5-9 m, much lower flow than regular sprays, and lower cost versus short and mid-range rotors.

STEEP BUNKER FACES

Bunker faces are particularly difficult to keep green due to steep slopes, high sun exposure and wind. Spray heads typically irrigating bunker faces cause runoff, have poor uniformity, and result in costly bunker maintenance. In contrast, highly uniform MP Rotators in this application eliminate runoff and resist wind.



ADVANCED MOISTURE MANAGEMENT AROUND THE GREEN

Areas surrounding greens are designed to be challenging for the sport of golf, making them equally challenging to irrigate. Variation in soil types, undulating terrain, compaction from high traffic, and sun and wind exposure — all add to the challenge. Low spots can become super-saturated, while the knobs continually dry out. Managing and scheduling irrigation to maintain consistent moisture conditions is nearly impossible, sometimes requiring supplemental or hand-watering.

BETTER GERMINATION

When seed germination is called for, sprays and rotors typically over-saturate the top layer of soil, resulting in less than optimum soil moisture conditions. MP Rotators use gentle, multiple streams to provide beneficial soil moisture conditions that promote faster, deeper root growth. For those courses that require seasonal over-seeding, MP Rotators are the sprinklers of choice in the 2.5-9 m performance range.


MP Rotators used in conjunction with traditional golf rotors offer the perfect combination for areas around the green. The MP Rotator, with an 2.5-9 m radius, can cover those micro areas that need supplemental water. The arc setting can be precisely adjusted to fit the area, while maintaining a matched precipitation rate. The solution is simple ... maintain uniform moisture conditions with proper irrigation scheduling while targeting problem areas with the MP Rotator.

All MP Rotators can be combined on the same zone because they maintain matched precipitation — even after arc & radius adjustment.


Arc Setting	MP1000							MP2000							MP3000						
	kPa	bar	Rad.(M)	LPH	LPM	mm/hr■	mm/hr▲	KPA	bar	Rad.(M)	LPH	LPM	mm/hr■	mm/hr▲	KPA	bar	Rad.(M)	LPH	LPM	mm/hr■	mm/hr▲
90°	—	—	—	—	—	—	—	175	1.75	5.2	71	1.18	11	12	175	1.75	7.6	158	2.63	11	13
	200	2.00	3.7	36	0.61	11	12	200	2.00	5.5	74	1.23	10	11	200	2.00	8.2	166	2.77	10	11
	225	2.25	3.8	38	0.63	10	12	225	2.25	5.6	80	1.33	10	12	225	2.25	8.4	175	2.92	10	12
	250	2.50	4.0	41	0.68	10	12	250	2.50	5.8	86	1.43	10	12	250	2.50	8.5	185	3.08	10	12
	275	2.75	4.1	42	0.70	10	11	275	2.75	6.1	91	1.52	10	11	275	2.75	9.1	195	3.25	9	11
	300	3.00	4.3	44	0.73	10	11	300	3.00	6.4	94	1.57	9	11	300	3.00	9.1	203	3.38	10	11
	325	3.25	4.3	45	0.75	10	11	325	3.25	6.6	97	1.62	9	10	325	3.25	9.1	212	3.53	10	12
	350	3.50	4.4	47	0.78	10	11	350	3.50	6.7	101	1.68	9	10	350	3.50	9.1	220	3.67	11	12
180°	—	—	—	—	—	—	—	175	1.75	4.9	133	2.22	11	12	175	1.75	7.6	329	5.48	11	13
	200	2.00	3.7	72	1.20	11	12	200	2.00	5.2	141	2.35	11	13	200	2.00	8.2	353	5.88	10	12
	225	2.25	3.8	76	1.27	10	12	225	2.25	5.3	150	2.50	11	13	225	2.25	8.4	373	6.22	11	12
	250	2.50	4.0	81	1.35	10	12	250	2.50	5.5	160	2.67	11	12	250	2.50	8.5	393	6.55	11	12
	275	2.75	4.1	84	1.40	10	11	275	2.75	5.8	168	2.80	10	12	275	2.75	9.1	413	6.88	10	11
	300	3.00	4.3	88	1.46	10	11	300	3.00	6.1	174	2.90	10	11	300	3.00	9.1	431	7.18	10	12
	325	3.25	4.3	91	1.51	10	11	325	3.25	6.2	182	3.03	9	11	325	3.25	9.1	449	7.48	11	12
	350	3.50	4.4	94	1.56	10	11	350	3.50	6.4	189	3.15	9	10	350	3.50	9.1	466	7.77	11	13
210°	—	—	—	—	—	—	—	175	1.75	4.9	155	2.58	11	12	175	1.75	7.6	384	6.40	11	13
	200	2.00	3.7	85	1.41	11	13	200	2.00	5.2	165	2.75	11	13	200	2.00	8.2	411	6.85	10	12
	225	2.25	3.8	89	1.48	10	12	225	2.25	5.3	175	2.92	11	13	225	2.25	8.4	436	7.27	11	12
	250	2.50	4.0	95	1.58	10	12	250	2.50	5.5	185	3.08	10	12	250	2.50	8.5	459	7.65	11	12
	275	2.75	4.1	98	1.63	10	11	275	2.75	5.8	195	3.25	10	12	275	2.75	9.1	481	8.02	10	11
	300	3.00	4.3	102	1.71	10	11	300	3.00	6.1	205	3.42	10	11	300	3.00	9.1	502	8.37	10	12
	325	3.25	4.3	106	1.76	10	11	325	3.25	6.2	214	3.57	9	11	325	3.25	9.1	523	8.72	11	12
	350	3.50	4.4	109	1.82	10	11	350	3.50	6.4	222	3.70	9	10	350	3.50	9.1	542	9.03	11	13
270°	—	—	—	—	—	—	—	175	1.75	4.9	199	3.32	11	12	175	1.75	7.6	501	8.35	12	13
	200	2.00	3.7	113	1.89	9	11	200	2.00	5.2	212	3.53	11	13	200	2.00	8.2	530	8.83	10	12
	225	2.25	3.8	117	1.95	10	12	225	2.25	5.3	225	3.75	11	13	225	2.25	8.4	560	9.33	11	12
	250	2.50	4.0	121	2.01	10	12	250	2.50	5.5	238	3.97	10	12	250	2.50	8.5	589	9.82	11	12
	275	2.75	4.1	125	2.07	10	11	275	2.75	5.8	249	4.15	10	12	275	2.75	9.1	619	10.32	10	11
	300	3.00	4.3	129	2.13	10	11	300	3.00	6.1	261	4.35	10	11	300	3.00	9.1	646	10.77	10	12
	325	3.25	4.3	133	2.19	10	11	325	3.25	6.2	272	4.53	9	11	325	3.25	9.1	673	11.22	11	12
	350	3.50	4.4	137	2.25	10	11	350	3.50	6.4	282	4.70	9	10	350	3.50	9.1	701	11.68	11	13
360°	—	—	—	—	—	—	—	175	1.75	4.9	265	4.42	11	12	175	1.75	7.6	659	10.98	11	13
	200	2.00	3.7	144	2.40	12	14	200	2.00	5.2	283	4.72	11	13	200	2.00	8.2	703	11.72	10	12
	225	2.25	3.8	153	2.55	11	13	225	2.25	5.3	300	5.00	11	13	225	2.25	8.4	745	12.42	11	12
	250	2.50	4.0	161	2.69	10	12	250	2.50	5.5	317	5.28	10	12	250	2.50	8.5	786	13.10	11	12
	275	2.75	4.1	169	2.81	10	12	275	2.75	5.8	333	5.55	10	12	275	2.75	9.1	825	13.75	10	11
	300	3.00	4.3	177	2.94	10	11	300	3.00	6.1	348	5.80	10	11	300	3.00	9.1	862	14.37	10	12
	325	3.25	4.3	183	3.05	10	11	325	3.25	6.2	362	6.03	9	11	325	3.25	9.1	897	14.95	11	12
	350	3.50	4.4	190	3.17	10	11	350	3.50	6.4	375	6.25	9	10	350	3.50	9.1	931	15.52	11	13

Radius measured on a 10 cm high riser. Precipitation rates are based on head-to-head throw coverage.

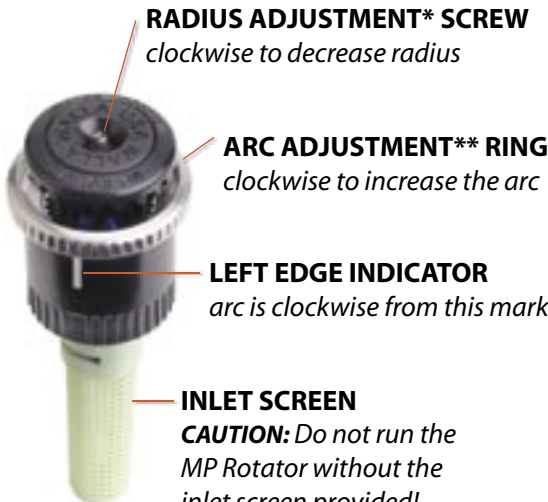
Arc Setting	MP CORNER				
	kPa	bar	Rad.(M)	LPH	LPM
45°	—	—	—	—	—
	200	2.00	3.5	36	0.61
	225	2.25	3.8	38	0.63
	250	2.50	4.0	41	0.68
	275	2.75	4.1	42	0.70
	300	3.00	4.3	44	0.73
	325	3.25	4.3	45	0.75
	350	3.50	4.4	47	0.78
90°	—	—	—	—	—
	175	1.75	3.2	69	1.15
	200	2.00	3.5	76	1.27
	225	2.25	3.8	79	1.31
	250	2.50	4.0	84	1.40
	275	2.75	4.1	86	1.44
	300	3.00	4.3	94	1.57
	325	3.25	4.3	98	1.63
105°	—	—	—	—	—
	175	1.75	3.2	80	1.34
	200	2.00	3.5	89	1.48
	225	2.25	3.8	92	1.53
	250	2.50	4.0	98	1.63
	275	2.75	4.1	102	1.70
	300	3.00	4.3	110	1.83
	325	3.25	4.3	113	1.88



Easy radius adjustment



Easy arc adjustment



- RADIUS ADJUSTMENT* SCREW**
clockwise to decrease radius
- ARC ADJUSTMENT** RING**
clockwise to increase the arc
- LEFT EDGE INDICATOR**
arc is clockwise from this mark
- INLET SCREEN**
CAUTION: Do not run the MP Rotator without the inlet screen provided!

*Built-in slip clutch prevents damage from over adjustment.
**Built-in ratchet permits left edge alignment.

MP ROTATOR® *advantages ...*



VS. ROTORS

- Matched precipitation — any arc, any radius
- Better uniformity after radius reduction
- *no diffuser screw to cause stream distortion*
- Superior performance in windy conditions
- *tight, high-energy streams penetrate the wind*
- Quick, easy arc & radius adjustments
- *no nozzle to change — no nozzle tree hassle*
- *faster installation*
- Lower cost

VS. SPRAYS

- Lower precipitation rate
- *radically less runoff*
- Higher uniformity
- *even after radius reduction*
- Superior close-in water
- Superior wind resistance
- Reduced misting at higher pressure



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This product may be covered by one or more of the following U.S. Patent Nos. 4842201, 4867379, 4898332, 4967961, 5058806, 5288022, 6244521, 6499672, 6651905, 6688539, 6736332 and other U.S. Patents pending or corresponding issued or pending foreign patents.