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Orbitor & Challenger Micro Sprinklers

Technical Specifications Sheet

Multi purpose, energy efficient irrigation

Matching sets of nozzle sizes, rotors, flippers and stakes ideally suited to oranges, mandarins, apples, pears, peaches, cherries, vines, tropical and exotic fruits, avacados, banana plantations, nut crops, nurseries, row crop vegetables, essential oil cultivation, frost control.

Orbitor Anti-Ant
Micro Sprinkler
⅜" BSP Base

Challenger MKII
Micro Sprinkler
⅜" BSP Base

Challenger MKII
Micro Sprinkler
½" BSP Base

Filtration requirements*

Nozzle Colour	White	Maroon	Green	Blue	Grey	Yellow	Red
Nozzle orifice (mm)	1.1	1.3	1.4	1.6	1.8	2.1	2.4
Mesh	>75	>75	75	75	50	50	50
Microns	>200	>200	200	200	300	300	300

* For non-colloidal water quality

XL Jet+ Sprays

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Performance data: Orbitor & Anti-Ant

Product Code			OAA13	OAA14	OAA16	OAA20	OAA22	OAA24	OAA27	Tested
Nozzle Colour			White	Maroon	Green	Blue	Grey	Yellow	Red	A92030/A92046
Nozzle Orifice (mm)			1.4	1.3	1.4	1.6	1.8	2.1	2.4	
	kPa	bar								[psi*]
Flow rate L/hr	100	1.0	46 [12]	56 [15]	72 [19]	101 [27]	125 [33]	153 [40]	196 [52]	14.5
Flow rate L/hr	125	1.25	52	64	81	113	139	172	219	
Flow rate L/hr	150	1.50	55 [14]	70 [18]	90 [24]	125 [33]	150 [40]	185 [49]	240 [63]	21.8
Flow rate L/hr	175	1.75	61	75	95	134	165	202	261	
Flow rate L/hr	200	2.00	65 [17]	80 [21]	101 [27]	143 [38]	176 [46]	215 [57]	278 [73]	29.0
Flow rate L/hr	225	2.25	-	-	-	-	187	227	295	
Flow rate L/hr	250	2.50	-	-	-	-	197	244	311	
Radius (metres)	100	1.0	1.9	2.0	2.0	2.3	2.5	2.7	3.0	
Radius (metres)	150	1.50	2.3	2.3	2.4	2.4	2.6	3.1	3.4	
Radius (metres)	200	2.00	2.4	2.3	2.4	2.7	2.6	3.4	3.6	
Stream Height (m)	150	1.50	0.08	0.08	0.09	0.09	0.09	0.10	0.10	

Performance data: Challenger & MKII

Product Code			SMB13	SMB14	SMB16	SMB20	SMB22	SMB24	SMB27	Tested
Nozzle Colour			White	Maroon	Green	Blue	Grey	Yellow	Red	A92030/A92046
Nozzle Orifice (mm)			1.1	1.3	1.4	1.6	1.8	2.1	2.4	
	kPa	bar								[psi*]
Flow rate L/hr	100	1.0	46 [12]	56 [15]	72 [19]	101 [27]	125 [33]	153 [40]	196 [52]	14.5
Flow rate L/hr	125	1.25	52	64	81	113	139	172	219	
Flow rate L/hr	150	1.50	55 [14]	70 [18]	90 [24]	125 [33]	150 [40]	185 [49]	240 [63]	21.8
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Flow rate L/hr	200	2.00	65 [17]	80 [21]	101 [27]	143 [38]	176 [46]	215 [57]	278 [73]	29.0
Flow rate L/hr	225	2.25	-	-	-	-	187	227	295	
Flow rate L/hr	250	2.50	-	-	-	-	197	244	311	
Radius (metres)	100	1.0	1.9	2.0	2.0	2.3	2.5	2.7	3.0	
Radius (metres)	150	1.50	2.3	2.3	2.4	2.4	2.6	3.1	3.4	
Radius (metres)	200	2.00	2.4	2.3	2.4	2.7	2.6	3.4	3.6	
Stream Height (m)	150	1.50	0.08	0.08	0.09	0.09	0.09	0.10	0.10	

Note: Shaded area denotes recommended operating pressure & discharge

* psi with [US Gallons/Hr]

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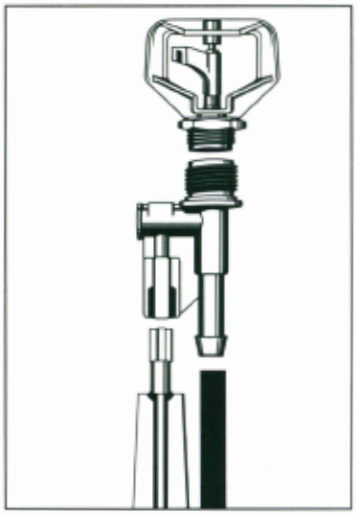
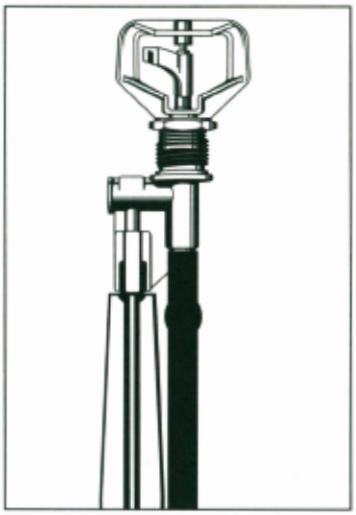
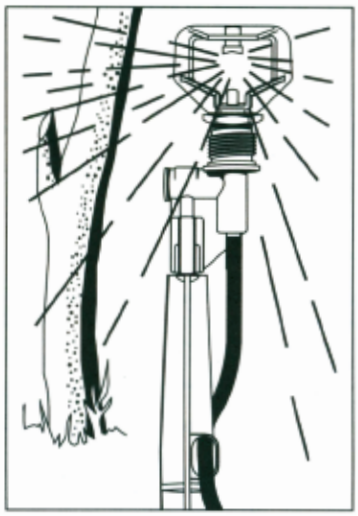
Installation



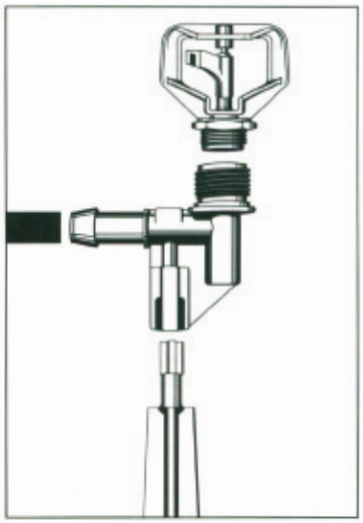
Threaded Stake Head and Combi Spike
5mm barbed bottom entry. Code HD5. Use with 5mm flexible riser tube connection to the lateral.



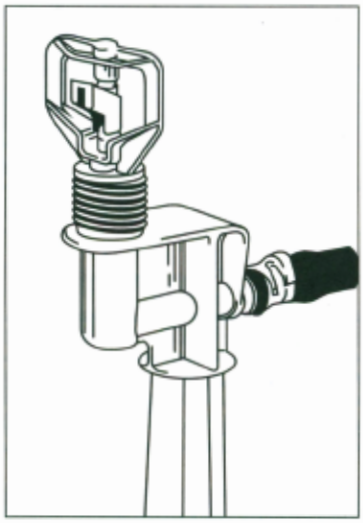
Combi Threaded Stake
5mm barbed bottom entry. Code ST05. Use with 5mm flexible riser tube connection to the lateral.



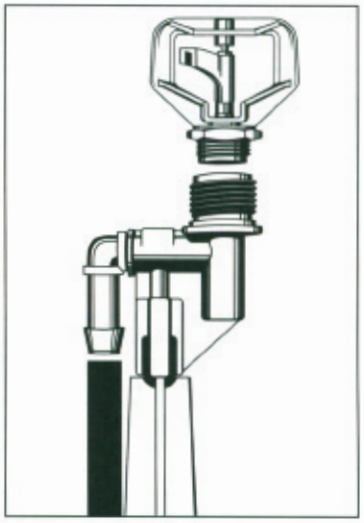
Deflectors
Remove nozzle by screwing a rigid riser and pulling. Removing the flipper push deflector stem into the frame. Re-insert nozzle Deflectors. Short range 360° on frame. Code SMD 360° long range. Code SMD 180° half circle.



Threaded Stake Head and Combi Spike
5mm barbed side entry. Code HD10 & HD13. Use with 10mm or 13mm poly tube connection to the lateral.



Standard Threaded Stake Head
Barbed side entry. Code ST10. Use with 10mm poly tube connection to the lateral.



Swivel Elbow Stake
Code ST10S. Use with 10mm poly tube connection to the lateral. Swivel action elbow ensures vertical stake position, especially with above ground laterals.

RECOMMENDED USE:
Products described above are designed and manufactured for micro irrigation use and therefore have a maximum recommended operating pressure of 300kPa.The products must be used with suitable filtration (where applicable) to avoid blockage or damage to working components.

Please note that the information, opinions, recommendations and advice given on this specification sheet are supplied only to provide an improved understanding of the technical aspects of Philmac products. So far as the law allows, Philmac Pty. Ltd. will not accept liability in respect of any loss or damage of any kind claimed to arise as result of reliance upon any information contained on this specification sheet. Please to our terms & conditions of supply: https://www.philmac.com.au/terms-conditions-supply/.

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