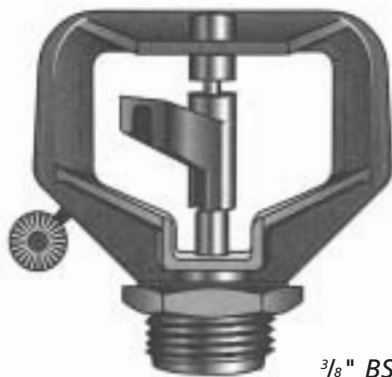


Orbitor & Challenger Micro Sprinklers.

Multi purpose, energy efficient irrigation

Orbitor Anti-Ant
Micro Sprinkler



$\frac{3}{8}$ " BSP Base



Challenger
MkII
Micro
Sprinkler

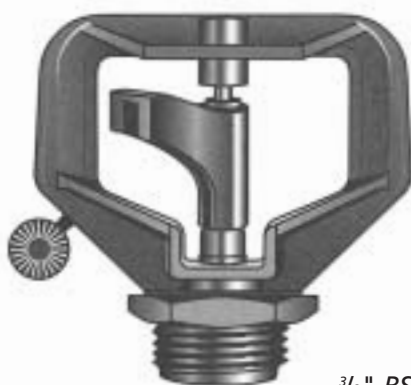
$\frac{1}{2}$ " BSP Base

$\frac{3}{8}$ " BSP Base



Low Angle
Challenger
Micro
Sprinkler

$\frac{1}{2}$ " BSP Base



$\frac{3}{8}$ " BSP Base



TESTED

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

Philmac[®]

The connection you can trust.

S P E C I F I C A T I O N S

- Colour Coded nozzle discharge rates from 55 lph to 240 lph (@ 150kPa)
- New planting and landscape deflectors, watering radius from 0.8m to 2.0m.
- A choice of Sprinkler diameters from 3.8 to 12 metres.
- A choice of standard 3/8" BSP base 1/2" BSP base.
- Plus the independent test proof of performance.

Orbitor - Anti-Ant Performance Data



Product Code			OAA 13	OAA 14	OAA 16	OAA 20	OAA 22	OAA 24	OAA 25	OAA 27	TESTED
Nozzle Colour			White	Maroon	Green	Blue	Grey	Yellow	Olive	Red	A92030 A92046
Nozzle Orifice (mm)			1.1	1.3	1.4	1.6	1.8	2.1	2.2	2.4	
	kPa	bar									psi*
Flow Rate L/hr	100	1.00	46 (12)	56 (15)	72 (19)	101 (27)	125 (33)	153 (40)	167 (44)	196 (52)	14.5
Flow Rate L/hr	125	1.25	52	64	81	113	139	172	186	219	
Flow Rate L/hr	150	1.50	55 (14)	70 (18)	90 (24)	125 (33)	150 (40)	185 (49)	200 (53)	240 (63)	21.8
Flow Rate L/hr	175	1.75	61	75	95	134	165	202	220	261	
Flow Rate L/hr	200	2.00	65 (17)	80 (21)	101 (27)	143 (38)	176 (46)	215 (57)	235 (62)	278 (73)	29.0
Flow Rate L/hr	225	2.25	-	-	-	-	187	227	253	295	
Flow Rate L/hr	250	2.50	-	-	-	-	197	244	266	311	
Radius (metres)	100	1.00	1.9	2.0	2.0	2.3	2.5	2.7	2.7	3.0	
Radius (metres)	150	1.50	2.3	2.3	2.4	2.4	2.6	3.1	3.2	3.4	
Radius (metres)	200	2.00	2.4	2.3	2.4	2.7	2.6	3.4	3.4	3.6	
Stream Height (m)	150	1.50	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.10	

Challenger MkII Performance Data



Product Code			SMB 13	SMB 14	SMB 16	SMB 20	SMB 22	SMB 24	SMB 25	SMB 27	TESTED
Nozzle Colour			White	Maroon	Green	Blue	Grey	Yellow	Olive	Red	A93032 A92046
Nozzle Orifice (mm)			1.1	1.3	1.4	1.6	1.8	2.1	2.2	2.4	
	kPa	bar									psi*
Flow Rate L/hr	100	1.00	46 (12)	56 (15)	72 (19)	101 (27)	125 (33)	153 (40)	167 (44)	196 (52)	14.5
Flow Rate L/hr	125	1.25	52	64	81	113	139	172	186	219	
Flow Rate L/hr	150	1.50	55 (14)	70 (18)	90 (24)	125 (33)	150 (40)	185 (49)	200 (53)	240 (63)	21.8
Flow Rate L/hr	175	1.75	61	75	95	134	165	202	220	261	
Flow Rate L/hr	200	2.00	65 (17)	80 (21)	101 (27)	143 (38)	176 (46)	215 (57)	235 (62)	278 (73)	29.0
Flow Rate L/hr	225	2.25	-	-	-	-	187	227	253	295	
Flow Rate L/hr	250	2.50	-	-	-	-	197	244	266	311	
Radius (metres)	100	1.00	3.4	3.4	3.8	4.0	4.8	4.8	4.9	4.9	
Radius (metres)	150	1.50	3.5	3.7	4.3	4.6	5.0	5.4	5.5	5.5	
Radius (metres)	200	2.00	3.5	3.8	4.4	4.8	5.3	5.7	5.7	5.7	
Stream Height (m)	150	1.50	0.6	0.6	0.7	0.8	0.8	0.9	0.7	0.7	

Note: Shaded area denotes recommended operating pressure & discharge.

* psi with US Gallons/hr.

Low Angle Challenger Performance Data



Product Code						SLA20	SLA22	SLA24	SLA25	SLA27	TESTED
Nozzle Colour						Blue	Grey	Yellow	Olive	Red	A93044 A93053
Nozzle Orifice (mm)						1.6	1.8	2.1	2.2	2.4	
	kPa	bar									psi*
Flow Rate L/hr	100	1.00				101 (27)	125 (33)	153 (40)	167 (44)	196 (52)	14.5
Flow Rate L/hr	125	1.25				113	139	172	186	219	
Flow Rate L/hr	150	1.50				125 (33)	150 (40)	185 (49)	200 (53)	240 (63)	21.8
Flow Rate L/hr	175	1.75				134	165	202	220	261	
Flow Rate L/hr	200	2.00				143 (38)	176 (46)	215 (57)	235 (62)	278 (73)	29.0
Flow Rate L/hr	225	2.25	-	-	-	-	187	227	253	295	
Flow Rate L/hr	250	2.50	-	-	-	-	197	244	266	311	
Radius (metres)	100	1.00	-	-	-	3.4	3.9	4.1	4.8	4.7	
Radius (metres)	150	1.50	-	-	-	3.9	4.8	4.9	5.0	5.5	
Radius (metres)	200	2.00	-	-	-	4.5	5.0	5.5	5.7	6.0	
Stream Height (m)	150	1.50	-	-	-	0.6	0.6	0.6	0.6	0.6	

Note: Shaded area denotes recommended operating pressure & discharge.

* psi with US Gallons/hr.

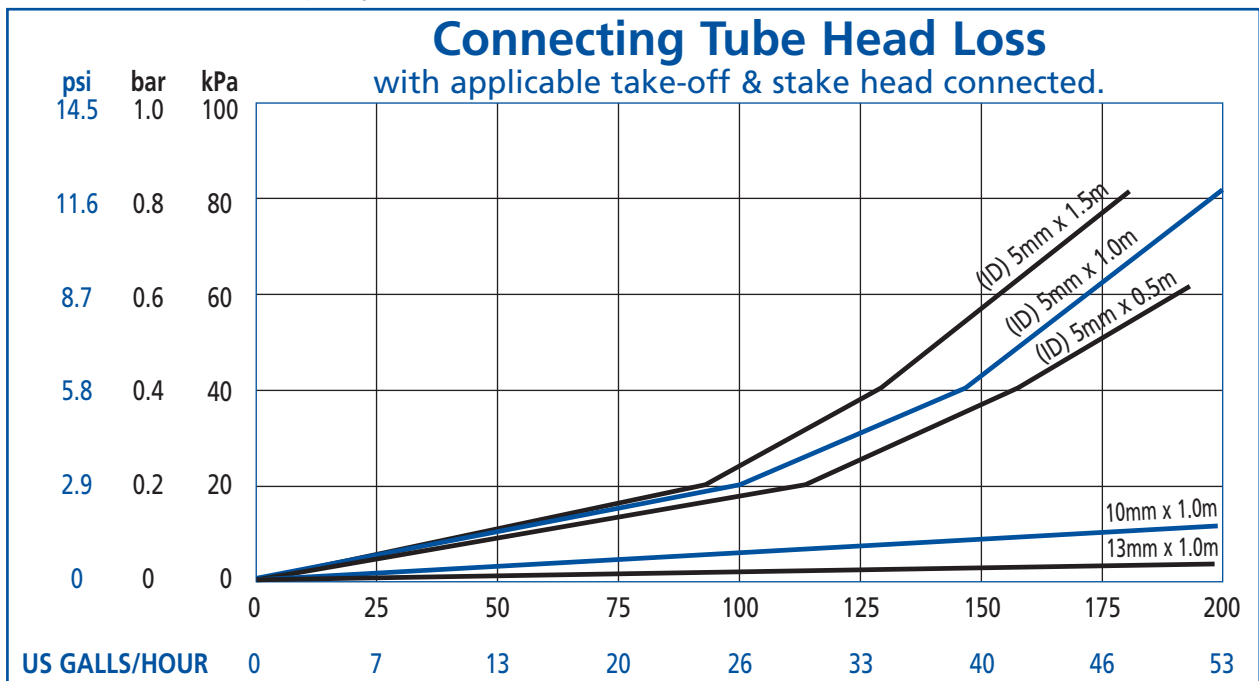
Deflector Performance Data (Radius)

	kPa	bar									
Frame 360° (m)	150	1.50	0.8	0.9	0.9	0.9	1.1	1.2	1.2	1.2	
SMD 360° (m)	150	1.50	1.2	1.2	1.5	2.0	-	-	-	-	
SMD 180° (m)	150	1.50	1.7	2.0	2.0	2.0	-	-	-	-	

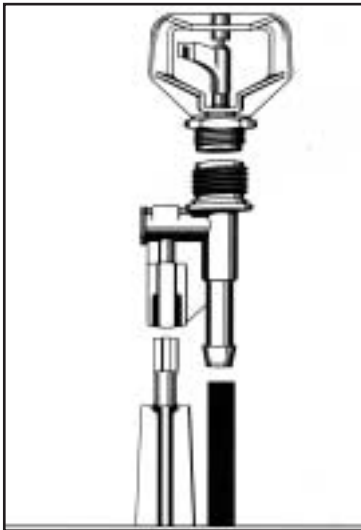
Filtration Requirements*

Nozzle Colour						White	Maroon	Green	Blue	Grey	Yellow	Olive	Red
Nozzle Orifice (mm)						1.1	1.3	1.4	1.6	1.8	2.1	2.2	2.4
Mesh	-	-	-	>75	>75	75	75	75	75	50	50	50	50
Microns	-	-	-	>200	>200	200	200	200	200	300	300	300	300

* For non-colloidal water quality.



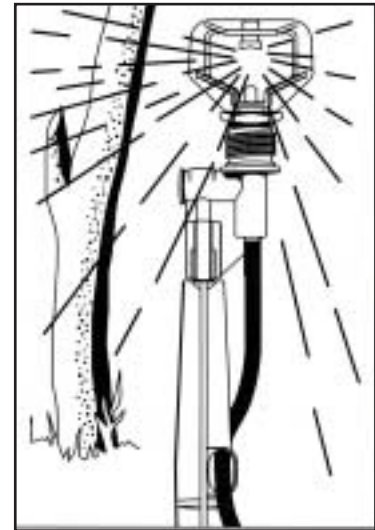
I N S T A L L A T I O N



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



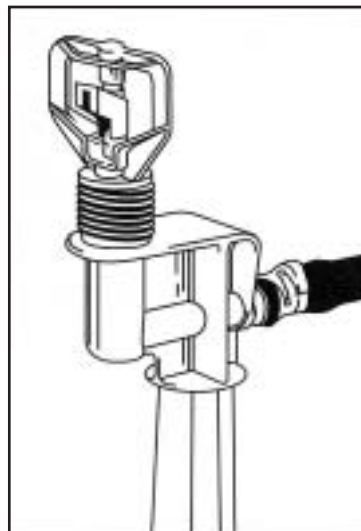
Combi Threaded Stake
5mm barbed bottom entry. Code ST05. Use with 5mm flexible riser tube connection to the lateral.



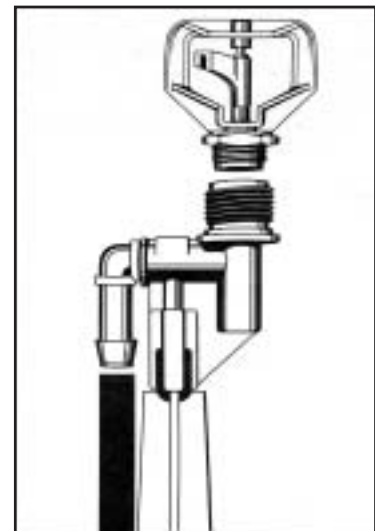
Deflectors
Remove nozzle by screwing a rigid riser and pulling. Removing the flipper, push deflector stem into the frame. Re-insert nozzle. Deflectors: Short range 360° on frame. Code SMD 360° long range. Code SMD 180° half circle.



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



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



Swivel Elbow Stake 10mm,
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 300 kPa. 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 a result of reliance upon any information contained on this specification sheet. Please refer to our Terms and Conditions of Supply of Goods.



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