FOR PWM SPRAYERS **COMBO-JET® 110° Tip-Cap Performance Specifications for PWM Systems**

					ñ		-					-			_										
Please Note: 1. Flow and application rates shown are for water only, applied on 20" spacing. 2. For applications where a uniform pattern is required, recommended pressures are higher than in standard spray systems. 3. Cap color determined by flow rate, as per ISO standard. 4. In order to make this chart easier to use, not all available tip-cap sizes are shown. For specifications for 005, 0067, 20, 25, 30, 40, 50 & 60 size Tip-Caps, visit our website.							ER110-XX TIP SERIES				TI	R11 P S	ERI	ES	MR110-XX TIP SERIES				DR110-XX TIP SERIES				SPRA Par		
5. Sta	5. Standard PWM systems have inherent flow capacity up to 1.5 US Gallons/Min						25-70 PSI				Recommended Pressure: 30-100 PSI				Recommended Pressure: 30-100 PSI				35-100 PSI						
Tip	Flow		Spray	er Speed	Range - k	m/h (Rou	unded)	VMD (Droplet Size				e in µ); %<141µ (Drift %); '				%<200µ (Drift %); %<600µ				(Small Droplets)				Tip-Cap	& Part No.
Cap	Rate	BAR	@ Appli	cation Ra	te (Litres/	Hectare)	@ 50cm		110° El	R Serie	s		110° SI	R Serie	s	· ·	110° M	R Serie	es		110° D	R Serie	s	Tip-Cap	Part #
No.	L/min		50	75	100	125	150	VMD	<141	<200	<600	VMD	<141	<200	<600	VMD	<141	<200	<600	VMD	<141	<200	<600	Stra	iner
	0.28	1.5	1-7	1-4	1-3	1-3	0-2	147	46%	85%	100%	-	-	-	-	i .	<u> </u>	-	-	-	-	-	-	ER110-01	40281-01
	0.32	2.0	2-8	1-5	1-4	1-3	1-3	140	50%	87%	100%				-				-		-			SR110-01	40287-01
												-	-	-		-	-	-		-		-	-		
01	0.39	3.0	2-9	1-6	1-5	1-4	1-3	131	57%	90%	100%	-	-	-	-	-	-	-	-	-	-	-	-	MR110-01	40291-01
	0.45	4.0	2-11	1-7	1-5	1-4	1-4	125	62%	92%	100%	-	-	-	-	· ·	-	-	-	-	-	-	-	DR110-01	
	0.51	5.0	2-12	2-8	1-6	1-5	1-4	120	65%	94%	100%	-	-	-	-	<u> </u>	-	-	-	-	-	-	-	100 Mesh	1 - Green
	0.56	6.0	3-13	2-9	1-7	1-5	1-4	116	68%	95%	100%	-	-	-	-	-	-	-	-	-	-	-	-	4025	1-00
	0.42	1.5	2-10	1-7	1-5	1-4	1-3	151	42%	78%	100%	-	-	-	-	-	-	-	-	-	-	-	-	ER110-015	40281-015
015	0.48	2.0	2-12	2-8	1-6	1-5	1-4	145	46%	80%	100%	218	23%	44%	98%	329	11%	21%	94%	372	7%	14%	91%	SR110-015	40287-015
	0.59	3.0	3-14	2-9	1-7	1-6	1-5	137	53%	84%	100%	195	29%	52%	98%	267	17%	32%	98%	319	11%	22%	94%	MR110-015	40291-015
	0.68	4.0	3-16	2-11	2-8	1-7	1-5	132	57%	87%	100%	180	34%	58%	98%	230	22%	40%	99%	285	13%	27%	96%	DR110-015	
	0.76	5.0	4-18	2-12	2-9	1-7	1-6	127	61%	89%	100%	167	37%	63%	98%	205	26%	47%	99%	262	16%	31%	97%	100 Mesh	
		6.0	4-10	3-13	2-9	2-8	1-0		64%	91%				66%	<u> </u>		20%	47 % 52%		202	17%		97%	4025	
	0.83				<u>.</u>			124			100%	157	40%	00%	98%	187		JZ%	100%	244	i	34%	i —		
	0.55	1.5	3-13	2-9	1-7	1-5	1-4	171	33%	64%	100%	-	-	-	-	-	-	-	-	-	-	-	-	ER110-02	40281-02
	0.64	2.0	3-15	2-10	2-8	1-6	1-5	161	39%	68%	100%	221	22%	43%	99%	322	11%	22%	95%	438	4%	9%	81%	SR110-02	40287-02
02	0.78	3.0	4-19	3-13	2-9	2-8	1-6	148	46%	75%	100%	203	27%	49%	99%	271	16%	31%	97%	383	7%	14%	88%	MR110-02	40291-02
02	0.90	4.0	4-22	3-14	2-11	2-9	1-7	139	52%	79%	100%	190	30%	54%	99%	240	20%	38%	98%	343	9%	18%	91%	DR110-02	40286-02
	1.01	5.0	5-24	3-16	2-12	2-10	2-8	132	56%	83%	100%	180	33%	58%	99%	218	23%	43%	98%	313	10%	21%	93%	50 Mes	h - Red
	1.11	6.0	5-27	4-18	3-13	2-11	2-9	126	59%	86%	100%	172	35%	61%	99%	202	26%	47%	99%	288	11%	23%	94%	4025	0-00
	0.69	1.5	3-17	2-11	2-8	1-7	1-6	193	28%	54%	100%	-	-	-	-	-	-	-	-	-	-	-	-	ER110-025	40281-025
	0.80	2.0	4-19	3-13	2-10	2-8	1-6	187	29%	56%	100%	239	19%	37%	98%	356	8%	17%	90%	441	4%	10%	78%	SR110-025	
	0.97	3.0	5-23	3-16	2-12	2-9	2-8	179	30%	58%	100%	219	23%	44%	98%	314	12%	23%	94%	390	7%	14%	87%	MR110-025	
025		4.0	5-27	4-18	3-14	2-11	2-0	174	31%	59%	100%	205	26%	48%	98%	283	15%	28%	95%	354	9%	17%	91%	DR110-025	
	1.13														<u> </u>				1					1 '	
	1.26	5.0	6-30	4-20	3-15	2-12	2-10	170	31%	61%	100%	195	29%	52%	98%	260	17%	31%	97%	327	10%	20%	93%	50 Mes	
	1.38	6.0	7-33	4-22	3-17	3-13	2-11	166	31%	62%	100%	186	31%	55%	98%	240	18%	34%	97%	304	11%	22%	95%	4025	
	0.82	1.5	4-20	3-13	2-10	2-8	1-7	196	27%	52%	99%	-	-	-	-	·	-	-	-	-	-	-	-	ER110-03	40281-03
	0.95	2.0	5-23	3-15	2-11	2-9	2-8	186	30%	55%	99%	309	11%	22%	94%	403	6%	12%	85%	488	3%	7%	72%	SR110-03	40287-03
03	1.16	3.0	6-28	4-19	3-14	2-11	2-9	172	35%	61%	98%	275	15%	30%	96%	354	9%	18%	91%	437	5%	11%	81%	MR110-03	40291-03
03	1.34	4.0	6-32	4-21	3-16	3-13	2-11	161	39%	64%	97%	250	18%	35%	97%	319	11%	22%	94%	400	6%	13%	86%	DR110-03	40286-03
	1.50	5.0	7-36	5-24	4-18	3-14	2-12	153	41%	67%	97%	231	21%	39%	98%	292	13%	25%	95%	372	7%	15%	88%	50 Mes	h - Red
	1.64	6.0	8-39	5-26	4-20	3-16	3-13	147	43%	69%	96%	215	23%	43%	98%	270	14%	28%	96%	348	8%	16%	90%	4025	0-00
	1.08	1.5	5-26	3-17	3-13	2-10	2-9	240	19%	37%	97%	-	-	-	-	<u> </u>	-	-	-	-	-	-	-	ER110-04	40281-04
	1.25	2.0	6-30	4-20	3-15	2-12	2-10	229	21%	40%	97%	322	10%	21%	93%	429	4%	10%	82%	524	3%	6%	66%	SR110-04	40287-04
	1.23	2.0	7-37	4-20 5-24	4-18	3-15	2-10	229	21%	40%	97%	287	10%	21%	95% 95%	374	4%	15%	90%	467	4%	9%	76%	MR110-04	40287-04
04															<u> </u>									1 1	
	1.77	4.0	8-42	6-28	4-21	3-17	3-14	203	27%	49%	96%	262	17%	32%	96%	335	9%	19%	93%	426	5%	11%	81%	DR110-04	
	1.97	5.0	9-47	6-32	5-24	4-19	3-16	195	29%	52%	96%	242	19%	36%	97%	304	10%	22%	95%	395	6%	13%	85%	50 Mes	
	2.16	6.0	10-52	7-35	5-26	4-21	3-17	188	30%	55%	95%	226	20%	39%	97%	280	11%	24%	96%	369	7%	15%	87%	4025	
	1.33	1.5	6-32	4-21	3-16	3-13	2-11	248	18%	35%	95%	-	-	-	-	<u> </u>	-	-	-	-	-	-	-	ER110-05	
	1.53	2.0	7-37	5-25	4-18	3-15	2-12	233	21%	40%	95%	371	7%	15%	90%	505	3%	6%	68%	543	2%	5%	60%	SR110-05	40287-05
0-	1.88	3.0	9-45	6-30	5-23	4-18	3-15	213	26%	45%	95%	324	11%	22%	93%	447	5%	10%	78%	505	3%	6%	68%	MR110-05	40291-05
05	2.17	4.0	10-52	7-35	5-26	4-21	3-17	200	29%	50%	95%	291	14%	27%	95%	405	6%	13%	83%	478	3%	7%	72%	DR110-05	
	2.43	5.0	12-58	8-39	6-29	5-23	4-19	190	31%	53%	95%	265	16%	31%	96%	373	7%	15%	86%	457	4%	8%	75%	50 Mes	
	2.66	6.0	13-64	9-43	6-32	5-26	4-21	183	33%	55%	95%	244	17%	34%	97%	346	8%	17%	88%	440	4%	9%	78%		0-00
			7-37	5-25	4-19			285	13%		94%	-	-	-	-	- 340		- 17/0	- 00	- 440			-	ER110-06	
	1.56	1.5			<u>.</u>	3-15	2-12	i		27%	1				<u> </u>							<u> </u>			
	1.80	2.0	9-43	6-29	4-22	3-17	3-14	270	16%	31%	94%	443	4%	10%	80%	527	3%	6%	63%	587	2%	4%	53%	SR110-06	
06	2.21	3.0	11-53	7-35	5-27	4-21	4-18	249	20%	37%	94%	380	8%	16%	88%	481	4%	8%	73%	536	2%	5%	63%	MR110-06	
	2.55	4.0	12-61	8-41	6-31	5-24	4-20	234	22%	41%	95%	335	10%	21%	92%	447	4%	10%	78%	500	3%	7%	68%	DR110-06	
	2.85	5.0	14-68	9-46	7-34	5-27	5-23	223	24%	44%	95%	301	12%	25%	94%	422	5%	11%	82%	472	3%	7%	72%	50 Mes	
	3.12	6.0	15-75	10-50	7-37	6-30	5-25	213	26%	46%	95%	272	14%	28%	95%	400	5%	12%	84%	449	4%	8%	75%	4025	0-00

Extremely Fine <60

VMD

Volume Median Diameter Size of the median droplet in microns (µ) for a sprayed volume. Half of the volume is made up of droplets smaller than the VMD; half is made up of droplets larger.

Droplet Categories as per ASABE S572.1 Classification (2009-current) Very Fine Fine Medium Coarse Very Coarse **Extremely Coarse** 60-105µ 106-235µ 236-340µ 341-403µ 404-502µ

% <141µ

% Driftable Fines Percentage of volume which is likely to

drift. 141 μ is now replacing 200 μ as the

new standard for driftable fines.

% **<200**µ

% Driftable Fines Percentage of volume which is likely to drift. 200µ is shown for reference. 141µ is used as the new standard for driftable fines.

503-665µ % **<600**µ

% Useful Droplets Percentage of volume which is made up of 'useful' droplets. As the distribution of useful droplets lowers, coverage is reduced.

Ultra Coarse >665µ

Strainer Mesh & Tips

Recommended Strainer mesh Mesh of strainer determined by the size of a tip. For larger tips (08+), strainers are not required. For PWM systems, typically 80 mesh inline strainers are used as well.

FOR PWM SPRAYERS

COMBO-JET® 110° Tip-Cap Performance Specifications for PWM Systems

(Rounded) are) @ 50cm 25 150		each size	ER110-XX TIP SERIES Recommended pressure varies with each size of tip				SR110-XX TIP SERIES Recommended pressure varies with each size of tip				MR110-XX TIP SERIES Recommended pressure varies with each size of tip				FERI ressure var ize of tip	SPRAY TIP PART #s			
	VMD (Droplet Siz				:e in µ)	; %<14	1µ (Dri	ift %); 9	%<200µ (Drift %); %<600µ				(Small Droplets)				Tip-Cap & Part No.		
160	110° ER Series				110° SR Series				110° MR Series				110° DR Series				Tip-Cap	Part #	
20 100	VMD	<141	<200	<600	VMD	<141	<200	<600	VMD	<141	<200	<600	VMD	<141	<200	<600	Stra	iner	
22 4-18	315	15%	28%	92%	494	4%	10%	58%	576	3%	7%	43%	657	2%	4%	34%	ER110-08	40281-08	
27 4-22	278	19%	34%	94%	432	7%	14%	70%	509	5%	9%	57%	593	3%	6%	44%	SR110-08	40287-08	
31 5-26	252	21%	38%	95%	388	8%	16%	77%	461	6%	11%	65%	548	4%	7%	50%	MR110-08	40291-08	
35 6-29 38 6-32	232 215	23% 25%	41% 44%	96% 96%	353 325	9% 11%	18% 19%	81% 84%	424 394	6% 7%	12% 14%	69% 73%	513 485	4% 5%	8% 9%	54% 57%	DR110-08	40286-08	
26 4-22	360	25%	24%	90% 88%	325 532	4%	8%	84% 48%	584	3%	5%	42%	721	2%	9% 3%	26%	FB110-10	40281-10	
32 5-27	322	14%	29%	91%	467	6%	12%	63%	520	4%	8%	53%	669	3%	4%	33%	SR110-10	40287-10	
37 6-31	296	17%	33%	92%	420	8%	14%	71%	474	5%	9%	60%	632	3%	5%	37%	MR110-10	40291-10	
41 7-34	275	19%	36%	93%	384	9%	16%	76%	438	6%	11%	65%	603	4%	6%	40%	DR110-10	40286-10	
45 8-38	258	21%	38%	94%	354	9%	17%	79%	409	6%	12%	68%	580	4%	7%	43%			
30 5-25	433	8%	16%	67%	560	3%	5%	43%	704	3%	3%	23%	706	2%	4%	26%	ER110-125	40281-125	
37 6-31	395	10%	18%	74%	492	4%	9%	58%	638	4%	5%	36%	661	3%	5%	33%	SR110-125	40287-125	
43 7-35	369	11%	19%	79%	444	5%	11%	66%	592	4%	6%	44%	630	4%	6%				
																	DR110-125	40286-125	
									-										
																		40281-15	
									-									40287-15 40291-15	
																		40291-15	
		++		77%													DITT 10-13	40200-10	
	30 5-25 37 6-31 43 7-35 48 8-40 52 9-43 33 6-28 41 7-34 47 8-39 53 9-44	30 5-25 433 37 6-31 395 43 7-35 369 48 8-40 348 52 9-43 331 33 6-28 466 41 7-34 426 47 8-39 398 53 9-44 376	30 5-25 433 8% 37 6-31 395 10% 43 7-35 369 11% 48 8-40 348 12% 52 9-43 331 12% 33 6-28 466 7% 41 7-34 426 9% 47 8-39 398 10% -53 9-44 376 12%	30 5-25 433 8% 16% 37 6-31 395 10% 18% 43 7-35 369 11% 19% 48 8-40 348 12% 20% 52 9-43 331 12% 21% 33 6-28 466 7% 14% 41 7-34 426 9% 16% 47 8-39 398 10% 18% 53 9-44 376 12% 19%	30 5-25 433 8% 16% 67% 37 6-31 395 10% 18% 74% 43 7-35 369 11% 19% 79% 48 8-40 348 12% 20% 81% 52 9-43 331 12% 21% 83% 33 6-28 466 7% 14% 58% 41 7-34 426 9% 16% 66% 47 8-39 398 10% 18% 71% 53 9-44 376 12% 19% 75%	30 5-25 433 8% 16% 67% 560 37 6-31 395 10% 18% 74% 492 43 7-35 369 11% 19% 79% 444 48 8-40 348 12% 20% 81% 407 52 9-43 331 12% 21% 83% 377 33 6-28 466 7% 14% 58% 641 41 7-34 426 9% 16% 66% 581 47 8-39 398 10% 18% 71% 539 53 9-44 376 12% 19% 75% 505	30 5-25 433 8% 16% 67% 560 3% 37 6-31 395 10% 18% 74% 492 4% 43 7-35 369 11% 19% 79% 444 5% 48 8-40 348 12% 20% 81% 407 6% 52 9-43 331 12% 21% 83% 377 7% 33 6-28 466 7% 14% 58% 641 3% 41 7-34 426 9% 16% 66% 581 4% 47 8-39 398 10% 18% 71% 539 5% 53 9-44 376 12% 19% 75% 505 5%	30 5-25 433 8% 16% 67% 560 3% 5% 37 6-31 395 10% 18% 74% 492 4% 9% 43 7-35 369 11% 19% 79% 444 5% 11% 48 8-40 348 12% 20% 81% 407 6% 13% 52 9-43 331 12% 21% 83% 377 7% 15% 33 6-28 466 7% 14% 58% 641 3% 4% 41 7-34 426 9% 16% 66% 581 4% 6% 47 8-39 398 10% 18% 71% 539 5% 8% 53 9-44 376 12% 19% 75% 505 5% 9%	30 5-25 433 8% 16% 67% 560 3% 5% 43% 37 6-31 395 10% 18% 74% 492 4% 9% 58% 43 7-35 369 11% 19% 79% 444 5% 11% 66% 48 8-40 348 12% 20% 81% 407 6% 13% 72% 52 9-43 331 12% 21% 83% 377 7% 15% 75% 33 6-28 466 7% 14% 58% 641 3% 4% 25% 41 7-34 426 9% 16% 66% 581 4% 6% 41% 47 8-39 398 10% 18% 71% 539 5% 8% 51% 53 9-44 376 12% 19% 75% 505 5% 9% 57% <	30 5-25 433 8% 16% 67% 560 3% 5% 43% 704 37 6-31 395 10% 18% 74% 492 4% 9% 58% 638 43 7-35 369 11% 19% 79% 444 5% 11% 66% 592 48 8-40 348 12% 20% 81% 407 6% 13% 72% 556 52 9-43 331 12% 21% 83% 377 7% 15% 75% 527 33 6-28 466 7% 14% 58% 641 3% 4% 25% 689 41 7-34 426 9% 16% 66% 581 4% 6% 41% 642 47 8-39 398 10% 18% 71% 539 5% 8% 51% 608 53 9-44 <	30 5-25 433 8% 16% 67% 560 3% 5% 43% 704 3% 37 6-31 395 10% 18% 74% 492 4% 9% 58% 638 4% 43 7-35 369 11% 19% 79% 444 5% 11% 66% 592 4% 48 8-40 348 12% 20% 81% 407 6% 13% 72% 556 5% 52 9-43 331 12% 21% 83% 377 7% 15% 75% 527 5% 33 6-28 466 7% 14% 58% 641 3% 4% 25% 689 4% 41 7-34 426 9% 16% 66% 581 4% 6% 41% 642 4% 47 8-39 398 10% 18% 71% 539	30 5-25 433 8% 16% 67% 560 3% 5% 43% 704 3% 3% 37 6-31 395 10% 18% 74% 492 4% 9% 58% 638 4% 5% 43 7-35 369 11% 19% 79% 444 5% 11% 66% 592 4% 6% 48 8-40 348 12% 20% 81% 407 6% 13% 72% 556 5% 8% 52 9-43 331 12% 21% 83% 377 7% 15% 75% 527 5% 9% 33 6-28 466 7% 14% 58% 641 3% 4% 25% 689 4% 5% 41 7-34 426 9% 16% 66% 581 4% 6% 41% 642 4% 6% 47	30 5-25 433 8% 16% 67% 560 3% 5% 43% 704 3% 3% 23% 37 6-31 395 10% 18% 74% 492 4% 9% 58% 638 4% 5% 36% 43 7-35 369 11% 19% 79% 444 5% 11% 66% 592 4% 6% 44% 48 8-40 348 12% 20% 81% 407 6% 13% 72% 556 5% 8% 49% 52 9-43 331 12% 21% 83% 377 7% 15% 75% 527 5% 9% 53% 33 6-28 466 7% 14% 58% 641 3% 4% 25% 689 4% 5% 26% 411 7-34 426 9% 16% 686 581 4% 6	30 5-25 433 8% 16% 67% 560 3% 5% 43% 704 3% 3% 23% 706 37 6-31 395 10% 18% 74% 492 4% 9% 58% 638 4% 5% 36% 661 43 7-35 369 11% 19% 79% 444 5% 11% 66% 592 4% 6% 44% 660 48 8-40 348 12% 20% 81% 407 6% 13% 72% 556 5% 8% 49% 606 552 9-43 331 12% 21% 83% 377 7% 15% 75% 527 5% 9% 586 333 6-28 466 7% 14% 58% 641 3% 4% 25% 689 4% 5% 567 57 56 5% 	30 5-25 433 8% 16% 67% 560 3% 5% 43% 704 3% 3% 23% 706 2% 37 6-31 395 10% 18% 74% 492 4% 9% 58% 638 4% 5% 36% 661 3% 43 7-35 369 11% 19% 79% 444 5% 11% 66% 592 4% 6% 44% 630 4% 48 8-40 348 12% 20% 81% 407 6% 13% 72% 556 5% 8% 49% 606 4% 552 9-43 331 12% 21% 83% 377 7% 15% 75% 527 5% 9% 586 5% 333 6-28 466 7% 14% 5% 641 3% 4% 25% 689 4% 	30 5-25 433 8% 16% 67% 560 3% 5% 43% 704 3% 3% 23% 706 2% 4% 37 6-31 395 10% 18% 74% 492 4% 9% 58% 638 4% 5% 36% 661 3% 5% 43 7-35 369 11% 19% 79% 444 5% 11% 66% 592 4% 6% 44% 630 4% 6% 48 8-40 348 12% 20% 81% 407 6% 13% 72% 556 5% 8% 49% 606 4% 7% 552 9-43 331 12% 21% 83% 377 7% 15% 527 5% 9% 53% 586 5% 8% 333 6-28 466 7% 14% 5% 641 3%	30 5-25 433 8% 16% 67% 560 3% 5% 43% 704 3% 3% 23% 706 2% 4% 26% 37 6-31 395 10% 18% 74% 492 4% 9% 58% 638 4% 5% 36% 661 3% 5% 33% 43 7-35 369 11% 19% 7% 444 5% 11% 66% 592 4% 6% 44% 630 4% 6% 37% 48 8-40 348 12% 20% 81% 407 6% 13% 72% 556 5% 8% 49% 606 4% 7% 40% 52 9-43 331 12% 21% 83% 377 7% 15% 527 5% 9% 53% 586 5% 8% 43% 26% 22% 24% 4%	30 5-25 433 8% 16% 67% 560 3% 5% 43% 704 3% 3% 23% 706 2% 4% 26% ER110-125 37 6-31 395 10% 18% 74% 492 4% 9% 58% 638 4% 5% 36% 661 3% 5% 33% SR110-125 43 7-35 369 11% 19% 79% 444 5% 11% 66% 592 4% 6% 44% 630 4% 6% 37% MI10-125 48 8-40 348 12% 20% 81% 407 6% 13% 72% 556 5% 8% 49% 606 4% 6% 410 110-125 52 9-43 331 12% 21% 83% 377 7% 15% 527 5% 9% 53% 586 5% 8% 43% 1	

*Droplet categories: The above chart is based on the ASABE Standard 572.1. Refer to chemical label to verify which ASABE S572.1 categories should be followed.

Extremely Fine <60

Recommended Pressure

Pressure Range for Tips For PWM systems, the pressure loss through system components is accounted for in these charts. Specified pressure in chart is boom pressure. Additional solenoid wear may occur for pressures above 60PSI

Very Fine Fine 60-105µ 106-235µ 236-340u

Droplet Categories as per ASABE S572.1 Classification (2009-current) Medium Coarse Very Coarse 341-403u

ASABE Droplet Categories

Color Classifications The colors associated with the VMD is based on an ASABE standard for droplet size categorization. See categories and colors above. Refer to wilger.net for older ASABE standard S572.

Duty Cycles Effective run time of PWM

Since PWM systems hold pressure constant, they adjust rates by the length of time the solenoids stay open (the duty cycle). Duty cycle is calculated by dividing your current speed into the max speed for that tip, Ideal operating duty cycles are 40-100%

Extremely Coarse 404-502u 503-665µ

Pre-orifice Length & Color

Differences in tip pre-orifices Pre-orifice color and length vary for some tips. SR-series pre-orifices will vary in color from the color of the cap. MR & DR pre-orifices will be the same color as the cap. Pre-orifices for high volume tips use a longer pre-orifice.

Ultra Coarse >665u

Using Tip Wizard

Same search, different results PWM systems use plumbing components that cause more in pressure loss when compared to standard spray systems. Tip Wizard accounts for those pressure drops, and also provides crucial duty cycle information as well

Multi-tip spraying with Pulse Width Modulation Technology

Pulse Width Modulation (PWM) provides the ability to hold tip pressure constant; therefore, holding the droplet size constant as well. This holds true with multi-tip spraying as well.



As a standard, PWM systems use one solenoid per nozzle body. For best utilization of PWM technology, a dual tip adapter [left] is used.

Spraving with two seperate outlets [right] is possible, but the outlet not controlled by a solenoid will be controlled by the auto-rate controller.

To use Tip Wizard to help select a multi-tip setup, simply split the total flow rate into two (or more) parts and ensure the tips selected can operate within the same duty cycle range and pressures.



Example Rate: 100 Litres/Hectare; Speed: 24 KPH; Nozzle Spacing: 50cm; Target Droplet Size: 400 microns (Systemic Herbicide)

If the total application is 100L/Ha, the effective rates per tip must add up to 100L/Ha. For simplicity, split the flow in equal parts; for example, two tips applying 50L/Ha. Consult the tip charts. A suitable choice might be the MR110-04 at ~2.8BAR with an effective volume of 50L/Ha per tip. The droplet size is right around 400µ, and travel speed at max speed (24MPH) is roughly at a 70% duty cycle.