

# HYPRO<sup>®</sup> NOZZLES

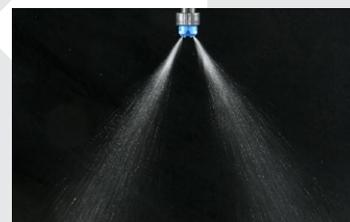
## GUARDIAN AIR<sup>™</sup> TWIN

A TWIN FINER AIR-INDUCTION NOZZLE IN INTEGRAL FASTCAP<sup>™</sup>



### FEATURES & BENEFITS

- Produces the smallest air-included droplets\* for more drops per litre and the best possible spray coverage from an air-induction nozzle
- Two 110° flat fan sprays directed at 30° inclines, one forward and the other backward
  - Improves coverage on upright targets and soil clods
  - 30° incline helps penetrate spray into denser crop or weed canopies
- The twin outlet orifices of Guardian AIR<sup>™</sup> Twin are similar in size to those of a single flat fan nozzle of the same colour, so they are no more susceptible to blockage
- 50-75% drift reduction at lower pressures
  - LERAP 2 ★ and JKI 50% drift reduction level
- New style integral FastCap<sup>™</sup> twists smoothly onto standard EF3 nozzle holders including Hypro's ProFlo<sup>™</sup>, Arag and Teejet
- Dust is sealed out by the locking ring to reduce contamination when removing the nozzle from the sprayer
- Compact design to reduce the risk of impact damage
- Nozzle filter can be fitted as an option where required



Incorporates the spray technology of the proven Guardian AIR<sup>™</sup> nozzle to provide an excellent balance between drift reduction and spray coverage.



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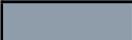
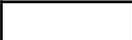
## GUARDIAN AIR™ TWIN

### NOZZLE SELECTION GUIDELINES

Guardian AIR™ Twin nozzles are recommended for a much broader range of applications than traditional air-induction nozzles because they produce more droplets and better spray coverage at normal spraying pressures. Guardian AIR™ spray technology has been rigorously tested and proven on a wide range of applications in both independent field trials and farmer comparisons.

For Guardian AIR™ Twin nozzles spray quality is consistent across all nozzle sizes sizes when used at the same pressure.

	CROP STAGE AND CHEMICAL TYPE:	TARGET:	APPLICATION CHALLENGE:	FLAT FAN		AIR INDUCTION		
				MEDIUM		FINER		COARSER
								
			VP	VPTECH™ 30° INCLINE	GUARDIAN AIR™ 10-13° INCLINE	GUARDIAN AIR™ TWIN 30° INCLINE	ULD / DRIFT BETA	
AUTUMN	SOIL-ACTING PRE OR EARLY POST-EM HERBICIDES	SOIL	EVEN COVERAGE OF SOIL CLOUDS					
	INSECTICIDES	SMALL OSR OR CEREAL PLANTS	SMALL TARGET AREA TO WET					
	POST-EM SELECTIVE HERBICIDES	SMALL GRASSES (LESS THAN 3 LEAVES)	SMALL TARGET AREA, WEED SHADING					
SPRING	POST-EM SELECTIVE HERBICIDES	GRASSES (MORE THAN 3 LEAVES)	VERTICAL TARGET ORIENTATION					
	POST-EM SELECTIVE HERBICIDES	BROAD-LEAVED WEEDS (UP TO 2 CM ACROSS)	SMALL TARGET AREA, CONSIDER WEED SHADING					
	POST-EM SELECTIVE HERBICIDES	BROAD-LEAVED WEEDS (2 - 5 CM ACROSS)	CONSIDER WEED SHADING					
	POST-EM SELECTIVE HERBICIDES	BROAD-LEAVED WEEDS ( MORE THAN 5 CM ACROSS)	PENETRATE INTO CROP CANOPY					
	EYESPOT FUNGICIDES AND PLANT GROWTH REGULATORS	CROP STEM AND LOWER LEAVES	PENETRATION TO BASE OF CROP					
	CEREAL FUNGICIDES T0, T1, T2	CROP LEAVES AND LEAF AXILS	PENETRATE CROP CANOPY					
	OSR FOLIAR FUNGICIDES	CROP LEAVES	COVERAGE FROM TOP TO BASE					
SUMMER	POTATO BLIGHT FUNGICIDES	CROP LEAVES AND STEMS	KEEP WATER RATES UP FOR GOOD COVERAGE					
	EAR FUNGICIDES (T3) AND APHICIDES	CROP EAR	CONTACT ACTION IMPORTANT					
	DESICCATION WITH CONTACT ACTING HERBICIDE	CROP LEAVES AND STEMS	KEEP WATER RATES UP FOR GOOD SPRAY COVERAGE					
	GLYPHOSATE	LARGER WEEDS AND CROP DESICCATION	NOT OVER-WETTING LEAF					

Best for efficacy		Urgent spraying only	
Acceptable efficacy		Not suitable	

Spray quality varies with pressure. The application guidelines shown above are at 3 bar pressure, 10-16 kph. At these pressures finer air induction nozzles such as Guardian AIR™ Twin typically reduce spray drift by 50%, whilst coarser air induction nozzles such as DriftBETA and ULD typically reduce drift by over 75%.

Always refer to the product label or the latest application advice from the agrochemical manufacturer before selecting a spray quality.

# HYPRO® NOZZLES

## GUARDIAN AIR™ TWIN

### PART NO: GAT110-02PK10

Nozzle	Pressure	Flow	Litres/hectare @ Km/h						
	Bar	L/min	6	8	10	12	14	16	18
<b>02</b>	2	0.653	131	98	78	65	56	49	44
	3	0.800	160	120	96	80	69	60	53
	4	0.924	185	139	111	92	79	69	62
	5	1.033	207	155	124	103	89	77	69
	6	1.131	226	170	136	113	97	85	75

### PART NO: GAT110-04PK10

Nozzle	Pressure	Flow	Litres/hectare @ Km/h						
	Bar	L/min	6	8	10	12	14	16	18
<b>04</b>	2	1.306	261	196	157	131	112	98	87
	3	1.600	320	240	192	160	137	120	107
	4	1.848	370	277	222	185	158	139	123
	5	2.066	413	310	248	207	177	155	138
	6	2.263	453	339	272	226	194	170	151

### PART NO: GAT110-025PK10

Nozzle	Pressure	Flow	Litres/hectare @ Km/h						
	Bar	L/min	6	8	10	12	14	16	18
<b>025</b>	2	0.816	163	122	98	82	70	61	54
	3	1.000	200	150	120	100	86	75	67
	4	1.155	231	173	139	115	99	87	77
	5	1.291	258	194	155	129	111	97	86
	6	1.414	283	212	170	141	121	106	94

### PART NO: GAT110-05PK10

Nozzle	Pressure	Flow	Litres/hectare @ Km/h						
	Bar	L/min	6	8	10	12	14	16	18
<b>05</b>	2	1.633	327	245	196	163	140	122	109
	3	2.000	400	300	240	200	171	150	133
	4	2.309	462	346	277	231	198	173	154
	5	2.582	516	387	310	258	221	194	172
	6	2.828	566	424	339	283	242	212	189

### PART NO: GAT110-03PK10

Nozzle	Pressure	Flow	Litres/hectare @ Km/h						
	Bar	L/min	6	8	10	12	14	16	18
<b>03</b>	2	0.980	196	147	118	98	84	73	65
	3	1.200	240	180	144	120	103	90	80
	4	1.386	277	208	166	139	119	104	92
	5	1.549	310	232	186	155	133	116	103
	6	1.697	339	255	204	170	145	127	113

### PART NO: GAT110-06PK10

Nozzle	Pressure	Flow	Litres/hectare @ Km/h						
	Bar	L/min	6	8	10	12	14	16	18
<b>06</b>	2	1.960	392	294	235	196	168	147	131
	3	2.400	480	360	288	240	206	180	160
	4	2.771	554	416	333	277	238	208	185
	5	3.098	620	465	372	310	266	232	207
	6	3.394	679	509	407	339	291	255	226

### PART NO: GAT110-035PK10\*

Nozzle	Pressure	Flow	Litres/hectare @ Km/h						
	Bar	L/min	6	8	10	12	14	16	18
<b>035</b>	2	1.143	229	171	137	114	98	86	76
	3	1.400	280	210	168	140	120	105	93
	4	1.616	323	242	194	162	139	121	108
	5	1.807	361	271	217	181	155	136	120
	6	1.980	396	297	238	198	170	148	132

### PART NO: GAT110-08PK10

Nozzle	Pressure	Flow	Litres/hectare @ Km/h						
	Bar	L/min	6	8	10	12	14	16	18
<b>08</b>	2	2.613	523	392	314	261	224	196	174
	3	3.200	640	480	384	320	274	240	213
	4	3.695	739	554	443	370	317	277	246
	5	4.131	826	620	496	413	354	310	275
	6	4.525	905	679	543	453	388	339	302

Application rates shown are based on tests at 3 bar and 50 cm nozzle spacing. For optimum spray coverage, use at 3 bar. Supplied in packs of 10, use the numbers shown. For individual nozzles delete 'PK10' and add 'A'. NB: GuardianAIR™ Twin nozzles are metered through a single orifice, unlike two individual nozzles fitted in a TwinCap.

## DRIFT REDUCTION CLASSIFICATIONS

Drift reduction	LERAP * ★	LERAP * ★★		
	25-50%	50-75%	Approval #	50%
<b>02</b>	2.25 - 2.5 bar	2.0 - 2.25 bar		
<b>025</b>	2.25 - 2.5 bar	2.0 - 2.25 bar	G-1872	2.0 - 2.5 bar
<b>03</b>	3.0 - 4.0 bar	2.0 - 3.0 bar	G-1874	2.0 - 3.0 bar
<b>035</b>	3.0 - 4.0 bar	2.0 - 3.0 bar		2.0 - 3.0 bar**
<b>04</b>	2.0 - 3.0 bar	-	G-1875	2.0 - 2.5 bar
<b>05</b>	3.0 - 3.5 bar	2.0 - 3.0 bar	G-1876	2.0 - 3.0 bar
<b>06</b>	3.0 - 3.5 bar	2.0 - 3.0 bar	G-1877	2.0 - 4.0 bar
<b>08</b>	3.0 - 4.0 bar	2.0 - 3.0 bar	G-1878	2.0 - 6.0 bar

- ★★★ 3-star LERAP - At least 75% reduction in drift
- ★★ 2-star LERAP - 50 to 75% reduction in drift

LERAP drift ratings are compared with reference F110/1.2/3.0 nozzles. Approvals are at the pressures shown for nozzles 0.5 m above the target at 6-12 kph.



JKI drift ratings are compared with reference F110/1.2/3.0 and FRD110/1.0/3.0 nozzles. Approvals are at pressures shown for nozzles 0.5 m above the target.

\* Provisional classification, to be confirmed by UK CRD.

\*\* Provisional classification, to be confirmed by JKI.

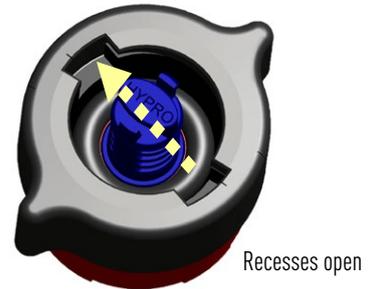
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### FITTING AND CLEANING GUIDELINES - NEW FASTCAP™

To fit Fastcap™ to bayonet;

- First ensure the sealing ring is in place and Fastcap™ recesses are open
- Align the bayonet lugs of nozzle holder with the recesses in the FastCap™
- Twist clockwise to lock

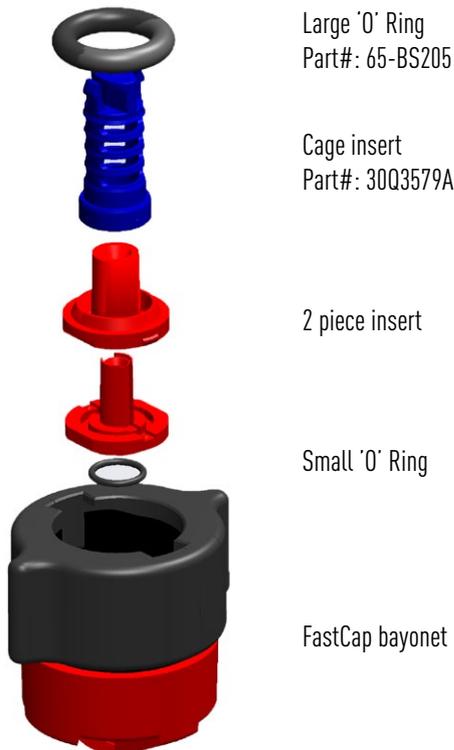


To dismantle the nozzle for cleaning;

- Push the top of the cage insert towards one of the open recesses, as shown by the arrow in the diagram on the right
- Slide all of the inserts out of the bayonet cap as one unit
- Parts will separate as shown below, and can be soaked

To reassemble;

- First push together the 2 piece insert, cage insert and two 'O' rings, ensuring that the flats on the two insert flanges are aligned with each other
- Place the insert assembly back into the bayonet cap, ensuring that the flats on the 2 piece insert are aligned with the flats in the recess of the nozzle body
- Once it is sitting in the recess, gently push down on the cage insert using light pressure until you hear it click.



Large 'O' Ring  
Part#: 65-BS205

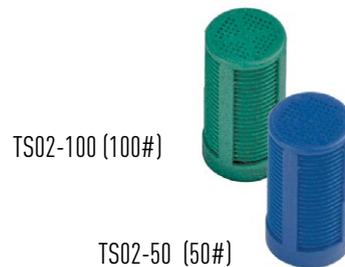
Cage insert  
Part#: 30Q3579A

2 piece insert

Small 'O' Ring

FastCap bayonet

The cage insert can be replaced with a filter if required. To order a GuardianAIR™ Twin nozzle with a 50 mesh filter, use the same part number omitting the 'A' (e.g. GAT110-03). Polypropylene GuardianAIR™ Twin nozzle filters are also available as spares.



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