

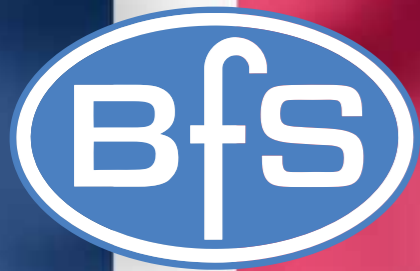


LOW DRIFT SPRAY
APPLICATION TECHNOLOGY

LIQUID FERTILISER
APPLICATION SPECIALISTS

LOW DRIFT NO DRIFT

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All Bfs products are British through and through

From initial concept to prototype design, evaluation, manufacturing, testing and production, everything is based in the UK. We are the only UK based nozzle manufacturer, and we were the first to introduce Air Inclusion Technology to the UK market.

Our first low drift nozzle was the Billericay Air Bubble Jet. This set the standard for low drift and we were the first to register a 3 star rated LERAP nozzle.

Since then we have introduced several other "Firsts".

- **The first LERAP rated nozzles (Bfs Air Bubble Jets) to appear on the CRD website in 1999**
- **The first adjustable bar (Bfs Dribble Bar) for liquid fertiliser application**
- **The first variable rate bar (Bfs AutoStreamer) for variable rate application of liquid fertilisers**
- **The first variable rate nozzle (Bfs 5Star) for application of liquid fertilisers**
- **The first 3* LERAP rated Low Drift Nozzle (Bfs PulZar) designed for Pulse Width Modulation Systems**
- **The first 4* LERAP rated 90% DRT nozzle (Bfs ExRay XC)**
- **The first... watch this space!**

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BfS ABTJ Air Bubble Twin Jet



Improve pesticide coverage by angling the spray forward and backward

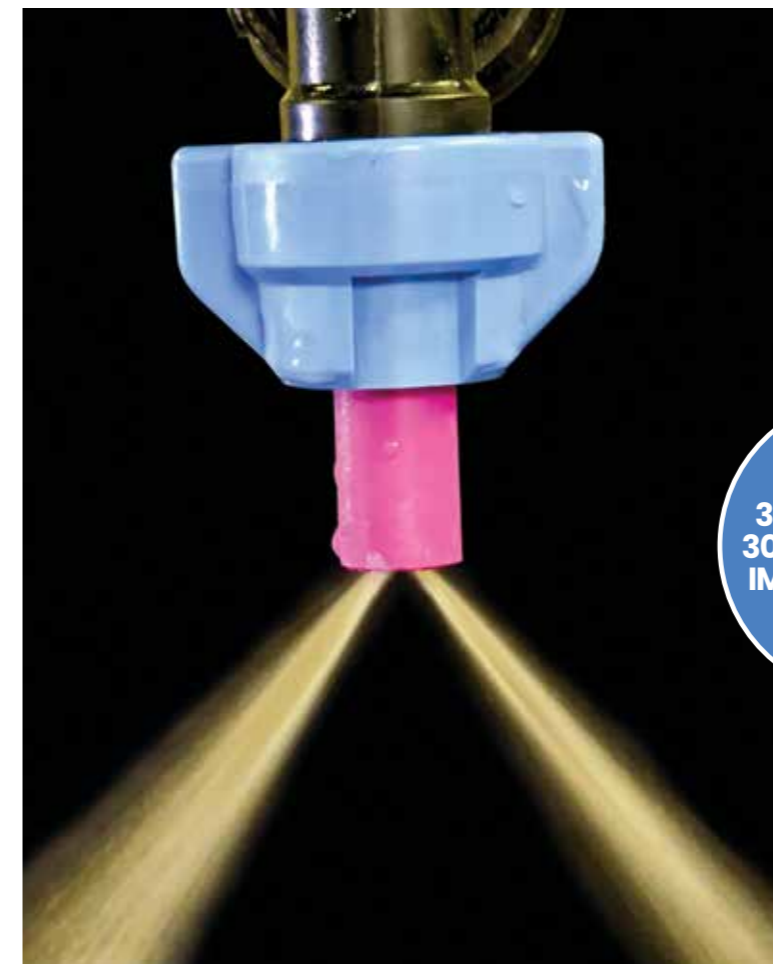
Very low drift Twin angled nozzle, one 30° forward and one 30° backwards, to improve target coverage while utilising a smaller droplet spectrum. The fan pattern is approx. 110° depending on operating pressure. This gives unsurpassed coverage of complex canopies. Provides better coverage with more drops per litre of spray compared to single air-induction nozzles.

Achieve excellent deposition on vertical surfaces (stems, leaves and ears of wheat), also around and beneath clods in rough seedbeds. This combination of angles will also result in better penetration of fungicides and insecticides in leafy crops of potatoes, oilseed rape, maize, and vegetables.

It also means you can apply larger volumes of water per hectare, but with a smaller droplet spectrum from the double fans. Each fan is half the output of the total nozzle size. Usually, a larger volume means far bigger droplets, which can be a disadvantage in some situations. The BFS ABTJ Twin gives an even distribution of applied products and this will increase their efficiency.

ABTJ Air Bubble Twin Jet Application Chart

SIZE	NOZZLE PRESSURE (Bar)	FLOW (l/min)	SPRAY QUALITY	LITRES PER HECTARE								
				Speed (kph) at 50cm nozzle spacing								
				4	6	8	10	12	14	16	18	20
LILAC 025	1	0.58	XC	174	116	87	70	58	50	43	39	35
	1.5	0.71	XC	213	142	107	85	71	61	53	47	43
	2	0.82	VC	246	164	123	98	82	70	62	55	49
	2.5	0.92	VC	275	183	138	110	92	79	69	61	55
	3	1.00	C	301	201	151	121	100	86	75	67	60
	3.5	1.08	C	325	217	163	130	108	93	81	72	65
	4	1.16	C	348	232	174	139	116	99	87	77	70
4.5	1.23	C	369	246	185	148	123	105	92	82	74	
BLUE 03	1	0.69	XC	208	139	104	83	69	59	52	46	42
	1.5	0.85	XC	255	170	127	102	85	73	64	57	51
	2	0.98	XC	294	196	147	118	98	84	74	65	59
	2.5	1.10	VC	329	219	164	131	110	94	82	73	66
	3	1.20	VC	360	240	180	144	120	103	90	80	72
	3.5	1.30	C	389	259	194	156	130	111	97	86	78
	4	1.39	C	416	277	208	166	139	119	104	92	83
4.5	1.47	C	441	294	221	176	147	126	110	98	88	
RED BROWN 035	1	0.81	VC	242	161	121	97	81	69	60	54	48
	1.5	0.99	VC	296	197	148	118	99	85	74	66	59
	2	1.14	C	342	228	171	137	114	98	86	76	68
	2.5	1.27	C	382	255	191	153	127	109	96	85	76
	3	1.40	C	419	279	209	168	140	120	105	93	84
	3.5	1.51	C	452	302	226	181	151	129	113	101	90
	4	1.61	C	484	322	242	193	161	138	121	107	97
4.5	1.71	M	513	342	257	205	171	147	128	114	103	
RED 04	1	0.93	XC	278	185	139	111	93	79	69	62	56
	1.5	1.13	VC	340	227	170	136	113	97	85	76	68
	2	1.31	C	393	262	197	157	131	112	98	87	79
	2.5	1.46	C	439	293	220	176	146	126	110	98	88
	3	1.60	C	481	321	241	193	160	138	120	107	96
	3.5	1.73	C	520	347	260	208	173	149	130	116	104
	4	1.85	C	556	371	278	222	185	159	139	124	111
4.5	1.97	M	590	393	295	236	197	168	147	131	118	
BROWN 05	1	1.15	UC	346	231	173	138	115	99	86	77	69
	1.5	1.41	XC	423	282	212	169	141	121	106	94	85
	2	1.63	XC	489	326	245	196	163	140	122	109	98
	2.5	1.82	XC	547	364	273	219	182	156	137	121	109
	3	2.00	VC	599	399	299	240	200	171	150	133	120
	3.5	2.16	C	647	431	323	259	216	185	162	144	129
	4	2.31	C	692	461	346	277	231	198	173	154	138
4.5	2.45	C	734	489	367	293	245	210	183	163	147	



**2 FAN
PATTERNS
30° FORWARDS
30° BACKWARDS
IMPROVES CROP
COVERAGE**

Size	Part No.
025 Lilac	NNT002025
03 Blue	NNT002030
035 Red/Brown	NNT002035
04 Red	NNT002040
05 Brown	NNT002050

BfS Pulzar PWM Nozzle

The low drift option for any PWM system

Working with Capstan and Case, BfS has developed a low drift nozzle for use with Pulse Width Modulation (PWM) nozzle bodies.

Since the early days of the introduction of PWM, BfS have been marketing Pulzar nozzles throughout north America and Canada and now the Pulzar nozzle systems are being offered on machines coming onto the UK market.



How they work

PWM controls each nozzle separately, and the flow rate from each nozzle is managed by rapidly switching the nozzle control solenoid on and off. The duration that the nozzle is "on" is called the Duty Cycle and varying this duty cycle provides the operator with the ability to control the volume output from each nozzle.

- The system pressure, spray quality and fan pattern remain consistent.
- The system can cope with a five-fold change in forward speed without affecting output.

PWM systems will enable the correct application from each nozzle even when going around a corner, where the outer edge of the boom is travelling much faster than the inner edge, so giving a lower rate of application. PWM corrects this by changing the duty cycle at each nozzle to compensate accordingly.

Flat fan nozzles have been the main nozzle used but these are prone to create small, driftable droplets. The Pulzar is a low drift nozzle perfectly suited to PWM systems, with up to 75% lower drift than conventional flat fans.

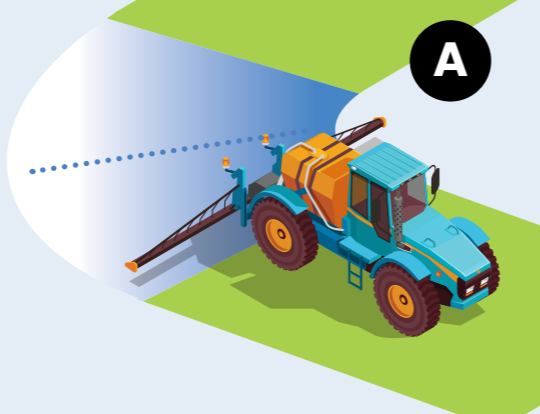
Note: Other spray nozzles may not work effectively on PWM systems. BfS can provide the necessary advice if required.

TURN COMPENSATION

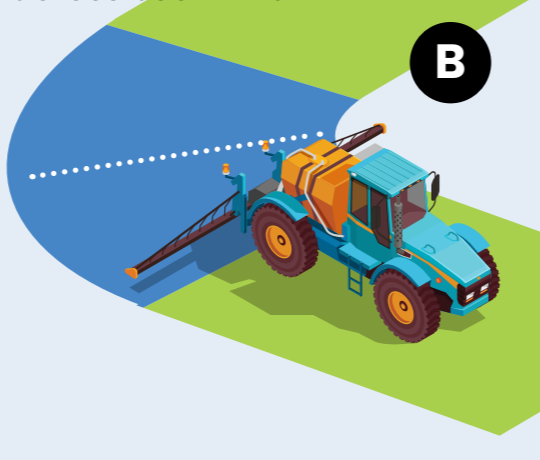
Figure A: Shows a standard system where on a turn the outside boom edge travels far quicker than the inside boom edge, resulting in differential application over that area, shown as a colour gradient from outside to inside.

Figure B: On the other hand, demonstrates how a PWM system will compensate for this speed difference by changing the duty cycle at each nozzle, while maintaining the overall system pressure, droplet size and the drift potential of the applied spray.

Uneven Application across boom width



Even Application across boom width



Size	Part No	LERAP * rating
015 Green	NNC003001	★★
02 Yellow	NNC003002	★★
025 Lilac	NNC003000	★★★
03 Blue	NNC003003	★★★★
04 Red	NNC003004	★★★★
05 Brown	NNC003005	★★★★
06 Grey	NNC003006	★★★★
08 White	NNC003008	

Pulzar PWM Application Chart

NOZZLE	PRESSURE (Bar)	FLOW (l/min)	SPRAY QUALITY	LITRES PER HECTARE AT 30% OR 100% DUTY CYCLE																LERAP Rating
				Speed (kph) at 50cm nozzle spacing																
				30%	100%	30%	100%	30%	100%	30%	100%	30%	100%	30%	100%	30%	100%	30%	100%	
PULZAR GREEN 015				6	8	10	12	14	16	18	20									★★★
	1	0.35	M	21	69	16	52	12	42	10	35	9	30	8	26	7	23	6	21	
	2	0.49	M	29	98	22	73	18	59	15	49	13	42	11	37	10	33	9	29	
	3	0.60	M	36	120	27	90	22	72	18	60	15	51	14	45	12	40	11	36	
	4	0.69	M	42	139	31	104	25	83	21	69	18	59	16	52	14	46	12	42	
	5	0.77	M	46	155	35	116	28	93	23	77	20	66	17	58	15	52	14	46	
PULZAR YELLOW 02				6	8	10	12	14	16	18	20									★★★
	1	0.47	VC	28	93	21	70	17	56	14	47	12	40	11	35	9	31	8	28	
	2	0.66	C	40	132	30	99	24	79	20	66	17	57	15	50	13	44	12	40	
	3	0.81	M	48	162	36	121	29	97	24	81	21	69	18	61	16	54	15	48	
	4	0.93	M	56	187	42	140	34	112	28	93	24	80	21	70	19	62	17	56	
	5	1.04	M	63	209	47	157	38	125	31	104	27	89	24	78	21	70	19	63	
PULZAR LILAC 025				6	8	10	12	14	16	18	20									★★★★
	1	0.58	VC	35	116	26	87	21	70	17	58	15	50	13	43	12	39	10	35	
	2	0.82	C	49	164	37	123	30	98	25	82	21	70	18	62	16	55	15	49	
	3	1.00	M	60	201	45	151	36	121	30	100	26	86	23	75	20	67	18	60	
	4	1.16	M	70	232	52	174	42	139	35	116	30	99	26	87	23	77	21	70	
	5	1.30	M	78	259	58	194	47	156	39	130	33	111	29	97	26	86	23	78	
PULZAR BLUE 03				6	8	10	12	14	16	18	20									★★★★
	1	0.69	XC	42	139	31	104	25	83	21	69	18	59	16	52	14	46	12	42	
	2	0.98	C	59	196	44	147	35	118	29	98	25	84	22	74	20	65	18	59	
	3	1.20	C	72	240	54	180	43	144	36	120	31	103	27	90	24	80	22	72	
	4	1.39	M	83	277	62	208	50	166	42	139	36	119	31	104	28	92	25	83	
	5	1.55	M	93	310	70	232	56	186	46	155	40	133	35	116	31	103	28	93	
PULZAR RED 04				6	8	10	12	14	16	18	20									★★★★
	1	0.93	XC	56	185	42	139	33	111	28	93	24	79	21	69	19	62	17	56	
	2	1.31	C	79	262	59	197	47	157	39	131	34	112	29	98	26	87	24	79	
	3	1.60	C	96	321	72	241	58	193	48	160	41	138	36	120	32	107	29	96	
	4	1.85	C	111	371	83	278	67	222	56	185	48	159	42	139	37	124	33	111	
	5	2.07	M	124	414	93	311	75	249	62	207	53	178	47	155	41	138	37	124	
PULZAR BROWN 05				6	8	10	12	14	16	18	20									★★★★
	1	1.15	VC	69	231	52	173	41	138	35	115	30	99	26	86	23	77	21	69	
	2	1.63	C	98	326	73	245	59	196	49	163	42	140	37	122	33	109	29	98	
	3	2.00	C	120	399	90	299	72	240	60	200	51	171	45	150	40	133	36	120	
	4	2.31	C	138	461	104	346	83	277	69	231	59	198	52	173	46	154	41	138	
	5	2.58	C	155	515	116	387	93	309	77	258	66	221	58	193	52	172	46	155	
PULZAR GREY 06				6	8	10	12	14	16	18	20									★★★★
	1	1.39	XC	83	277	62	208	50	166	42	139	36	119	31	104	28	92	25	83	
	2	1.96	VC	118	392	88	294	71	235	59	196	50	168	44	147	39	131	35	118	
	3	2.40	VC	144	480	108	360	86	288	72	240	62	206	54	180	48	160	43	144	
	4	2.77	VC	166	554	125	416	100	333	83	277	71	238	62	208	55	185	50	166	
	5	3.10	VC	186	620	139	465	112	372	93	310	80	266	70	232	62	207	56	186	
PULZAR WHITE 08				6	8	10	12	14	16	18	20									★★★★
	1	1.85	UC	111	369	83	277	66	221	55	185	47	158	42	138	37	123	33	111	
	2	2.61	XC	157	522	117	392	94	313	78	261	67	224	59	196	52	174	47	157	
	3	3.20	XC	192	639	144	479	115	384	96	320	82	274	72	240	64	213	58	192	
	4	3.69	XC	221	738	166	554	133	443	111	369	95	316	83	277	74	246	66	221	
	5	4.13	C	248	825	186	619	149	495	124	413	106	354	93	310	83	275	74	248	

LERAP Rating applies to spraying at 2 to 2.5bar, 50cm nozzle height, traveling between 4kph-12kph, when used at 100% duty cycle or as a standard nozzle.

BfS FlowCheck

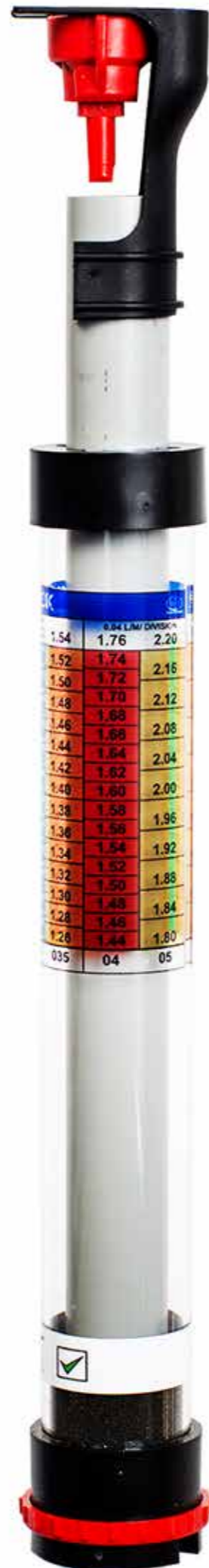
Easy and effective method of checking the flow output of nozzles. No need for a jug or a stop watch.



Simply set the dial at the base of the FlowCheck to the nozzle size being tested e.g. 03, hang the FlowCheck(s) on the boom under the nozzle (can be a single one or a number spread across the boom), turn on the pump, set the boom pressure to 3 bar and the FlowCheck will indicate the flow, within a few seconds.

Also available in sets of 5 in a carry case, for sprayer test examiners.

Part No LTS000007



01268 710237

Standard 'Wide range' Nozzle



BfS do make a flat fan for use when low drift nozzles are not appropriate.

However, they should not be used in anything but the best spraying conditions when drift onto non-target areas will not occur.



Ceramic Sizes	Part No.	Plastic Sizes	Part No.
02 Yellow	NNA003111	015 Green	NNA003101
03 Blue	NNA003112	02 Yellow	NNA003102
04 Red	NNA003113	025 Lilac	NNA003027
05 Brown	NNA003114	03 Blue	NNA003103
06 Grey	NNA003115	04 Red	NNA003104
		05 Brown	NNA003105
		06 Grey	NNA003106
		08 White	NNA003108
		10 Black	NNA003110

SIZE	NOZZLE PRESSURE (Bar)	FLOW (l/min)	LITRES PER HECTARE							
			Speed (kph) at 50cm nozzle spacing							
			6	8	10	12	14	16	18	20
GREEN 015	1	0.35	69	52	42	35	30	26	23	21
	2	0.49	98	73	59	49	42	37	33	29
	3	0.60	120	90	72	60	51	45	40	36
	4	0.69	139	104	83	69	59	52	46	42
	5	0.77	155	116	93	77	66	58	52	46
YELLOW 02	1	0.49	92	69	55	46	40	35	31	28
	2	0.66	132	99	79	66	57	50	44	40
	3	0.80	162	121	97	81	69	61	54	49
	4	0.93	187	140	112	93	80	70	62	56
	5	1.04	209	157	125	104	89	78	70	63
LILAC 025	1	0.58	116	87	70	58	50	43	39	35
	2	0.82	163	123	98	82	70	61	55	49
	3	1.00	200	151	121	100	86	75	67	60
	4	1.15	231	174	139	116	99	87	77	70
	5	1.30	259	194	156	130	111	97	86	78
BLUE 03	1	0.69	139	104	83	69	59	52	46	42
	2	0.98	196	147	118	98	84	74	65	59
	3	1.20	240	180	144	120	103	90	80	72
	4	1.39	277	208	166	139	119	104	92	83
	5	1.55	310	232	186	155	133	116	103	93
RED 04	1	0.92	184	139	111	93	79	69	62	55
	2	1.31	261	196	157	131	112	98	87	79
	3	1.60	320	241	193	160	138	120	107	96
	4	1.85	370	278	222	185	159	139	124	111
	5	2.07	414	311	249	207	178	155	138	124
BROWN 05	1	1.16	231	173	139	115	99	87	77	69
	2	1.63	327	245	196	163	140	122	109	98
	3	2.00	400	299	240	200	171	150	133	120
	4	2.31	462	346	277	231	198	173	154	138
	5	2.58	515	387	309	258	221	193	172	155
GREY 06	1	1.39	277	208	166	139	119	104	92	83
	2	1.96	392	294	235	196	168	147	131	118
	3	2.40	480	360	288	240	206	180	160	144
	4	2.77	554	416	333	277	238	208	185	166
	5	3.10	620	465	372	310	266	232	207	186
WHITE 08	1	1.85	369	277	221	185	158	138	123	111
	2	2.61	523	392	314	261	224	196	174	157
	3	3.20	640	480	384	320	274	240	213	192
	4	3.70	739	554	443	370	317	277	246	222
	5	4.13	826	620	496	413	354	310	275	248
BLACK 10	1	2.31	461	346	277	231	198	173	154	138
	2	3.26	653	489	392	326	280	245	218	196
	3	4.00	799	599	480	400	343	300	266	240
	4	4.61	923	692	554	461	395	346	308	277
	5	5.16	1032	774	619	516	442	387	344	310

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BfS Fairway 90 Amenity Nozzle

Better for the environment and the operator



- Ultra low drift - no need to use a shrouded boom
- See what your nozzles are doing
- Perfect for use in urban areas, golf courses, playing fields, caravan and camp sites, local authority parks and gardens
- Full ISO range available to cater for many different application volumes
- Standard operating pressures (2 to 5 bar)
- Direct replacement nozzle - fits most nozzle bodies
- Supplied complete in a cap ready to fit
- More spray days per season
- Improve timeliness of applications

Billericay Farm Services Ltd, introduce the "Fairway 90" Low Drift Nozzle for all amenity spraying. Great coverage from this extended range nozzle, capable of being used from 2 to 5 bar pressure without significantly increasing drift.

Get rid of your shrouded sprayer boom but maintain excellent drift control, while being able to see the nozzles spraying.

This results in more active ingredient going where it is targeted and not onto surrounding sensitive areas, whilst at the same time being able to see if any nozzles are not operating.

Safer for the operator, bystanders and the environment.

Fairway 90	Part No.
01 Orange	NNB005100
015 Green	NNB005150
02 Yellow	NNB005200
025 Lilac	NNB005250
03 Blue	NNB005300
035 Red Brown	NNB005350
04 Red	NNB005400
05 Brown	NNB005500
06 Grey	NNB005600

Fairway 90 Amenity Nozzle Application Chart

Nozzle	Pressure	Flow	Spray Quality *	Output in Litres/Ha (at nozzle height of 70cm and nozzle spacing of 50cm)				
				Speed (KPH)				
				4	6	8	10	12
Fairway 90 LILAC 025	Bar	L/Min	*	4	6	8	10	12
	2	0.75	VC	225	150	113	90	75
	2.5	0.91	C	272	181	136	109	91
	3	1.00	C	300	200	150	120	100
	3.5	1.10	C	330	220	165	132	110
Fairway 90 BLUE 03	Bar	L/Min	*	4	6	8	10	12
	2	0.95	VC	285	190	143	114	95
	2.5	1.11	VC	332	221	166	133	111
	3	1.20	C	360	240	180	144	120
	3.5	1.30	C	390	260	195	156	130
Fairway 90 RED BROWN 035	Bar	L/Min	*	4	6	8	10	12
	2	1.05	VC	315	210	158	126	105
	2.5	1.25	C	374	249	187	149	125
	3	1.40	C	420	280	210	168	140
	3.5	1.50	C	450	300	225	180	150
Fairway 90 RED 04	Bar	L/Min	*	4	6	8	10	12
	2	1.10	XC	330	220	165	132	110
	2.5	1.45	VC	434	289	217	173	145
	3	1.60	VC	480	320	240	192	160
	3.5	1.70	VC	510	340	255	204	170
Fairway 90 BROWN 05	Bar	L/Min	*	4	6	8	10	12
	2	1.53	XC	459	306	230	184	153
	2.5	1.75	VC	526	351	263	211	175
	3	1.96	VC	588	392	294	235	196
	3.5	2.12	VC	636	424	318	254	212
Fairway 90 GREY 06	Bar	L/Min	*	4	6	8	10	12
	2	1.80	XC	540	360	270	216	180
	2.5	2.27	XC	681	454	340	272	227
	3	2.45	XC	735	490	368	294	245
	3.5	2.70	XC	810	540	405	324	270
4	2.95	XC	885	590	443	354	295	

* Spray Quality Coding		
Category	Symbol	Colour
Extremely Fine	XF	Purple
Very Fine	VF	Red
Fine	F	Orange
Medium	M	Yellow
Coarse	C	Blue
Very Coarse	VC	Green
Extremely Coarse	XC	White
Ultra Coarse	UC	Black




Use Fairway 90 nozzles at 70cm above the target for optimal spray coverage and result

Low Drift Knapsack Nozzle Pack

A nozzle for every knapsack application, low drift to protect the operator and the environment



Low Drift Knapsack Application Chart

Nozzle	Pressure (Bar)	L/Min	Output at Speed 3.6 kph (Litres / ha)		Swath Width (Coverage Width)		Spot Treatment Output (mls)		
			0.5m	1.0m	50cm	100cm	seconds		
			1m/s	1m/s	Nozzle Height (cm)		1	2	3
 Bubble Jet ABJ 025	1.0	0.58	192	96	30	60	9.6	19.2	28.9
	1.5	0.71	236	118	30	60	11.8	23.6	35.4
	2.0	0.82	272	136	25	50	13.6	27.2	40.8
	2.5	0.91	304	152	25	50	15.2	30.4	45.6
	3.0	1.00	333	167	25	50	16.7	33.3	50.0
 Flat Fan WR 025	1.0	0.58	192	96	17.5	35	9.6	19.2	28.9
	1.5	0.71	236	118	17.5	35	11.8	23.6	35.4
	2.0	0.82	272	136	17.5	35	13.6	27.2	40.8
	2.5	0.91	304	152	17.5	35	15.2	30.4	45.6
	3.0	1.00	333	167	17.5	35	16.7	33.3	50.0
 Cone Jet ABCJ 025 Cone	1.0	0.58	192	96	30	60	9.6	19.2	28.9
	1.5	0.71	236	118	30	60	11.8	23.6	35.4
	2.0	0.82	272	136	30	60	13.6	27.2	40.8
	2.5	0.91	304	152	30	60	15.2	30.4	45.6
	3.0	1.00	333	167	30	60	16.7	33.3	50.0
 Anvil Nozzle DT AN 025 Airmix	1.5	0.71	236	118	30	60	11.8	23.6	35.4
	2.0	0.82	272	136	21	42	13.6	27.2	40.8
	2.5	0.91	304	152	14.5	29	15.2	30.4	45.6
	3.0	1.00	333	167	12	24	16.7	33.3	50.0

A convenient pack of 4 assorted nozzles and a nozzle filter to cater for any knapsack application:

BfS AirBubble Jet - 025

For general purpose use, where low drift is necessary for most pesticide applications. 110° fan pattern.

BfS Hollow Cone ABCJ - 025

The angled fan from this low drift, hollow cone nozzle, ensures great coverage for fungicide and insecticides. 80° fan pattern.

Airmix Deflector tip - 025

Air inclusion large droplets for increased drift control. Ideal for herbicides where drift can not be tolerated. 80 to 130° fan pattern.

BfS Wide Range Flat Fan - 025

For use under glass where drift will not be a problem.

Nozzle filter - 100 mesh

to keep particulate debris out of the nozzle to reduce blockages.

All 025 nozzles to suit walking pace use of 1m per second. Official flow rate of 1.0 litre/minute at 3 bar operating pressure.

These individual nozzles are also sold separately, in multiples, for boom use. We also stock nozzles with different flow rates. Please ask for further information if you require any.

Knapsack Nozzle Pack MKM001199



Other Nozzle Options

We are the UK's official distributor for Agrotop nozzles and spraying accessories



Bfs ABCJ Hollow Cone Air Induction Nozzle

025 nozzle for effective coverage from all angles to give superior control of insects and late season fungicides from the 80° fan angle. Air inclusion gives superior drift reduction for a hollow cone nozzle design.

These are a great idea also for use in knapsack sprayers to reduce operator exposure and drift onto sensitive vegetation. Can be used at low pressures.

Size	Part No.
025 Lilac	NNA004125



Flat Fan 80° degree range

These flat fan nozzles are ideally suited to booms with 25 and 33cm nozzle spacing, where a fine spray is required. Suitable for PWM but expect more drift than from the Bfs STS-80 range, which are the preferred low drift option.

Size	Part No.
02 Yellow 80	NNA003182
03 Blue 80	NNA003183
04 Red 80	NNA003184
05 Brown 80	NNA003185
06 Grey 80	NNA003024
08 White 80	NNA003025
10 Black 80	NNA003026



APE 80° Ceramic range

Standard flat fan 80° ceramic nozzle. Hard wearing.

Size	Part No.
01 Orange 80	NNF002012
015 Green 80	NNF002014
02 Yellow 80	NNF002011
04 Red 80	NNF002013



Airmix OC 80° (offset nozzle)

Low pressure off-centre air-inclusion nozzle for a sharp cut off on the outer nozzle of the boom, to protect the field margins. Also for use in knapsack sprayers for simple edge spraying.

Size	Part No.
02 Yellow OC80	NNA003308
025 Lilac OC80	NNA003309
03 Blue OC80	NNA003310
04 Red OC80	NNA003311
05 Brown OC80	NNA003312

ATR 80° Hollow Cone ceramic

Ideal cone nozzle for orchards and vineyards, but very drift prone.

Size	Part No.
01 Orange	NNF002008
015 Green	NNF002006
02 Yellow	NNF002007
025 Lilac	NNF002002
03 Blue	NNF002021
04 Red	NNF002003
05 Brown	NNF002009
06 Grey	NNF002010
08 White	NNF002017



AVI 80° ceramic

015, 02, 025, 03, 04 Venturi air inclusion (11mm nozzle) Ideal low drift flat fan nozzle for orchards and vineyards.

Size	Part No.
015 Green	NNF002018
02 Yellow	NNF002015
025 Lilac	NNF002020
03 Blue	NNF002019
04 Red	NNF002016



Tip Cap plastic range

Size	Part No.
015 Green Tipcap plastic	NNA003001
02 Yellow Tipcap plastic	NNA003002
03 Blue Tipcap plastic	NNA003003
04 Red Tipcap plastic	NNA003004
05 Brown Tipcap plastic	NNA003005
06 Grey Tipcap plastic	NNA003006
08 White Tipcap plastic	NNA003008
10 Black Tipcap plastic	NNA003010
12 Turquoise Tipcap plastic	NNA003012
16 Purple Tipcap plastic	NNA003016
20 Light Blue Tipcap plastic	NNA003020

Tip Cap ceramic range

Ceramic flat fan incorporated in the cap to make removal/replacement and storage simple. Colour coded to the nozzle flow range. Includes sealing washer.

Size	Part No.
015 Green Tipcap Ceramic	NNA002001
02 Yellow Tipcap Ceramic	NNA002002
03 Blue Tipcap Ceramic	NNA002003
04 Red Tipcap Ceramic	NNA002004
05 Brown Tipcap Ceramic	NNA002005
06 Grey Tipcap Ceramic	NNA002006
08 White Tipcap Ceramic	NNA002007



BfS Angled Caps



British designed and manufactured, this exciting spraying innovation from Billericay Farm Services offers sprayer operators the opportunity of achieving the benefits of angling the spray forwards or backwards, whilst using their existing nozzles.

Angled Caps provide a 30° spray angle using all standard 8mm nozzles

- Improved vegetation coverage
- Increased chemical efficacy
- Enhanced disease control

Why use them?

Research has shown that angling the spray at 30° and alternating the nozzles forwards and straight down across the boom improves spray deposition.

The need to purchase additional, more expensive speciality nozzles is eliminated.



Colour code	Part No.
Black	NCF000100
Orange	NCF000110
Green	NCF000115
Yellow	NCF000120
Lilac	NCF000125
Blue	NCF000130
Red Brown	NCF000135
Red	NCF000140
Brown	NCF000150
Grey	NCF000160
White	NCF000180
Replacement Seal	NCF000101

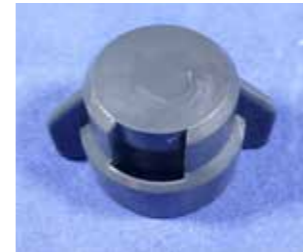
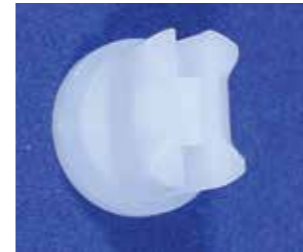
Twin Caps



The Twin Cap is designed to hold two Billericay Air Bubble Jets at an angle of 30 degrees forward and 30 degrees rearward facing to get improved crop coverage with increased volumes, while maintaining a specified spray quality. Will hold standard flat fans or a blanking nozzle if this is required.

Part No	NTB000011
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Blanking Nozzle/Cap



Blanking Nozzle	NTA000001
Blanking Cap	NCA000021

Nozzle Filters

Full range of dome and cylinder filters available for in-line and nozzle filtration.

Various sizes from 25 mesh to 200 mesh.

Colour code	Part No.
24 mesh White	NSA000002
50 mesh Blue	NSA000003
100 mesh Red	NSA000001
200 mesh Pink	NSA000009
Hardi filter: 50 mesh blue	NSA000203

Standard Nozzle Caps



Available in all colours as an 8mm nozzle size, and in select colours as an 11mm nozzle size.

Part No	8mm	11mm
Orange	NCA000012	
Green	NCA000001	
Yellow	NCA000002	
Lilac	NCA000000	
Blue	NCA000003	NCA000314
Red Brown	NCA002992	
Red	NCA000004	NCA000315
Brown	NCA000005	NCA000311
Grey	NCA000006	
White	NCA000004	
Black	NCA000021	NCA000304
Nozzle Washer	NWA000003	



Other caps are kept in stock, Hardi for example, so please ask if you have any special requirements.

BfS AutoStreamer variable rate Liquid Fertiliser Applicator

Provides true variable rate liquid fertiliser application

The AutoStreamer developed and manufactured by BfS works on sprayers with flow based rate controllers. Accurate application of liquid fertiliser is made simple as the operator has only to enter the litres per hectare required, factor in the specific gravity (SG) and begin to apply.

Changing the application rate is equally simple and undertaken from within the cab. The AutoStreamer is manufactured in chemical resistant, glass reinforced plastic and is easily fitted to most boom sprayers.

AutoStreamer Features

- **Precision:** Ensures the accurate placement of liquid fertilisers right up to the edge of the crop.
- **Efficiency:** Allows the application of liquid fertilisers under a wide range of conditions at full rate right up to the crop boundaries.
- **Accuracy:** Use at any boom height with no overlap or underlap, and no off target contamination.
- **Protection:** Minimises crop scorch. Stabilised streams of liquid with large droplets that tend to roll off crop leaves.

How does it work?

Using a quad-valve manifold system, where each valve is encased in a specially developed rubber sleeve, the AutoStreamer allows the operator to achieve a ten-fold increase in flow rate from a three-fold increase in pressure. The unique manifold directs the flow of liquid fertiliser into four individual outlets 12.5cm apart across the whole boom width. Hooks on each end allow for adjacent bars to be loosely attached together to keep them in line. Nitrile bands available to join them.

Part No.
NFB300004



Colour code	Part No.
Teejet /EF3 /Euro	NFB500001
AgriFac	NFB500010
Stabiliser band	NFB300004

For confirmation of details see our AutoStreamer leaflet.

BfS AutoStreamer Application Chart

Litres per Hectare	Speed range in Kph, between 0.75 bar to 2.6 bar pressure														
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
60															
120															
180															
240															
300															
400															
500															
600															
700															
800															
900															
1000															
1100															

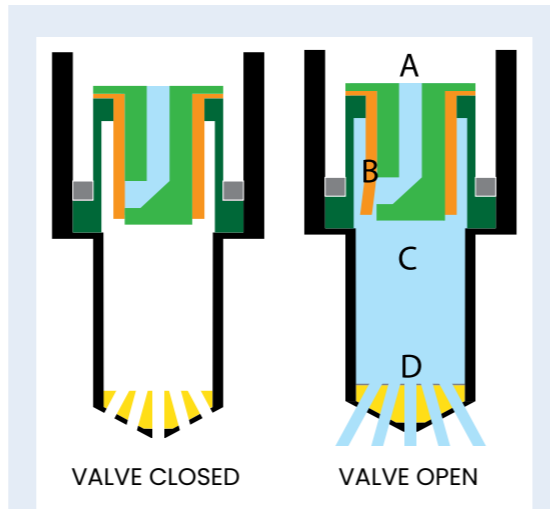


BfS 5 Star / 5 Star Plus Liquid Fertiliser Nozzles



5 Star and **5 Star Plus** are single fertiliser caps specifically designed for flow based controllers. Designed to operate at 70cms above target, the 5 streams provide excellent coverage reducing the risk of scorch damage to the crop.

One nozzle will have the same output range as 3 standard ISO fertiliser caps. Suitable for Easy Fit 3 nozzle bodies and a multitude of boom configurations.



How does it work?

5 Star consists of a five hole, fertiliser nozzle housing with a bayonet fitting. The nozzle incorporates an internal auto-valve that comprises a chamber and metering orifice surrounded by a resilient, but flexible, sheath. The sheath is manufactured using a specially developed material, which is expandable and reacts consistently and proportionately to increase / decrease in pressure. When there is no flow / pressure the flexible sheath closes the exit aperture in the support plug. As pressure is increased the sheath expands in response to the increase and liquid flows out of the aperture and into a chamber at a rate directly proportional to the increase in pressure and then exits as five consistent streams through the five orifices.

5 Star NFB400103

5 Star Plus NFB400104

5 Star Plus



5 Star Application Range Litres

Litres Per Hectare	Speed KPH Range using 1.25bar to 2.75bar														
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
60															
80															
100															
140															
180															
200															
240															
280															
300															
350															
400															
450															
500															

5 Star Plus Application Range Litres

30N SG 1.3 Litres Per Hectare	Speed KPH Range using 1.0bar to 2.5bar														
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
60															
80															
100															
140															
180															
200															
240															
280															
300															
350															
400															
450															
500															

BfS Nova Liquid Fertiliser applicator cap



BfS Nova liquid fertiliser cap distributes liquid fertiliser from 5 streams, to evenly cover the 50cm distance between nozzle bodies.

Designed to be used either as a standalone nozzle, or in conjunction with the BfS Dribblebar II, for those difficult to fit positions where a Dribble Bar will not fit and a cap is required.

Boom height should be 70cm above the target. Use at the lower end of the pressure range, wherever possible, to reduce the risk of crop scorch from smaller droplets.

Available in ISO colours red, brown, grey and white with more sizes to be added to the range in the future.



Nova comes from the same stable as the Bfs 5 Star and Bfs 5 Star Plus, however this model is compatible with all types of sprayer controller, unlike the 5 star and 5 Star Plus which are flow based only.

Boom nozzle spacing should be 50 cm along the boom and the cap 70 cm above target to get optimum distribution.

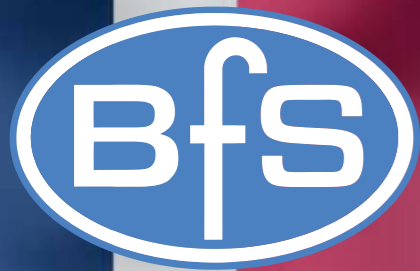
04 Red	NFB400240
05 Brown	NFB400250
06 Grey	NFB400260
08 White	NFB400280



BfS Nova Application Chart

NOZZLE	NOZZLE PRESSURE (Bar)	FLOW (l/min)	LITRES PER HECTARE										
			Speed (kph) at 50cm nozzle spacing										
			5	6	7	8	9	10	11	12	13	14	15
NOVA 04	1	0.90	217	181	155	135	120	108	98	90	83	77	72
	1.25	1.01	241	201	172	151	134	121	110	101	93	86	80
	1.5	1.10	265	221	189	165	147	132	120	110	102	95	88
	1.75	1.19	285	237	203	178	158	142	129	119	109	102	95
	2	1.29	308	257	220	193	171	154	140	129	119	110	103
	2.25	1.35	325	271	232	203	180	162	148	135	125	116	108
	2.5	1.42	340	284	243	213	189	170	155	142	131	122	113
	2.75	1.50	359	299	256	224	199	180	163	150	138	128	120
	3	1.60	384	320	274	240	213	192	175	160	148	137	128
NOVA 05	1	1.06	254	212	182	159	141	127	116	106	98	91	85
	1.25	1.19	285	237	203	178	158	142	129	119	110	102	95
	1.5	1.35	323	269	231	202	179	161	147	135	124	115	108
	1.75	1.42	340	283	243	212	189	170	155	142	131	121	113
	2	1.63	391	326	279	245	217	196	178	163	150	140	130
	2.25	1.61	386	322	276	241	214	193	175	161	148	138	129
	2.5	1.71	409	341	292	256	227	205	186	171	157	146	136
	2.75	1.90	456	380	325	285	253	228	207	190	175	163	152
	3	2.00	480	400	343	300	267	240	218	200	185	171	160
NOVA 06	1	1.35	324	270	231	203	180	162	147	135	125	116	108
	1.25	1.47	353	294	252	220	196	176	160	147	136	126	118
	1.5	1.63	390	325	279	244	217	195	177	163	150	139	130
	1.75	1.73	416	347	297	260	231	208	189	173	160	149	139
	2	1.80	432	360	309	270	240	216	196	180	166	154	144
	2.25	1.99	478	398	341	299	265	239	217	180	164	151	139
	2.5	2.10	504	420	360	315	280	252	229	199	184	171	159
	2.75	2.20	528	440	377	330	294	264	240	190	175	163	152
	3	2.40	576	480	411	360	320	288	262	240	222	206	192
NOVA 08	1	1.76	422	352	302	264	235	211	192	176	162	151	141
	1.25	2.02	485	404	346	303	269	242	220	202	186	173	162
	1.5	2.18	522	435	373	326	290	261	237	218	201	186	174
	1.75	2.42	582	485	415	363	323	291	264	242	224	208	194
	2	2.56	614	512	439	384	341	307	279	256	236	219	205
	2.25	2.72	652	543	466	407	362	326	296	272	251	233	217
	2.5	2.82	678	565	484	424	377	339	308	282	261	242	226
	2.75	2.95	708	590	506	443	394	354	322	295	272	253	236
	3	3.20	768	640	549	480	427	384	349	320	295	274	256

*Flow rates calculated using water @ 20°C.
At pressures over 3 bar some atomisation will occur and result in an increased risk of crop scorch.



How to reduce drift

BfS were, and still are, at the forefront of low drift spray nozzle technology. To reduce drift onto non-target plants, and to safeguard the environment, try these ways to reduce undesirable spray drift :

- Do not spray in windy weather – a light air or breeze is preferable, and do not spray if droplets are blown towards sensitive areas
- Choose a nozzle with a 3-star (75% lower drift) or 4-star (90% lower drift) LERAP rating – BfS have several options
- Use a higher volume of water through a nozzle with a larger orifice, producing larger, less drift prone droplets
- Slow down – Less air movement to affect the smaller droplets
- Alternate adjacent nozzles to face forwards and downwards so there is less droplet impact which will result in smaller, drift prone droplets being created
- Lower the boom (but consistent with the correct overlap and even spray pattern from the nozzles chosen) as the time it takes a droplet to move from the nozzle to the target is critical for drift control. The shorter the time the better.
- Operate the system at a lower pressure – this creates larger droplets which are less prone to drift
- Try an 80° fan angle nozzle if it suits your sprayer – These produce a lower number of small driftable droplets
- Ensure spraying equipment is maintained to a high standard and calibrated on a regular basis

Main Dealers:



Raising standards, raising service

At Downham, near Billericay, Essex the BfS spray technology tradecentre is East Anglia's premier location for spray application products, equipment and spares. Our trained and experienced staff are on hand to service your requirements, offer advice when required and provide friendly after-sales support

We stock spray jets, pumps, Allman sprayer parts, filters, knapsacks, hoses, liquid fertiliser applicators, PPE, weedwipes, measuring jugs, spray tanks, hoses and much, much more.

This catalogue contains details on many of the products that are the most popular and frequently purchased, and also features application rate charts for easy reference.

However, if an item you are seeking is not listed, please contact us as we hold a wide range of other products in stock. Whether your requirements are for a farm, horticultural holding, golf course, sports ground landscaping, local authority purchase or for a private garden, we have the products you need.



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