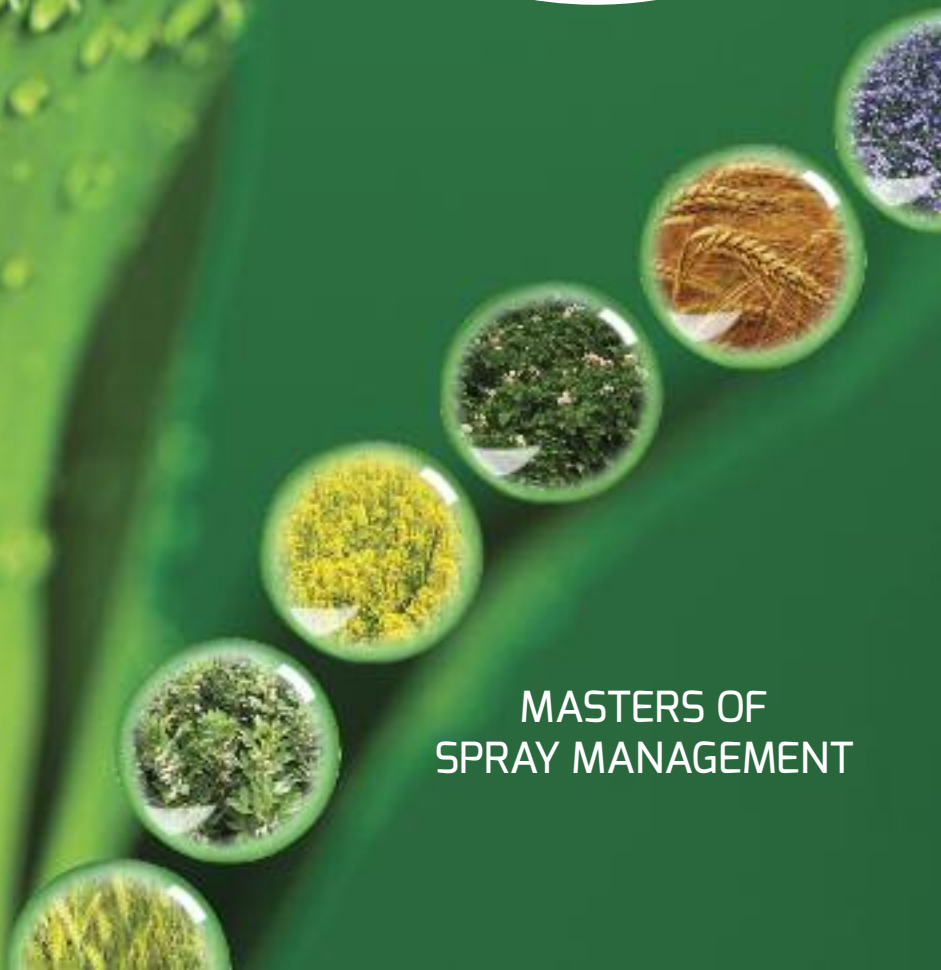




MASTERS OF  
SPRAY MANAGEMENT





## Raising standards, raising service

Billericay Farm Services Ltd celebrates its 70th anniversary in June 2018

At Downham, near Billericay, Essex the BFS spray technology trade centre 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 and minimum/maximum speed 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 of arboriculture project, local authority purchase or for a private garden, we have the products you need.



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# Spray Technology Products

## Billericay Air Bubble Jets

The Billericay Air Bubble Jets are the internationally renowned, and industry's leading air induction nozzles, invented by Billericay Farm Services.

Manufactured in Britain, these precision made nozzles cover the complete spectrum of spraying activity and are currently available in ten size options. The jets fit any standard nozzle cap and are ISO coloured according to size.

The Bubble Jet range is suitable for most sprayers including Very Low Volume (VLV) nozzles for knapsacks and for high volume (HV) agricultural sprayers.

Available in ten sizes 01, 015, 02, 025, 03, 035, 04, 05, 06, 08. Application rates range from 20-905 litres per hectare.

Billericay Air Bubble Jets operate at pressure ranges from 1-5 bars with a fan angle of 100 degrees. As the mixture of air and liquid is compressible, the fan angle may vary slightly according to the operating pressure.

Awarded LERAP 3 star rating at 2 Bar for sizes 025, 03, 0.35, 04, 05 and 0.6.

Sizes		Part No.
01	Orange	NNB002991
015	Green	NNB003001
02	Yellow	NNB003002
025	Lilac	NNB003000
03	Blue	NNB003003
035	Red/Brown	NNB002992
04	Red	NNB003004
05	Brown	NNB003005
06	Grey	NNB003006
08	White	NNB003008



# Air Bubble Jets Application Rate Chart

Nozzle	Pressure Flow	LITRES PER HECTARE																					
		Speed (kph) at 50cm nozzle spacing																					
		Bar	l/min	1	2	3	4	5	6	7	8	10	11	12	13	14	15	16	17	18	19	20	21
<b>ORANGE</b> <b>01</b>	1	0.23	277	139	92	69	55	46	40	35	28	25	23	21	20	18	17	16	15	15	14	13	13
	2	0.33	392	196	131	98	78	65	56	49	39	36	33	30	28	26	24	23	22	21	20	19	18
	3	0.40	480	240	160	120	96	80	69	60	48	44	40	37	34	32	30	28	27	25	24	23	22
	4	0.46	554	277	185	139	111	92	79	69	55	50	46	43	40	37	35	33	31	29	28	26	25
	5	0.52	619	310	206	155	124	103	88	77	62	56	52	48	44	41	39	36	34	33	31	29	28
<b>GREEN</b> <b>015</b>	1	0.35	416	208	139	104	83	69	59	52	42	38	35	32	30	28	26	24	23	22	21	20	19
	2	0.49	588	294	196	147	118	98	84	73	59	53	49	45	42	39	37	35	33	31	29	28	27
	3	0.60	720	360	240	180	144	120	103	90	72	65	60	55	51	48	45	42	40	38	36	34	33
	4	0.69	831	416	277	208	166	139	119	104	83	76	69	64	59	55	52	49	46	44	42	40	38
	5	0.77	930	465	310	232	186	155	133	116	93	85	77	72	66	62	58	55	52	49	46	44	42
<b>YELLOW</b> <b>02</b> ★★	1	0.47	560	280	187	140	112	93	80	70	56	51	47	43	40	37	35	33	31	29	28	27	25
	2	0.66	792	396	264	198	158	132	113	99	79	72	66	61	57	53	50	47	44	42	40	38	36
	3	0.81	970	485	323	242	194	162	139	121	97	88	81	75	69	65	61	57	54	51	48	46	44
	4	0.93	1120	560	373	280	224	187	160	140	112	102	93	86	80	75	70	66	62	59	56	53	51
	5	1.04	1252	626	417	313	250	209	179	157	125	114	104	96	89	83	78	74	70	66	63	60	57
<b>LILAC</b> <b>025</b> ★★★★	1	0.58	696	348	232	174	139	116	99	87	70	63	58	54	50	46	43	41	39	37	35	33	32
	2	0.82	984	492	328	246	197	164	141	123	98	89	82	76	70	66	62	58	55	52	49	47	45
	3	1.00	1205	603	402	301	241	201	172	151	121	110	100	93	86	80	75	71	67	63	60	57	55
	4	1.16	1392	696	464	348	278	232	199	174	139	127	116	107	99	93	87	82	77	73	70	66	63
	5	1.30	1556	778	519	389	311	259	222	194	156	141	130	120	111	104	97	92	86	82	78	74	71
<b>BLUE</b> <b>03</b> ★★★★	1	0.69	832	416	277	208	166	139	119	104	83	76	69	64	59	55	52	49	46	44	42	40	38
	2	0.98	1176	588	392	294	235	196	168	147	118	107	98	90	84	78	74	69	65	62	59	56	53
	3	1.20	1440	720	480	360	288	240	206	180	144	131	120	111	103	96	90	85	80	76	72	69	65
	4	1.39	1663	832	554	416	333	277	238	208	166	151	139	128	119	111	104	98	92	88	83	79	76
	5	1.55	1859	930	620	465	372	310	266	232	186	169	155	143	133	124	116	109	103	98	93	89	85
<b>BROWN RED</b> <b>035</b> ★★★★	1	0.81	967	484	322	242	193	161	138	121	97	88	81	74	69	64	60	57	54	51	48	46	44
	2	1.14	1368	684	456	342	274	228	195	171	137	124	114	105	98	91	86	80	76	72	68	65	62
	3	1.40	1675	838	558	419	335	279	239	209	168	152	140	129	120	112	105	99	93	88	84	80	76
	4	1.61	1935	967	645	484	387	322	276	242	193	176	161	149	138	129	121	114	107	102	97	92	88
	5	1.80	2163	1081	721	541	433	360	309	270	216	197	180	166	154	144	135	127	120	114	108	103	98
<b>RED</b> <b>04</b> ★★★★	1	0.93	1112	556	371	278	222	185	159	139	111	101	93	86	79	74	69	65	62	59	56	53	51
	2	1.31	1572	786	524	393	314	262	225	197	157	143	131	121	112	105	98	92	87	83	79	75	71
	3	1.60	1925	963	642	481	385	321	275	241	193	175	160	148	138	128	120	113	107	101	96	92	88
	4	1.85	2223	1112	741	556	445	371	318	278	222	202	185	171	159	148	139	131	124	117	111	106	101
	5	2.07	2486	1243	829	621	497	414	355	311	249	226	207	191	178	166	155	146	138	131	124	118	113
<b>BROWN</b> <b>05</b> ★★★★	1	1.15	1383	692	461	346	277	231	198	173	138	126	115	106	99	92	86	81	77	73	69	66	63
	2	1.63	1956	978	652	489	391	326	279	245	196	178	163	150	140	130	122	115	109	103	98	93	89
	3	2.00	2396	1198	799	599	479	399	342	299	240	218	200	184	171	160	150	141	133	126	120	114	109
	4	2.31	2766	1383	922	692	553	461	395	346	277	251	231	213	198	184	173	163	154	146	138	132	126
	5	2.58	3093	1546	1031	773	619	515	442	387	309	281	258	238	221	206	193	182	172	163	155	147	141
<b>GREY</b> <b>06</b> ★★★★	1	1.39	1663	832	554	416	333	277	238	208	166	151	139	128	119	111	104	98	92	88	83	79	76
	2	1.96	2352	1176	784	588	470	392	336	294	235	214	196	181	168	157	147	138	131	124	118	112	107
	3	2.40	2881	1440	960	720	576	480	412	360	288	262	240	222	206	192	180	169	160	152	144	137	131
	4	2.77	3326	1663	1109	832	665	554	475	416	333	302	277	256	238	222	208	196	185	175	166	158	151
	5	3.10	3719	1859	1240	930	744	620	531	465	372	338	310	286	266	248	232	219	207	196	186	177	169
<b>WHITE</b> <b>08</b>	1	1.85	2215	1107	738	554	443	369	316	277	221	201	185	170	158	148	138	130	123	117	111	105	101
	2	2.61	3132	1566	1044	783	626	522	447	392	313	285	261	241	224	209	196	184	174	165	157	149	142
	3	3.20	3836	1918	1279	959	767	639	548	479	384	349	320	295	274	256	240	226	213	202	192	183	174
	4	3.69	4429	2215	1476	1107	886	738	633	554	443	403	369	341	316	295	277	261	246	233	221	211	201
	5	4.13	4952	2476	1651	1238	990	825	707	619	495	450	413	381	354	330	310	291	275	261	248	236	225





# Spray Technology Products



## PulZar Nozzles

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/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 bodies 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 jet used but these are prone to create small, driftable droplets. The PulZar is a low drift jet 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.*



### Sizes Part No.

015	Green	NNC003001
025	Lilac	NNC003000
03	Blue	NNC003003
04	Red	NNC003004
05	Brown	NNC003005
06	Grey	NNC003006

# PulZar\* Jets Application Rate Chart

Nozzle	Pressure Flow	LITRES PER HECTARE																					
		Speed (kph) at 50cm nozzle spacing																					
		Bar	l/min	1	2	3	4	5	6	7	8	10	11	12	13	14	15	16	17	18	19	20	21
<b>GREEN</b> 015	1	0.35	416	208	139	104	83	69	59	52	42	38	35	32	30	28	26	24	23	22	21	20	19
	2	0.49	588	294	196	147	118	98	84	73	59	53	49	45	42	39	37	35	33	31	29	28	27
	3	0.60	720	360	240	180	144	120	103	90	72	65	60	55	51	48	45	42	40	38	36	34	33
	4	0.69	831	416	277	208	166	139	119	104	83	76	69	64	59	55	52	49	46	44	42	40	38
	5	0.77	930	465	310	232	186	155	133	116	93	85	77	72	66	62	58	55	52	49	46	44	42
<b>LILAC</b> 025	1	0.58	696	348	232	174	139	116	99	87	70	63	58	54	50	46	43	41	39	37	35	33	32
	2	0.82	984	492	328	246	197	164	141	123	98	89	82	76	70	66	62	58	55	52	49	47	45
	3	1.00	1205	603	402	301	241	201	172	151	121	110	100	93	86	80	75	71	67	63	60	57	55
	4	1.16	1392	696	464	348	278	232	199	174	139	127	116	107	99	93	87	82	77	73	70	66	63
	5	1.30	1556	778	519	389	311	259	222	194	156	141	130	120	111	104	97	92	86	82	78	74	71
<b>BLUE</b> 03	1	0.69	832	416	277	208	166	139	119	104	83	76	69	64	59	55	52	49	46	44	42	40	38
	2	0.98	1176	588	392	294	235	196	168	147	118	107	98	90	84	78	74	69	65	62	59	56	53
	3	1.20	1440	720	480	360	288	240	206	180	144	131	120	111	103	96	90	85	80	76	72	69	65
	4	1.39	1663	832	554	416	333	277	238	208	166	151	139	128	119	111	104	98	92	88	83	79	76
	5	1.55	1859	930	620	465	372	310	266	232	186	169	155	143	133	124	116	109	103	98	93	89	85
<b>RED</b> 04	1	0.93	1112	556	371	278	222	185	159	139	111	101	93	86	79	74	69	65	62	59	56	53	51
	2	1.31	1572	786	524	393	314	262	225	197	157	143	131	121	112	105	98	92	87	83	79	75	71
	3	1.60	1925	963	642	481	385	321	275	241	193	175	160	148	138	128	120	113	107	101	96	92	88
	4	1.85	2223	1112	741	556	445	371	318	278	222	202	185	171	159	148	139	131	124	117	111	106	101
	5	2.07	2486	1243	829	621	497	414	355	311	249	226	207	191	178	166	155	146	138	131	124	118	113
<b>BROWN</b> 05	1	1.15	1383	692	461	346	277	231	198	173	138	126	115	106	99	92	86	81	77	73	69	66	63
	2	1.63	1956	978	652	489	391	326	279	245	196	178	163	150	140	130	122	115	109	103	98	93	89
	3	2.00	2396	1198	799	599	479	399	342	299	240	218	200	184	171	160	150	141	133	126	120	114	109
	4	2.31	2766	1383	922	692	553	461	395	346	277	251	231	213	198	184	173	163	154	146	138	132	126
	5	2.58	3093	1546	1031	773	619	515	442	387	309	281	258	238	221	206	193	182	172	163	155	147	141
<b>GREY</b> 06	1	1.39	1663	832	554	416	333	277	238	208	166	151	139	128	119	111	104	98	92	88	83	79	76
	2	1.96	2352	1176	784	588	470	392	336	294	235	214	196	181	168	157	147	138	131	124	118	112	107
	3	2.40	2881	1440	960	720	576	480	412	360	288	262	240	222	206	192	180	169	160	152	144	137	131
	4	2.77	3326	1663	1109	832	665	554	475	416	333	302	277	256	238	222	208	196	185	175	166	158	151
	5	3.10	3719	1859	1240	930	744	620	531	465	372	338	310	286	266	248	232	219	207	196	186	177	169

\*For Pulse Width Modulation (PWM) nozzle bodies



# Spray Technology Products



## ExRay XC Extended Range Nozzles

Achieve up to 90% drift reduction, and cover a wider application rate (volume) from each nozzle size in use. Get the same rates of coverage that you would normally need 3 nozzles to achieve. The nozzles are available as either straight down or angled (30 degree) versions.

### How they work

ExRay XC nozzle features an extra, variable, pre-orifice to achieve the "Extended Range" of output, simply by varying the operating pressure. Incorporating Air Induction technology, the number of driftable droplets generated is minimised allowing up to 90% drift reduction to be achieved, even at practical working pressures.

ExRay XC nozzles are supplied ready-made up with three component parts plus a standard ISO 8mm cap and will fit any nozzle body that accepts nozzle filters.

The ExRay XC valve and cap assembly replaces the standard cap seal and the nozzle is fitted into the cap in the normal way.

TRIALS: Undergoing extensive field trials, the commercial launch of these nozzles will be announced shortly but sprayer operators currently state that when spray is applied the ExRay XC nozzles are visibly superior to currently available low drift jets.



Example: ExRay XC 025

### Straight



### Angled



IT IS ESSENTIAL that the correct combination of ExRay XC valve and nozzle are used together. See chart opposite.

- 1st Column – ExRay XC valve colour
- 2nd column – Nozzle colour
- 3rd column – Nozzle metering washer colour

Size	Part No.	Part No.
01	NNB004100	NNB004109
015	NNB004150	NNB004159
02	NNB004200	NNB004209
025	NNB004250	NNB004259
03	NNB004300	NNB004309
035	NNB004350	NNB004359
04	NNB004400	NNB004409
05	NNB004500	NNB004509
06	NNB004600	NNB004609

Note: ExRay XC 01 nozzles cannot be used at pressures below 2 bar. ExRay XC 015 and 02 nozzles cannot be used at pressures below 1.5 bar.





# ExRay XC Extended Range Nozzle Application Rate Chart

Nozzle / Valve colour		LITRES PER HECTARE																					
		Pressure / Nozzle colour		Speed (kph) at 50cm nozzle spacing																			
		Bar	l/min	1	2	3	4	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
ExRay XS 01 LILAC	2	0.42	408	204	136	102	68	58	51	45	41	37	34	31	29	27	26	24	23	21	20	19	19
	2.7	0.44	528	264	176	132	88	75	66	59	53	48	44	41	38	35	33	31	29	28	26	25	24
	3	0.46	552	276	184	138	92	79	69	61	55	50	46	42	39	37	35	32	31	29	28	26	25
	4	0.58	696	348	232	174	116	99	87	77	70	63	58	54	50	46	44	41	39	37	35	33	32
	5	0.66	792	396	264	198	132	113	99	88	79	72	66	61	57	53	50	47	44	42	40	38	36
ExRay XS 015 LILAC	2	0.42	504	252	168	126	84	72	63	56	50	46	42	39	36	34	32	30	28	27	25	24	23
	2.7	0.60	720	360	240	180	120	103	90	80	72	65	60	55	51	48	45	42	40	38	36	34	33
	3	0.62	744	372	248	186	124	106	93	83	74	68	62	57	53	50	47	44	41	39	37	35	34
	4	0.76	912	456	304	228	152	130	114	101	91	83	76	70	65	61	57	54	51	48	46	43	41
	5	0.85	1020	510	340	255	170	146	128	113	102	93	85	78	73	68	64	60	57	54	51	49	46
ExRay XS 02 LILAC	2	0.52	624	312	208	156	104	89	78	69	62	57	52	48	45	42	39	37	35	33	31	30	28
	2.7	0.76	912	456	304	228	152	130	114	101	91	83	76	70	65	61	57	54	51	48	46	43	41
	3	0.78	936	468	312	234	156	134	117	104	94	85	78	72	67	62	59	55	52	49	47	45	43
	4	1.00	1200	600	400	300	200	171	150	133	120	109	100	92	86	80	75	71	67	63	60	57	55
	5	1.10	1320	660	440	330	220	189	165	147	132	120	110	102	94	88	83	78	73	69	66	63	60
ExRay S 025 BLUE	1	0.50	600	300	200	150	100	86	75	67	60	55	50	46	43	40	38	35	33	32	30	29	27
	2	0.75	900	450	300	225	150	129	113	100	90	82	75	69	64	60	56	53	50	47	45	43	41
	2.7	0.95	1140	570	380	285	190	163	143	127	114	104	95	88	81	76	71	67	63	60	57	54	52
	3	1.00	1200	600	400	300	200	171	150	133	120	109	100	92	86	80	75	71	67	63	60	57	55
	4	1.20	1440	720	480	360	240	206	180	160	144	131	120	111	103	96	90	85	80	76	72	69	65
5	1.40	1680	840	560	420	280	240	210	187	168	153	140	129	120	112	105	99	93	88	84	80	76	
ExRay L 03 LIGHT GREEN	1	0.70	840	420	280	210	140	120	105	93	84	76	70	65	60	56	53	49	47	44	42	40	38
	2	0.95	1140	570	380	285	190	163	143	127	114	104	95	88	81	76	71	67	63	60	57	54	52
	2.7	1.05	1260	630	420	315	210	180	158	140	126	115	105	97	90	84	79	74	70	66	63	60	57
	3	1.20	1440	720	480	360	240	206	180	160	144	131	120	111	103	96	90	85	80	76	72	69	65
	4	1.40	1680	840	560	420	280	240	210	187	168	153	140	129	120	112	105	99	93	88	84	80	76
5	1.60	1920	960	640	480	320	274	240	213	192	175	160	148	137	128	120	113	107	101	96	91	87	
ExRay L 035 LIGHT GREEN	1	0.75	900	450	300	225	150	129	113	100	90	82	75	69	64	60	56	53	50	47	45	43	41
	2	1.05	1260	630	420	315	210	180	158	140	126	115	105	97	90	84	79	74	70	66	63	60	57
	2.7	1.20	1440	720	480	360	240	206	180	160	144	131	120	111	103	96	90	85	80	76	72	69	65
	3	1.40	1680	840	560	420	280	240	210	187	168	153	140	129	120	112	105	99	93	88	84	80	76
	4	1.60	1920	960	640	480	320	274	240	213	192	175	160	148	137	128	120	113	107	101	96	91	87
5	1.80	2160	1080	720	540	360	309	270	240	216	196	180	166	154	144	135	127	120	114	108	103	98	
ExRay S 04 BLUE	1	0.70	840	420	280	210	140	120	105	93	84	76	70	65	60	56	53	49	47	44	42	40	38
	2	1.10	1320	660	440	330	220	189	165	147	132	120	110	102	94	88	83	78	73	69	66	63	60
	2.7	1.47	1764	882	588	441	294	252	221	196	176	160	147	136	126	118	110	104	98	93	88	84	80
	3	1.60	1920	960	640	480	320	274	240	213	192	175	160	148	137	128	120	113	107	101	96	91	87
	4	1.90	2280	1140	760	570	380	326	285	253	228	207	190	175	163	152	143	134	127	120	114	109	104
5	2.20	2640	1320	880	660	440	377	330	293	264	240	220	203	189	176	165	155	147	139	132	126	120	
ExRay XL 05 ORANGE	1	1.05	1260	630	420	315	210	180	158	140	126	115	105	97	90	84	79	74	70	66	63	60	57
	2	1.53	1836	918	612	459	306	262	230	204	184	167	153	141	131	122	115	108	102	97	92	87	83
	2.7	1.87	2244	1122	748	561	374	321	281	249	224	204	187	173	160	150	140	132	125	118	112	107	102
	3	1.96	2352	1176	784	588	392	336	294	261	235	214	196	181	168	157	147	138	131	124	118	112	107
	4	2.30	2760	1380	920	690	460	394	345	307	276	251	230	212	197	184	173	162	153	145	138	131	125
5	2.64	3168	1584	1056	792	528	453	396	352	317	288	264	244	226	211	198	186	176	16	158	151	144	
ExRay L 06 LIGHT GREEN	1	1.00	1200	600	400	300	200	171	150	133	120	109	100	92	86	80	75	71	67	63	60	57	55
	2	1.80	2160	1080	720	540	360	309	270	240	216	196	180	166	154	144	135	127	120	114	108	103	98
	2.7	2.10	2520	1260	840	630	420	360	315	280	252	229	210	194	180	168	158	148	140	133	126	120	115
	3	2.45	2940	1470	980	735	490	420	368	327	294	267	245	226	210	196	184	173	163	155	147	140	133
	4	2.95	3540	1770	1180	885	590	506	443	393	354	322	295	272	253	236	221	208	197	186	177	169	161
5	3.44	4128	2064	1376	1032	688	590	516	459	413	375	344	318	295	275	258	243	229	217	206	197	188	



# Spray Technology Products



## Flat Fan 110° 'Wide Range' Nozzles

(ISO colour coded)

### Plastic

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

### Ceramic

Sizes		Part No.
02	Yellow	NNA003111
03	Blue	NNA003112
04	Red	NNA003113
05	Brown	NNA003114
06	Grey	NNA003115

# 110 Flat Fan 'Wide Range' Nozzles Application Rate Chart.

Nozzle	Pressure (Bar)	Flow l/min	LITRES PER HECTARE							
			Speed (kph) at 50 cm nozzle spacing							
			6	8	10	12	14	16	18	20
<b>GREEN</b> 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
<b>YELLOW</b> 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
<b>LILAC</b> 025	1	0.58	115	87	69	58	49	43	38	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
<b>BLUE</b> 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
<b>RED</b> 04	1	0.92	184	139	111	92	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
<b>BROWN</b> 05	1	1.16	231	173	139	116	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
<b>GREY</b> 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
<b>WHITE</b> 08	1	1.85	370	277	222	185	158	139	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
<b>LIGHT BLUE</b> 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



# Spray Technology Products

## **5STAR** Variable Rate Liquid Fertiliser Nozzle

The 5 Star is an innovative fertiliser applicator developed by the BFS technical team for flow based controllers.

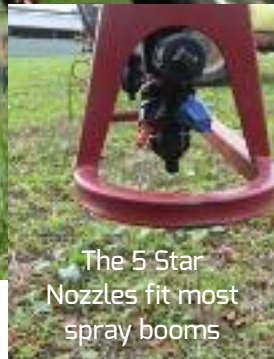
The application of liquid fertiliser may require two or even three sets of conventional multi-hole nozzles to apply the correct rate of nutrients required.

By fitting a 5 Star nozzle with its unique auto-adjusting valve, frequent nozzle changes are eliminated and operators can fit just one set of nozzles, which will apply a wide variation of fertiliser volumes.

The only other way is by changing nozzle inserts, moving slider or discs from outside the cab.



The 5 Star nozzle produces five consistent streams of liquid fertiliser.



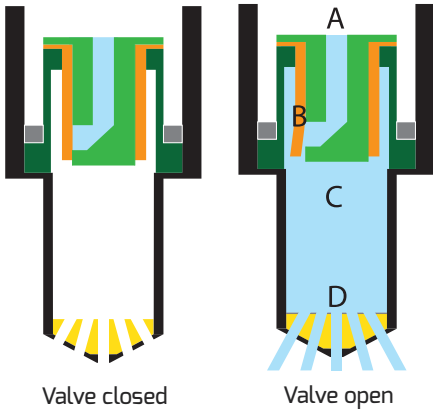
The 5 Star Nozzles fit most spray booms



# Spray Technology Products

## How the 5 Star nozzle works

5 Star is of a five-hole fertiliser nozzle housing with a bayonet fitting. The nozzle incorporates an internal auto-valve that has 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 increases/decreases in pressure.



### The 5 Star Features

- ◆ Consistent flow streams without droplet break-up
- ◆ Eliminates frequent nozzle changes or adjustments
- ◆ Uniform flow rate across boom width
- ◆ Wide variation of applied volume, even at low pressures
- ◆ Reduced risk of scorch
- ◆ One nozzle replaces three sizes



5 Star incorporates unique components that ensure uniform and consistent results.

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.

**Part No. NFB400103**

## Trident

For those operators that prefer a three hole output, the Trident nozzle using the same technology is also available.

**Part No. NFB400001**

### 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															





# Spray Technology Products

## BFS Dribble Bar II

The Dribble Bar II has a re-designed disc with 11 settings giving extra application rate options, but retains the unique “dial-a-rate setting” flow rate adjustment.

It accurately applies liquid fertiliser through four equally-spaced openings along the Bar.



The application rates can be pre-set to one of eleven different flow rates by a simple fingertip adjustment of the flow control disc. Flow rates can be easily altered in the field without metering discs or removing the Dribble Bar.

**Accurate:** Allows precision targeting of liquid fertiliser, eradicates application overlap, and therefore reduces lodging.

**Effective:** Provides an efficient and flexible method of application. Ensures liquid fertiliser can be applied under a wide range of climatic and ground conditions.

**Economic:** Offers increased speed, more efficient utilisation of labour and machines and saves on cost by reducing waste.

**Safe:** Removes risk of spray drift contamination, eliminates field run-off to ditches and hedgerows and minimises crop scorch.



### Fitting

TeeJet/EF3/Euro

### Part No.

NFB200401

### Stabilisers

Hooks to Dribble Bar to keep them in line.

**Part No.** NFB200412 Dribble Bars

# BFS Dribble Bar II Maximum and Minimum Speed Chart.

Optimum Speed is between 11kph and 13kph (shown in Bold)

Application Rate l/ha	Position *		Position △		Position 1		Position 2		Position 3		Position 4		Position 5		Position 6		Position 7		Position 8		Position 9		
	Speed kph		Speed kph		Speed kph		Speed kph		Speed kph		Speed kph		Speed kph		Speed kph		Speed kph		Speed kph		Speed kph		
	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min
100	13	19	13	20	16																		
120	11	16	11	17	14	20	18																
140	9	14	10	15	12	17	15			19													
160	8	12	8	13	10	15	13	19	17			19											
180	7	11	7	11	9	14	12	17	15			17		19									
200	6	10	7	10	8	12	11	15	13	19	15		18										
220	6	9	6	9	7	11	10	14	12	18	14	20	16				21						
240	5	8	6	9	7	10	9	13	11	16	13	18	15	21	19								
260	5	7	5	8	6	9	8	12	10	15	12	17	13	19	17		20						
280	5	7	5	7	6	9	8	11	9	14	11	16	13	18	16		19	20			20		
300	4	6	4	7	5	8	7	10	9	13	10	15	12	17	15		17	18			19		
400	3	5	3	5	4	6	5	8	7	10	8	11	9	13	11	17	13	20	14			14	
500		4		4	3	5	4	6	5	8	6	9	7	10	9	14	10	16	11	17	11	18	
600		3		3		4	4	5	4	6	5	7	6	8	8	11	9	13	9	14	9	15	
700					3	3	4	4	6	4	6	5	7	6	10	7	11	8	12	8	13		
800					3		4	3	5	4	5	4	6	6	8	7	10	7	11	7	11		
900							3		4	3	5	4	6	5	8	6	9	6	10	6	10		
1000							3		4	3	4	4	5	5	7	5	8	5	9	6	9		
1100									4		4	3	5	4	6	5	7	5	8	5	8		
1200									3				4	4	6	4	7	5	7	5	7		
1300												3		4	3	5	4	6	4	7	4	7	
1400												3		4	3	5	4	6	4	6	4	6	
1500													3	3	5	3	5	4	6	4	6		
1600														3		4	3	5	3	5	4	6	
1700															4	3	5	3	5	3	5		
1800															4		4	3	5	3	5		
1900															4		4		5		5		
2000															3		4		4		4		

This chart shows litres per hectare applied with a Dribble Bar spacing of 50cm. If the controller allows the operator to input the Specific Gravity of the fertiliser the controller will compensate for the difference between water and fertiliser. Any other controller will need the rate modified by a simple calculation before using this chart and entering the new rate into the controller.



The BFS Dribble Bar II is calibrated to give optimal performance with pressures between 1bar and 2.5bar, travelling at a speed of 12kph. Speeds slower than the minimum shown may require pressures lower than 1bar and give uneven application. Speeds faster than the maximum shown may require pressures higher than 2.5bar and increase the risk of splashing resulting in crop scorch or damage to the Dribble Bar II.

Use the calculation below to find the setting for the required speed range.  
**(this example is for N28 with an SG of 1.25 with an application rate of 268 litres/hectare).**  
*Calculation*  
 Required Application Rate × (√Specific Gravity) = Rate to select from chart and input in controller.  
 Litres/hectare × Square root of Specific Gravity = Litres/hectare  
 e.g. 268 × 1.25 (1.118) = 300 **Choose Position 5 @ 12kph**

# BFS Dribble Bar II Application Rate Chart.

Pressure  Flow  Bar  l/min

Application Rate – Litres per hectare @ 50cm spacing

SPEED kph	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
POSITION 	1.00	1.08	432	324	259	216	185	162	144	130	118	108	100	93	86	81
	1.25	1.21	484	363	290	242	207	182	161	145	132	121	112	104	97	91
	1.50	1.29	516	387	310	258	221	194	172	155	141	129	119	111	103	97
	1.75	1.41	564	423	338	282	242	212	188	169	154	141	130	121	113	106
	2.00	1.48	592	444	355	296	254	222	197	178	161	148	137	127	118	111
	2.50	1.62	648	486	389	324	278	243	216	194	177	162	150	139	130	122
POSITION 	1.00	1.12	448	336	269	224	192	168	149	134	122	112	103	96	90	84
	1.25	1.24	496	372	298	248	213	186	165	149	135	124	114	106	99	93
	1.50	1.34	536	402	322	268	230	201	179	161	146	134	124	115	107	101
	1.75	1.44	576	432	346	288	247	216	192	173	157	144	133	123	115	108
	2.00	1.52	608	456	365	304	261	228	203	182	166	152	140	130	122	114
	2.50	1.70	680	510	408	340	291	255	227	204	185	170	157	146	136	128
POSITION <b>1</b>	1.00	1.35	540	405	324	270	231	203	180	162	147	135	125	116	108	101
	1.25	1.54	616	462	370	308	264	231	205	185	168	154	142	132	123	116
	1.50	1.67	668	501	401	334	286	251	223	200	182	167	154	143	134	125
	1.75	1.80	720	540	432	360	309	270	240	216	196	180	166	154	144	135
	2.00	1.90	760	570	456	380	326	285	253	228	207	190	175	163	152	143
	2.50	2.04	816	612	490	408	350	306	272	245	223	204	188	175	163	153
POSITION <b>2</b>	1.00	1.76	704	528	422	352	302	264	235	211	192	176	162	151	141	132
	1.25	1.95	780	585	468	390	334	293	260	234	213	195	180	167	156	146
	1.50	2.12	848	636	509	424	363	318	283	254	231	212	196	182	170	159
	1.75	2.23	892	669	535	446	382	335	297	268	243	223	206	191	178	167
	2.00	2.34	936	702	562	468	401	351	312	281	255	234	216	201	187	176
	2.50	2.54	1016	762	610	508	435	381	339	305	277	254	234	218	203	191
POSITION <b>3</b>	1.00	2.20	880	660	528	440	377	330	293	264	240	220	203	189	176	165
	1.25	2.45	980	735	588	490	420	368	327	294	267	245	226	210	196	184
	1.50	2.68	1072	804	648	536	459	402	357	322	292	268	247	230	214	201
	1.75	2.82	1128	846	677	564	482	423	376	338	308	282	260	242	226	212
	2.00	2.96	1184	888	710	592	507	444	395	355	323	296	273	254	237	222
	2.50	3.24	1296	972	778	648	555	486	432	389	353	324	299	278	259	243
POSITION <b>4</b>	1.00	2.57	1028	771	617	514	441	386	343	308	280	257	237	220	206	193
	1.25	2.79	1116	837	670	558	478	419	372	335	304	279	258	239	223	209
	1.50	3.02	1208	906	725	604	518	453	403	362	329	302	279	259	242	227
	1.75	3.21	1284	963	770	642	550	482	428	385	350	321	296	275	257	241
	2.00	3.34	1336	1002	802	668	573	501	445	401	364	334	308	286	267	251
	2.50	3.66	1464	1098	878	732	627	549	488	439	399	366	338	314	293	275

SPEED kph	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
POSITION <b>5</b>	1.00	2.92	1168	876	701	584	501	438	389	350	319	292	270	250	234
	1.25	3.22	1288	966	773	644	552	483	429	386	351	322	297	276	258
	1.50	3.46	1384	1038	830	692	593	519	461	415	377	346	319	297	277
	1.75	3.67	1468	1101	881	734	629	551	489	440	400	367	339	315	294
	2.00	3.79	1516	1137	910	758	650	569	505	455	413	379	350	325	303
	2.50	4.18	1672	1254	1003	836	717	627	557	502	456	418	386	358	334
POSITION <b>6</b>	1.00	3.79	1516	1137	910	758	650	569	505	455	413	379	350	325	303
	1.25	4.28	1712	1284	1027	856	734	642	571	514	467	428	395	367	342
	1.50	4.62	1848	1386	1109	924	792	693	616	554	504	462	426	396	370
	1.75	4.98	1992	1494	1195	996	854	747	664	598	543	498	460	427	398
	2.00	4.28	1712	1284	1027	856	734	642	571	514	467	428	395	367	342
	2.50	5.66	2264	1698	1358	1132	970	849	755	679	617	566	522	485	453
POSITION <b>7</b>	1.00	4.36	1744	1308	1046	872	747	654	581	523	476	436	402	374	349
	1.25	4.82	1928	1446	1157	964	826	723	643	578	526	482	445	413	386
	1.50	5.23	2092	1569	1255	1046	897	785	697	628	571	523	483	448	418
	1.75	5.60	2240	1680	1344	1120	960	840	747	672	611	560	517	480	448
	2.00	6.12	2448	1836	1469	1224	1049	918	816	734	668	612	565	525	490
	2.50	6.65	2660	1995	1596	1330	1140	998	887	798	725	665	614	570	532
POSITION <b>8</b>	1.00	4.58	1832	1374	1099	916	785	687	611	550	500	458	423	393	366
	1.25	5.08	2032	1524	1219	1016	871	762	677	610	554	508	469	435	406
	1.50	5.46	2184	1638	1310	1092	936	819	728	655	596	546	504	468	437
	1.75	5.92	2368	1776	1421	1184	1015	888	789	710	646	592	546	507	474
	2.00	6.52	2608	1956	1565	1304	1118	978	869	782	711	652	602	559	522
	2.50	7.20	2880	2160	1728	1440	1234	1080	960	864	785	720	665	617	576
POSITION <b>9</b>	1.00	4.74	1896	1422	1138	948	813	711	632	569	517	474	438	406	379
	1.25	5.30	2120	1590	1272	1060	909	795	707	636	578	530	489	454	424
	1.50	5.72	2288	1716	1373	1144	981	858	763	686	624	572	528	490	458
	1.75	6.20	2480	1860	1488	1240	1063	930	827	744	676	620	572	531	496
	2.00	6.72	2688	2016	1613	1344	1152	1008	896	806	733	672	620	576	538
	2.50	7.48	2992	2244	1795	1496	1282	1122	997	898	816	748	690	641	598

The Application Rates have been measured using water. The charts are shown in litres/hectare applied with a Dribble Bar II spacing of 50cm. These figures are given as a guide and the operator should adjust speed and pressure to suit local conditions. Please note that pressures higher than 2.5 bar can damage the Dribble Bar II and care must be taken when using automatic controllers.



# Spray Technology Products

## AutoStreamer – Liquid Fertiliser Applicator

*Provides true variable rate liquid fertiliser application*

The AutoStreamer is an innovation developed by the BFS technical team. The BFS AutoStreamer works with a flow based rate controller. To ensure the accurate application of liquid fertiliser 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.

**Part No. NFB500001 EF3**

**NFB500010 AGRIFAC**



### AutoStreamer Features

- ◆ **Precision:** Ensures the accurate placement of liquid fertilisers and avoids application overlap.
- ◆ **Efficiency:** Allows the application of liquid fertilisers to be applied under a wide range of field and climatic conditions and right up the field boundaries.
- ◆ **Economy:** Saves on waste and offers increased speed of application and better utilisation of labour and machinery.
- ◆ **Protection:** Eliminates spray drift and field run-off to ditches, etc. Minimises crop scorch.



Hooks at each end can be fitted with stabilisers to keep them in line

### Stabilisers

Elasticated stabilisers that slip over the end hooks are available to keep the AutoStreamers in line.

**Part No. NFB300004**

### How does it work?

Using a clever quad-valve system, each encased in a specially developed rubber sleeve, the AutoStreamer allows the operator to achieve a ten-fold increase in flow rates from only a three-fold increase in pressure. As the liquid fertiliser enters the AutoStreamer the flow is channelled into four individual outlets.





# Spray Technology Products

## AutoStreamer – Liquid Fertiliser Applicator

Now you can have precision, variable-rate, drift-free application of liquid fertilisers, with the rate of application adjusted from within the cab.

Litres per/ha	Speed Range using 0.75bar to 2.6bar																		
	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																			

### Tests undertaken using water

Whilst under field conditions reports indicate that the AutoStreamer will operate very effectively at flow rates as low as 0.8 litres per minute, BFS does not recommend rates of less than 1.2 litres per minute.





# Spray Technology Products

## Angled Cap

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 and 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

### What are they?

A cap and seal designed to allow the fitting of all standard 8mm jets. Manufactured using chemical resistant materials.

### Why use them?

Research has shown that angling the spray at 30° and alternating the nozzles backwards and forwards across the boom improves spray deposition. The need to purchase additional, more expensive speciality nozzles is eliminated.

- ◆ **Flexible** - Used with all standard 8 mm nozzles
- ◆ **Accurate** - Provides a 30° angled spray
- ◆ **Versatile** - Universal EF 3 bayonet fitting
- ◆ **Practical** - Easy to fit, exchange and remove
- ◆ **Durable** - Chemical resistant and long lasting
- ◆ **Economical** - less than half the price of angled nozzles



Seal



## Replacement Seal

Part No. NCF000101

## Angled Cap and Seal

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



# Spray Technology Products

## Standard 8 mm Nozzle Cap & Washer



Colour code	Part No.
Orange	NCA000012
Green	NCA000001
Yellow	NCA000002
Lilac	NCA000000
Blue	NCA000003
Brown Red	NCA002992
Red	NCA000004
Brown	NCA000005
Grey	NCA000006
White	NCA000008
Light Blue	NCA000010

## BFS Nozzle Filters

Ball Check Nozzle Filters also available.

Size	Part No.
50 mesh	NSA000003
24 mesh	NSA000002
100 mesh	NSA000001



## Hardi Nozzle Filter (Blue)

Part No. NSA000203



## Blanking Nozzle

Part No. NTA000001



## Twin Caps

Fits all standard ISO tips.  
Compatible with 'US style'  
bayonet fittings.

Part No.  
NTB000011



*Nozzles not included.*

## BFS 'US Style' Bayonet Extension Fittings

Part No. NBA001001





# Measuring Equipment

## 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 pressure to 3 bar and the FlowCheck will indicate the flow.

**Part No.** LTS000007



*Easy-carry and storage case*



*FlowCheck showing easily readable flow chart*



*FlowCheck has a clip that secures it firmly under the spray nozzle*



*Multiple FlowChecks can be hung on the boom*



# Measuring Jugs & Cylinders

Cylinder 1 litre

**Part No.**

MJC000005

Cylinder 2 litre

**Part No.**

MJC000002



## Moulded markings

Type	Size	Part No.
Beaker	100 ml	MJB000002
Jug	500 ml	MJB000001
Jug	1 litre	MJJ000004
Jug	2 litre	MJJ000002
Jug	3 litre	MJJ000003
Jug	5 litre	MJJ000005



## Printed Markings

Type	Size	Part No.
Jug	1 litre	MJJ000007
Jug	2 litre	MJJ000008



## BFS Quick Check Jug

Unique measuring aid, the Quick Check Jug offers a fast, accurate calibration test for crop sprayers. A range of tests can be carried out with each operation taking 30 seconds.

Type	Size	Part No.
Jug	2 litre	MJJ000001





# Allman Sprayer Spares

## Allman Sprayer Parts

BFS stock a huge range of authentic Allman sprayer parts and can also manufacture many parts to Allman specifications. A few examples are shown below but are only a fraction of what is available, many ex-stock. Please call our stores on 01268 710237 for full details.

## Allman Control Valves



## Allman Boom Tubes

Supplied in various lengths. Also supplied in different diameter tubes, with or without nozzle bodies.



## Allman Boom Spring



## Allman Diaphragms



## Allman Boom Hinge & Spindle



Manufactured in mild steel

## Allman Diaphragm & 'O' rings



## Allman Filter Mesh



## Allman Nozzle Body





# Allman Sprayer Spares

**Floating Filters**



**Twin Boom & Lance**



**Basket Filters**



**Controllers**



**Rubber Lids**



**Ace Pump Kit & Impeller**



**Tank Lids**



**Roller Vane Seal Kit**





# Pumps

## Centrifugal Pumps (Hydraulic Driven)

### Ace (Hydraulic Driven) Range

Ace Pump Corporation has developed a complete range of products for the agricultural and construction markets. The pumps are found serving a variety of functions in industry today including crop sprayers, turf sprayers, and more. BFS are the UK main dealers for Ace pumps.



Pump	Part No.
ACE-FMC-240N-HYD 1¼"	VAC005044

The 204 motor requires 4 GPM(15.1 LPM) maximum hydraulic fluid input.

Recommended for:

- ◆ Pressure Compensating Closed Centre Systems
- ◆ Open Centre Systems up to 13 GPM (49.2 LPM) using internal needle valve bypass.



Pump (Self Priming)	Part No.
ACE FMC-150SP-HYD-206N 1½"	VAC005051

The 206 motor requires 7 GPM (26.5 LPM) maximum hydraulic fluid input and fits virtually all tractor hydraulic systems.

Recommended for:

- ◆ Pressure Compensating and Load Sensing Closed Centre Systems
- ◆ Open Centre Systems up to 16 GPM (60.6 LPM) using internal needle valve bypass



Pump	Part No.
ACE FMC-150-HYD-206N 1½"	VAC005046

The 206 motor requires 7 GPM (26.5 LPM) maximum hydraulic fluid input and fits virtually all tractor hydraulic systems.

Recommended for:

- ◆ Pressure Compensating and Load Sensing Closed Centre Systems
- ◆ Open Centre Systems up to 16 GPM (60.6 LPM) using internal needle valve bypass



Pump	Part No.
FMCWS-650F-HYD 1½"	VAC005062

The M16 motor requires 14 GPM (53 LPM) maximum hydraulic fluid input.

Recommended for:

- ◆ Pressure Compensating and Load Sensing Closed Centre Systems
- ◆ Open Centre Systems up to 14 GPM (53 LPM)





# Pumps

## Diaphragm Pumps (Low Pressure)

### Comet Range

Designed to provide good resistance to abrasive solutions and extra flow for agitation. All hydraulic pumps are equipped with stainless steel shaft and wear rings.

Pump	Part No.	
BP105K 1 <sup>3</sup> / <sub>8</sub> "	VAP003103	Six Splined Shaft
BP105K 30mm	VAP003106	Bare Shaft



## Diaphragm Pumps

### Annovi Reverberi Range

Semi-hydraulic diaphragm pumps with air chamber and 1<sup>3</sup>/<sub>8</sub>" splined shaft.

Pump	Part No.	Flow rate (l/min)	Pressure (bar)	Power (hp)
AR70	VAP002006	70	20	3.4
AR135	VAP002004	130	20	6.7
AR250	VAP002001	250	20	11.5

AR70



AR250



AR135



## Roller Vane Pumps

Positive displacement pumps. They operate efficiently at a range of PTO speeds and under wide variations of pressures and flow rates.

**Part No.** RVC10 VAR001004

**Part No.** RVC25 VAR001007





# Pumps

## Flojet Pumps

**Part No.** VAP006001 Flojet 5.9 bar 7 Lpm pump  
230 volt

**Part No.** VAP006002 Flojet 3.1 bar max 18.5 Lpm 12V  
DC pump

**Part No.** VAP006004 Flojet LF Series Piston Pump 3.1 Lpm 12V

**Part No.** VAP006005 Flojet 6.8 bar 7.6 Lpm D3135E7011AR Pump 12V



## Centrifugal Pumps

BFS stock a full range of Pacer Pump spares. Please contact our stores for your requirements.

### Honda (Petrol)

2" Centrifugal pump, Honda engine GX160 207P-5,  
4 bar max pressure, 757 lt/min max flow. Power 5.5hp.



## Pressure Gauges (Glycerin filled)

4 bar 1/4" BSP 63mm **Part No.** VGB000011 Bottom Entry

7 bar 1/4" BSP 63mm **Part No.** VGB000010 Bottom Entry

11 bar 1/4" BSP 63mm **Part No.** VGB000013 Bottom Entry

7 bar 1/4" BSP 63mm **Part No.** VGS000011 Rear Entry



## Pressure Gauges (Brass, glycerin filled)

16 bar 1/4" BSP 100mm **Part No.** VGB000014 Rear Entry

16 bar 1/4" BSP 100mm **Part No.** VGB000017 Bottom Entry



## Pump Winter Service Kit

The kits are supplied to fit the range of pumps outlined.

AR 250 Winter Service Kit

**Part No.** VAP001003

AR 135 Winter Service Kit

**Part No.** VAP001005



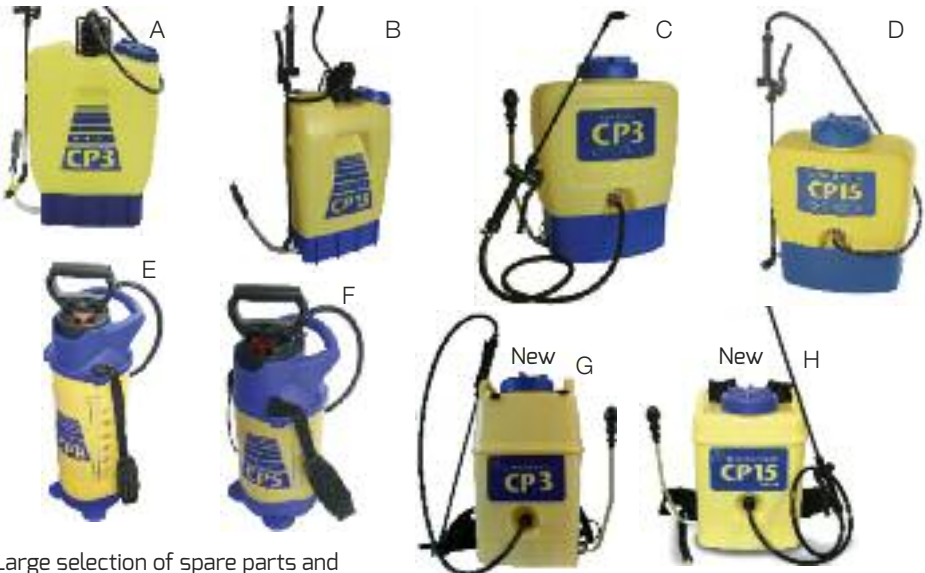
The number and extent of these spare parts are too many to detail in this catalogue. However, our trained stores staff will be able to provide information on the products held in stock and, if not immediately available, will be pleased to order them for you. Contact details below.



# Knapsacks

## Cooper Pegler range

<b>Model</b>	<b>BFS Part No</b>	<b>Model</b>	<b>BFS Part No</b>
A. CP3-2000	MKM002001	E. MaxiPro 8	MKM002005
B. CP15-2000	MKM002002	F. MaxiPro 5	MKM002006
C. CP3 Classic	MKM002003	G. Evolution CP3	MKM002015
D. CP15 Classic	MKM002004	H. Evolution CP15	MKM002016



Large selection of spare parts and accessories for the CP range are available from stock



## Fox Motori

Featuring a 12 volt, re-chargeable battery, this electric powered knapsack has been designed for the professional user and comes complete with pressure adjustment and pressure gauge for precise application.

- ◆ 15 litre tank
- ◆ 12v piston diaphragm pump
- ◆ 22W electric motor
- ◆ Weight: 5.6kg (when empty)

**Part No. MKE000008**







# Application Products

## MicroWipe – Weedwipe

A safe, simple and economical means of spot-treating weeds with herbicides containing glyphosate. The herbicide impregnated wick, when 'wiped' onto the target vegetation, transfers a small amount of the chemical to the foliage. Drift risk onto non-target foliage is removed.

The MicroWipe's all plastic construction consists of a herbicide reservoir inside the transparent handle that transfers the chemical by gravity to nylon-rope wick.

The MicroWipe is light, easy to use, has no moving parts, and does not suffer from corrosion. It eliminates chemical waste as there is no spray run-off.

Available in 2 versions.

Straight: Single T

**Part No. MKM006001**

Angled Head

**Part No. MKM005901**

## All Clear

A specially formulated liquid sprayer cleaner which removes pesticide deposits and other debris (including oily substances) from tanks, booms, hoses, filters and nozzles.

**Pack size Part No.**

5lt

**MAD000024**



## BullsEye Spray Pattern Indicator

By just simply adding BullsEye to the spray tank solution operators will see at a glance the temporary spray pattern on the target surface ensuring overlap and missed areas are a thing of the past. Ideal for knapsack spot treatments and through power sprayers on golf and bowling greens and in many landscape situations.

**Part No. MAD000001**





# Parts & Fittings

BFS also stock a large range of braided, clear and suction hoses, stainless steel clips and spare parts for spraying machinery and equipment.



**Ball Valves**



**Hose & Tail Elbows**



**Camlever Couplers**



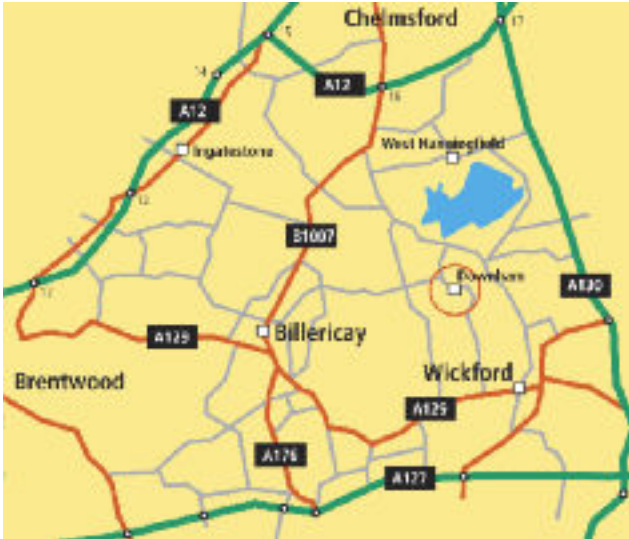
**Nozzle Bodies**



**Filter Elements**



**Suction Filter plus Element**



## BFS Directions

Directions from A12.

Exit junction 16 and head towards Billericay on B1007. After 1 mile turn left into Downham Road. Continue along a winding road and at T-junction turn left into Hawkswood Road. Pass Hanningfield reservoir on left and take first turning right into Crowsheath Lane. At next T-junction turn left into School Road and follow road through Downham village. BFS offices and store will be found 400m on the left.



**Billericay Farm Services Ltd**  
**Downham, Billericay, Essex CM11 1QU**

**Tel: 01268 710237**

**Fax: 01268 712125**

**E-mail: [stores@bfs.uk.com](mailto:stores@bfs.uk.com)**

**Website: [www.bfs.uk.com](http://www.bfs.uk.com)**