

GUIDE TO CHOOSING THE PROPER STARA SPRAY NOZZLES



SPRAY NOZZLES

The Stara spray nozzles are developed to ensure quality agricultural chemical applications. They can be used to apply insecticides, herbicides, and fungicides. They are compatible with all the Stara Sprayer Line and classified into nine families. Each model meets specific needs of the farmer daily basis.



DO YOU KNOW WHICH SPRAY NOZZLE MODEL IS THE IDEAL ONE FOR EACH TYPE OF APPLICATION?

FOLLOW OUR GUIDE!

COVERAGE

• It is the amount of droplet percentage applied to a certain area or target when spraying. The coverage is a factor that is directly connected to the type of chemical applied, application rate, droplet size, plant type, application factor, and waste reduction.


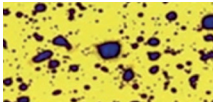

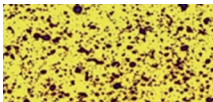

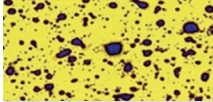



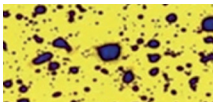

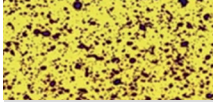

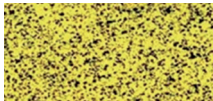
VOLUME

• The spraying volume set per area (L/ha) with the droplet size is one of the most common processes to change the coverage. Thereby, both must be analysed when choosing the spray nozzle. Changing these parameters directly influences the intended coverage and the success or failure of the application.

STANDARD DROPLET SIZE

DROPLET SIZE CLASS	DROPLET SIZE	VMD (microns)	DROPLET COLOUR	FOLIAR RETENTION	DRIPT POTENTIAL
EXTREMELY FINE (EF)	Smaller	< 60	Purple	Excellent	Higher
VERY FINE (VF)		61 - 105	Red	Excellent	
FINE (F)		106 - 235	Orange	Very Good	
MEDIUM (M)		236 - 340	Yellow	Good	
COARSE (C)		341 - 403	Blue	Moderate	
VERY COARSE (VC)		404 - 502	Green	Poor	
EXTREMELY COARSE (EC)		503 - 665	White	Very Poor	
ULTRA COARSE (UC)	Larger	> 665	Black	Very Poor	Lower

NUMBER OF DROPLETS FOR PHYTOSANITARY CONTROL

PRODUCT	DROPLETS (cm ²)	SIZE
 SYSTEMIC-ACTING INSECTICIDE	20 - 30	 C M
 CONTACT-ACTING INSECTICIDE	50 - 70	 M F
 PRE-EMERGENT HERBICIDE	20 - 30	 VC C M
 POST-EMERGENT SYSTEMIC HERBICIDE	20 - 30	 UC VC C
 POST-EMERGENT CONTACT HERBICIDE	30 - 40	 C M
 SYSTEMIC-ACTING FUNGICIDE	50 - 70	 M F
 CONTACT-ACTING FUNGICIDE	> 70	 F VF

WEAR OF NOZZLES

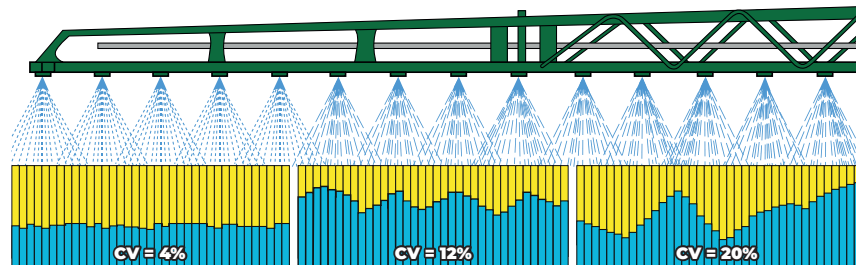
- One of the most practical ways to see if a spray nozzle is worn-out or damaged is to compare the new spray nozzle flow to the used spray nozzle flow. Consider the same model, flow and pressure;
- To do that, it is required to check the liquid flow of each unit using a graduated cylinder, a timer and a pressure manometer installed on the spray nozzle. Collect the liquid from both nozzles and compare the nozzles flow used with the new one;



- The spray nozzles considered excessively worn-out must be replaced when the flow exceeds 10% of the flow when compared to the new spray nozzle;

COEFFICIENT OF VARIATION

- The coefficient of variation (CV) is a measure taken on the spray nozzles and taking into consideration the spray distribution uniformity along the length of a spray boom. The spacing between nozzles, boom height, wear, the opening angle of the nozzles and the operation pressure result in the overlay of the boom spray nozzles. Thus, the lower the CV value, the higher the liquid distribution uniformity and the application precision.



NEW SPRAY NOZZLES*

They provide a uniform application when properly overlaid.

WORN-OUT SPRAY NOZZLES*

They feature higher flow with concentrated spraying under each point.

DAMAGED/BLOCKED SPRAY NOZZLES*

They feature irregular flow - over application and under application

SOURCE: ADAPTED FROM TEEJET TECHNOLOGIES

*Tested by a test bench.

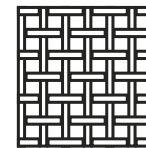
SPRAY NOZZLE STRAINERS

- In addition to the spray nozzles, which determine the system flow and provide the desired droplet size, it is crucial to have attention to the other system components, especially the strainers. They must be clean and in good working conditions at all times.
- As much as the spray nozzle strainers as the equipment filters, they follow a regulation standard and standardisation to prevent misunderstandings regarding the mesh size and colour.

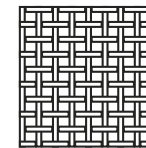
MESH*	STRAINER COLOUR
30	RED
50	BLUE
80	YELLOW
100	GREEN



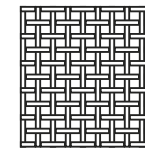
SPRAY NOZZLE STRAINERS*



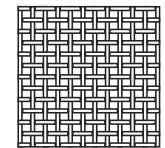
30 MESH



50 MESH



80 MESH



100 MESH



LINE FILTERS, SPRAY BOOMS AND PUMP*

*Check the parts catalogue to see the replacement options available.

STARA TP - STP

LOW DRIFT WITH SPOT SPRAYING APPLICATION TECHNOLOGY



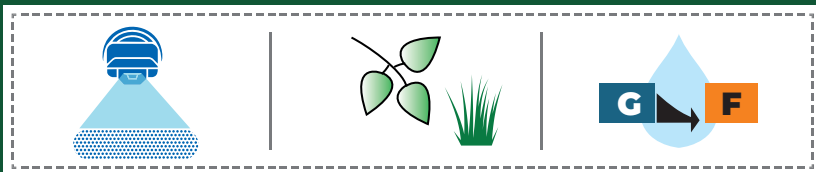
• Spraying jet pattern is flat and uniform, providing uniform coverage in all spraying jets without the need of overlap;

• Ideal for range application in the row unit, between row units or in specific targets;

Specially developed for the spot spraying system ECO SPRAY;

• Available in hard stainless steel, ensuring longer durability;

• Automatic alignment of the spraying jet with the cap and sealing ring.



• Spraying pattern is flat and uniform

• Perfect for spot spraying application of post emergent applications

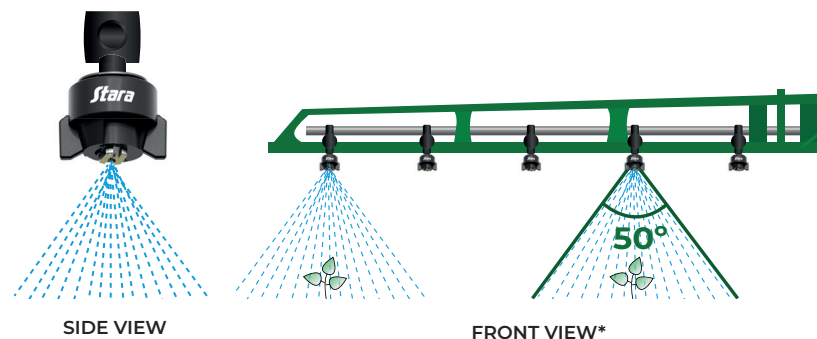
• Developed for wide versatility in applications

Features	
Common use:	Weed control
Pattern:	Flat uniform jet
Technology:	Uniform spraying
Material:	Hard stainless steel
Spray angle:	50 °
Pressure range:	2 to 4 BAR
Configuration:	Complete, FastCap
Brand/Model	Tejeet-TP50_E

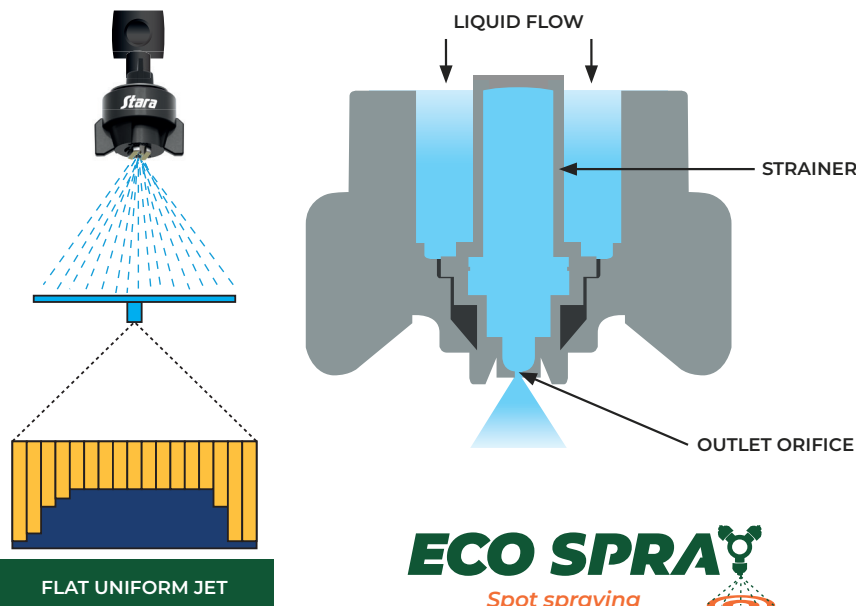
Application guide		
**Herbicide	Pre-emergent	Good
	Systemic-acting	Excellent
	Contact	Excellent
**Fungicide	Systemic-acting	Excellent
	Contact	Good
**Insecticide	Systemic-acting	Excellent
	Contact	Good
*Drift control		Excellent

*Not recommended | *Good: 50-75% | *Very good: ~75% | *Excellent: ~90%** The droplet size must be chosen according to the target or product to be applied.

ASSEMBLED ON THE SPRAY BOOM



*The application range may vary according to the boom height



ECO SPRAY
Spot spraying

STARA TP - STP

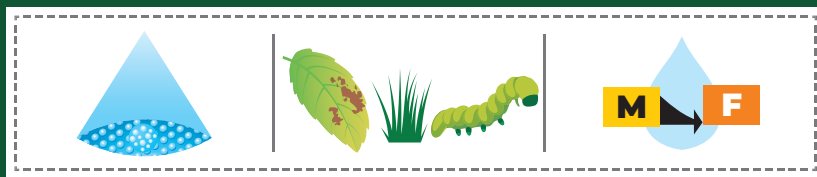
							L/ha 50 cm of spacing between nozzles									
							Speed km/h									
Nozzle	Strainer / Mesh	Droplet size	PRESSURE (BAR)	PRESSURE (KPA)	PRESSURE (PSI)	FLOW (L/MIN)	2	4	6	8	10	12	14	16	18	20
STP-02	50	M	2,0	200	30	0,653	392	\$	131	98	78	65	56	49	44	39
		M	2,5	250	37	0,730	438	219	146	110	88	73	63	55	49	44
		M	3,0	300	45	0,800	480	240	160	120	96	80	69	60	53	48
		F	3,5	350	51	0,864	518	259	173	130	104	86	74	65	58	52
		F	4,0	400	49	0,924	554	277	185	139	111	92	79	69	62	55
STP-03	50	G	2,0	200	30	0,980	588	294	196	147	118	98	84	73	65	59
		M	2,5	250	37	1,095	657	329	219	164	131	110	94	82	73	66
		M	3,0	300	45	1,200	720	360	240	180	144	120	103	90	80	72
		M	3,5	350	51	1,296	778	389	259	194	156	130	111	97	86	78
		M	4,0	400	49	1,386	831	416	277	208	166	139	119	104	92	83
STP-04	50	G	2,0	200	30	1,306	784	392	261	196	157	131	112	98	87	78
		G	2,5	250	37	1,461	876	438	292	219	175	146	125	110	97	88
		M	3,0	300	45	1,600	960	480	320	240	192	160	137	120	107	96
		M	3,5	350	51	1,728	1037	518	346	259	207	173	148	130	115	104
		M	4,0	400	49	1,848	1109	554	370	277	222	185	158	139	123	111

STARA 3D-S3D

IDEAL FOR THE TOTAL AREA APPLICATION



- Excellent for product application for systemic-acting products;
- Forward and rear-facing fan helps in canopy penetration and requires higher coverage;
- Greater performance when compared to the standard fan spray nozzle (conventional). Extra 10% of efficiency when controlling weeds with pre-emergent herbicides;
- It prevents the so-called "umbrella" effect. Consequently, the chances to reach the target are higher;
- Drift reduction by 60-75% compared to conventional spray nozzles;
- The spray nozzles are designed to be installed alternating forward and backwards on the boom to provide 3-dimensional coverage on vertical targets;
- The 100° angle inclined at 37.5° to increase the application versatility.



100° spray angle, inclined at 37.5° and ensures uniform coverage and drift control.

It is perfect to spray a wide range of chemicals such as fungicides, herbicides, and insecticides.

It is carefully designed to produce medium and fine droplets with a wide pressure range.

Features	
Common use:	Phytosanitary control
Pattern	Advanced cone pattern
Technology	Uniform spraying
Material	Polyacetal
Angle/Inclination	100° / 37.5°
Pressure range	1 to 6 bar
Configuration	with SnapLock
Brand/Model	Hypro - 3D

Application guide		
**Herbicide	Pre-emergent	Very good
	Systemic-acting	Good
	Contact	Very good
*Fungicide	Systemic-acting	Excellent
	Contact	Excellent
**Insecticide	Systemic-acting	Excellent
	Contact	Very good
*Drift control		Good

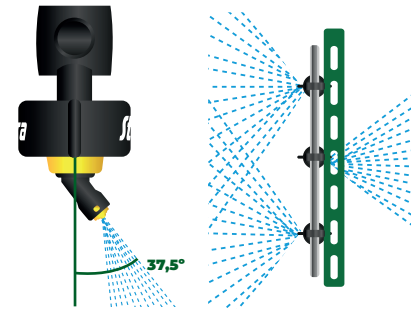
* -: Not recommended | *Good: 50-75% | *Very Good: >75% | *Excellent: >90%.
 ** The droplet size must be chosen according to the target or product to be applied.



Video

See for yourself the operation quality of the spray nozzle - Stara 3D

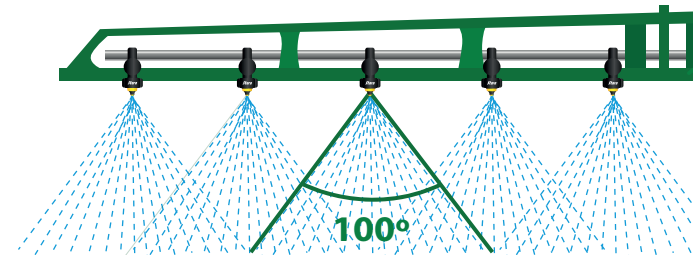
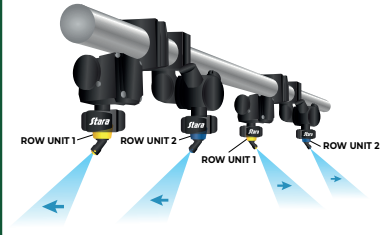
INSTALLATION ON THE SPRAY BOOM



SIDE VIEW

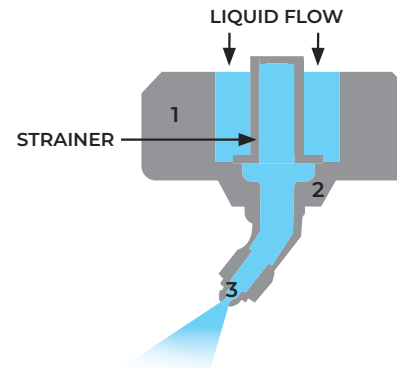
TOP VIEW*

TWIN ROW SPRAYING SYSTEM



FRONT VIEW*

* The fan capacity may vary according to the boom height



1 – SnapLock cap for installation and removal.

2 - Angular orifice for higher coverage and less drift.

3 - Orifice designed for more droplet uniformity, drift reduction and distribution uniformity along the length of a spray boom.

STARA 3D-S3D

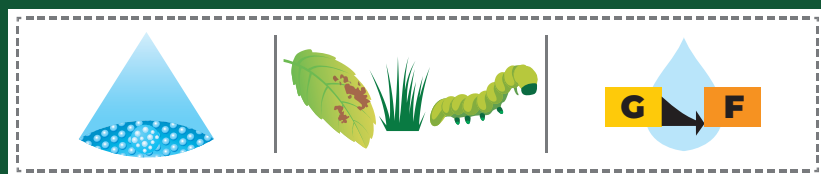
							L/ha, spacing between spray nozzles of 50 cm																	
							Speed km/h																	
Spray nozzles	Strainer/ Mesh	Droplet size	Pressure (bar)	Pressure (kPa)	Pressure (psi)	Flow (l/min)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	35	
S3D-015	100	M	1	100	15	0,346	208	104	69	52	42	35	30	26	23	21	19	17	16	15	14	13	12	
		M	1.5	150	22	0,424	255	127	85	64	51	42	36	32	28	25	23	21	20	18	17	16	15	
		F	2	200	30	0,490	294	147	98	73	59	49	42	37	33	29	27	24	23	21	20	18	17	
		F	2.5	250	37	0,548	329	164	110	82	66	55	47	41	37	33	30	27	25	23	22	21	19	
		F	3	300	45	0,600	360	180	120	90	72	60	51	45	40	36	33	30	28	26	24	23	21	
		F	4	400	59	0,693	416	208	139	104	83	69	59	52	46	42	38	35	32	30	28	26	24	
		F	5	500	73	0,775	465	232	155	116	93	77	66	58	52	46	42	39	36	33	31	29	27	
S3D-02	100	F	6	600	88	0,849	509	255	170	127	102	85	73	64	57	51	46	42	39	36	34	32	29	
		M	1	100	15	0,462	277	139	92	69	55	46	40	35	31	28	25	23	21	20	18	17	16	
		M	1.5	150	22	0,566	339	170	113	85	68	57	48	42	38	34	31	28	26	24	23	21	19	
		M	2	200	30	0,653	392	196	131	98	78	65	56	49	44	39	36	33	30	28	26	24	22	
		F	2.5	250	37	0,730	438	219	146	110	88	73	63	55	49	44	40	37	34	31	29	27	25	
		F	3	300	45	0,800	480	240	160	120	96	80	69	60	53	48	44	40	37	34	32	30	27	
		F	4	400	59	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32	
S3D-025	100	F	5	500	73	1,033	620	310	207	155	124	103	89	77	69	62	56	52	48	44	41	39	35	
		F	6	600	88	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39	
		M	1	100	15	0,577	346	173	115	87	69	58	49	43	38	35	31	29	27	25	23	22	20	
		M	1.5	150	22	0,707	424	212	141	106	85	71	61	53	47	42	39	35	33	30	28	27	24	
		M	2	200	30	0,816	490	245	163	122	98	82	70	61	54	49	45	41	38	35	33	31	28	
		M	2.5	250	37	0,913	548	274	183	137	110	91	78	68	61	55	50	46	42	39	37	34	31	
		M	3	300	45	1,000	600	300	200	150	120	100	86	75	67	60	55	50	46	43	40	38	34	
S3D-03	100	M	4	400	59	1,155	693	346	231	173	139	115	99	87	77	69	63	58	53	49	46	43	40	
		F	5	500	73	1,291	775	387	258	194	155	129	111	97	86	77	70	65	60	55	52	48	44	
		F	6	600	88	1,414	849	424	283	212	170	141	121	106	94	85	77	71	65	61	57	53	48	
		C	1	100	15	0,693	416	208	139	104	83	69	59	52	46	42	38	35	32	30	28	26	24	
		M	1.5	150	22	0,849	509	255	170	127	102	85	73	64	57	51	46	42	39	36	34	32	29	
		M	2	200	30	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34	
		M	2.5	250	37	1,095	657	329	219	164	131	110	94	82	73	66	60	55	51	47	44	41	38	
S3D-035	100	M	3	300	45	1,200	720	360	240	180	144	120	103	90	80	72	65	60	55	51	48	45	41	
		F	4	400	59	1,386	831	416	277	208	166	139	119	104	92	83	76	69	64	59	55	52	48	
		F	5	500	73	1,549	930	465	310	232	186	155	133	116	103	93	85	77	72	66	62	58	53	
		F	6	600	88	1,697	1018	509	339	255	204	170	145	127	113	102	93	85	78	73	68	64	58	
		C	1	100	15	0,808	485	242	162	121	97	81	69	61	54	48	44	40	37	35	32	30	28	
		M	1.5	150	22	0,990	594	297	198	148	119	99	85	74	66	59	54	49	46	42	40	37	34	
		M	2	200	30	1,143	686	343	229	171	137	114	98	86	76	69	62	57	53	49	46	43	39	
S3D-04	50	M	2.5	250	37	1,278	767	383	256	192	153	128	110	96	85	77	70	64	59	55	51	48	44	
		M	3	300	45	1,400	840	420	280	210	168	140	120	105	93	84	76	70	65	60	56	53	48	
		M	4	400	59	1,617	970	485	323	242	194	162	139	121	108	97	88	81	75	69	65	61	55	
		M	5	500	73	1,807	1084	542	361	271	217	181	155	136	120	108	99	90	83	77	72	68	62	
		F	6	600	88	1,980	1188	594	396	297	238	198	170	148	132	119	108	99	91	85	79	74	68	
		VC	1	100	15	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32	
		C	1.5	150	22	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39	
S3D-05	50	M	2	200	30	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45	
		M	2.5	250	37	1,461	876	438	292	219	175	146	125	110	97	88	80	73	67	63	58	55	50	
		M	3	300	45	1,600	960	480	320	240	192	160	137	120	107	96	87	80	74	69	64	60	55	
		M	4	400	59	1,848	1109	554	370	277	222	185	158	139	123	111	101	92	85	79	74	69	63	
		M	5	500	73	2,066	1239	620	413	310	248	207	177	155	138	124	113	103	95	89	83	77	71	
		F	6	600	88	2,263	1358	679	453	339	272	226	194	170	151	136	123	113	104	97	91	85	78	
		VC	1	100	15	1,155	693	346	231	173	139	115	99	87	77	69	63	58	53	49	46	43	40	
S3D-06	50	C	1.5	150	22	1,414	849	424	283	212	170	141	121	106	94	85	77	71	65	61	57	53	48	
		C	2	200	30	1,633	980	490	327	245	196	163	140	122	109	98	89	82	75	70	65	61	56	
		M	2.5	250	37	1,826	1095	548	365	274	219	183	156	137	122	110	100	91	84	78	73	68	63	
		M	3	300	45	2,000	1200	600	400	300	240	200	171	150	133	120	109	100	92	86	80	75	69	
		M	4	400	59	2,309	1386	693	462	346	277	231	198	173	154	139	126	115	107	99	92	87	79	
		M	5	500	73	2,582	1549	775	516	387	310	258	221	194	172	155	141	129	119	111	103	97	89	
		M	6	600	88	2,828	1697	849	566	424	339	283	242	212	189	170	154	141	131	121	113	106	97	
S3D-08	50	VC	1	100	15	1,386	831	416	277	208	166	139	119	104	92	83	76	69	64	59	55	52	48	
		C	1.5	150	22	1,697	1018	509	339	255	204	170	145	127	113	102	93	85	78	73	68	64	58	
		C	2	200	30	1,960	1176	588	392	294	235	196	168	147	131	118	107	98	90	84	78	73	67	
		C	2.5	250	37	2,191	1315	657	438	329	263	219	188	164	146	131	120	110	101	94	88	82	75	
		M	3	300	45	2,400	1440	720	480	360	288	240	206	180	160	144	131	120	111	103	96	90	82	
		M	4	400	59	2,771	1663	831	554	416	333	277	238	208	185	166	151	139	128	119	111	104	95	
		M	5	500	73	3,098	1859	930	620	465	377	310	266	232	207	186	169	155	143	133	124	116	106	
S3D-08	50	M	6	600	88	3,394	2036	1018	679	509	407	339	291	255	226	204	185	170	157	145	136	127	116	
		VC	1	100	15	1,848	1109	554	370	277	222	185	158	139	123	111	101	92	85	79	74	69	63	
		VC	1.5	150	22	2,263	1358	679	453	339	272	226	194	170	151	136	123	113	104	97	91	85	78	
		C	2	200	30	2,613	1568	784	523	392	314	261	224	196	174	157	143	131	121	112	105	98	90	

STARA GUARDIAN-SG

IDEAL FOR THE TOTAL AREA APPLICATION



- Providing an extra consistent and stable spray fan to allow more versatility at different application and speed rates;
- FastCap kit assembly in one single part. It is engineered to prevent the cap, ring and strainer from being missing. Additionally, it is for easy installation and safer handling;
- The 120° angle inclined at 20° to increase the application versatility;
- An arrow (↵) indicates the inclination direction for easy installation.
- Alternate the spray tips forward and backwards to create a twin fan to penetrate the canopy.



120° spray angle at 20° inclination ensures uniform distribution coverage and drift control.

It is perfect to spray a wide range of chemicals such as fungicides, herbicides, and insecticides.

It is carefully designed to produce medium and fine droplets with a wide pressure range.

Features	
Common use:	Phytosanitary control
Pattern	Flat fan
Technology	Pre-Orifice
Material	Polyacetal
Angle/Inclination	120° / 20°
Pressure range	1.5 to 8 bar
Configuration	Complete, FastCap
Brand/Model	Hypro - Guardian

Application guide		
**Herbicide	Pre-emergent	Very good
	Systemic-acting	Good
	Contact	Very good
*Fungicide	Systemic-acting	Excellent
	Contact	Excellent
**Insecticide	Systemic-acting	Excellent
	Contact	Very good
*Drift control		Good

* - : Not recommended | *Good: 50-75% | *Very Good: >75% | *Excellent: >90%.
 ** The droplet size must be chosen according to the target or product to be applied.



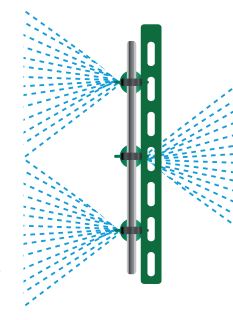
Video

See for yourself the operation quality of the spray nozzle - Stara Guardian-SG

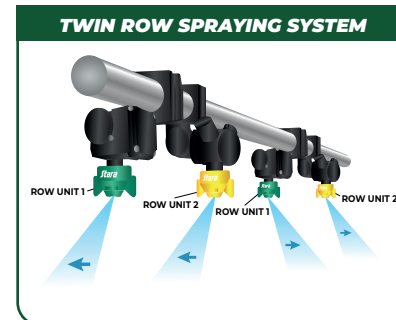
INSTALLATION ON THE SPRAY BOOM



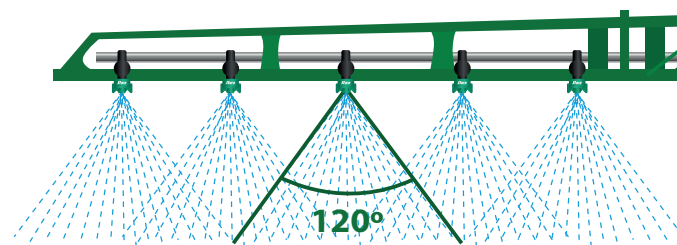
SIDE VIEW



TOP VIEW*

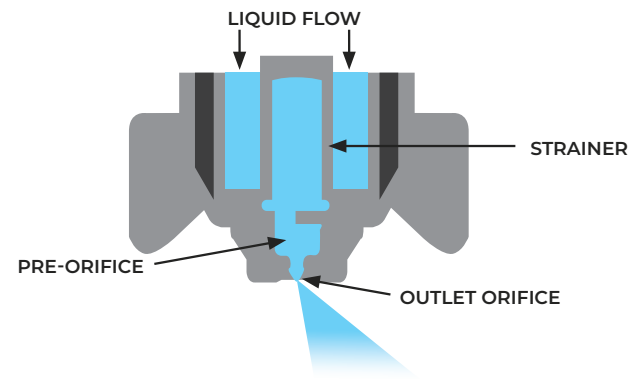


TWIN ROW SPRAYING SYSTEM



FRONT VIEW*

* The fan capacity may vary according to the boom height



STARA GUARDIAN-SG

							L/ha, spacing between spray nozzles of 50 cm																
							Speed km/h																
Spray nozzles	Strainer/ Mesh	Droplet size	Pressure (bar)	Pressure (kPa)	Pressure (psi)	Flow (l/min)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	35
SG-015	100	- *	1.5	150	22	0,424	255	127	85	64	51	42	36	32	28	25	23	21	20	18	17	16	15
		M	2	200	30	0,490	294	147	98	73	59	49	42	37	33	29	27	24	23	21	20	18	17
		M	3	300	45	0,600	360	180	120	90	72	60	51	45	40	36	33	30	28	26	24	23	21
		M	4	400	59	0,693	416	208	139	104	83	69	59	52	46	42	38	35	32	30	28	26	24
		F	5	500	73	0,775	465	232	155	116	93	77	66	58	52	46	42	39	36	33	31	29	27
		F	6	600	88	0,849	509	255	170	127	102	85	73	64	57	51	46	42	39	36	34	32	29
		F	7	700	102	0,917	550	275	183	137	110	92	79	69	61	55	50	46	42	39	37	34	31
F	8	800	117	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34		
SG-02	100	- *	1.5	150	22	0,566	339	170	113	85	68	57	48	42	38	34	31	28	26	24	23	21	19
		M	2	200	30	0,653	392	196	131	98	78	65	56	49	44	39	36	33	30	28	26	24	22
		M	3	300	45	0,800	480	240	160	120	96	80	69	60	53	48	44	40	37	34	32	30	27
		M	4	400	59	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32
		M	5	500	73	1,033	620	310	207	155	124	103	89	77	69	62	56	52	48	44	41	39	35
		M	6	600	88	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39
		M	7	700	102	1,222	733	367	244	183	147	122	105	92	81	73	67	61	56	52	49	46	42
F	8	800	117	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45		
SG-025	100	- *	1.5	150	22	0,707	424	212	141	106	85	71	61	53	47	42	39	35	33	30	28	27	24
		M	2	200	30	0,816	490	245	163	122	98	82	70	61	54	49	45	41	38	35	33	31	28
		M	3	300	45	1,000	600	300	200	150	120	100	86	75	67	60	55	50	46	43	40	38	34
		M	4	400	59	1,155	693	346	231	173	139	115	99	87	77	69	63	58	53	49	46	43	40
		M	5	500	73	1,291	775	387	258	194	155	129	111	97	86	77	70	65	60	55	52	48	44
		M	6	600	88	1,414	849	424	283	212	170	141	121	106	94	85	77	71	65	61	57	53	48
		M	7	700	102	1,528	917	458	306	229	183	153	131	115	102	92	83	76	71	65	61	57	52
M	8	800	117	1,633	980	490	327	245	196	163	140	122	109	98	89	82	75	70	65	61	56		
SG-03	100	C	1.5	150	22	0,849	509	255	170	127	102	85	73	64	57	51	46	42	39	36	34	32	29
		M	2	200	30	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34
		M	3	300	45	1,200	720	360	240	180	144	120	103	90	80	72	65	60	55	51	48	45	41
		M	4	400	59	1,386	831	416	277	208	166	139	119	104	92	83	76	69	64	59	55	52	48
		M	5	500	73	1,549	930	465	310	232	186	155	133	116	103	93	85	77	72	66	62	58	53
		M	6	600	88	1,697	1018	509	339	255	204	170	145	127	113	102	93	85	78	73	68	64	58
		M	7	700	102	1,833	1100	550	367	275	220	183	157	137	122	110	100	92	85	79	73	69	63
M	8	800	117	1,960	1176	588	392	294	235	196	168	147	131	118	107	98	90	84	78	73	67		
SG-04	50	VC	1.5	150	22	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39
		VC	2	200	30	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45
		C	3	300	45	1,600	960	480	320	240	192	160	137	120	107	96	87	80	74	69	64	60	55
		C	4	400	59	1,848	1109	554	370	277	222	185	158	139	123	111	101	92	85	79	74	69	63
		M	5	500	73	2,066	1239	620	413	310	248	207	177	155	138	124	113	103	95	89	83	77	71
		M	6	600	88	2,263	1358	679	453	339	272	226	194	170	151	136	123	113	104	97	91	85	78
		M	7	700	102	2,444	1466	733	489	367	293	244	209	183	163	147	133	122	113	105	98	92	84
M	8	800	117	2,613	1568	784	523	392	314	261	224	196	174	157	143	131	121	112	105	98	90		
SG-05	50	EC	1.5	150	22	1,414	849	424	283	212	170	141	121	106	94	85	77	71	65	61	57	53	48
		EC	2	200	30	1,633	980	490	327	245	196	163	140	122	109	98	89	82	75	70	65	61	56
		VC	3	300	45	2,000	1200	600	400	300	240	200	171	150	133	120	109	100	92	86	80	75	69
		C	4	400	59	2,309	1386	693	462	346	277	231	198	173	154	139	126	115	107	99	92	87	79
		M	5	500	73	2,582	1549	775	516	387	310	258	221	194	172	155	141	129	119	111	103	97	89
		M	6	600	88	2,828	1697	849	566	424	339	283	242	212	189	170	154	141	131	121	113	106	97
		M	7	700	102	3,055	1833	917	611	458	367	306	262	229	204	183	167	153	141	131	122	115	105
F	8	800	117	3,266	1960	980	653	490	392	327	280	245	218	196	178	163	151	140	131	122	112		

*For pressures lower than 1.5 bar, the fan quality may vary.

STARA LOW DRIFT - AR-SBA

AIR INDUCTION NOZZLE WITH REMARKABLE COVERAGE



- Ideal for post-emergent application;
- Improved to obtain performance and high yields, especially for reduced application rates (100 L/ha);
- Drift reduction and less environmental impact through the application increase and droplet retention on the plants;
- The inclined fan that allows a more uniform coverage on the top and side of the plants with higher speed ranges;
- Providing better coverage with more droplets per sprayed litre when compared to the other air induction spray nozzles;
- Alternate the spray nozzles forward and backwards to provide better penetration on the crop plant;
- An arrow (↵) indicates the inclination direction for easy installation.



Optimised to obtain better performance and high yields. The inclined fan allows more uniformity and better retention of the droplets on the target.

Ideal for applications that require more coverage. Allowing for faster and higher efficient applications.

Providing better coverage with more droplets per sprayed litre when compared to the other air induction spray nozzles.

Features	
Common use:	Weed control, plant health
Pattern	Flat fan
Technology	Air Induction
Material	Polyacetal
Angle/Inclination	110°/10°
Pressure range	1 to 8 bar
Configuration	Complete, FastCap
Brand/Model	Hypro - GuardianAIR

Application guide		
**Herbicide	Pre-emergent	Very good
	Systemic-acting	Excellent
	Contact	Excellent
*Fungicide	Systemic-acting	Very good
	Contact	Good
**Insecticide	Systemic-acting	Very good
	Contact	Good
*Drift control		Very good

* - : Not recommended | *Good: 50-75% | *Very Good: >75% | *Excellent: >90%.
 ** The droplet size must be chosen according to the target or product to be applied.



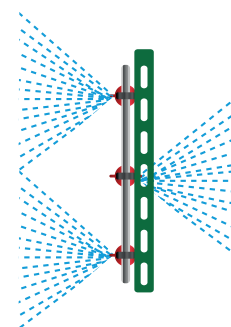
Video

See for yourself the operation quality of the spray nozzle - Stara Low Drift - AR-SBA

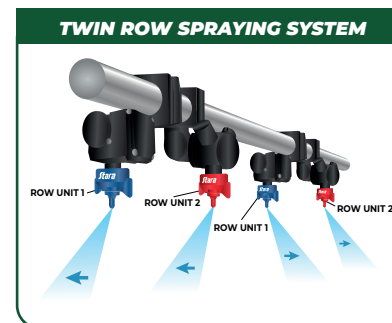
INSTALLATION ON THE SPRAY BOOM



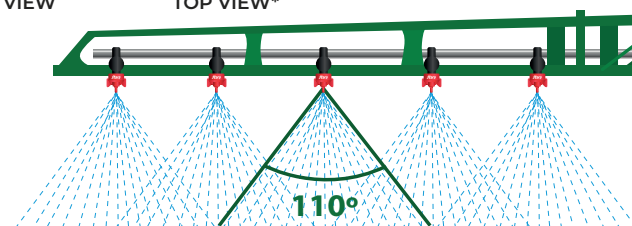
SIDE VIEW



TOP VIEW*

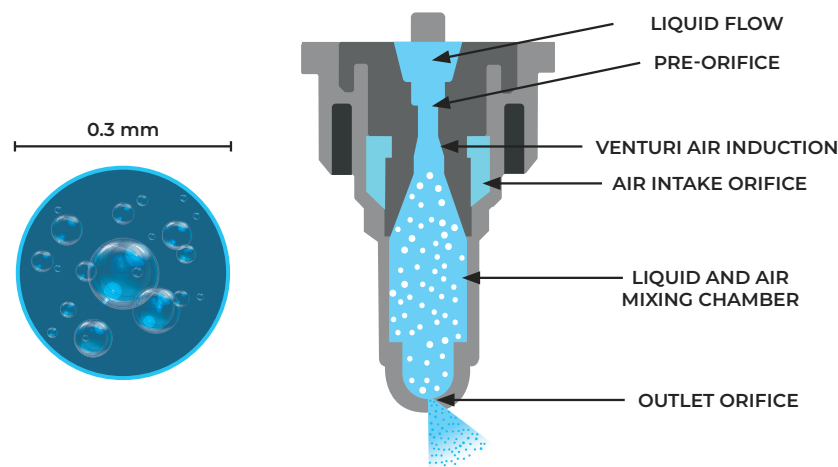


TWIN ROW SPRAYING SYSTEM



FRONT VIEW*

* The fan capacity may vary according to the boom height



STARA LOW DRIFT - AR-SBA

							L/ha, spacing between spray nozzles of 50 cm																
							Speed km/h																
Spray nozzles	Strainer/ Mesh	Droplet size	Pressure (bar)	Pressure (kPa)	Pressure (psi)	Flow (l/min)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	35
SBA-015	100	UC	1	100	15	0,346	208	104	69	52	42	35	30	26	23	21	19	17	16	15	14	13	12
		UC	1.5	150	22	0,424	255	127	85	64	51	42	36	32	28	25	23	21	20	18	17	16	15
		EC	2	200	30	0,490	294	147	98	73	59	49	42	37	33	29	27	24	23	21	20	18	17
		C	3	300	45	0,600	360	180	120	90	72	60	51	45	40	36	33	30	28	26	24	23	21
		M	4	400	59	0,693	416	208	139	104	83	69	59	52	46	42	38	35	32	30	28	26	24
		M	5	500	73	0,775	465	232	155	116	93	77	66	58	52	46	42	39	36	33	31	29	27
		M	6	600	88	0,849	509	255	170	127	102	85	73	64	57	51	46	42	39	36	34	32	29
		M	7	700	102	0,917	550	275	183	137	110	92	79	69	61	55	50	46	42	39	37	34	31
		M	8	800	117	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34
SBA-02	50	UC	1	100	15	0,462	277	139	92	69	55	46	40	35	31	28	25	23	21	20	18	17	16
		EC	1.5	150	22	0,566	339	170	113	85	68	57	48	42	38	34	31	28	26	24	23	21	19
		VC	2	200	30	0,653	392	196	131	98	78	65	56	49	44	39	36	33	30	28	26	24	22
		M	3	300	45	0,800	480	240	160	120	96	80	69	60	53	48	44	40	37	34	32	30	27
		M	4	400	59	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32
		M	5	500	73	1,033	620	310	207	155	124	103	89	77	69	62	56	52	48	44	41	39	35
		M	6	600	88	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39
		M	7	700	102	1,222	733	367	244	183	147	122	105	92	81	73	67	61	56	52	49	46	42
		M	8	800	117	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45
SBA-025	50	UC	1	100	15	0,577	346	173	115	87	69	58	49	43	38	35	31	29	27	25	23	22	20
		EC	1.5	150	22	0,707	424	212	141	106	85	71	61	53	47	42	39	35	33	30	28	27	24
		VC	2	200	30	0,816	490	245	163	122	98	82	70	61	54	49	45	41	38	35	33	31	28
		C	3	300	45	1,000	600	300	200	150	120	100	86	75	67	60	55	50	46	43	40	38	34
		M	4	400	59	1,155	693	346	231	173	139	115	99	87	77	69	63	58	53	49	46	43	40
		M	5	500	73	1,291	775	387	258	194	155	129	111	97	86	77	70	65	60	55	52	48	44
		M	6	600	88	1,414	849	424	283	212	170	141	121	106	94	85	77	71	65	61	57	53	48
		M	7	700	102	1,528	917	458	306	229	183	153	131	115	102	92	83	76	71	65	61	57	52
		M	8	800	117	1,633	980	490	327	245	196	163	140	122	109	98	89	82	75	70	65	61	56
SBA-03	50	UC	1	100	15	0,693	416	208	139	104	83	69	59	52	46	42	38	35	32	30	28	26	24
		UC	1.5	150	22	0,849	509	255	170	127	102	85	73	64	57	51	46	42	39	36	34	32	29
		EC	2	200	30	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34
		VC	3	300	45	1,200	720	360	240	180	144	120	103	90	80	72	65	60	55	51	48	45	41
		C	4	400	59	1,386	831	416	277	208	166	139	119	104	92	83	76	69	64	59	55	52	48
		M	5	500	73	1,549	930	465	310	232	186	155	133	116	103	93	85	77	72	66	62	58	53
		M	6	600	88	1,697	1018	509	339	255	204	170	145	127	113	102	93	85	78	73	68	64	58
		M	7	700	102	1,833	1100	550	367	275	220	183	157	137	122	110	100	92	85	79	73	69	63
		M	8	800	117	1,960	1176	588	392	294	235	196	168	147	131	118	107	98	90	84	78	73	67
SBA-04	50	UC	1	100	15	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32
		EC	1.5	150	22	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39
		VC	2	200	30	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45
		C	3	300	45	1,600	960	480	320	240	192	160	137	120	107	96	87	80	74	69	64	60	55
		M	4	400	59	1,848	1109	554	370	277	222	185	158	139	123	111	101	92	85	79	74	69	63
		M	5	500	73	2,066	1239	620	413	310	248	207	177	155	138	124	113	103	95	89	83	77	71
		M	6	600	88	2,263	1358	679	453	339	272	226	194	170	151	136	123	113	104	97	91	85	78
		M	7	700	102	2,444	1466	733	489	367	293	244	209	183	163	147	133	122	113	105	98	92	84
		M	8	800	117	2,613	1568	784	523	392	314	261	224	196	174	157	143	131	121	112	105	98	90

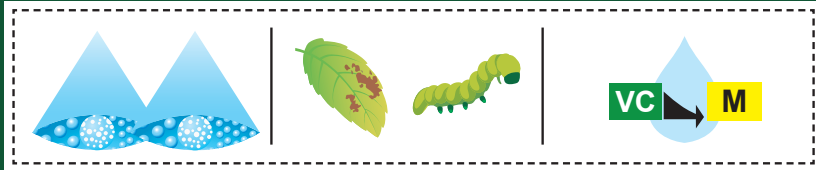
STARA TWIN FAN - SDL

EXCELLENT COVERAGE AND LOW DRIFT



- Excellent coverage for post-emergent applications;
- Forward and rear-facing fan helps in canopy penetration and requires higher coverage;
- Incorporating the features of the uniform coverage and spray nozzle drift reduction known worldwide;
- Easy to be installed and a cap with an exclusive lock system and a gasket are included for safe and precise installation;
- The design prevents dirt from entering the inner walls of the spray nozzle when it is removed;

Designed with precision to provide better coverage, more droplets per sprayed litre when compared to other air induction nozzles.



The twin fan with air induction provides uniform coverage and drift reduction.

Perfect for applications where a higher coverage is required.

Designed with precision to provide better coverage, more droplets per sprayed litre when compared to other air induction spray nozzles.

Features	
Common use:	Phytosanitary control
Pattern	Twin flat fan
Technology	Air Induction
Material	Polyacetal
Angle/Inclination	110°/30° (60°)
Pressure range	2 to 8 bar
Configuration	Complete, FastCap
Brand/Model	Hypro - GuardianAIR Twin



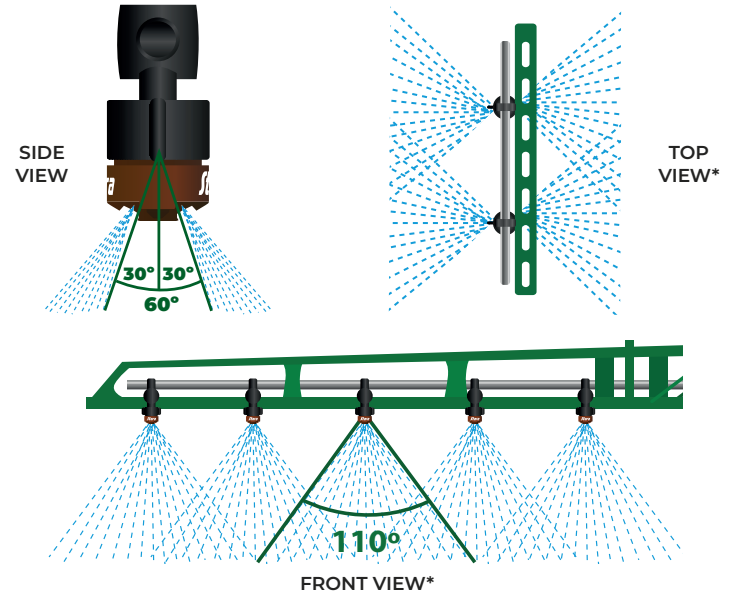
Video

See for yourself the operation quality of the spray nozzle - Stara Twin Fan - SDL

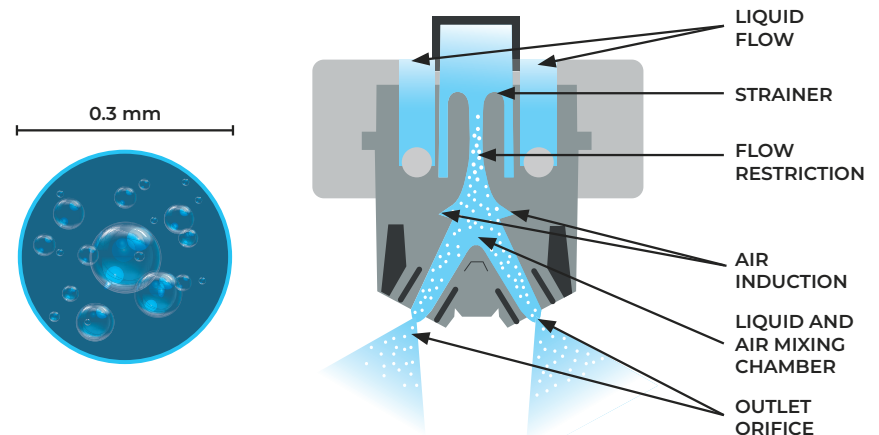
Application guide		
**Herbicide	Pre-emergent	Good
	Systemic-acting	Very good
	Contact	Excellent
*Fungicide	Systemic-acting	Excellent
	Contact	Very good
**Insecticide	Systemic-acting	Excellent
	Contact	Very good
*Drift control		Good

*: Not recommended | *Good: 50-75% | *Very Good: >75% | *Excellent: >90%.
 ** The droplet size must be chosen according to the target or product to be applied.

INSTALLATION ON THE SPRAY BOOM



* The fan capacity may vary according to the boom height



STARA TWIN FAN - SDL

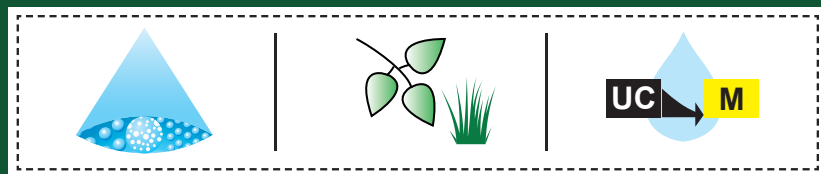
							L/ha, spacing between spray nozzles of 50 cm																
							Speed km/h																
Spray nozzles	Strainer/ Mesh	Droplet size	Pressure (bar)	Pressure (kPa)	Pressure (psi)	Flow (l/min)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	35
SDL-02	50	C	2	200	30	0,653	392	196	131	98	78	65	56	49	44	39	36	33	30	28	26	24	22
		M	3	300	45	0,800	480	240	160	120	96	80	69	60	53	48	44	40	37	34	32	30	27
		M	4	400	59	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32
		M	5	500	73	1,033	620	310	207	155	124	103	89	77	69	62	56	52	48	44	41	39	35
		M	6	600	88	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39
		F	7	700	102	1,222	733	367	244	183	147	122	105	92	81	73	67	61	56	52	49	46	42
		F	8	800	117	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45
		VC	2	200	30	0,816	490	245	163	122	98	82	70	61	54	49	45	41	38	35	33	31	28
		VC	3	300	45	1,000	600	300	200	150	120	100	86	75	67	60	55	50	46	43	40	38	34
		M	4	400	59	1,155	693	346	231	173	139	115	99	87	77	69	63	58	53	49	46	43	40
		M	5	500	73	1,291	775	387	258	194	155	129	111	97	86	77	70	65	60	55	52	48	44
		M	6	600	88	1,414	849	424	283	212	170	141	121	106	94	85	77	71	65	61	57	53	48
		M	7	700	102	1,528	917	458	306	229	183	153	131	115	102	92	83	76	71	65	61	57	52
		M	8	800	117	1,633	980	490	327	245	196	163	140	122	109	98	89	82	75	70	65	61	56
		VC	2	200	30	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34
		C	3	300	45	1,200	720	360	240	180	144	120	103	90	80	72	65	60	55	51	48	45	41
		M	4	400	59	1,386	831	416	277	208	166	139	119	104	92	83	76	69	64	59	55	52	48
		M	5	500	73	1,549	930	465	310	232	186	155	133	116	103	93	85	77	72	66	62	58	53
		M	6	600	88	1,697	1018	509	339	255	204	170	145	127	113	102	93	85	78	73	68	64	58
		M	7	700	102	1,833	1100	550	367	275	220	183	157	137	122	110	100	92	85	79	73	69	63
		M	8	800	117	1,960	1176	588	392	294	235	196	168	147	131	118	107	98	90	84	78	73	67
		VC	2	200	30	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45
		C	3	300	45	1,600	960	480	320	240	192	160	137	120	107	96	87	80	74	69	64	60	55
		M	4	400	59	1,848	1109	554	370	277	222	185	158	139	123	111	101	92	85	79	74	69	63
		M	5	500	73	2,066	1239	620	413	310	248	207	177	155	138	124	113	103	95	89	83	77	71
		M	6	600	88	2,263	1358	679	453	339	272	226	194	170	151	136	123	113	104	97	91	85	78
		M	7	700	102	2,444	1466	733	489	367	293	244	209	183	163	147	133	122	113	105	98	92	84
		M	8	800	117	2,613	1568	784	523	392	314	261	224	196	174	157	143	131	121	112	105	98	90
		VC	2	200	30	1,633	980	490	327	245	196	163	140	122	109	98	89	82	75	70	65	61	56
		C	3	300	45	2,000	1200	600	400	300	240	200	171	150	133	120	109	100	92	86	80	75	69
		M	4	400	59	2,309	1386	693	462	346	277	231	198	173	154	139	126	115	107	99	92	87	79
		M	5	500	73	2,582	1549	775	516	387	310	258	221	194	172	155	141	129	119	111	103	97	89
		M	6	600	88	2,828	1697	849	566	424	339	283	242	212	189	170	154	141	131	121	113	106	97
		M	7	700	102	3,055	1833	917	611	458	367	306	262	229	204	183	167	153	141	131	122	115	105
		M	8	800	117	3,266	1960	980	653	490	392	327	280	245	218	196	178	163	151	140	131	122	112
		EC	2	200	30	1,960	1176	588	392	294	235	196	168	147	131	118	107	98	90	84	78	73	67
		C	3	300	45	2,400	1440	720	480	360	288	240	206	180	160	144	131	120	111	103	96	90	82
		C	4	400	59	2,771	1663	831	554	416	333	277	238	208	185	166	151	139	128	119	111	104	95
		M	5	500	73	3,098	1859	930	620	465	372	310	266	232	207	186	169	155	143	133	124	116	106
		M	6	600	88	3,394	2036	1018	679	509	407	339	291	255	226	204	185	170	157	145	136	127	116
		M	7	700	102	3,666	2200	1100	733	550	440	367	314	275	244	220	200	183	169	157	147	137	126
		M	8	800	117	3,919	2352	1176	784	588	470	392	336	294	261	235	214	196	181	168	157	147	134

STARA ULTRA LOW DRIFT - SUB

TWIN AIR INDUCTION TECHNOLOGY



- Ideal for pre and post-emergent herbicide application;
- Providing fewer fine droplets which reduce the drift without damaging the coverage;
- A wide-angle (120°) that allows lower heights of the spray boom and excellent uniformity;
- Featuring a small size that prevents it from being damaged on the sprayer boom;
- It is found in the FastCap version for easy installation and cost reduction;
- It is made of resistant and hard polyacetal with a longer lifespan.



Coarse spraying standard (60°) for larger area coverage.

Ideal for pre and post-emergent herbicide application.

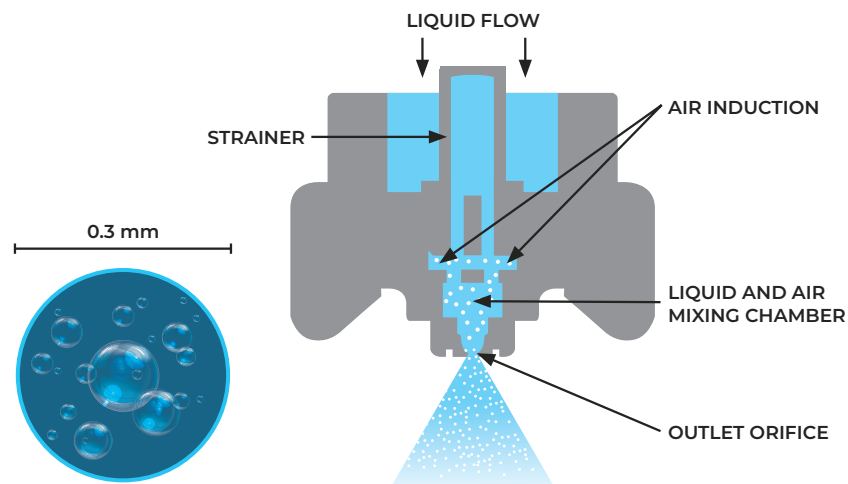
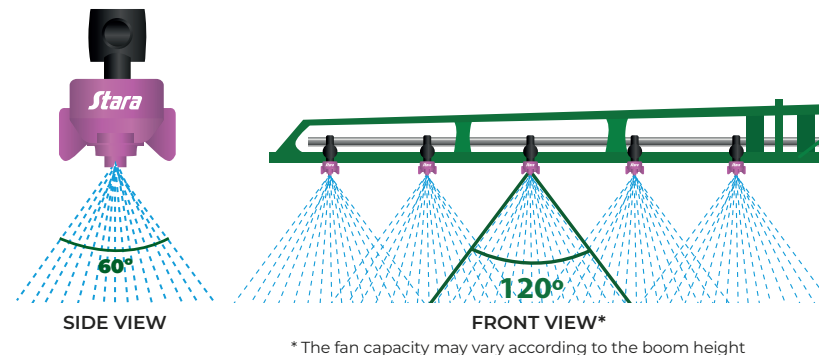
Developed to eliminate drifted droplets without jeopardising the target coverage.

Features	
Common use:	Phytosanitary control
Pattern	Flat fan
Technology	Air Induction
Material	Polyacetal
Angle/Inclination	120°
Pressure range	1 to 8 bar
Configuration	Complete, FastCap
Brand/Model	Hypro - Ultra Low-Drift

Application guide		
**Herbicide	Pre-emergent	Excellent
	Systemic-acting	Excellent
	Contact	Good
*Fungicide	Systemic-acting	-
	Contact	-
	Systemic-acting	-
**Insecticide	Systemic-acting	-
	Contact	-
*Drift control		Excellent

---: Not recommended | *Good: 50-75% | *Very Good: >75% | *Excellent: >90%.
 ** The droplet size must be chosen according to the target or product to be applied.

INSTALLATION ON THE SPRAY BOOM



Video

See for yourself the operation quality of the spray nozzle - Stara Ultra Low Drift - SUB

STARA ULTRA LOW DRIFT - SUB

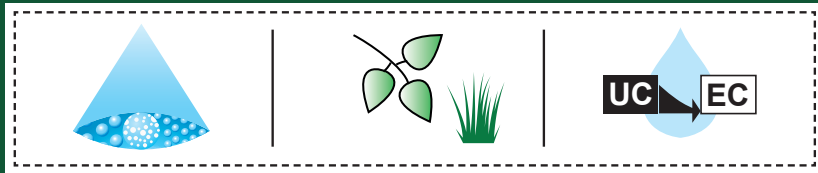
							L/ha, spacing between spray nozzles of 50 cm																
							Speed km/h																
Spray nozzles	Strainer/ Mesh	Droplet size	Pressure (bar)	Pressure (kPa)	Pressure (psi)	Flow (l/min)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	35
SUB-015	100	UC	1	100	15	0,346	208	104	69	52	42	35	30	26	23	21	19	17	16	15	14	13	12
		UC	1.5	150	22	0,424	255	127	85	64	51	42	36	32	28	25	23	21	20	18	17	16	15
		EC	2	200	30	0,490	294	147	98	73	59	49	42	37	33	29	27	24	23	21	20	18	17
		VC	3	300	45	0,600	360	180	120	90	72	60	51	45	40	36	33	30	28	26	24	23	21
		C	4	400	59	0,693	416	208	139	104	83	69	59	52	46	42	38	35	32	30	28	26	24
		C	5	500	73	0,775	465	232	155	116	93	77	66	58	52	46	42	39	36	33	31	29	27
		M	6	600	88	0,849	509	255	170	127	102	85	73	64	57	51	46	42	39	36	34	32	29
		M	7	700	102	0,917	550	275	183	137	110	92	79	69	61	55	50	46	42	39	37	34	31
		M	8	800	117	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34
SUB-02	50	UC	1	100	15	0,462	277	139	92	69	55	46	40	35	31	28	25	23	21	20	18	17	16
		UC	1.5	150	22	0,566	339	170	113	85	68	57	48	42	38	34	31	28	26	24	23	21	19
		EC	2	200	30	0,653	392	196	131	98	78	65	56	49	44	39	36	33	30	28	26	24	22
		C	3	300	45	0,800	480	240	160	120	96	80	69	60	53	48	44	40	37	34	32	30	27
		C	4	400	59	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32
		M	5	500	73	1,033	620	310	207	155	124	103	89	77	69	62	56	52	48	44	41	39	35
		M	6	600	88	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39
		M	7	700	102	1,222	733	367	244	183	147	122	105	92	81	73	67	61	56	52	49	46	42
		M	8	800	117	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45
SUB-025	50	UC	1	100	15	0,577	346	173	115	87	69	58	49	43	38	35	31	29	27	25	23	22	20
		EC	1.5	150	22	0,707	424	212	141	106	85	71	61	53	47	42	39	35	33	30	28	27	24
		EC	2	200	30	0,816	490	245	163	122	98	82	70	61	54	49	45	41	38	35	33	31	28
		C	3	300	45	1,000	600	300	200	150	120	100	86	75	67	60	55	50	46	43	40	38	34
		C	4	400	59	1,155	693	346	231	173	139	115	99	87	77	69	63	58	53	49	46	43	40
		M	5	500	73	1,291	775	387	258	194	155	129	111	97	86	77	70	65	60	55	52	48	44
		M	6	600	88	1,414	849	424	283	212	170	141	121	106	94	85	77	71	65	61	57	53	48
		M	7	700	102	1,528	917	458	306	229	183	153	131	115	102	92	83	76	71	65	61	57	52
		M	8	800	117	1,633	980	490	327	245	196	163	140	122	109	98	89	82	75	70	65	61	56
SUB-03	50	UC	1	100	15	0,693	416	208	139	104	83	69	59	52	46	42	38	35	32	30	28	26	24
		EC	1.5	150	22	0,849	509	255	170	127	102	85	73	64	57	51	46	42	39	36	34	32	29
		EC	2	200	30	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34
		C	3	300	45	1,200	720	360	240	180	144	120	103	90	80	72	65	60	55	51	48	45	41
		C	4	400	59	1,386	831	416	277	208	166	139	119	104	92	83	76	69	64	59	55	52	48
		M	5	500	73	1,549	930	465	310	232	186	155	133	116	103	93	85	77	72	66	62	58	53
		M	6	600	88	1,697	1018	509	339	255	204	170	145	127	113	102	93	85	78	73	68	64	58
		M	7	700	102	1,833	1100	550	367	275	220	183	157	137	122	110	100	92	85	79	73	69	63
		M	8	800	117	1,960	1176	588	392	294	235	196	168	147	131	118	107	98	90	84	78	73	67
SUB-04	50	UC	1	100	15	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32
		UC	1.5	150	22	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39
		UC	2	200	30	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45
		UC	3	300	45	1,600	960	480	320	240	192	160	137	120	107	96	87	80	74	69	64	60	55
		EC	4	400	59	1,848	1109	554	370	277	222	185	158	139	123	111	101	92	85	79	74	69	63
		EC	5	500	73	2,066	1239	620	413	310	248	207	177	155	138	124	113	103	95	89	83	77	71
		VC	6	600	88	2,263	1358	679	453	339	272	226	194	170	151	136	123	113	104	97	91	85	78
		C	7	700	102	2,444	1466	733	489	367	293	244	209	183	163	147	133	122	113	105	98	92	84
		C	8	800	117	2,613	1568	784	523	392	314	261	224	196	174	157	143	131	121	112	105	98	90

STARA LOW DRIFT - MAX-SBDM

THE LATEST INNOVATION TO CONTROL AND MANAGE DRIFT



- Higher efficient nozzle to reduce drift. It provides a reduction of up to 95% compared to the standard spray nozzle fan;
- Wide pressure range that keeps the droplet size consistent for more flexibility when applying hormonal herbicides (Example: Dicamba and 2,4-D);
- A spray angle of 130°, allows lower heights of the spray boom and excellent uniformity;
- It features a small and robust design to prevent it from easily breaking when reaching the crop plant or the soil;
- Ideal for post-emergent herbicide application where the drift reduction is crucial;
- It is easy to be installed, the sealing ring and strainer are included and the mesh is according to the spray nozzle flow.



Coarse spraying standard for larger area coverage.

Ideal for pre and post herbicide applications where drift reduction is crucial.

Developed to eliminate drifted droplets without jeopardising the target coverage.

Features	
Common use:	Weed control
Pattern	Flat fan
Technology	Air Induction
Material	Polyacetal
Angle/Inclination	130°
Pressure range	2 to 7 bar
Configuration	with SnapLock
Brand/Model	Hypro - Ultra Low-Drift Max



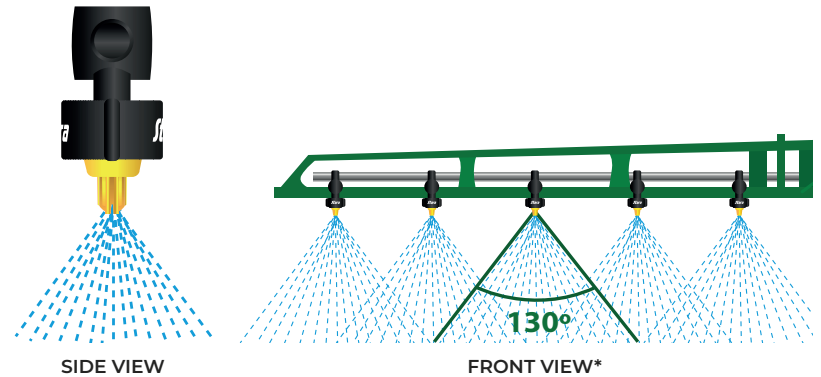
Video

See for yourself the operation quality of the spray nozzle - Stara Low Drift - MAX-SBDM

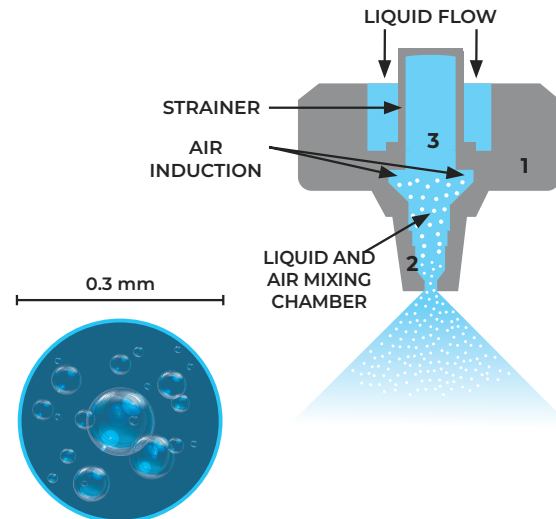
Application guide		
**Herbicide	Pre-emergent	Excellent
	Systemic-acting	Excellent
	Contact	Good
*Fungicide	Systemic-acting	-
	Contact	-
**Insecticide	Systemic-acting	-
	Contact	-
*Drift control		Excellent

* - : Not recommended | *Good: 50-75% | *Very Good: >75% | *Excellent: >90%
 ** The droplet size must be chosen according to the target or product to be applied.

INSTALLATION ON THE SPRAY BOOM



* The fan capacity may vary according to the boom height



1 - SnapLock cap version for easy installation and removal.

2 - Outlet orifice for higher coverage angle and fewer fine droplets.

3 - Pre-orifice is engineered to create a coarse droplet and reduce the fine droplets on a wide operating range.

STARA LOW DRIFT - MAX-SBDM

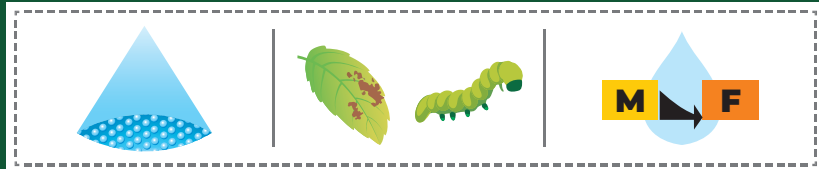
							L/ha, spacing between spray nozzles of 50 cm																
							Speed km/h																
Spray nozzles	Strainer/ Mesh	Droplet size	Pressure (bar)	Pressure (kPa)	Pressure (psi)	Flow (l/min)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	35
SBDM-02	50	UC	2	200	30	0,653	392	196	131	98	78	65	56	49	44	39	36	33	30	28	26	24	22
		UC	3	300	45	0,800	480	240	160	120	96	80	69	60	53	48	44	40	37	34	32	30	27
		UC	4	400	49	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32
		EC	5	500	73	1,033	620	310	207	155	124	103	89	77	69	62	56	52	48	44	41	39	35
		EC	6	600	88	1,131	679	339	226	170	136	113	97	85	75	68	62	57	52	48	45	42	39
SBDM-02S	50	EC	7	700	102	1,222	733	367	244	183	147	122	105	92	81	73	67	61	56	52	49	46	42
		UC	2	200	30	0,816	490	245	163	122	98	82	70	61	54	49	45	41	38	35	33	31	28
		UC	3	300	45	1,000	600	300	200	150	120	100	86	75	67	60	55	50	46	43	40	38	34
		UC	4	400	49	1,155	693	346	231	173	139	115	99	87	77	69	63	58	53	49	46	43	40
		UC	5	500	73	1,291	775	387	258	194	155	129	111	97	86	77	70	65	60	55	52	48	44
SBDM-03	50	UC	6	600	88	1,414	849	424	283	212	170	141	121	106	94	85	77	71	65	61	57	53	48
		EC	7	700	102	1,528	917	458	306	229	183	153	131	115	102	92	83	76	71	65	61	57	52
		UC	2	200	30	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34
		UC	3	300	45	1,200	720	360	240	180	144	120	103	90	80	72	65	60	55	51	48	45	41
		UC	4	400	49	1,386	831	416	277	208	166	139	119	104	92	83	76	69	64	59	55	52	48
SBDM-04	50	UC	5	500	73	1,549	930	465	310	232	186	155	133	116	103	93	85	77	72	66	62	58	53
		EC	6	600	88	1,697	1018	509	339	255	204	170	145	127	113	102	93	85	78	73	68	64	58
		EC	7	700	102	1,833	1100	550	367	275	220	183	157	137	122	110	100	92	85	79	73	69	63
		UC	2	200	30	1,306	784	392	261	196	157	131	112	98	87	78	71	65	60	56	52	49	45
		UC	3	300	45	1,600	960	480	320	240	192	160	137	120	107	96	87	80	74	69	64	60	55
SBDM-05	50	UC	4	400	49	1,848	1109	554	370	277	222	185	158	139	123	111	101	92	85	79	74	69	63
		UC	5	500	73	2,066	1239	620	413	310	248	207	177	155	138	124	113	103	95	89	83	77	71
		EC	6	600	88	2,263	1358	679	453	339	272	226	194	170	151	136	123	113	104	97	91	85	78
		EC	7	700	102	2,444	1466	733	489	367	293	244	209	183	163	147	133	122	113	105	98	92	84
		UC	2	200	30	1,633	980	490	327	245	196	163	140	122	109	98	89	82	75	70	65	61	56
SBDM-06	50	UC	3	300	45	2,000	1200	600	400	300	240	200	171	150	133	120	109	100	92	86	80	75	69
		UC	4	400	49	2,309	1386	693	462	346	277	231	198	173	154	139	126	115	107	99	92	87	79
		UC	5	500	73	2,582	1549	775	516	387	310	258	221	194	172	155	141	129	119	111	103	97	89
		EC	6	600	88	2,828	1697	849	566	424	339	283	242	212	189	170	154	141	131	121	113	106	97
		EC	7	700	102	3,055	1833	917	611	458	367	306	262	229	204	183	167	153	141	131	122	115	105
SBDM-07	50	UC	2	200	30	1,960	1176	588	392	294	235	196	168	147	131	118	107	98	90	84	78	73	67
		UC	3	300	45	2,400	1440	720	480	360	288	240	206	180	160	144	131	120	111	103	96	90	82
		UC	4	400	49	2,771	1663	831	554	416	333	277	238	208	185	166	151	139	128	119	111	104	95
		UC	5	500	73	3,098	1859	930	620	465	372	310	266	232	207	186	169	155	143	133	124	116	106
		EC	6	600	88	3,394	2036	1018	679	509	407	339	291	255	226	204	185	170	157	145	136	127	116
SBDM-08	50	EC	7	700	102	3,666	2200	1100	733	550	440	367	314	275	244	220	200	183	169	157	147	137	126
		UC	2	200	30	2,613	1568	784	523	392	314	261	224	196	174	157	143	131	121	112	105	98	90
		UC	3	300	45	3,200	1920	960	640	480	384	320	274	240	213	192	175	160	148	137	128	120	110
		UC	4	400	49	3,695	2217	1109	739	554	443	370	317	277	246	222	202	185	171	158	148	139	127
		UC	5	500	73	4,131	2479	1239	826	620	496	413	354	310	275	248	225	207	191	177	165	155	142
SBDM-09	50	UC	6	600	88	4,525	2715	1358	905	679	543	453	388	339	302	272	247	226	209	194	181	170	155
		EC	7	700	102	4,888	2933	1466	978	733	587	489	419	367	326	293	267	244	226	209	196	183	168

STARA WIDE SPRAY ANGLE - SLA

IDEAL FOR LARGER COVERAGE APPLICATIONS



- It provides uniform droplets in a small size that ensure excellent target coverage;
- They are recommended for insecticides and fungicides application in general when the weather conditions are favourable to operate with small droplets;
- The fan is 110°, which provides great distribution uniformity;
- The droplet spectrum is similar to the SCV nozzle with less blockage risk.



Featuring a spray angle of 110° to ensure uniform distribution.

Perfect for applications where a higher coverage is required.

It is carefully designed to produce medium and fine droplets with a wide pressure range.

Features	
Common use:	Phytosanitary control
Pattern	Flat fan
Technology	Uniform spraying
Material	Polyacetal
Angle/Inclination	110°
Pressure range	1 to 5 bar
Configuration	Complete, FastCap
Brand/Model	Hypro - Variable Pressure



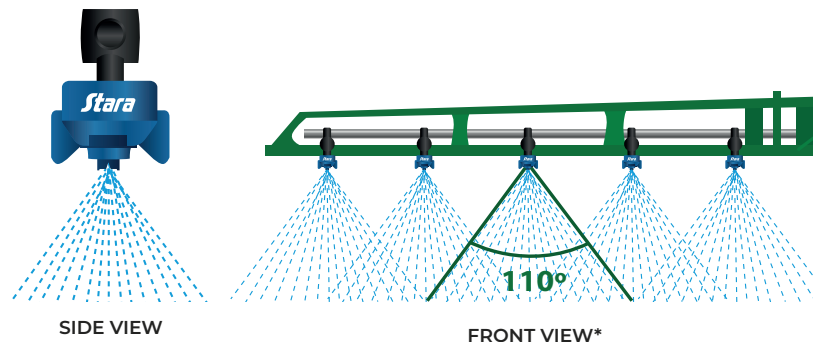
Video

See for yourself the operation quality of the spray nozzle - Stara Wide Spray Angle - SLA

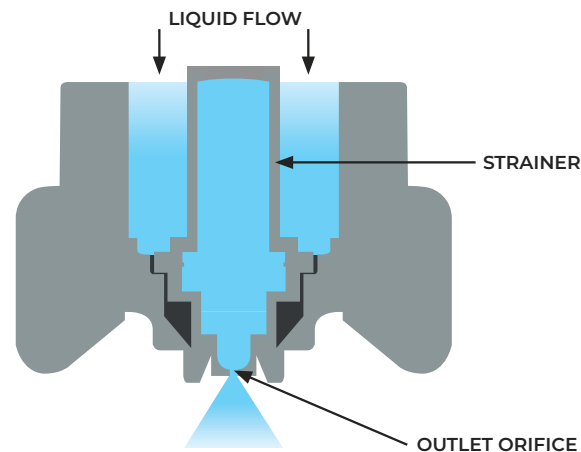
Application guide		
**Herbicide	Pre-emergent	-
	Systemic-acting	Good
	Contact	Excellent
*Fungicide	Systemic-acting	Good
	Contact	Excellent
**Insecticide	Systemic-acting	Good
	Contact	Excellent
*Drift control		-

* - : Not recommended | *Good: 50-75% | *Very Good: >75% | *Excellent: >90%.
 ** The droplet size must be chosen according to the target or product to be applied.

INSTALLATION ON THE SPRAY BOOM



* The fan capacity may vary according to the boom height



STARA WIDE SPRAY ANGLE - SLA

							L/ha, spacing between spray nozzles of 50 cm																
Spray nozzles	Strainer/ Mesh	Droplet size	Pressure (bar)	Pressure (kPa)	Pressure (psi)	Flow (l/min)	Speed km/h																
							2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	35
SLA-02	50	-	1*	100	15	0,462	277	139	92	69	55	46	40	35	31	28	25	23	21	20	18	17	16
		-	1.5*	150	22	0,566	339	170	113	85	68	57	48	42	38	34	31	28	26	24	23	21	19
		F	2	200	30	0,653	392	196	131	98	78	65	56	49	44	39	36	33	30	28	26	24	22
		F	3	300	45	0,800	480	240	160	120	96	80	69	60	53	48	44	40	37	34	32	30	27
		F	4	400	59	0,924	554	277	185	139	111	92	79	69	62	55	50	46	43	40	37	35	32
		F	5	500	73	1,033	620	310	207	155	124	103	89	77	69	62	56	52	48	44	41	39	35
SLA-025	50	M	1	100	15	0,577	346	173	115	87	69	58	49	43	38	35	31	29	27	25	23	22	20
		M	1.5	150	22	0,707	424	212	141	106	85	71	61	53	47	42	39	35	33	30	28	27	24
		F	2	200	30	0,816	490	245	163	122	98	82	70	61	54	49	45	41	38	35	33	31	28
		F	3	300	45	1,000	600	300	200	150	120	100	86	75	67	60	55	50	46	43	40	38	34
		F	4	400	59	1,155	693	346	231	173	139	115	99	87	77	69	63	58	53	49	46	43	40
		F	5	500	73	1,291	775	387	258	194	155	129	111	97	86	77	70	65	60	55	52	48	44
SLA-03	50	M	1	100	15	0,693	416	208	139	104	83	69	59	52	46	42	38	35	32	30	28	26	24
		M	1.5	150	22	0,849	509	255	170	127	102	85	73	64	57	51	46	42	39	36	34	32	29
		F	2	200	30	0,980	588	294	196	147	118	98	84	73	65	59	53	49	45	42	39	37	34
		F	3	300	45	1,200	720	360	240	180	144	120	103	90	80	72	65	60	55	51	48	45	41
		F	4	400	59	1,386	831	416	277	208	166	139	119	104	92	83	76	69	64	59	55	52	48
		F	5	500	73	1,549	930	465	310	232	186	155	133	116	103	93	85	77	72	66	62	58	53

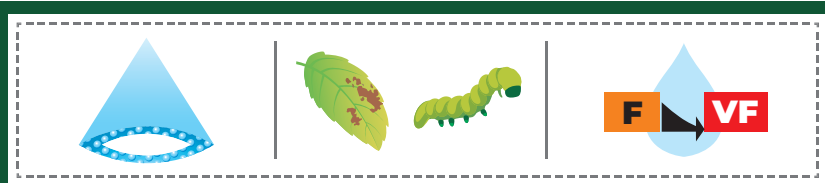
*For pressures lower than 1.5 bar, the fan quality may vary.

STARA HOLLOW CONE - SCV

PERFECT TO MANAGE WIDE COVERAGE AREAS



- It provides uniform droplets in a small size that ensure excellent target coverage;
 - They are recommended for insecticides and fungicides application in general when the weather conditions are favourable to operate with small droplets;
 - Providing a cone fan of 80°. It is recommended for flow below 40 L/ha;
- Featuring a droplet spectrum similar to the SLA nozzle.



Featuring a spray angle of 80° to ensure uniform distribution.

Perfect for applications where a higher coverage is required.

It is carefully designed to produce fine droplets and very fine droplets with a wide pressure range.

Features	
Common use:	Phytosanitary control
Pattern	Hollow cone fan
Technology	Uniform spraying
Material	Polyacetal
Angle/Inclination	80°
Pressure range	3 to 10 bar
Configuration	Complete, FastCap
Brand/Model	Hypro - Hollow Cone

Application guide		
**Herbicide	Pre-emergent	-
	Systemic-acting	Good
	Contact	Excellent
*Fungicide	Systemic-acting	Good
	Contact	Excellent
**Insecticide	Systemic-acting	Good
	Contact	Excellent
*Drift control		-

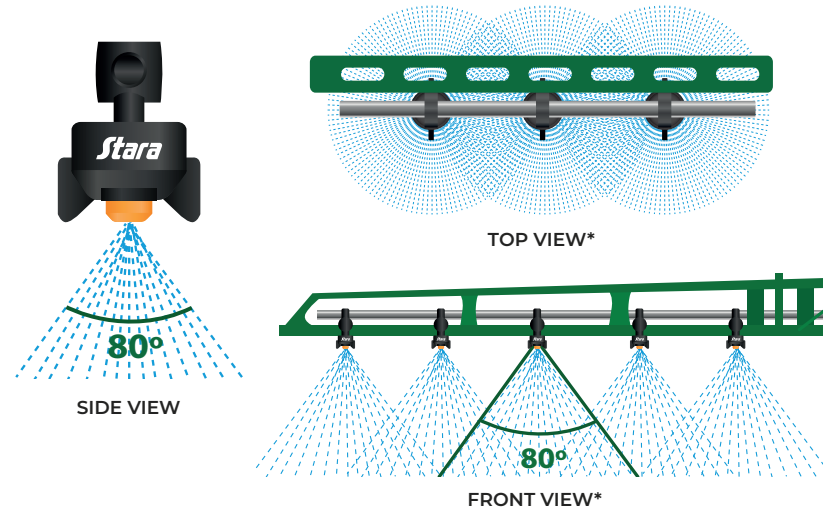
* : Not recommended | *Good: 50-75% | *Very Good: >75% | *Excellent: >90%.
 ** The droplet size must be chosen according to the target or product to be applied.



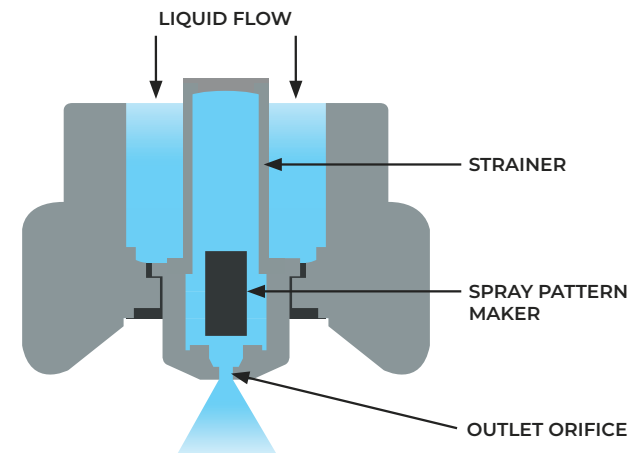
Video

See for yourself the operation quality of the spray nozzle - Stara Hollow Cone - SCV

INSTALLATION ON THE SPRAY BOOM



* The fan capacity may vary according to the boom height

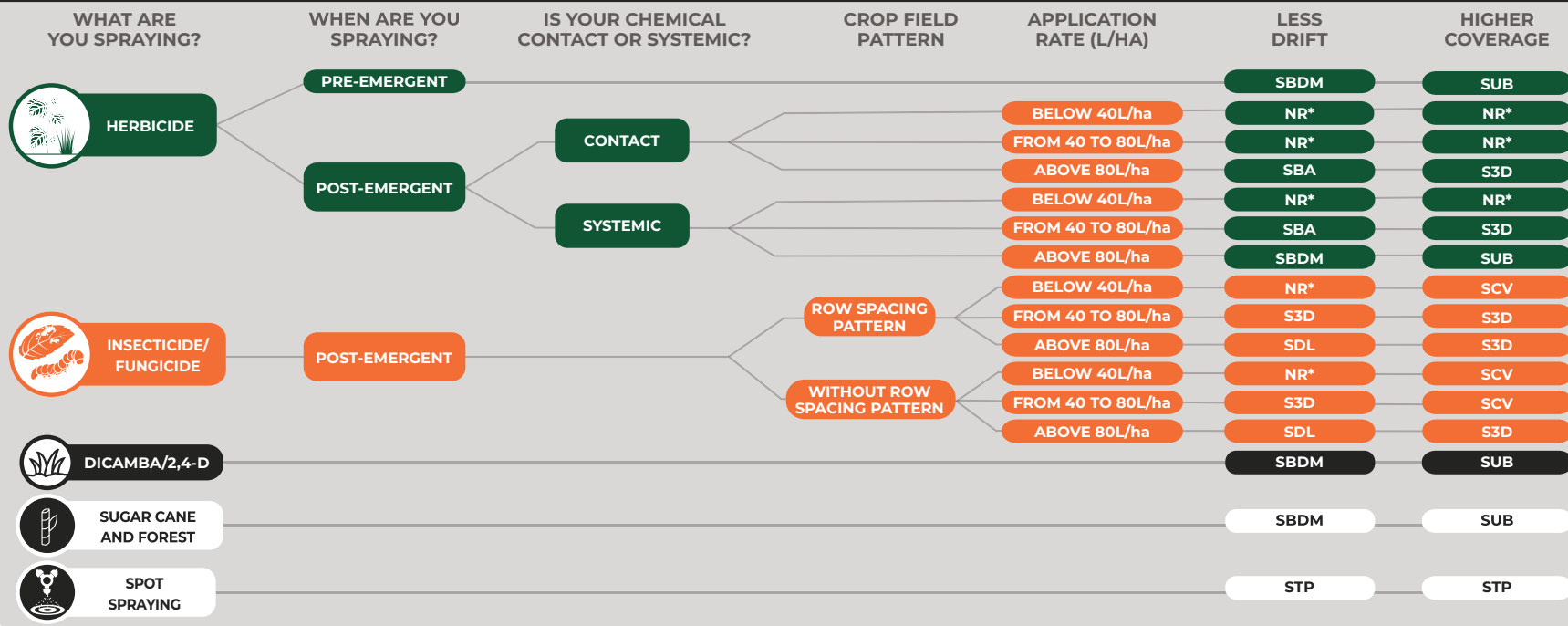


STARA HOLLOW CONE - SCV

							L/ha, spacing between spray nozzles of 50 cm																
							Speed km/h																
Spray nozzles	Strainer/ Mesh	Droplet size	Pressure (bar)	Pressure (kPa)	Pressure (psi)	Flow (l/min)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	35
SCV4	50	F	3	300	45	0,265	159	80	53	40	32	27	23	20	18	16	14	13	12	11	11	10	9
		F	4	400	59	0,306	184	92	61	46	37	31	26	23	20	18	17	15	14	13	12	11	10
		F	5	500	73	0,342	205	103	68	51	41	34	29	26	23	21	19	17	16	15	14	13	12
		F	6	600	88	0,375	225	112	75	56	45	37	32	28	25	22	20	19	17	16	15	14	13
		F	7	700	102	0,405	243	121	81	61	49	40	35	30	27	24	22	20	19	17	16	15	14
		F	8	800	117	0,433	260	130	87	65	52	43	37	32	29	26	24	22	20	19	17	16	15
		VF	9	900	131	0,459	275	138	92	69	55	46	39	34	31	28	25	23	21	20	18	17	16
		VF	10	1000	146	0,484	290	145	97	73	58	48	41	36	32	29	26	24	22	21	19	18	17
SCV6	50	M	3	300	45	0,397	238	119	79	60	48	40	34	30	26	24	22	20	18	17	16	15	14
		F	4	400	59	0,458	275	138	92	69	55	46	39	34	31	28	25	23	21	20	18	17	16
		F	5	500	73	0,513	308	154	103	77	62	51	44	38	34	31	28	26	24	22	21	19	18
		F	6	600	88	0,561	337	168	112	84	67	56	48	42	37	34	31	28	26	24	22	21	19
		F	7	700	102	0,606	364	182	121	91	73	61	52	45	40	36	33	30	28	26	24	23	21
		F	8	800	117	0,648	389	194	130	97	78	65	56	49	43	39	35	32	30	28	26	24	22
		F	9	900	131	0,688	413	206	138	103	83	69	59	52	46	41	38	34	32	29	28	26	24
		F	10	1000	146	0,725	435	217	145	109	87	72	62	54	48	43	40	36	33	31	29	27	25
SCV8	50	F	3	300	45	0,530	318	159	106	80	64	53	45	40	35	32	29	27	24	23	21	20	18
		F	4	400	59	0,612	367	184	122	92	73	61	52	46	41	37	33	31	28	26	24	23	21
		VF	5	500	73	0,684	411	205	137	103	82	68	59	51	46	41	37	34	32	29	27	26	23
		VF	6	600	88	0,750	450	225	150	112	90	75	64	56	50	45	41	37	35	32	30	28	26
		VF	7	700	102	0,810	486	243	162	121	97	81	69	61	54	49	44	40	37	35	32	30	28
		VF	8	800	117	0,865	519	260	173	130	104	87	74	65	58	52	47	43	40	37	35	32	30
		VF	9	900	131	0,918	551	275	184	138	110	92	79	69	61	55	50	46	42	39	37	34	31
		VF	10	1000	146	0,969	581	290	194	145	116	97	83	73	65	58	53	48	45	41	39	36	33
SCV9	50	F	3	300	45	0,596	358	179	119	89	72	60	51	45	40	36	33	30	28	26	24	22	20
		F	4	400	59	0,688	413	206	138	103	83	69	59	52	46	41	38	34	32	29	28	26	24
		VF	5	500	73	0,769	462	231	154	115	92	77	66	58	51	46	42	38	36	33	31	29	26
		VF	6	600	88	0,843	506	253	169	126	101	84	72	63	56	51	46	42	39	36	34	32	29
		VF	7	700	102	0,910	546	273	182	137	109	91	78	68	61	55	50	46	42	39	36	34	31
		VF	8	800	117	0,973	584	292	195	146	117	97	83	73	65	58	53	49	45	42	39	36	33
		VF	9	900	131	1,032	619	310	206	155	124	103	88	77	69	62	56	52	48	44	41	39	35
		VF	10	1000	146	1,088	653	326	218	163	131	109	93	82	73	65	59	54	50	47	44	41	37
SCV10	50	F	3	300	45	0,662	397	199	132	99	79	66	57	50	44	40	36	33	31	28	26	25	23
		VF	4	400	59	0,764	459	229	153	115	92	76	66	57	51	46	42	38	35	33	31	29	26
		VF	5	500	73	0,855	513	256	171	128	103	85	73	64	57	51	47	43	39	37	34	32	29
		VF	6	600	88	0,936	562	281	187	140	112	94	80	70	62	56	51	47	43	40	37	35	32
		VF	7	700	102	1,011	607	303	202	152	121	101	87	76	67	61	55	51	47	43	40	38	35
		VF	8	800	117	1,081	649	324	216	162	130	108	93	81	72	65	59	54	50	46	43	41	37
		VF	9	900	131	1,147	688	344	229	172	138	115	98	86	76	69	63	57	53	49	46	43	39
		VF	10	1000	146	1,209	725	363	242	181	145	121	104	91	81	73	66	60	56	52	48	45	41
SCV12	50	F	3	300	45	0,750	450	225	150	113	90	75	64	56	50	45	41	38	35	32	30	28	26
		F	4	400	59	0,866	520	260	173	130	104	87	74	65	58	52	47	43	40	37	35	32	30
		VF	5	500	73	0,968	581	290	194	145	116	97	83	73	65	58	53	48	45	41	39	36	33
		VF	6	600	88	1,061	636	318	212	159	127	106	91	80	71	64	58	53	49	45	42	40	36
		VF	7	700	102	1,146	687	344	229	172	137	115	98	86	76	69	62	57	53	49	46	43	39
		VF	8	800	117	1,225	735	367	245	184	147	122	105	92	82	73	67	61	57	52	49	46	42
		VF	9	900	131	1,299	779	390	260	195	156	130	111	97	87	78	71	65	60	56	52	49	45
		VF	10	1000	146	1,369	822	411	274	205	164	137	117	103	91	82	75	68	63	59	55	51	47
SCV18	50	F	3	300	45	1,180	708	354	236	177	142	118	101	89	79	71	64	59	54	51	47	44	40
		F	4	400	59	1,363	818	409	273	204	164	136	117	102	91	82	74	68	63	58	55	51	47
		F	5	500	73	1,523	914	457	305	229	183	152	131	114	102	91	83	76	70	65	61	57	52
		F	6	600	88	1,669	1001	501	334	250	200	167	143	125	111	100	91	83	77	72	67	63	57
		F	7	700	102	1,802	1081	541	360	270	216	180	154	135	120	108	98	90	83	77	72	68	62
		VF	8	800	117	1,927	1156	578	385	289	231	193	165	145	128	116	105	96	89	83	77	72	66
		VF	9	900	131	2,044	1226	613	409	307	245	204	175	153	136	123	111	102	94	88	82	77	70
		VF	10	1000	146	2,154	1293	646	431	323	259	215	185	162	144	129	118	108	99	92	86	81	74

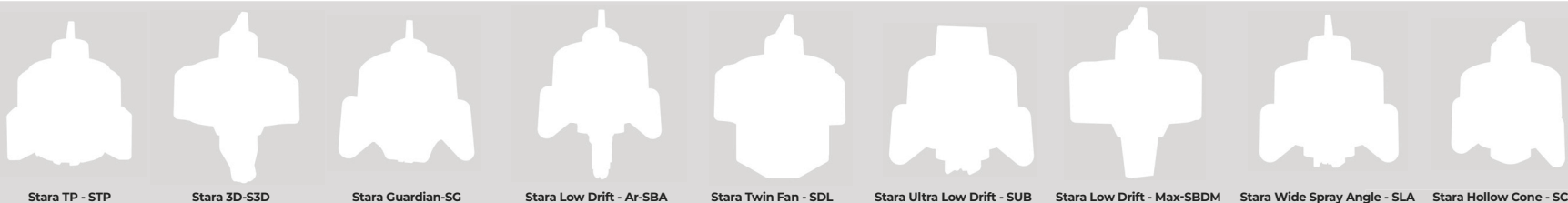
GUIDE TO CHOOSE THE PROPER STARA SPRAY NOZZLES

TECHNOLOGY ON TARGET

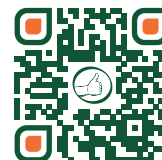


NR*: Not recommended.

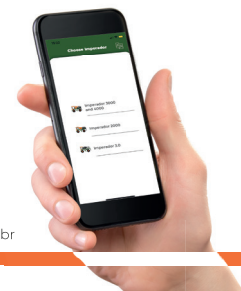
Note: Applying fertiliser without considering the weather conditions may cause direct losses in the target control and damage to surrounding areas. Therefore, never use spray nozzles with very fine/extremely fine droplets when the temperature is above 28°C, the humidity is below 55% or the wind speed is above 7 km/h. Always follow the recommendations and instructions described in the chemical container label.



TO LEARN WHICH NOZZLE IS THE BEST OPTION FOR EACH APPLICATION, REFER TO THE STARA SPRAYING APP



Available for
Android and IOS



www.stara.com.br/en

STARA S.A. Indústria de Implementos Agrícolas | Av. Stara, 519 - Mail box 53 - Não-Me-Toque/RS | Phone number: 55 54 3332 2800 | Postcode: 99470-000 | Email address: contact@stara.com.br

[Linked in /company/Stara](#) - [YouTube /StaraBrasil](#) - [f /StaraBrasil](#) - [@StaraBrasil](#) - [stara.brasil](#)