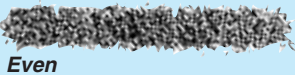
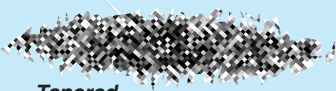


FLAT FAN NOZZLES

- * Special elliptical orifice produces a narrow elliptical spray 'footprint'.
- * The droplets are uniformly distributed across the 'footprint' tapering at the edges.
- * Overlapping these nozzles by 50% produces an even spray coverage. Also available with even 'footprints' giving a high impact spray.
- * Another flat fan pattern is produced by deflector nozzles where a straight jet of liquid strikes an accurately machined deflector surface producing a wide angle.



Even

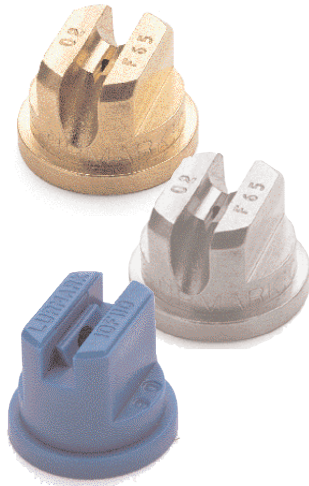


Tapered

Spray Footprints



Flat Fan F Series



TYPICAL APPLICATIONS

- * Washing e.g. car, gravel
- * Industrial washing machines
- * Cleaning e.g. upholstery
- * Continuous casting
- * Metal finishing
- * Degreasing
- * Foam control
- * Spray coating
- * Circuit board processing
- * Insecticide and herbicide application

SPRAY CHARACTERISTICS

- * Available in 0°, 15°, 25°, 40°, 65°, 80° and 110° angles at 3 bar.
- * High impact spray of coarse droplets (greater impact as spray angle decreases).
- * Available as even spray pattern for single nozzle applications and as a tapered pattern for use along spray bars (ganging-up) to achieve even distribution.

CONSTRUCTION

- * Tips are one piece construction, which are fully interchangeable.
- * Tips have no internal parts, therefore reducing the chance of clogging.
- * Tips can be assembled in a 4-piece unit design comprising of nozzle body, strainer tip and cap nut - refer to page 38 for more details.

MATERIALS

Standard materials are brass, Acetal and 303 stainless steel.

Flat Fan CM Series



TYPICAL APPLICATIONS

- * Washing e.g. car, gravel, coal
- * Industrial washing machines
- * Cleaning e.g. upholstery
- * Continuous casting
- * Metal finishing
- * Degreasing
- * Foam control
- * Spray coating
- * Circuit board processing

SPRAY CHARACTERISTICS

- * Available in 0°, 15°, 25°, 40°, 65°, 80°, 90° and 110° angles at 3 bar.
- * High impact spray of coarse droplets (greater impact as spray angle decreases).
- * Available as even spray pattern for single nozzle applications and as a tapered pattern for use along spray bars (ganging-up) to achieve even distribution.

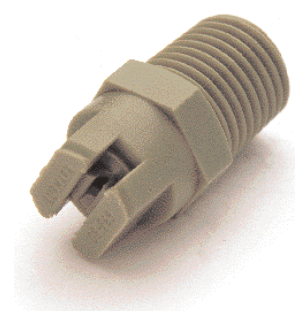
CONSTRUCTION

- * One piece male pipe thread design.
- * No internal parts, therefore reducing the chance of clogging.
- * Hex body prevents distortion of the orifice for quick and easy installation.
- * In areas where space is at a premium, 'stubby' versions are available.

MATERIALS

Standard materials are brass, PVC and 316 stainless steel.

Flat Fan Fanjet



TYPICAL APPLICATIONS

- * Washing e.g. car, gravel, coal
- * Industrial washing machines
- * Vegetable washing
- * Wheel washers
- * Screen cleaning
- * Metal finishing
- * Degreasing
- * Additive application
- * Spray coating
- * Circuit board processing

SPRAY CHARACTERISTICS

- * Available in 25°, 40°, 65° and 80° angles at 3 bar.
- * High impact spray of coarse droplets (greater impact as spray angle decreases).
- * Available as even spray pattern.

CONSTRUCTION

- * One piece male pipe thread design.
- * No internal parts, therefore reducing the chance of clogging.
- * Hex body prevents distortion of the orifice for quick and easy installation.

MATERIALS

Standard material is PVDF.

Refer to pages 14 and 15 for flow rate charts.

Flat Fan SN Series



TYPICAL APPLICATIONS

- * Descaling
- * Washing gravel and stone
- * Vegetable washing
- * Vehicle washing
- * Electronic etch washing
- * Component washing
- * Cleaning
- * Degreasing
- * Paper mill applications
- * Garden / show water features

SPRAY CHARACTERISTICS

- * Available in 15°, 25°, 35°, 40° and 50° spray angles at 3 bar (angle varies with pressure).
- * High impact, well defined spray with uniform distribution.

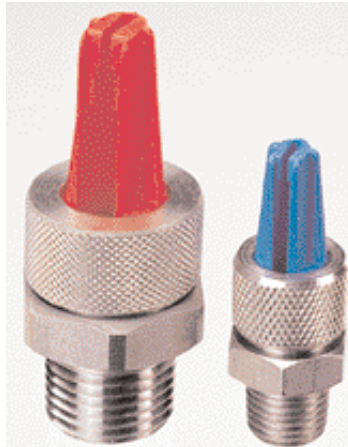
CONSTRUCTION

- * One piece male pipe thread design, with large round orifice to reduce blockage.
- * Deflection plate is precision-machined to maximise impact.

MATERIALS

- * Standard materials are brass, 303 and 316 stainless steel.

Flat Fan Maxthro XT Series



TYPICAL APPLICATIONS

- * Spraying waste products
- * Rangeland and pasture spraying
- * Dust suppression
- * Pesticide application
- * Road and runway applications
- * Fertiliser broadcasting
- * Where reduced spray drift required

SPRAY CHARACTERISTICS

- * Available as 110° off-centre spray.
- * Off-centre even pattern.
- * Spray swath width ranges from 5.18 to 6.4 metres.

CONSTRUCTION

- * Stainless steel male pipe thread design.
- * Patented slotted nozzle design.

MATERIALS

- * Standard material is 316 stainless steel and Acetal tip.

Flat Fan C Series



TYPICAL APPLICATIONS

- * Continuous casting applications

SPRAY CHARACTERISTICS

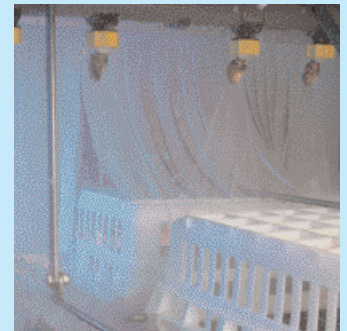
- * Available in 80° and 100° angle at 3 bar.
- * Even deflected flat fan pattern with an even distribution.

CONSTRUCTION

- * Three piece design with internal nozzle to produce a flat fan pattern.
- * Fits into a 1" cap nut. Part Number = 28-Q2142.

MATERIALS


- * Standard material is brass.



Refer to page 14 and 17 for flow rate charts.

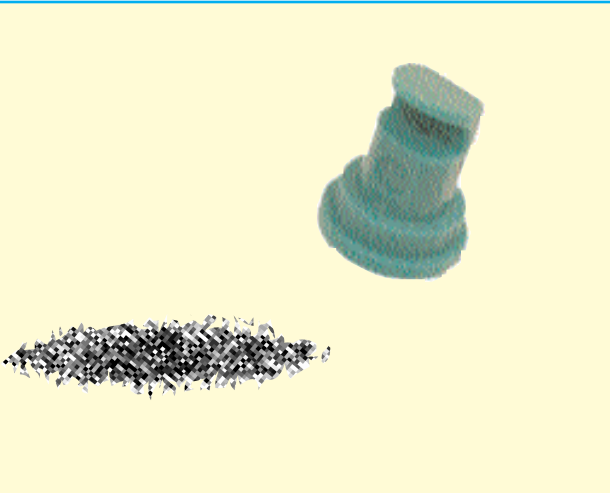
FANJET (FLAT FAN) - FLOW CHART

NOZZLE REFERENCE AND COLOUR	Thread Connection (BSP)		Flow (L/min) @ Pressure (bar)							Spray Angle (Degrees) @ 3 bar			
	1/8"	1/4"	0.5	1	2	3	4	5	7	25	40	65	80
CM02 Orange	x	x	0.33	0.46	0.65	0.80	0.92	1.03	1.22	■	■	■	■
CM03 Red	x	x	0.49	0.69	0.98	1.20	1.39	1.55	1.83	■	■	■	■
CM04 Camb Blue	x	x	0.65	0.92	1.31	1.60	1.85	2.07	2.44	■	■	■	■
CM05 Yellow	x	x	0.82	1.15	1.63	2.00	2.31	2.58	3.06	■	■	■	■
CM06 Lime Green	x	x	0.98	1.39	1.96	2.40	2.77	3.10	3.67	■	■	■	■
CM08 Moss Green	x	x	1.31	1.85	2.61	3.20	3.70	4.13	4.89	■	■	■	■
CM10 Royal Blue	x	x	1.63	2.31	3.27	4.00	4.62	5.16	6.11	■	■	■	■
CM15 Emerald Green	x	x	2.45	3.46	4.90	6.00	6.93	7.75	9.17	■	■	■	■
CM20 Olive Green	x	x	3.27	4.62	6.53	8.00	9.24	10.33	12.22	■	■	■	■
CM30 Red	x	x	4.90	6.93	9.80	12.00	13.86	15.49	18.33	■	■	■	■
CM40 Camb Blue	x	x	6.53	9.24	13.06	16.00	18.48	20.66	24.44	■	■	■	■
CM50 Yellow	x	x	8.16	11.55	16.33	20.00	23.09	25.82	30.55	■	■	■	■



AN SERIES (FLAT FAN) - FLANGED TIP FLOW CHART

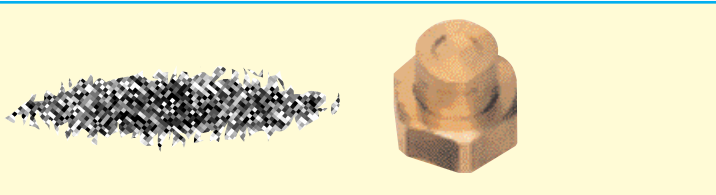
TIP REFERENCE	Flow (L/min) @ Pressure (bar)							Spray Angle @ 1.5 bar	
	0.5	1.0	1.5	2.0	2.5	3.0	4.0	Metal	Acetal
AN0.50	0.16	0.23	0.28	0.32	0.36	0.39	0.46	110*	80
AN0.75	0.24	0.34	0.42	0.48	0.54	0.589	0.68	115	95
AN1.0	0.32	0.46	0.56	0.64	0.72	0.79	0.91	115	105
AN1.5	0.48	0.68	0.84	0.97	1.08	1.18	1.37	115	105
AN2.0	0.64	0.91	1.12	1.29	1.44	1.58	1.82	115	105
AN2.5	0.81	1.14	1.40	1.61	1.80	1.97	2.28	115	110
AN3.0	0.97	1.37	1.68	1.93	2.16	2.37	2.74	125	110
AN4.0	1.29	1.82	2.23	2.58	2.88	3.16	3.65	125	120
AN5.0	1.61	2.28	2.79	3.22	3.60	3.95	4.56	125	145
AN7.5	2.42	3.42	4.19	4.84	5.41	5.92	6.84	145	145
AN10	3.22	4.56	5.58	6.45	7.21	7.90	9.12	145	145
AN15	4.84	6.84	8.38	9.67	10.81	11.84	13.68	145	145
AN20	6.45	9.12	11.17	12.89	14.42	15.79	18.24	145	145



*At 3 bar


C SERIES (FLAT FAN) - FLOW CHART

NOZZLE REF.	Flow L/min @ Pressure (bar)						Spray Angle
	1	2	2.8	3	5	7	
C0500	3.01	4.26	5.00	5.21	6.73	7.97	80
C1000	6.02	8.52	10.0	10.43	13.46	15.93	80
C1500	9.03	12.77	15.0	15.64	20.20	23.90	80
C2000	12.04	17.03	20.0	20.86	26.93	31.86	80
C3000	18.06	25.55	30.0	31.29	40.39	47.79	80



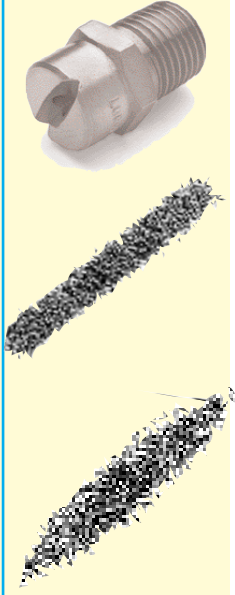
F SERIES (FLAT FAN) - FLOW CHART

TIP REFERENCE		Flow (L/min) @ Pressure (bar)									
Tapered	Evenspray	0.5	1	2	3	4	5	7	10	20	30
005F	005E	0.08	0.12	0.16	0.20	0.23	0.26	0.31	0.37	0.52	0.63
0067F	0087E	0.11	0.15	0.22	0.27	0.31	0.35	0.41	0.49	0.69	0.85
0077F	0077E	0.13	0.18	0.25	0.31	0.36	0.40	0.47	0.56	0.80	0.97
01F	01E	0.16	0.23	0.33	0.40	0.46	0.52	0.61	0.73	1.03	1.26
015F	015E	0.24	0.35	0.49	0.60	0.69	0.77	0.92	1.10	1.55	1.90
02F	02E	0.33	0.46	0.65	0.80	0.92	1.03	1.22	1.46	2.07	2.53
03F	03E	0.49	0.69	0.98	1.20	1.39	1.55	1.83	2.19	3.10	3.79
04F	04E	0.65	0.92	1.31	1.60	1.85	2.07	2.44	2.92	4.13	5.06
05F	05E	0.82	1.15	1.63	2.00	2.31	2.58	3.06	3.65	5.16	6.32
06F	06E	0.98	1.39	1.96	2.40	2.77	3.10	3.67	4.38	6.20	7.59
08F	08E	1.31	1.85	2.61	3.20	3.70	4.13	4.89	5.84	8.26	10.12
10F	10E	1.63	2.31	3.27	4.00	4.62	5.16	6.11	7.30	10.33	12.65
15F	15E	2.45	3.46	4.90	6.00	6.93	7.75	9.17	10.95	15.49	18.97
20F	20E	3.27	4.62	6.53	8.00	9.24	10.33	12.22	14.61	20.66	25.30



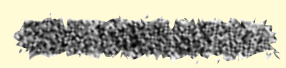
CM SERIES (FLAT FAN) - FLOW CHART

Nozzle Reference	Thread Connection (BSP)						Flow (L/min) @ Pressure (bar)									
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	0.5	1	2	3	4	5	7	10	20	30
CM01	X	X					0.16	0.23	0.33	0.40	0.46	0.52	0.61	0.73	1.03	1.26
CM015	X	X					0.24	0.35	0.49	0.60	0.69	0.77	0.92	1.10	1.55	1.90
CM02	X	X					0.33	0.46	0.65	0.80	0.92	1.03	1.22	1.46	2.07	2.53
CM03	X	X					0.49	0.69	0.98	1.20	1.39	1.55	1.83	2.19	3.10	3.79
CM04	X	X					0.65	0.92	1.31	1.60	1.85	2.07	2.44	2.92	4.13	5.06
CM045	X	X					0.73	1.04	1.47	1.80	2.08	2.32	2.75	3.29	4.65	5.69
CM05	X	X					0.82	1.15	1.63	2.00	2.31	2.58	3.06	3.65	5.16	6.32
CM055	X	X					0.90	1.27	1.80	2.20	2.54	2.84	3.36	4.02	5.68	6.96
CM06	X	X					0.98	1.39	1.96	2.40	2.77	3.10	3.67	4.38	6.20	7.59
CM065	X	X					1.06	1.50	2.12	2.60	3.00	3.36	3.97	4.75	6.71	8.22
CM07	X	X					1.14	1.62	2.29	2.80	3.23	3.61	4.28	5.11	7.23	8.85
CM08	X	X					1.31	1.85	2.61	3.20	3.70	4.13	4.89	5.84	8.26	10.12
CM09	X	X					1.47	2.08	2.94	3.60	4.16	4.65	5.50	6.57	9.30	11.38
CM10	X	X					1.63	2.31	3.27	4.00	4.62	5.16	6.11	7.30	10.33	12.65
CM15	X	X					2.45	3.46	4.90	6.00	6.93	7.75	9.17	10.95	15.49	18.97
CM20	X	X					3.27	4.62	6.53	8.00	9.24	10.33	12.22	14.61	20.66	25.30
CM30		X					4.90	6.93	9.80	12.00	13.86	15.49	18.33	21.91	30.98	37.95
CM40		X	X				6.53	9.24	13.06	16.00	18.48	20.66	24.44	29.21	41.31	50.60
CM50		X	X				8.16	11.55	16.33	20.00	23.09	25.82	30.55	36.51	51.64	63.25
CM60		X	X				9.80	13.86	19.60	24.00	27.71	30.98	36.66	43.82	61.97	75.89
CM70		X	X				11.43	16.17	22.86	28.00	32.33	36.15	42.77	51.12	72.30	88.54
CM80		X	X				13.06	18.48	26.13	32.00	36.95	41.31	48.88	58.42	82.62	101.19
CM100		X	X	X			16.33	23.09	32.66	40.00	46.19	51.64	61.10	73.03	103.28	126.49
CM150			X	X			24.49	34.64	48.99	60.00	69.28	77.46	91.65	109.54	154.92	189.74
CM200			X	X			32.66	46.19	65.32	80.00	92.38	103.28	122.20	146.06	206.56	252.98
CM250				X			40.82	57.74	81.65	100.00	115.47	129.10	152.75	182.57	258.20	316.23
CM300				X	X		48.99	69.28	97.98	120.00	138.56	154.92	183.30	219.09	309.84	379.47
CM400				X	X		65.32	92.38	130.64	160.00	184.75	206.56	244.40	292.12	413.12	505.96
CM500					X		81.65	115.47	163.30	200.00	230.94	258.20	305.51	365.15	516.40	632.46
CM600					X		97.98	138.56	195.96	240.00	277.13	309.84	366.61	438.18	619.68	758.95



AN SERIES - THREADED (FLAT FAN) - FLOW CHART

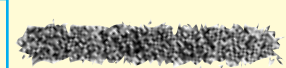
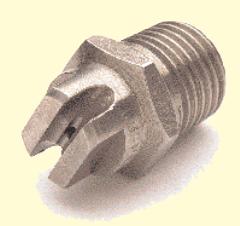
NOZZLE REFERENCE	Thread Connection BSP						Flow (L/min) @ Pressure (bar)								Spray Angle @ 1.5 bar
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	0.5	1.0	1.5	2.0	2.5	3.0	4.0		
AN0.50	X						0.16	0.23	0.28	0.32	0.36	0.39	0.46	110*	
AN0.80	X						0.24	0.34	0.42	0.48	0.54	0.59	0.68	115	
AN1.0	X						0.32	0.46	0.56	0.64	0.72	0.79	0.91	115	
AN1.5	X						0.48	0.68	0.84	0.97	1.08	1.18	1.37	115	
AN2.0	X	X					0.64	0.91	1.12	1.29	1.44	1.58	1.82	115	
AN2.5	X	X					0.81	1.14	1.40	1.61	1.80	1.97	2.28	115	
AN3.0	X	X					0.97	1.37	1.68	1.93	2.16	2.37	2.74	125	
AN4.0	X	X					1.29	1.82	2.23	2.58	2.88	3.16	3.65	125	
AN5.0	X	X					1.61	2.28	2.79	3.22	3.60	3.95	4.56	125	
AN7.5	X	X					2.42	3.42	4.19	4.84	5.41	5.92	6.84	145	
AN10	X	X					3.22	4.56	5.58	6.45	7.21	7.90	9.12	145	
AN15	X	X					4.84	6.84	8.38	9.67	10.81	11.84	13.68	145	
AN20	X	X	X				6.45	9.12	11.17	12.89	14.42	15.79	18.24	145	
AN25		X	X				8.06	11.40	13.96	16.12	18.02	19.74	22.79	145	
AN30			X				9.67	13.68	16.75	19.34	21.62	23.69	27.35	145	
AN35			X				11.28	15.96	19.54	22.57	25.23	27.64	31.91	145	
AN40			X	X			12.89	18.24	22.33	25.79	28.83	31.58	36.47	145	
AN50				X			16.12	22.79	27.92	32.24	36.04	39.48	45.59	145	
AN60				X	X		19.34	27.35	33.50	38.68	43.25	47.38	54.71	145	
AN80				X	X		25.79	36.47	44.67	51.58	57.67	63.17	72.94	145	
AN100				X	X		32.24	45.59	55.83	64.47	72.08	78.96	91.18	145	
AN120					X		38.68	54.71	67.00	77.37	86.50	94.75	109.41	145	
AN160					X		51.58	72.94	89.33	103.15	115.33	126.34	145.88	145	
AN210					X		67.70	95.74	117.25	135.39	151.37	165.82	191.47	145	
AN300						X	96.71	136.76	167.50	193.41	216.24	236.88	273.53	145	
AN450						X	145.06	205.15	251.25	290.12	324.37	355.33	410.29	145	



*At 3 bar

HPN SERIES (FLAT FAN) - FLOW CHART

NOZZLE REFERENCE	Connection (BSP)		Flow (L/min) @ Pressure (bar)									
	1/8"	1/4"	15	20	30	40	50	60	80	100	150	200
HPN 04	X	X	3.46	4.00	4.90	5.66	6.32	6.93	8.00	8.94	10.95	12.65
HPN 045	X	X	3.90	4.50	5.51	6.36	7.12	7.79	9.00	10.06	12.32	14.23
HPN 05	X	X	4.33	5.00	6.12	7.07	7.91	8.66	10.00	11.18	13.69	15.81
HPN 055	X	X	4.76	5.50	6.74	7.78	8.70	9.53	11.00	12.30	15.06	17.39
HPN 06	X	X	5.20	6.00	7.35	8.49	9.49	10.39	12.00	13.42	16.43	18.97
HPN 065	X	X	5.63	6.50	7.96	9.19	10.28	11.26	13.00	14.53	17.80	20.55
HPN 07	X	X	6.06	7.00	8.57	9.90	11.07	12.12	14.00	15.65	19.17	22.14
HPN 075	X	X	6.50	7.50	9.19	10.61	11.86	12.99	15.00	16.77	20.54	23.72
HPN 08	X	X	6.93	8.00	9.80	11.31	12.65	13.86	16.00	17.89	21.91	25.30
HPN 085	X	X	7.36	8.50	10.41	12.02	13.44	14.72	17.00	19.01	23.28	26.88
HPN 09	X	X	7.79	9.00	11.02	12.73	14.23	15.59	18.00	20.12	24.65	28.46
HPN 10	X	X	8.66	10.00	12.25	14.14	15.81	17.32	20.00	22.36	27.39	31.62
HPN 15	X	X	12.99	15.00	18.37	21.21	23.72	25.98	30.00	33.54	41.08	47.43
HPN 20	X	X	17.32	20.00	24.49	28.28	31.62	34.64	40.00	44.72	54.77	63.25
HPN 30		X	25.98	30.00	36.74	42.43	47.43	51.96	60.00	67.08	82.16	94.87
HPN 40		X	34.64	40.00	48.99	56.57	63.25	69.28	80.00	89.44	109.54	126.49
HPN 50		X	43.30	50.00	61.24	70.71	79.06	86.60	100.00	111.80	136.93	158.11



Items against white background available from stock

SN SERIES (FLAT FAN) - FLOW CHART

NOZZLE REFERENCE	Thread Connection (BSP)					Flow(L/min) @ Operating Pressure (bar)							Spray Angle @ 3 bar		
	1/8"	1/4"	3/8"	1/2"	3/4"	1	2	3	4	5	7	10	15	35	50
SN 4	x					0.91	1.29	1.58	1.82	2.04	2.4	2.88		x	
SN 10		x				2.28	3.22	3.95	4.56	5.10	6.03	7.21	x	x	x
SN 20		x	x			4.56	6.45	7.90	9.12	10.19	12.06	14.42	x	x	
SN 25			x			5.70	8.06	9.87	11.40	12.74	15.08	18.02			x
SN 40			x			9.12	12.89	15.79	18.24	20.39	24.12	28.83	x	x	x
SN 50			x			11.40	16.12	19.74	22.79	25.48	30.15	36.04		x	
SN 60			x	x		13.68	19.34	23.69	27.35	39.58	36.18	43.25	x	x	x
SN 80				x		18.24	25.79	31.58	36.47	40.78	48.25	57.67	x		
SN 100			x	x		22.79	32.24	39.48	45.59	50.97	60.31	72.08		x	x
SN 160			x			36.47	51.58	63.17	72.94	81.55	96.49	115.33			x
SN 200				x	x	45.59	64.47	78.96	91.18	101.94	120.62	144.16			x



Maxthro XT SERIES (FLAT FAN) - FLOW CHART

NOZZLE REF	Thread Connection (NPT)					Flow (L/min) @ Pressure (bar)			Swath Width (m)
	1/4"	3/8"	1/2"	3/4"	1"	3	4	5	
XT020	x					7.90	9.12	10.19	5.18
XT024	x					9.48	10.94	12.23	5.18
XT043		x				16.98	19.60	21.92	6.10
XT080			x			31.58	36.47	40.77	6.40
XT167				x		65.93	76.13	85.12	9.45
XT215				x		84.88	98.01	109.58	9.45
XT330					x	130.28	150.44	168.196	6.40

