

Southern Cross windmill flowchart		Wind speed 8.0 metres/second				28.8 Km/hour				17.9 miles per hour													
Model		Southern Cross IZ										Southern Cross "SENESCHAL"											
Turbine diameter (m)		1.83 [6 foot]		2.44 [8 foot]		3.05 [10 foot]		3.66 [12 foot]		4.27 [14 foot]		5.19 [17 foot]				6.41 [21 foot]				7.63 [25 foot]			
Tower height (m)		7.6 – 18.3		9.2 – 18.3		9.2 – 18.3		12.2 – 18.3		12.2 – 18.3		10.7 – 18.3				12.2 – 18.3				12.2 – 18.3			
Pump Stroke (mm)		133.4 [5 ¼"]		146.1 [5 ¾"]		165.1 [6 ½"]		184.2 [7 ¼"]		184.2 [7 ¼"]		177.8 [7"]		203.2 [8"]		209.6 [8 ¼"]		254 [10"]		241.3 [9 ½"]		304.8 [12.0"]	
Cylinder diameter (mm)	Cylinder diameter (inches)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)
44.5	1 ¾"	22.9	0.4	40.3	0.44	72.1	0.44	96.2	0.46	135.3	0.4	146.6	0.75	128.2	0.86								
50.8	2"	18.3	0.53	33.2	0.53	60.2	0.55	80.3	0.62	113	0.53	126.7	0.97	109.9	1.13								
57.2	2 ¼"	15.6	0.68	28.1	0.75	50.7	0.71	67.8	0.77	95.3	0.66	109.9	1.24	94.7	1.41	175.6	1.19	143.5	1.43				
63.5	2 ½"	13.1	0.79	23.5	0.93	43.1	0.88	57.7	0.95	80.9	0.82	96.2	1.54	82.4	1.77	152.7	1.46	125.2	1.79	216.8	1.41	161.8	1.81
69.9	2 ¾"	11.3	1.01	20.2	1.1	36.9	1.06	49.5	1.15	69.6	0.99	84	1.85	73.3	2.12	134.4	1.77	109.9	2.16	193.9	1.72	145	2.16
76.2	3"	9.8	1.21	17.4	1.32	32.1	1.28	42.7	1.37	60.2	1.15	73.3	2.21	64.1	2.54	119.1	2.12	97.7	2.56	175.6	2.05	129.8	2.6
82.6	3 ¼"	8.2	1.14	15.3	1.54	28.1	1.5	37.6	1.61	52.5	1.35	62.6	2.6	55	2.98	105.3	2.47	87	3	157.3	2.41	117.6	3.05
88.9	3 ½"	7.3	1.63	13.4	1.79	24.7	1.72	33	1.85	46.1	1.59	53.4	3.02	47.3	3.44	94.7	2.87	76.3	3.49	140.5	2.78	106.9	3.53
101.6	4"	5.8	2.14	10.4	2.34	19.5	2.25	26	2.43	36.3	2.03	41.2	3.95	36.6	4.5	73.3	3.75	61.1	4.55	106.9	3.64	85.5	47.61
108	4 ¼"	5.2	2.41	9.5	2.65	17.4	2.56	23.2	2.74	32.7	2.3	36.6	4.46	32.1	5.08	6.41	4.24	53.4	5.14	94.7	4.1	74.8	5.21
114.3	4 ½"	4.6	2.69	8.5	2.96	15.6	2.87	20.8	3.07	29.3	2.6	32.1	4.99	29	5.69	58	4.77	47.3	5.78	85.5	4.61	67.2	5.83
127	5"	3.7	3.33	7	3.66	12.8	3.53	17.1	3.8	24.1	3.18	26	6.18	22.9	7.06	47.3	5.87	38.2	7.13	68.7	5.69	55	7.19
152.4	6"			4.9	5.3	9.2	5.08	12.2	5.47	17.1	4.59	18.3	8.83	16.2	10.15	32.1	8.47	26.9	10.24	47.3	8.21	38.2	10.37
203.2	8"							7	9.71	9.8	8.3	10.4	15.89	9.92	18.01	18.3	15.01	15.3	18.18	26.9	14.57	21.4	18.45
251	10"															11.6	23.48	9.8	28.42	16.8	22.77	13.7	28.78
304.8	12'															8.2	33.81	6.7	41.05	11.9	32.84	9.5	41.49
355.6	14"																			8.5	45.02	7	56.94

Note: All pumping capacities are based on an 8.0 metres/second wind; output is reduced by 25% in 5.4 metres/second to 7.1 metres/second wind and by 50% in 3.6 metres/second to 4.5 metres/second wind

Southern Cross windmill flowchart		Wind speed 5.4 to 7.1 metres/second				19.44 to 25.56 Km/h				12.07 to 15.88 miles per hour													
Model		Southern Cross IZ										Southern Cross "SENESCHAL"											
Turbine diameter (m)		1.83 [6 foot]		2.44 [8 foot]		3.05 [10 foot]		3.66 [12 foot]		4.27 [14 foot]		5.19 [17 foot]				6.41 [21 foot]				7.63 [25 foot]			
Tower height (m)		7.6 – 18.3		9.2 – 18.3		9.2 – 18.3		12.2 – 18.3		12.2 – 18.3		10.7 – 18.3				12.2 – 18.3				12.2 – 18.3			
Pump Stroke (mm)		133.4 [5 ¼"]		146.1 [5 ¾"]		165.1 [6 ½"]		184.2 [7 ¼"]		184.2 [7 ¼"]		177.8 [7"]		203.2 [8"]		209.6 [8 ¼"]		254 [10"]		241.3 [9 ½"]		304.8 [12.0"]	
Cylinder diameter (mm)	Cylinder diameter (inches)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)
44.5	1 ¾"	22.9	0.30	40.3	0.33	72.1	0.33	96.2	0.35	135.3	0.30	146.6	0.56	128.2	0.65								
50.8	2"	18.3	0.40	33.2	0.40	60.2	0.41	80.3	0.47	113	0.40	126.7	0.73	109.9	0.85								
57.2	2 ¼"	15.6	0.51	28.1	0.56	50.7	0.53	67.8	0.58	95.3	0.50	109.9	0.93	94.7	1.06	175.6	0.89	143.5	1.07				
63.5	2 ½"	13.1	0.59	23.5	0.70	43.1	0.66	57.7	0.71	80.9	0.62	96.2	1.16	82.4	1.33	152.7	1.10	125.2	1.34	216.8	1.06	161.8	1.36
69.9	2 ¾"	11.3	0.76	20.2	0.83	36.9	0.80	49.5	0.86	69.6	0.74	84	1.39	73.3	1.59	134.4	1.33	109.9	1.62	193.9	1.29	145	1.62
76.2	3"	9.8	0.91	17.4	0.99	32.1	0.96	42.7	1.03	60.2	0.86	73.3	1.66	64.1	1.91	119.1	1.59	97.7	1.92	175.6	1.54	129.8	1.95
82.6	3 ¼"	8.2	0.86	15.3	1.16	28.1	1.13	37.6	1.21	52.5	1.01	62.6	1.95	55	2.24	105.3	1.85	87	2.25	157.3	1.81	117.6	2.29
88.9	3 ½"	7.3	1.22	13.4	1.34	24.7	1.29	33	1.39	46.1	1.19	53.4	2.27	47.3	2.58	94.7	2.15	76.3	2.62	140.5	2.09	106.9	2.65
101.6	4"	5.8	1.61	10.4	1.76	19.5	1.69	26	1.82	36.3	1.52	41.2	2.96	36.6	3.38	73.3	2.81	61.1	3.41	106.9	2.73	85.5	35.71
108	4 ¼"	5.2	1.81	9.5	1.99	17.4	1.92	23.2	2.06	32.7	1.73	36.6	3.35	32.1	3.81	6.41	3.18	53.4	3.86	94.7	3.08	74.8	3.91
114.3	4 ½"	4.6	2.02	8.5	2.22	15.6	2.15	20.8	2.30	29.3	1.95	32.1	3.74	29	4.27	58	3.58	47.3	4.34	85.5	3.46	67.2	4.37
127	5"	3.7	2.50	7	2.75	12.8	2.65	17.1	2.85	24.1	2.39	26	4.64	22.9	5.30	47.3	4.40	38.2	5.35	68.7	4.27	55	5.39
152.4	6"			4.9	3.98	9.2	3.81	12.2	4.10	17.1	3.44	18.3	6.62	16.2	7.61	32.1	6.35	26.9	7.68	47.3	6.16	38.2	7.78
203.2	8"							7	7.28	9.8	6.23	10.4	11.92	9.92	13.51	18.3	11.26	15.3	13.64	26.9	10.93	21.4	13.84
251	10"															11.6	17.61	9.8	21.32	16.8	17.08	13.7	21.59
304.8	12'															8.2	25.36	6.7	30.79	11.9	24.63	9.5	31.12
355.6	14"																			8.5	33.77	7	42.71

Southern Cross windmill flowchart		Wind speed 3.6 to 4.5 metres/second				13.17 to 16.2 Km/hour				8.19 to 10.6 miles per hour													
Model		Southern Cross IZ										Southern Cross "SENECHAL"											
Turbine diameter (m)		1.83 [6 foot]		2.44 [8 foot]		3.05 [10 foot]		3.66 [12 foot]		4.27 [14 foot]		5.19 [17 foot]				6.41 [21 foot]				7.63 [25 foot]			
Tower height (m)		7.6 – 18.3		9.2 – 18.3		9.2 – 18.3		12.2 – 18.3		12.2 – 18.3		10.7 – 18.3				12.2 – 18.3				12.2 – 18.3			
Pump Stroke (mm)		133.4 [5 ¼"]		146.1 [5 ¾"]		165.1 [6 ½"]		184.2 [7 ¼"]		184.2 [7 ¼"]		177.8 [7"]		203.2 [8"]		209.6 [8 ¼"]		254 [10"]		241.3 [9 ½"]		304.8 [12.0"]	
Cylinder diameter (mm)	Cylinder diameter (inches)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)	Lift (M)	Capacity (m3/hr.)
44.5	1 ¾"	22.9	0.20	40.3	0.22	72.1	0.22	96.2	0.23	135.3	0.20	146.6	0.38	128.2	0.43								
50.8	2"	18.3	0.27	33.2	0.27	60.2	0.28	80.3	0.31	113	0.27	126.7	0.49	109.9	0.57								
57.2	2 ¼"	15.6	0.34	28.1	0.38	50.7	0.36	67.8	0.39	95.3	0.33	109.9	0.62	94.7	0.71	175.6	0.45	143.5	0.72				
63.5	2 ½"	13.1	0.40	23.5	0.47	43.1	0.44	57.7	0.48	80.9	0.41	96.2	0.77	82.4	0.89	152.7	0.55	125.2	0.90	216.8	0.71	161.8	0.68
69.9	2 ¾"	11.3	0.51	20.2	0.55	36.9	0.53	49.5	0.58	69.6	0.50	84	0.93	73.3	1.06	134.4	0.66	109.9	1.08	193.9	0.86	145	0.81
76.2	3"	9.8	0.61	17.4	0.66	32.1	0.64	42.7	0.69	60.2	0.58	73.3	1.11	64.1	1.27	119.1	0.80	97.7	1.28	175.6	1.03	129.8	0.98
82.6	3 ¼"	8.2	0.57	15.3	0.77	28.1	0.75	37.6	0.81	52.5	0.68	62.6	1.30	55	1.49	105.3	0.93	87	1.50	157.3	1.21	117.6	1.14
88.9	3 ½"	7.3	0.82	13.4	0.90	24.7	0.86	33	0.93	46.1	0.80	53.4	1.51	47.3	1.72	94.7	1.08	76.3	1.75	140.5	1.39	106.9	1.32
101.6	4"	5.8	1.07	10.4	1.17	19.5	1.13	26	1.22	36.3	1.02	41.2	1.98	36.6	2.25	73.3	1.41	61.1	2.28	106.9	1.82	85.5	1.785
108	4 ¼'	5.2	1.21	9.5	1.33	17.4	1.28	23.2	1.37	32.7	1.15	36.6	2.23	32.1	2.54	6.41	1.59	53.4	2.57	94.7	2.05	74.8	1.95
114.3	4 ½"	4.6	1.35	8.5	1.48	15.6	1.44	20.8	1.54	29.3	1.30	32.1	2.50	29	2.85	58	1.79	47.3	2.89	85.5	2.31	67.2	2.19
127	5"	3.7	1.67	7	1.83	12.8	1.77	17.1	1.90	24.1	1.59	26	3.09	22.9	3.53	47.3	2.20	38.2	3.57	68.7	2.85	55	2.70
152.4	6"			4.9	2.65	9.2	2.54	12.2	2.74	17.1	2.30	18.3	4.42	16.2	5.08	32.1	3.18	26.9	5.12	47.3	4.11	38.2	3.89
203.2	8"							7	4.86	9.8	4.15	10.4	7.95	9.92	9.01	18.3	5.63	15.3	9.09	26.9	7.29	21.4	6.92
251	10"															11.6	8.81	9.8	14.21	16.8	11.39	13.7	10.79
304.8	12'															8.2	12.68	6.7	20.53	11.9	16.42	9.5	15.56
355.6	14"																			8.5	22.51	7	21.35