

Southern Cross

"IZ" DOUBLE GEARED WINDMILLS

NO FUEL OR POWER BILLS...

Use wind energy to pump vital water supplies.

LOW MAINTENANCE...

Southern Cross Windmills are self-sufficient, require little attention and offer proven operating reliability for safety of water supply. Many of the Southern Cross Windmills you see are over 30 years old and are still operating reliably—and in most cases spare parts are available.

IDEAL FOR REMOTE AREAS...

Windmills eliminate the need to transport fuel or install expensive power lines into remote areas.

ALL WEATHER OPERATION...

The only requirement is a light breeze for operation, day or night, in all weather conditions.

POLLUTION FREE...

Southern Cross Windmills operate without noise or atmospheric pollution.

FEATURES...

- Automatic oiling and governing.
- Powerful windwheels for easy starting and excellent pumping ability.
- Designed to pump from deep bores and over long distances.
- Simple to install and maintain.
- All working parts run in oil and are sealed against weather.
- All exposed steel parts are hot dip galvanised.
- High standard of manufacture.
- Simple reefing gear.

SIZES AVAILABLE...

WINDWHEEL DIAMETERS: 1.8, 2.4, 3, 3.6 and 4.3 m
(6, 8, 10, 12 and 14 ft.)

TOWER HEIGHTS: 6, 7.6, 9, 12, 15 and 18 m
(20, 25, 30, 40, 50 and 60 ft.)



PUMPING CAPACITIES OF SOUTHERN CROSS WINDMILLS...

The correct combination of windmill and pump is that which allows the mill to work easily in light winds. The pumping table below shows the average daily supply which can be expected from each combination of windmill and pump, up to the depths given, in most areas of Australia, provided that the windmill is erected on a sufficiently high tower in a good open site where the wind can reach the windwheel freely. There are, however some areas in which the wind is not so strong, and in these areas customers should specify a larger size of windmill and pump than would normally be used. Also in districts where the wind does not blow for as many hours per day as the average, customers should specify a larger size of windmill and pump. Greater satisfaction will always be achieved with a lightly loaded windmill.

MILL MODEL	WHEEL DIAM. m (ft)	STROKE mm (in)		DIAMETER OF PUMP CYLINDER mm (inch)				
				44 (1.75)	51 (2)	57 (2.25)	64 (2.5)	
6-IZ	1.8 (6)	133 (5.25)	Total Lift - metres (feet)	22 (73)	18 (60)	16 (51)	13 (43)	
			Average Daily Output - kilolitres (gallons)	3.6 (795)	4.7 (1040)	6.0 (1320)	7.4 (1630)	
8-IZ	2.4 (8)	146 (5.75)	Total Lift - metres (feet)	40 (132)	33 (109)	28 (92)	23 (77)	
			Average Daily output - kilolitres (gallons)	4.0 (875)	5.2 (1145)	6.6 (1450)	8.1 (1790)	
10-IZ	3.0 (10)	165 (6.5)	Total Lift - metres (feet)	72 (236)	60 (197)	51 (166)	43 (141)	
			Average Daily output - kilolitres (gallons)	3.9 (855)	5.1 (1115)	6.4 (1415)	7.9 (1745)	
12-IZ	3.6 (12)	184 (7.25)	Total Lift - metres (feet)	96 (315)	72 (263)	68 (222)	58 (189)	
			Average Daily output - kilolitres (gallons)	4.2 (925)	5.5 (1205)	7.0 (1530)	8.6 (1885)	
14-IZ	4.3 (14)	184 (7.25)	Total Lift - metres (feet)	135 (443)	113 (370)	95 (312)	81 (265)	
			Average Daily output - kilolitres (gallons)	3.6 (790)	4.7 (1035)	6.0 (1310)	7.4 (1620)	

"IZ" DOUBLE GEARED WINDMILLS



DATA REQUIRED FOR SELECTING AND QUOTING SOUTHERN CROSS WINDMILLS

Pumping Underground Water from Bores and Wells:

1. Depth of bore or wellm
2. Bore casing size (inside diam.) or size of well mm
3. Distance from ground level to water levelm
4. Maximum hourly supply available for pumping.....litres
5. If water is pumped at the maximum rate of supply, how far will water level be below ground level then m
6. Height above ground level at the pumping site to top of tank or reservoirm
7. Distance from tank or reservoir to pumping sitem
8. Maximum height of obstructions, if any, in the vicinity of the pumping site and how far away. If there is any doubt about the prevailing winds easily reaching the site, describe the site as fully as possible
9. Quantity of water required daily.....kilolitres
10. What the water is to be used for.....
11. Size and type of other equipment available, if any, you wish to use on the job if possible

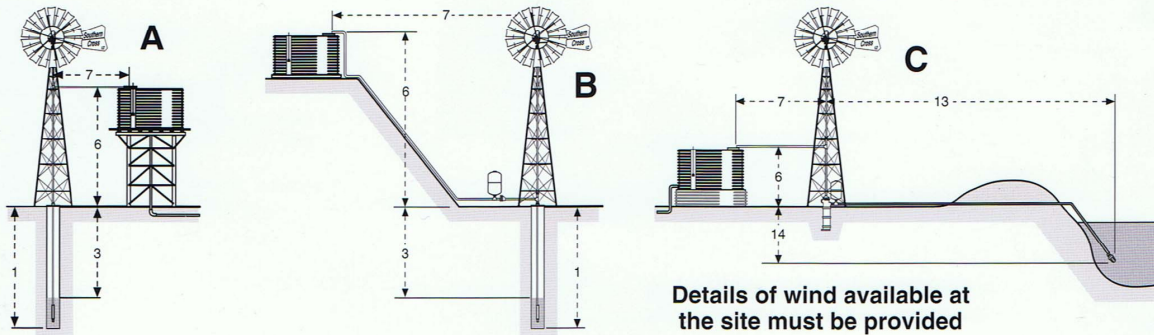
Pumping Surface Water — Creeks, Dams, Drains, Earth Tanks

12. Source of supply
13. Distance along the ground from the water to the point at which it is proposed to install the pumpm
14. Vertical height from the lowest water level to the point at which the pump will be installedm
15. Plus the information asked for at 6, 7, 8, 9, 10, and 11

If New Windmill Head Only is required:

16. Size and make of old mill
17. Height of existing tower above ground levelm
18. Is tower 3 or 4 post
19. Size of pump installedmm
20. Distance from ground level to pump.....m
21. Size of pump delivery piping or casingmm
22. Size and type of pump rods.....mm
23. Is connection required for between new mill and existing pump rods
24. Plus the information in questions 1 to 10 if pumping from bore or well, and questions 6 to 10 and 12 to 14 if pumping surface water

WHICH ILLUSTRATION BELOW MOST RESEMBLES YOUR LAYOUT



DIAMETER OF PUMP CYLINDER mm (inch)

	70 (2.75)	76 (3)	83 (3.25)	89 (3.5)	102 (4)	108 (4.25)	114 (4.5)	127 (5)	152 (6)	203 (8)
	11 (37)	10 (32)	8 (27)	7 (24)	6 (19)	5 (17)	4 (15)	3 (12)	— —	— —
	9.0 (1970)	10.7 (2345)	12.5 (2750)	14.5 (3190)	18.9 (4165)	21.4 (4705)	24 (5275)	29.6 (6510)	— —	— —
	20 (66)	17 (57)	15 (50)	13 (44)	10 (34)	9 (31)	8 (28)	7 (23)	5 (16)	— —
	9.8 (2165)	11.7 (2575)	13.8 (3025)	15.9 (3505)	20.8 (4580)	23.5 (5170)	26.3 (5795)	32.5 (7155)	46.8 (10,305)	— —
	37 (121)	32 (105)	28 (92)	25 (81)	20 (64)	17 (57)	16 (51)	13 (42)	9 (30)	— —
	9.6 (2110)	11.4 (2515)	13.4 (2950)	15.5 (3420)	20.3 (4465)	22.9 (5040)	25.7 (5655)	31.7 (6980)	45.7 (10,050)	— —
	49 (162)	43 (140)	37 (123)	33 (108)	26 (85)	23 (76)	21 (68)	17 (56)	12 (40)	7 (23)
	10.4 (2285)	12.4 (2720)	14.5 (3190)	16.8 (3700)	22 (4830)	24.8 (5455)	27.8 (6115)	34.3 (7550)	49.4 (10,870)	87.9 (19,325)
	69 (228)	60 (197)	52 (172)	46 (151)	36 (119)	33 (107)	29 (96)	24 (79)	17 (56)	10 (32)
	8.9 (1955)	10.5 (2315)	12.4 (2730)	14.4 (3165)	18.8 (4135)	21.2 (4670)	23.8 (5235)	29.4 (6470)	42.3 (9310)	75.2 (16,540)