

"IZ" DOUBLE GEARED

**WINDMILLS** 

# "ENERGY FREE" **WATER SUPPLY SYSTEMS**

## tyco

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**WINDMILLS** 

## "ENERGY FREE" WATER SUPPLY SYSTEMS



THE COMPANY AGREES with the original purchaser of each SOUTHERN CROSS Windmill that, at any time within three years from the date of despatch of such windmill, the Company will repair or supply parts without charge to the original point of despatch to replace the parts which, on return, freight pre-paid, prove to the satisfaction of the Company to be

defective in material or workmanship, and providing the tower anchorages hold, and the mill and tower are erected and maintained in accordance with the instruction manual. Under no conditions will the Company accept responsibility or make any allowances for any consequential damages or any other expenses whatsoever.







As Tyco policy is one of constant improvement, we reserve the right to make specification changes without notice and without incurring liability

#### Form 2773 December 2003

#### **APPLICATIONS**

- Stock Watering
  - Domestic Water Supplies
- Tank and Dam Filling
- Pumping from Deep Bores and over Long **Distances**

#### **FEATURES**

- Very Low Maintenance... Time proven reliability
- No Fuel or Power Bills
- Ideal for Remote Areas... Windmills eliminate the need to transport fuel or install power lines
- 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
- Range of Sizes... 1.8 to 4.3 metre Windwheels



### **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
- 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 metres

#### **TOWER HEIGHTS:**

6, 7.6, 9, 12, 15 and 18 metres.







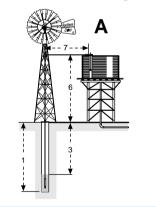
#### PUMPING CAPACITIES OF SOUTHERN CROSS WINDMILLS...

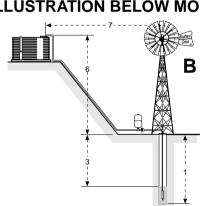
The correct combination of windmill and pump is that which allows the mill to work easily in light winds. The pumping table below shows the average daily supply which can be expected from each combination of windmill and pump, up to the depths given, in most areas of Australia, provided that the windmill 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.

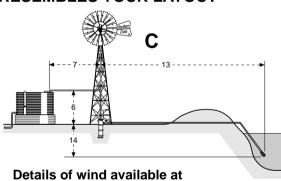
#### DATA REQUIRED FOR SELECTING AND QUOTING SOUTHERN CROSS WINDMILLS

| Pumping Underground Water from Bores and Wells:  | Pumping Surface Water — Creeks, Dams, Drains,  |
|--|--|
| 1. Depth of bore or wellm  | Earth Tanks  |
| 2. Bore casing size (inside diam.) or size of well mm  | 12. Source of supply   |
| 3. Distance from ground level to water levelm  | 13. Distance along the ground from the water to the point at which it is proposed to install the pumpm                     |
| 4. Maximum hourly supply available for pumpinglitres   | 14. Vertical height from the lowest water level to the point at  |
| 5. If water is pumped at the maximum rate of supply, how far will water level be below ground level then m | which the pump will be installedm  |
| 6. Height above ground level at the pumping site to top of   | 15. Plus the information asked for at 6, 7, 8, 9, 10, and 11   |
| tank or reservoirm   | If New Windmill Head Only is required:   |
| 7. Distance from tank or reservoir to pumping sitem  | 16. Size and make of old mill  |
| 8. Maximum height of obstructions, if any, in the vacinity of  | 17. Height of existing tower above ground levelm   |
| the pumping site and how far away. If there is any doubt   | 18. Is tower 3 or 4 post   |
| about the prevailing winds easily reaching the site, describe the site as fully as possible                | 19. Size of pump installedmm   |
|  | 20.Distance from ground level to pumpm   |
|  | 21. Size of pump delivery piping or casingmm   |
| Quantity of water required dailykilolitres   | 22. Size and type of pump rodsmm   |
|  | 23. Is connection required for between new mill and existing   |
| 10. What the water is to be used for   | pump rods  |
| 11. Size and type of other equipment available, if any, you wish to use on the job if possible             | 24. Plus the information in questions 1 to 10 if pumping from bore or well, and questions 6 to 10 and 12v to 14 if pumping |
|  | surface water  |
|  |  |

#### WHICH ILLUSTRATION BELOW MOST RESEMBLES YOUR LAYOUT







the site must be provided

| MILL  | WHEEL           | OTD OVE   | DIAMETER OF PUMP CYLINDER mm (inch) |                                       |                                      |                                   |  | DIAMETER OF PUMP CYLINDER mm (inch) |       |                                       |                                      |                                   |                                    |                                   |                                |                                     |    |                                    |                                       |  |
|-------|-----------------|---|-------------------------------------|---------------------------------------|--------------------------------------|-----------------------------------|--|-------------------------------------|-------|---------------------------------------|--------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|--------------------------------|-------------------------------------|----|------------------------------------|---------------------------------------|--|
| MODEL |                 | STROKE<br>mm (in)   | <b>44</b> (1.75)                    | <b>51</b> (2)                         | <b>57</b> (2.25)                     | <b>64</b> (2.5)                   |  | 70 (2                               | 2.75) | <b>76</b> (3)                         | <b>83</b> (3.25)                     | <b>89</b> (3.5)                   | <b>102</b> (4)                     | <b>108</b> (4.25)                 | <b>114</b> (4.5)               | <b>127</b> (5)                      | 15 | <b>2</b> (6)                       | <b>203</b> (8)                        |  |
| 6-IZ  | <b>1.8</b> (6)  | 133 (5.25) Total Lift - metres (feet) Average Daily Output - kilolitres (gallons) | <b>22</b> (73)<br><b>3.6</b> (795)  | <b>18</b> (60)<br><b>4.7</b> (1040)   | <b>16</b> (51) <b>6.0</b> (1320)     | <b>13</b> (43) <b>7.4</b> (1630)  |  | 11 (<br>9.0 (1                      | ` '   | <b>10</b> (32)<br><b>10.7</b> (2345)  | <b>8</b> (27) <b>12.5</b> (2750)     | <b>7</b> (24) <b>14.5</b> (3190)  | ` '                                | <b>5</b> (17) <b>21.4</b> (4705)  | <b>4</b> (15) <b>24</b> (5275) | <b>3</b> (12)<br><b>29.6</b> (6510  |    |                                    |                                       |  |
| 8-IZ  | <b>2.4</b> (8)  | 146 (5.75) Total Lift - metres (feet) Average Daily output - kilolitres (gallons) | <b>40</b> (132)<br><b>4.0</b> (875) | <b>33</b> (109) <b>5.2</b> (1145)     | <b>28</b> (92)<br><b>6.6</b> (1450)  | <b>23</b> (77) <b>8.1</b> (1790)  |  | <b>20</b> (2 <b>9.8</b> (2          | ` '   | <b>17</b> (57) <b>11.7</b> (2575)     | <b>15</b> (50) <b>13.8</b> (3025)    | <b>13</b> (44) <b>15.9</b> (3505) | , ,                                | <b>9</b> (31) <b>23.5</b> (5170)  | ` '                            | <b>7</b> (23) <b>32.5</b> (7155     |    | (16)<br><b>.8</b> (10,305          | — —<br>  — —                          |  |
| 10-IZ | <b>3.0</b> (10) | 165 (6.5) Total Lift - metres (feet) Average Daily output - kilolitres (gallons)  | <b>72</b> (236)<br><b>3.9</b> (855) | <b>60</b> (197) <b>5.1</b> (1115)     | <b>51</b> (166) <b>6.4</b> (1415)    | <b>43</b> (141) <b>7.9</b> (1745) |  | <b>37</b> (2                        | ,     | <b>32</b> (105) <b>11.4</b> (2515)    | <b>28</b> (92)<br><b>13.4</b> (2950) | <b>25</b> (81) <b>15.5</b> (3420) | , ,                                | <b>17</b> (57) <b>22.9</b> (5040) | , ,                            | , ,                                 |    | (30)<br>. <b>7</b> (10,050         | <br>                                  |  |
| 12-IZ | <b>3.6</b> (12) | 184 (7.25) Total Lift - metres (feet) Average Daily output - kilolitres (gallons) | <b>96</b> (315)<br><b>4.2</b> (925) | <b>72</b> (263) <b>5.5</b> (1205)     | <b>68</b> (222)<br><b>7.0</b> (1530) | <b>58</b> (189) <b>8.6</b> (1885) |  | <b>49</b> (2                        | - /   | <b>43</b> (140)<br><b>12.4</b> (2720) |                                      | , ,                               | , ,                                | <b>23</b> (76) <b>24.8</b> (5455) | ` '                            | , ,                                 |    | <b>2</b> (40)<br><b>.4</b> (10,870 | <b>7</b> (23)<br><b>87.9</b> (19,325) |  |
| 14-IZ | 4.3 (14)        | 184 (7.25) Total Lift - metres (feet) Average Daily output - kilolitres (gallons) | <b>135</b> (443) <b>3.6</b> (790)   | <b>113</b> (370)<br><b>4.7</b> (1035) | <b>95</b> (312) <b>6.0</b> (1310)    | <b>81</b> (265) <b>7.4</b> (1620) |  | 69 (2<br>8.9 (1                     | ,     | <b>60</b> (197)<br><b>10.5</b> (2315) |                                      |                                   | <b>36</b> (119) <b>18.8</b> (4135) |                                   |                                | <b>24</b> (79)<br><b>29.4</b> (6470 |    | <b>7</b> (56)<br><b>.3</b> (9310)  | <b>10</b> (32) <b>75.2</b> (16,540)   |  |