

**P64/30 Performance Table**

Mean Wind Speed (m/s)	Weibull Coefficients C – k	Eq. Annual Energy Production kWh/year	Average Capacity Factor m.m <sup>3</sup> /day	Annual Pumping Rate for H=100m m <sup>3</sup> /year
4	4,4 – 1,41	26 061	12 725	46 445
4,5	5,0 – 1,56	32 034	15 677	57 221
5	5,6 – 1,72	39 029	19 129	69 820
5,5	6,2 – 1,92	46 482	22 853	83 415
6	6,8 – 2,15	55 059	27 147	99 087
6,5	7,3 – 2,35	63 563	31 372	114 508
7	7,9 – 2,66	74 652	39 939	134 827
7,5	8,4 – 2,60	90 096	43 916	160 292

**P81/30 Performance Table**

Mean Wind Speed (m/s)	Weibull Coefficients C – k	Eq. Annual Energy Production kWh/year	Average Capacity Factor m.m <sup>3</sup> /day	Annual Pumping Rate for H=100m m <sup>3</sup> /year
4	4,4 – 1,41	32 396	15 626	57 036
4,5	5,0 – 1,56	39 876	19 270	70 336
5	5,6 – 1,72	48 627	23 519	85 844
5,5	6,2 – 1,92	58 022	28 142	102 719
6	6,8 – 2,15	68 841	33 472	122 171
6,5	7,3 – 2,35	79 519	38 673	141 155
7	7,9 – 2,66	93 524	45 574	166 347
7,5	8,4 – 2,60	111 874	53 386	194 859

**P64/50 : 64 m<sup>2</sup> rotor and 30 kW rated power**

**P81/50 : 81 m<sup>2</sup> rotor and 30 kW rated power**

#### Average Capacity Factor

Average daily capacity calculation example for 100 m depth and P64/30 windpump at 5,5 m/s mean wind speed:

$$ACF / H = 22853 : 100 = 228 \text{ m}^3/\text{day}$$

#### Equivalent annual energy production

Equivalent AEP is defined as “energy demand of a grid connected submercible pump which pumps same amount of water with the windpump”

$$AEP = \frac{9,81}{3600} \frac{Hm}{\eta}$$

AEP [kWh] Equivalent annual energy production

H [m] Pumping head

m [m<sup>3</sup>] Annual pumping rate

$\eta$  Submercible pump efficiency (assumed 0,50)