

# wind turbines



**XL.1**



**Raum 1.3**



**Proven 7**

	<b>XL.1</b>	<b>Whisper 200</b>	<b>1.3</b>	<b>e300i</b>	<b>Proven 7</b>	
<b>Manufacturer</b>	<b>Bergey Windpower</b>	<b>Southwest Windpower</b>	<b>Raum</b>	<b>Kestrel</b>	<b>Proven Energy</b>	
<b>Website</b>	bergey.com	windenergy.com	raumenergy.com	kestrelwind.co.za	provenenergy.co.uk	

## Specs

<b>Swept area (sq. ft.)*</b>	53.0	63.5	73.0	76.0	103.6	
<b>Warranty (years)*</b>	5	5	5	5	5	
<b>SWCC certification application</b>	No	No	No	No	No	

## Predicted Annual Energy Output (kWh)\*

<b>8 mph</b>	420	794	908	973	1,704	
<b>9 mph</b>	610	1,121	1,110	1,315	2,438	
<b>10 mph</b>	840	1,483	1,539	1,726	3,494	
<b>11 mph</b>	1,110	1,865	2,004	2,131	4,417	
<b>12 mph</b>	1,400	2,254	2,479	2,551	5,627	
<b>13 mph</b>	1,710	2,637	2,940	2,966	6,614	
<b>14 mph</b>	2,040	3,005	3,365	3,356	7,842	

## Survey of North American Wind Installers

<b>Number of responses</b>	5	0	0	0	2	
<b>Turbines installed by respondents</b>	26	0	0	0	4	
<b>Manufacturer presales response</b>	B+				C-	
<b>Product quality</b>	B+				B	
<b>Completeness of order</b>	A-				B	
<b>Ease of serviceability</b>	A-				B	
<b>Post sales tech support</b>	A-				C-	
<b>System reliability</b>	B+				A-	
<b>Average overall grade</b>	B+				B-	

### Would you sell or install this turbine to another customer?

<b>Yes</b>	<b>Maybe</b>	<b>No</b>	4-1-0			1-0-1	
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### Would you buy & install this turbine for yourself?

<b>Yes</b>	<b>Maybe</b>	<b>No</b>	3-0-2			2-0-0	
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\*Manufacturers' data from 2010

**Whisper 200**



**e300i**



**Xzeres 110**





	<b>Xzeres 110</b>	<b>Skystream 3.7</b>	<b>e400i</b>	<b>3.5</b>	<b>Whisper 500</b>	<b>Montana</b>	<b>R9000</b>	
	<b>Xzeres</b>	<b>Southwest Windpower</b>	<b>Kestrel</b>	<b>Raum</b>	<b>Southwest Windpower</b>	<b>Fortis</b>	<b>Evance</b>	
	xzeres.com	windenergy.com	kestrelwind.co.za	raumenergy.com	windenergy.com	fortiswind.com	evancewind.com	
	110.0	113.0	135.0	135.0	176.0	211.0	246.0	
	10	5	5	5	5	5	5	
	No	Yes	Yes	No	No	No	Yes	
	1,629	914	2,010	2,021	1,474	3,459	3,500	
	2,274	1,373	2,781	3,213	2,139	4,438	5,030	
	3,039	1,925	3,807	4,380	2,907	5,443	6,670	
	3,894	2,594	5,050	5,811	3,749	6,444	9,012	
	4,801	3,216	5,996	7,447	4,637	7,410	10,590	
	5,728	3,898	7,230	8,631	5,544	8,315	12,530	
	6,643	4,575	8,285	10,272	6,445	9,132	14,500	
	8	5	0	0	1	0	1	
	13	30	0	0	1	0	1	
	B	B			B		A-	
	B-	B-			C		A-	
	B-	A			A		A	
	C+	C			C		B	
	C	C-			C		A-	
	C+	C			C		A	
	C+	B-			B-		A-	
	1-3-4	2-1-2			0-1-0		1-0-0	
	1-2-5	2-1-2			0-0-1		1-0-0	



# wind turbines



Proven 11



S-343



Excel-S

	Proven 11	Scirocco	S-343	Excel-R	Excel-S
<b>Manufacturer</b>	Proven Energy	Eoltec	Endurance Windpower	Bergey Windpower	Bergey Windpower
<b>URL</b>	provenenergy.co.uk	eoltec.com	endurancewindpower.com	bergey.com	bergey.com

## Specs

<b>Swept area (sq. ft.)*</b>	255.6	265.0	343.0	415.0	415.0
<b>Warranty (years)*</b>	5	5	5	10	10
<b>SWCC certification application</b>	No	No	Yes	No	Yes

## Predicted Annual Energy Output (kWh)\*

<b>8 mph</b>	2,773	3,496	5,249	3,600	5,000
<b>9 mph</b>	3,973	4,997	7,293	5,400	7,100
<b>10 mph</b>	5,752	6,746	9,498	7,500	9,600
<b>11 mph</b>	7,358	8,687	11,781	9,700	12,700
<b>12 mph</b>	9,526	10,751	14,065	12,100	15,900
<b>13 mph</b>	11,331	12,870	16,282	14,500	19,500
<b>14 mph</b>	13,606	14,983	18,375	16,800	23,300

## Survey of North American Wind Installers

<b>Number of responses</b>	3	3	8	1	18
<b>Turbines installed by respondents</b>	4	6	40	3	110
<b>Manufacturer presales response</b>	C+	C+	B+	B	B+
<b>Product quality</b>	B	A	B+	B	A-
<b>Completeness of order</b>	B+	B+	B+	A	A-
<b>Ease of serviceability</b>	C	B	B	A	B+
<b>Post sales tech support</b>	D+	C	A-	A	B+
<b>System reliability</b>	C	B	B	B	B+
<b>Average overall grade</b>	C+	B	B+	A-	B+

### Would you sell or install this turbine to another customer?

<b>Yes</b>	<b>Maybe</b>	<b>No</b>	1-0-2	1-0-2	7-0-1	1-0-0	17-1-0
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### Would you buy & install this turbine for yourself?

<b>Yes</b>	<b>Maybe</b>	<b>No</b>	0-0-3	1-0-2	6-0-2	1-0-0	15-1-2
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\*Manufacturers' data from 2010



Scirocco

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Excel-R

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Alize



**Xzeres 442SR**



**31-20**



**E-3120**

	<b>Alize</b>	<b>Xzeres 442SR</b>	<b>Proven 35</b>	<b>31-20</b>	<b>133-11</b>	<b>E-3120</b>	<b>Northwind 100</b>	
	<b>Fortis</b>	<b>Xzeres</b>	<b>Proven Energy</b>	<b>WTIC</b>	<b>Gaia-Wind</b>	<b>Endurance Windpower</b>	<b>Northern Power Systems</b>	
	fortiswind.com	xzeres.com	provenenergy.co.uk	windturbine.net	gaia-wind.com	endurancewindpower.com	northernpower.com	
	426.0	442.0	684.5	754.0	1,425.0	3,120.0	3,725.0	
	5	10	5	5	5	5	2 (5 optional)	
	No	Yes	No	No	Yes	Not applicable	Not applicable	
	11,098	7,081	10,759	7,295	11,535	48,145	49,099	
	14,659	9,910	14,826	10,689	17,004	68,890	69,742	
	18,456	13,198	20,400	14,966	22,962	91,758	98,996	
	22,344	16,819	25,057	20,066	29,127	115,746	124,508	
	26,156	20,628	30,895	25,836	35,263	139,955	158,135	
	29,728	24,483	35,448	32,070	41,167	163,647	185,796	
	32,925	28,267	40,863	38,552	48,676	186,254	220,558	
	0	8	9	6	3	4	6	
	0	16	18	39	4	33	20	
		A-	B	B+	B+	B	A	
		C+	C	B	A	B-	A	
		C	C	A-	A	C+	A-	
		C+	D	C+	A	B	A-	
		B-	C	B-	A	B+	A-	
		C	C	B	A	C+	B+	
		C+	C	B	A	B-	A-	
		3-1-4	2-1-6	4-1-1	3-0-0	2-1-1	6-0-0	
		3-1-4	1-1-7	2-2-2	2-1-0	2-0-2	4-1-1	



**Proven 35**



**133-11**



**Northwind 100**