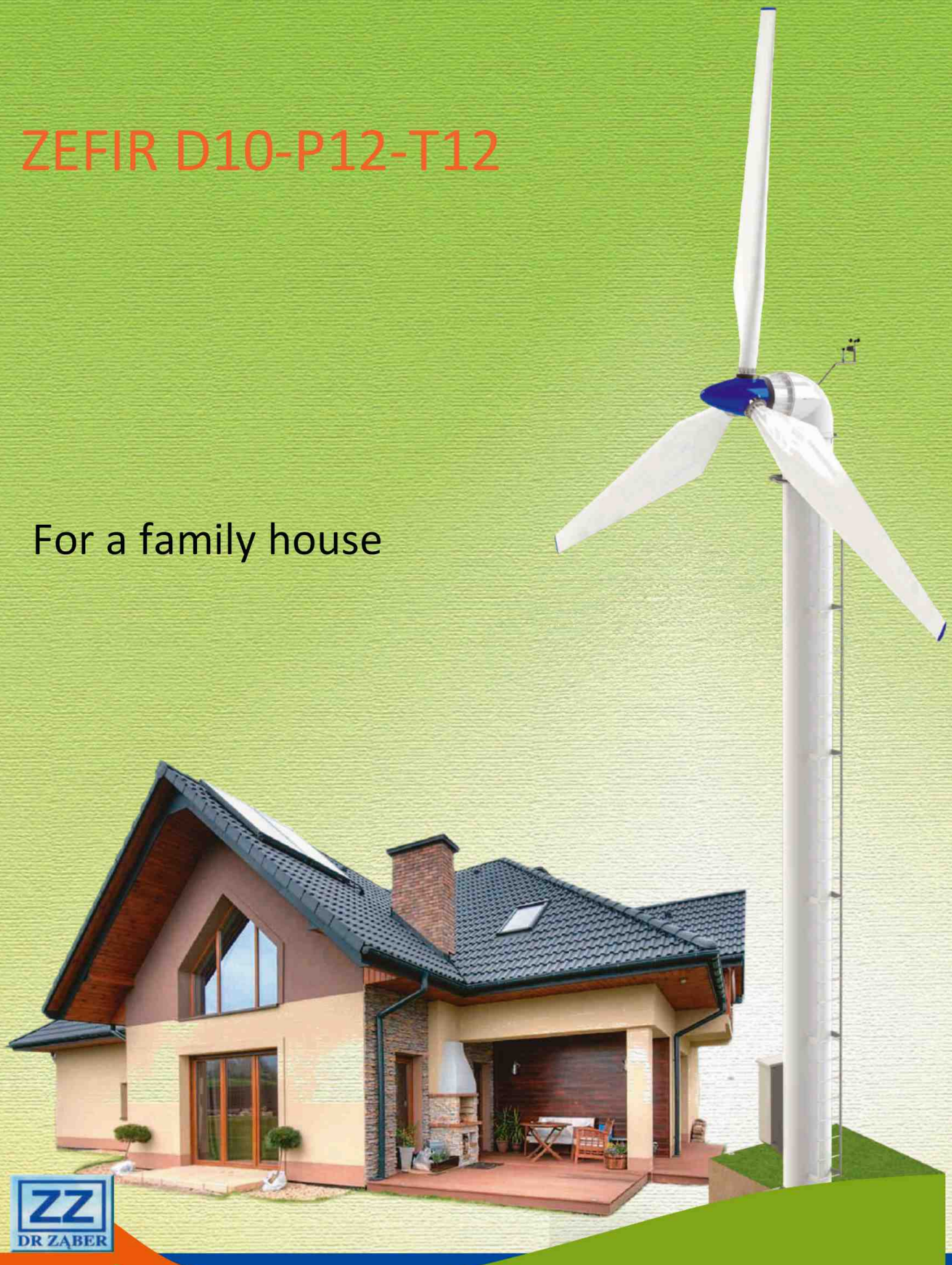
ZEFIR D10-P12-T12

For a family house



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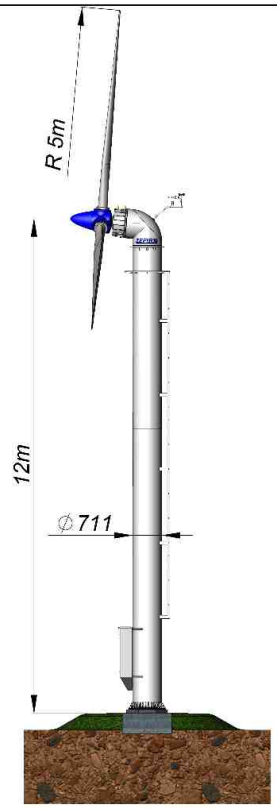
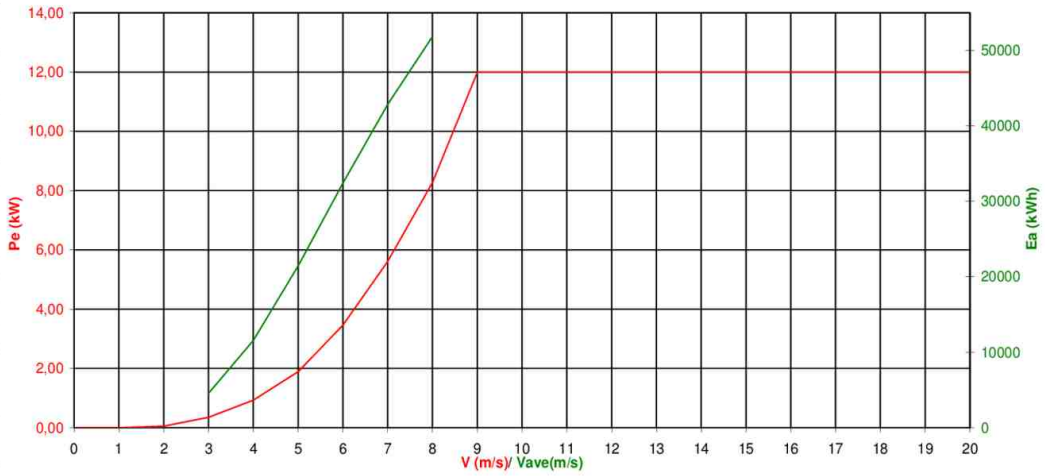
ZEFIR D10-P12-T12

TECHNICAL SPECIFICATION



MAIN PARAMETERS	
Rotor diameter	10m
Rated power	12kW
Rated wind speed	9.0m/s
Start wind speed	3.0m/s↑ i 15.0m/s↓ (10 min. avg.)
Cut-out wind speed	2.0m/s↓ i 20.0m/s↑ (10 min. avg.)
Hub height	12m
Wind class	II (EN61400-2:2014)
ROTOR	
Type	Upwind with active pitch control
Rotational speed range	30÷125rpm
Rotational direction	Clockwise
Blade material	Fiberglass reinforced with resin
Number of blades	3
GENERATOR	
Type	PMG
Rated power	13.5kW
Rated rpm	100rpm
Drive system	Direct drive
YAW SYSTEM	
Type	Active with gear-motor drive
Yaw bearing	Slide bearing with annular wheel
Additional function	Cable twisting control

V (m/s)	Pe (kw)	Ea (kWh)
0	0,00	
1	0,00	
2	0,05	
3	0,35	4553
4	0,93	11559
5	1,90	21467
6	3,47	32441
7	5,61	42856
8	8,27	51844
9	12,00	
10	12,00	
11	12,00	
12	12,00	
13	12,00	
14	12,00	
15	12,00	
16	12,00	
17	12,00	
18	12,00	
19	12,00	
20	12,00	



DIMENSIONS AND WEIGHT			
Steel tower diameter	Ø711mm	Steel tower diameter at the top	Ø711mm
Tower height	11.25m	Tower weight	2.0T,
Nacelle WxLxH	711x2180x1050mm	Nacelle weight	1066kG (without blades)
Number of segments	1	Access to the nacelle	External ladder
Rotor blade length	4.7m	Rotor blade weight	82kG
Control box AxBxH	800x300x1200mm	Control box weight	90kG
Inverter AxBxH	600x600x1700mm	Inverter weight	210kG
SAFETY SYSTEM		**CONTROL SYSTEM**	
Power limitation	Automatic pitch control system	Type	ZEFIR dedicated µP control system
Braking system	Disc brake clamp on the main shaft	Location	In the base of the tower
Safety system concept	"Fail-safe" philosophy design	Remote monitoring	ZEFIR SCADA

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