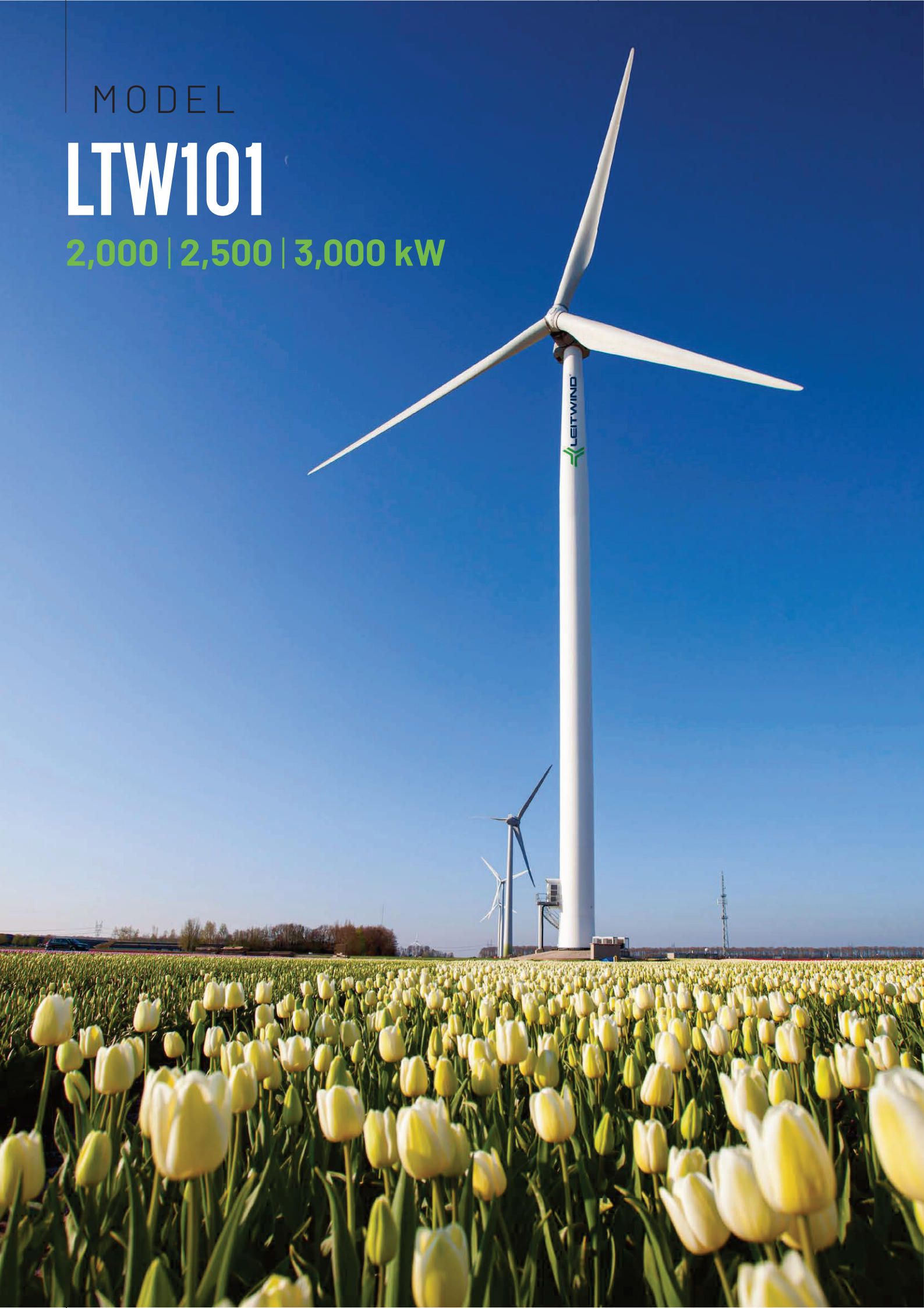
MODEL

LTW101

2,000 | 2,500 | 3,000 kW



LTW101 2,000 | 2,500 | 3,000 kW

DESIGN DATA	
Rated power	2,000	2,500	3,000 kW
Hub height	80 / 93.5 m
Tip height max (upper end)	130 / 144 m
Wind class	IIA / IIIA
Cut-in wind speed	3 m/s
Cut-out wind speed	25 m/s
Concept	Direct Drive 3-bladed upwind turbine with horizontal axis, variable speed and automatic pitch and yaw regulation

TOWER	
	Segmented tubular steel tower
	Transformer and converter station in tower bottom

ROTOR	
Rotor diameter	101 m
Swept area	8,012 m^2
Rotational speed	15 rpm
Tip speed	79 m/s
Blade material	GFRP-EP
Power and rotor speed control	Active pitch control

GENERATOR Direct Drive	
Type	Permanent Magnet Direct Drive Synchronous Machine
Stator Winding	Modular coils with tooth concentrated winding, exchangeable
Rotor Topology	Modular Permanent Magnets with flux concentration, exchangeable
Cooling	Air cooled rotor and water cooled stator
Speed Range	Variable Low Speed Machine

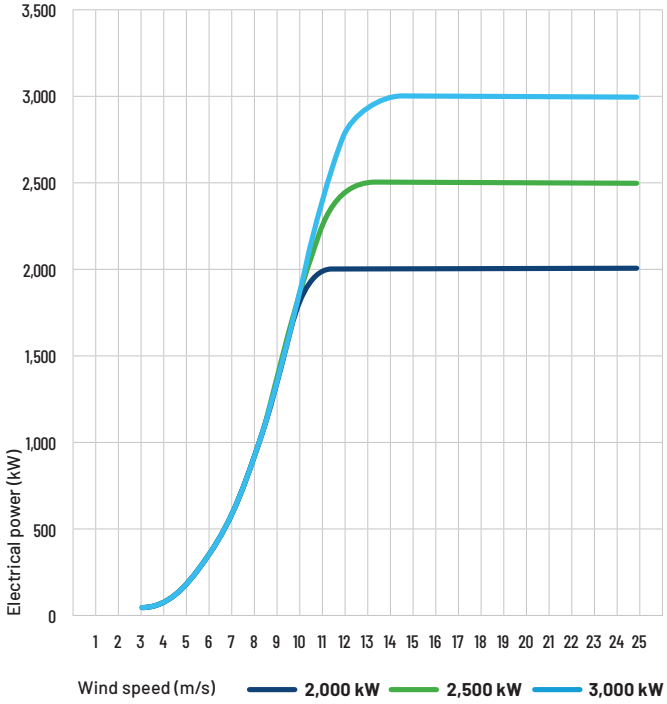
CONTROL & SAFETY SYSTEM	
Pitch and yaw control	Active electrical LeitPitch system and active electrical yaw system
Remote control	Leitwind integrated SCADA
Safety system	Hardwired safety loop
Main brake	Aerodynamic, indipendent pitch control
Service brake	Electrical
Rotor lock	Hydraulic

POWER ELECTRONIC LeitDrive	
Converter type	4Q full power - 3 phase IGBT
Arrangement	Multiple modular LeitDrive converter - increase of technical availability - partial load operation
Converter rated voltage and frequency (grid-side)	690 V ±10%, 50-60 Hz ±5%
Converter power factor (grid-side)	0.95 ind - 1 - 0.95 cap for reactive power compensation control, grid voltage control capability
Power quality and Grid codes	High quality output power in accordance with major grid code requirements. Integration into various grid systems worldwide - Grid code compliance e.g. CEI 0-16, TERNA (incl. LVRT) and many other countries - Power quality according to IEC 61400-21 - Emission limits according to IEC 61800-3

AEP - ESTIMATED ANNUAL ELECTRICAL PRODUCTION

	LTW101 2,000 kW	LTW101 2,500 kW	LTW101 3,000 kW
m/s	MWh/y	MWh/y	MWh/y
4.5	3,067	3,109	3,161
5.0	4,009	4,134	4,249
5.5	4,974	5,217	5,429
6.0	5,921	6,315	6,652
6.5	6,822	7,387	7,872
7.0	7,656	8,403	9,050
7.5	8,406	9,338	10,151

POWER CURVE



	LTW101 2,000 kW	LTW101 2,500 kW	LTW101 3,000 kW
Wind speed (m/s)	Electrical power (kW)	Electrical power (kW)	Electrical power (kW)
3.0	41	41	41
4.0	122	118	118
5.0	268	258	258
6.0	480	470	470
7.0	772	769	769
8.0	1,162	1,154	1,154
9.0	1,634	1,634	1,634
10.0	1,983	2,125	2,205
11.0	2,000	2,402	2,667
12.0	2,000	2,500	2,891
13.0	2,000	2,500	2,993
14.0	2,000	2,500	3,000
15.0	2,000	2,500	3,000
16.0 - 25.0	2,000	2,500	3,000