



The latest steps of REpowers proven Mx series

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- **Mx series** introduction
- **MM92** – the latest step of the proven Mx-series
 - o Design changes
 - o Technical data
 - o Measurements & Certificates
 - o Operational results
 - o Power output
 - o Sound emissions
- **MM82** – advanced conditions of use



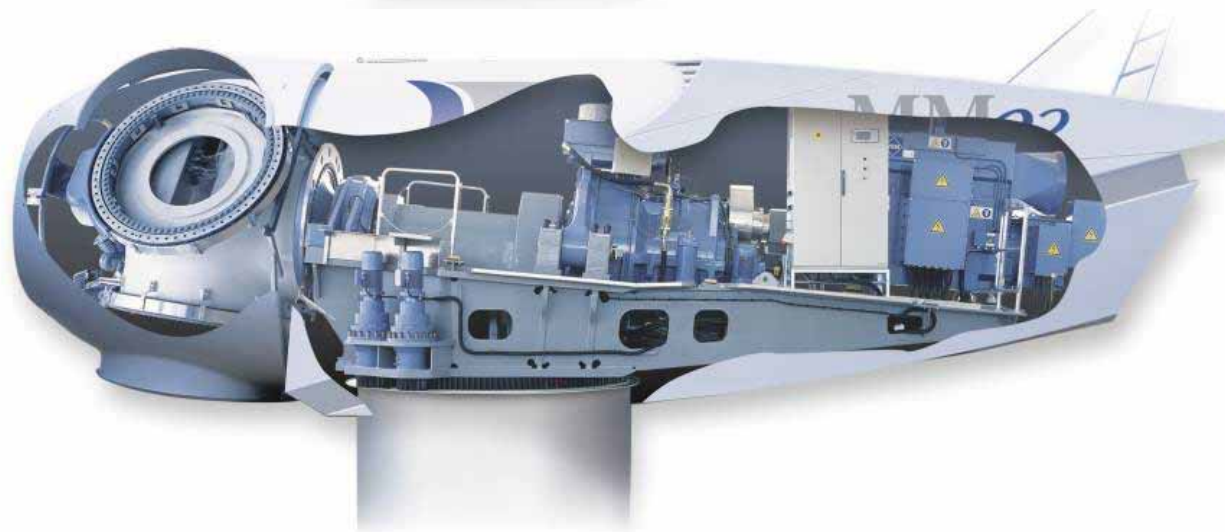
MM92 - the latest step of the proven Mx-series

Product line	MD		MM		
Rated power [MW]	1.5 MW		2.0 MW		
Rotor diameter [m]	70	77	70	82	92
Swept area [m ²]	3,850	4,657	3,850	5,281	6,720
Hub heights [m]	65 – 90	61.5 – 111.5	55 - 80	59 - 100	68.5 - 100
Type class up to ...	DIBt 3 / IEC IIa	DIBt 2 / IEC IIIa	DIBt 3 / IEC Ia	DIBt 3 / IEC Ia	DIBt 3 / IEC IIa

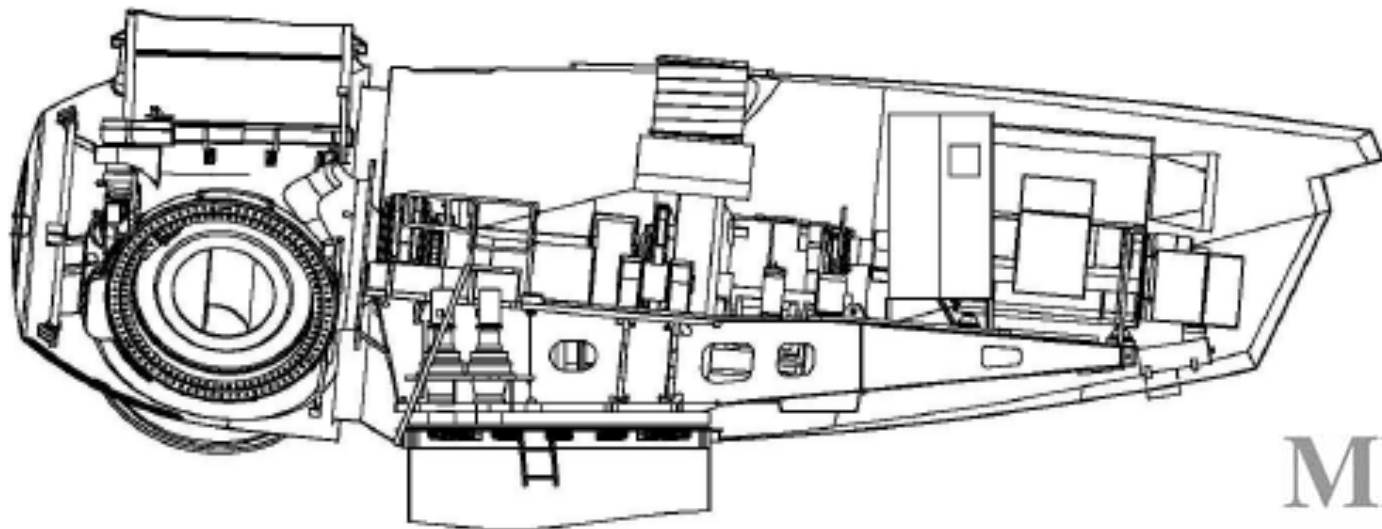
MID



MM

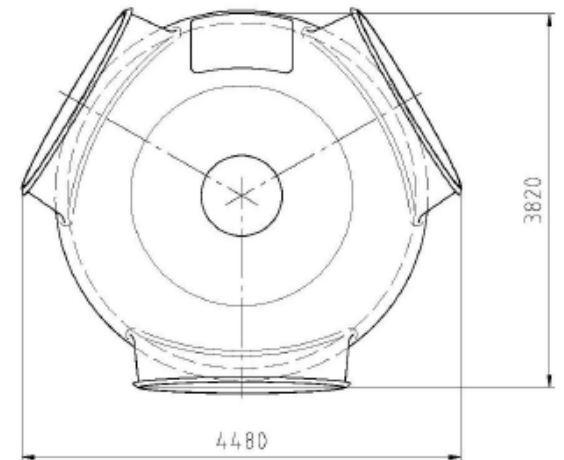
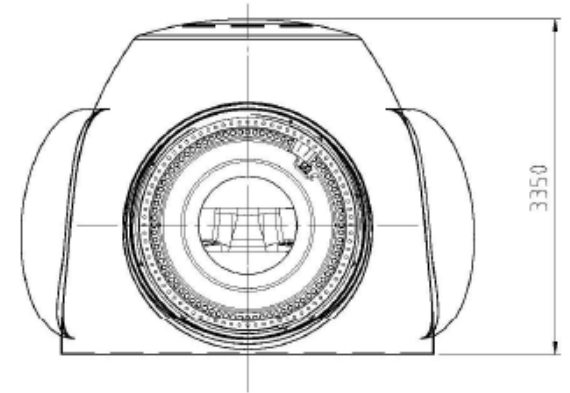


- Constant design focus on efficiency and long-term reliability
- Unchanged electrical system with excellent electrical behaviour
- Specific modifications of single components
- Load optimisation by advanced control and adjustment systems



MM92

- Latest pitch drive & control technology
 - Minimising of extreme loads
- New blade bearing with increased number of blade bolts
 - Efficient load transfer with unchanged operational safety



- Proven blade profile
- GRP design with a weight of 8t
- Multi receptor system for lightning protection





MM92

Technical data

Rated Power:	2.0 MW
Rotor diameter:	92.5 m
Hub heights:	68.5m, 78.5m, 100 m
Type class:	IEC II, IEC II, IEC III
Cut-in wind speed:	3.0 m/s
Rated wind speed:	11.2 m/s
Cut-out wind speed:	24.0 m/s
Rotational speed:	7.8 – 15.0 min ⁻¹ (+12.5%)
Tip speed:	72.7 m/s
Rotor blade:	LM 45.3 P

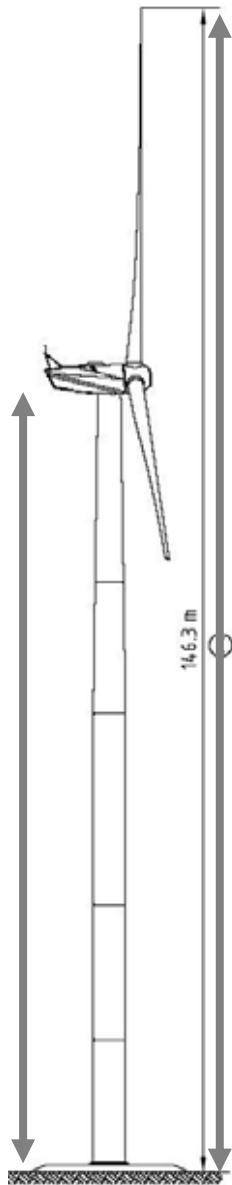


Hub heights

100m - IEC III

78.5m – IEC II

68.5m – IEC II

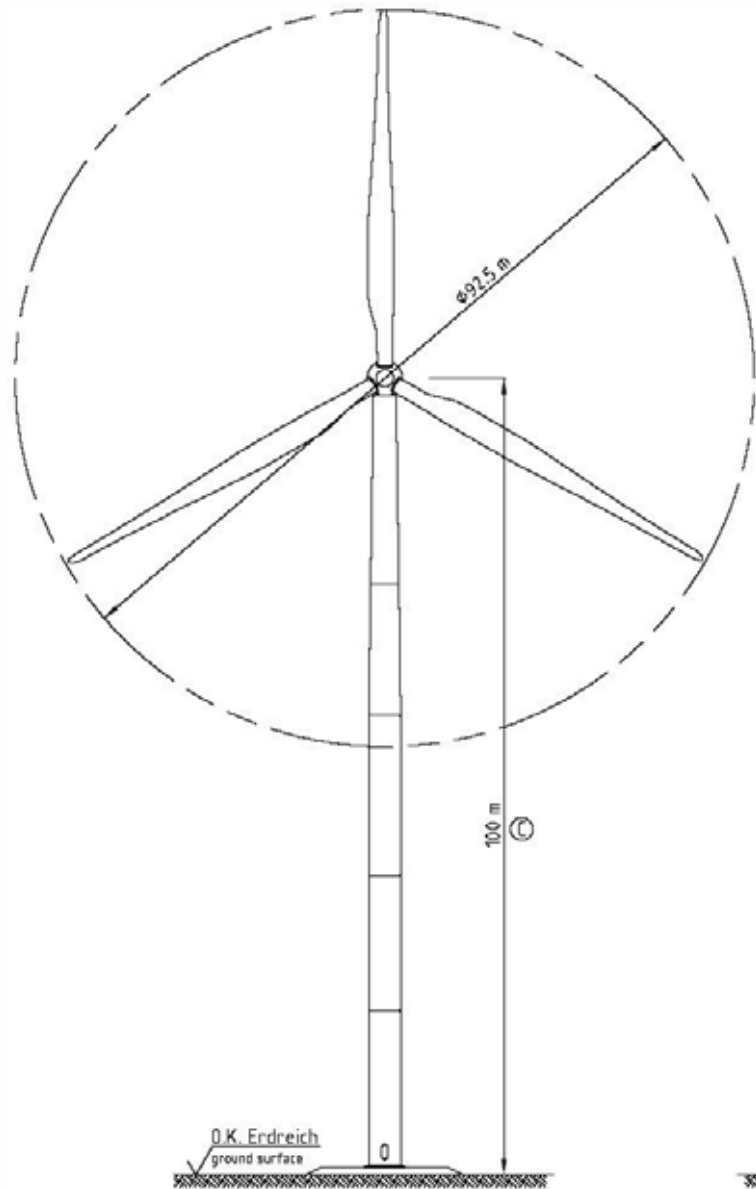


Tip heights

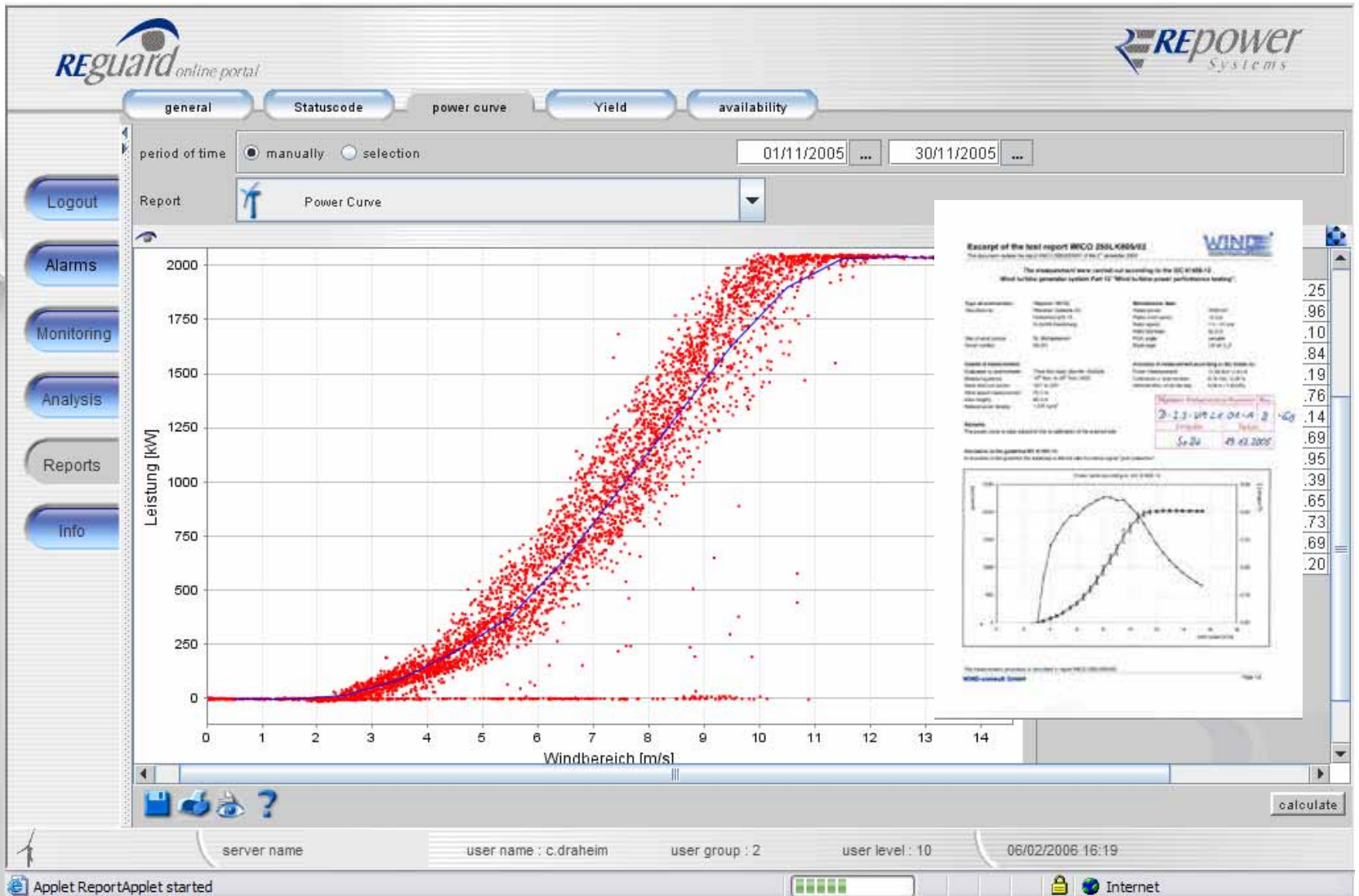
146m - IEC III

125m – IEC II

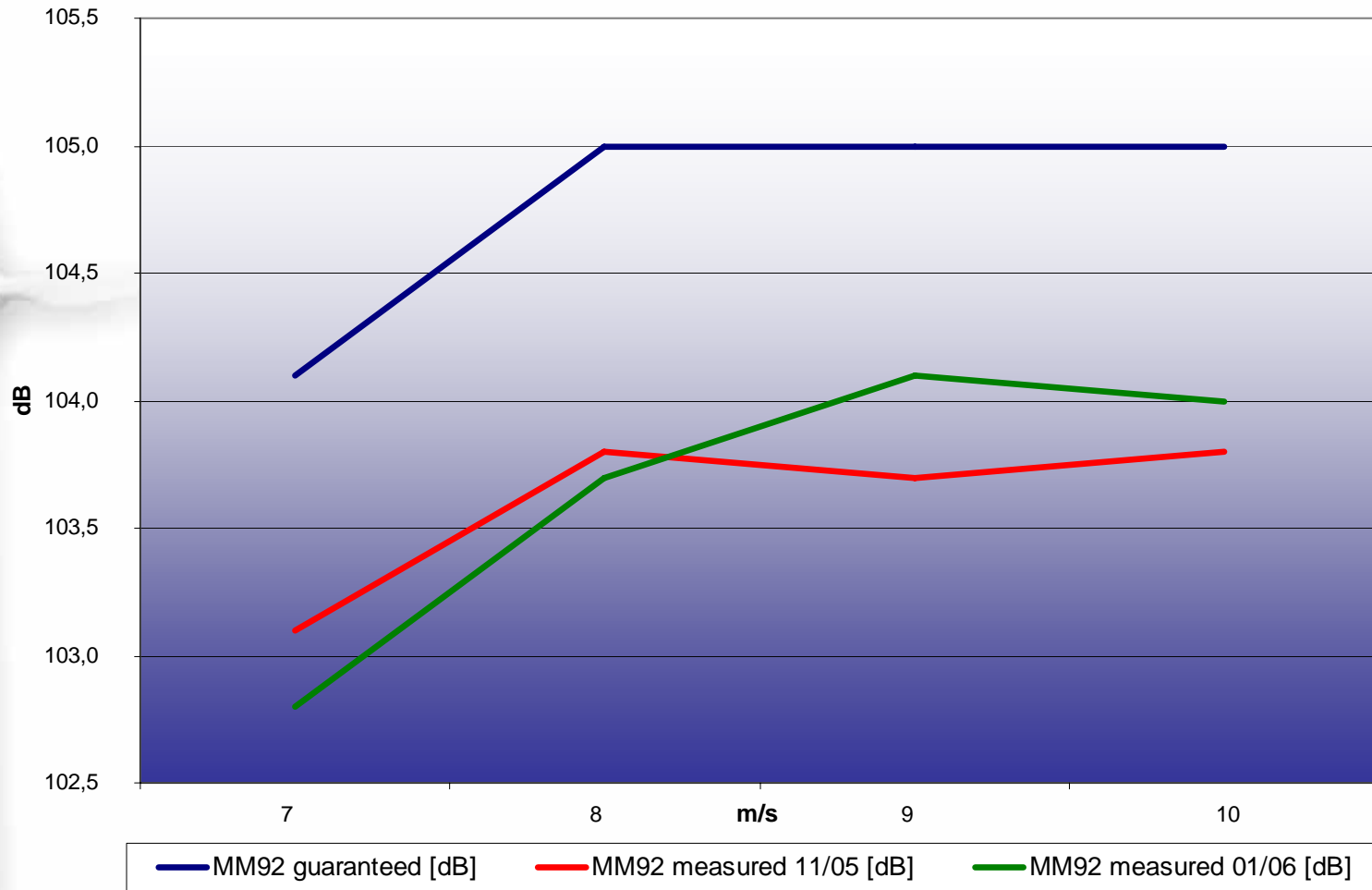
115m – IEC II



- Power curve measurements meet 100 % guaranteed values



- Sound measurements



- Optional: reduced and individual sound power curves

- Further installations 2006
- Further measurements in progress
- Certifications
 - Design Assessment according IEC
 - Type Test Certificate according IEC



MM82

- Conditions of use up to
 - IEC Ia
 - DIBt 3

- Certification
 - Type Test Certificate according IEC Ia



MM82

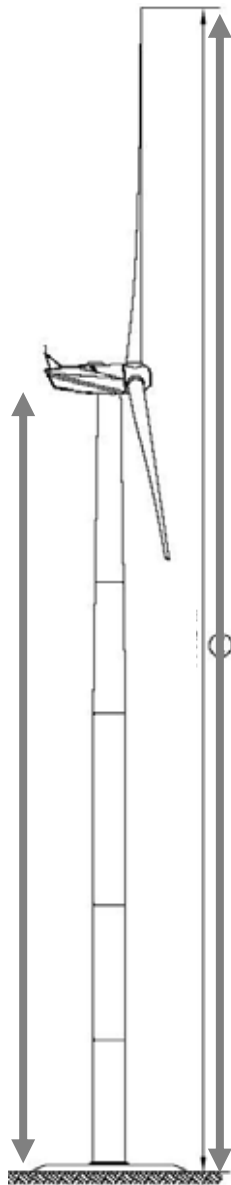


Hub heights
100m - IEC III

80m - IEC I

69m - IEC I

59m - IEC I



Tip heights
146m - IEC III

121m - IEC I

110m - IEC I

100m - IEC I



 **REpower**
Systems

www.repower.de