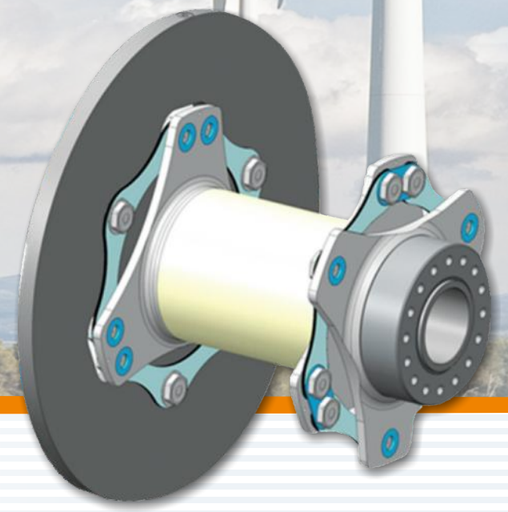
WIND–TURBINE COUPLING

WTKU–N
KWN 22160



Product | Engineering Services
Maintenance

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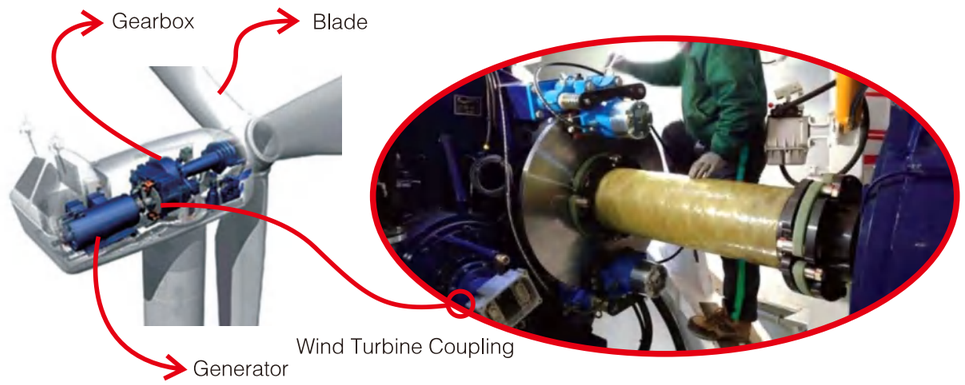
Wind Turbine Coupling



Distinguishing Features：

1.Able to compensate for high displacement deviations between shafts.

2.Electrical isolation: to protect the running safety of equipment.

3.Power transmission free of wear.

4.Steady shock free start up in loaded or unloaded state.

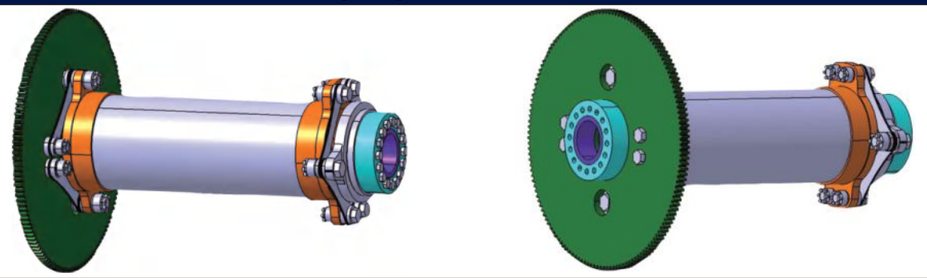
5.Prevention of overload: to protect the safety of shaft end equipment.

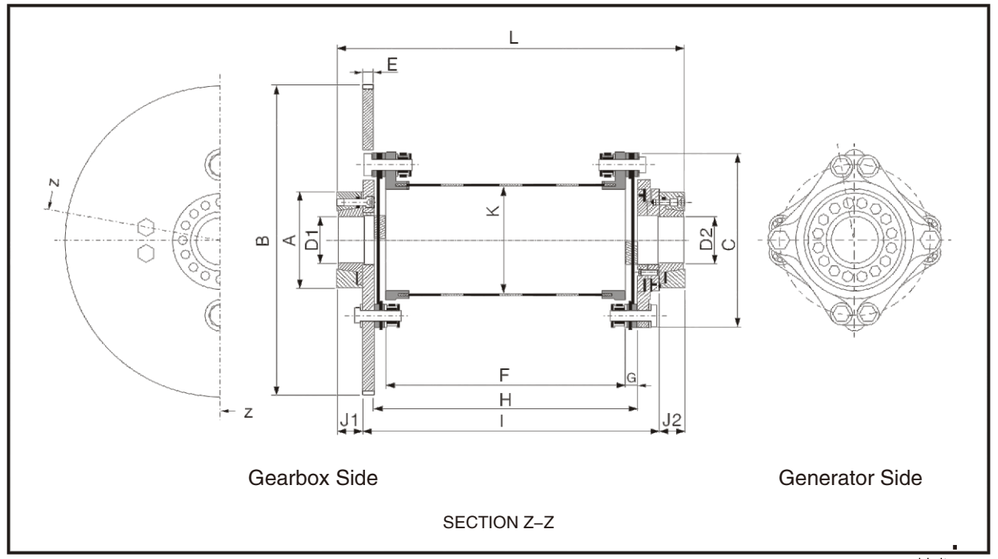
6.Buffering and damping, low noise.

7.No maintenance, low wear, easy installation and disassembly, long service life.

Type	Torque		Speed		Misalignment		
	Rated (Nm)	Slip (Nm)	Rated (Nm)	Max. (Nm)	Axial (mm)	Angle (deg)	Radial (mm)
0.75MW	5,240	7,130~9,650	1,706	1,963.0	± 15	2.0	15.0
1.5MW	8,300	12,000~18,000	1,810	2,100.0	± 15	1.0	10.0
2.0MW	14,500	16,700~25,900	800~1,610	1,820.0	± 6	1.0	10.0
3.0MW	21,000	30,000~35,000	1,466	1,980.0	± 10	1.0	33.0
3.3MW	22,000	32,000~37,000	1,466	2,055.2	± 10	1.0	33.0
4.0MW	35,500	46,300~62,700	1,200	1,343.0	± 13	3.6	35.5
5.5MW	50,950	63,000~86,000	350~1,300	1,500.0	± 10	1.0	25.0

Introduction of Turbine Coupling



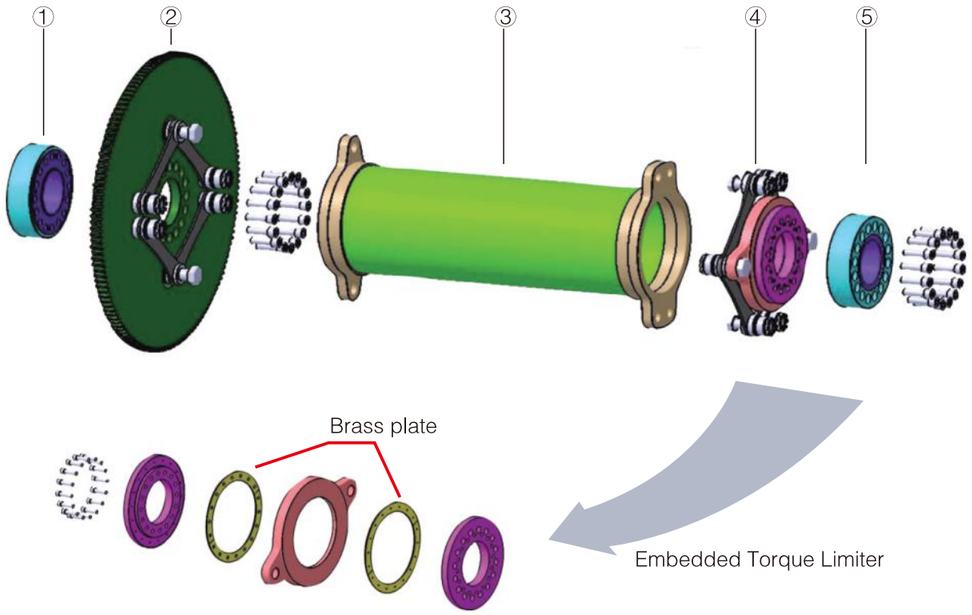


SECTION Z–Z

Unit：mm

Type	Size	A	B	C	D1/D2	E	F	G	H	I	J1/J2	K	L
KWP KWP	0.75MW	240	700	350	100/110	20	546	38	622	662	75.0	230.0	812
KWP KWPT	1.5MW	255	860	444	130/120	35	550	48	646	711	70.0/75.0	256.5	856
KWP KWPT	2MW	265	830	400	130/140	30	945	55	1,055	1,115	76.5	277.0	1,268
KWP KWPT	3MW	320	1,000	531	150	30	1,145	58	1,261	1,321	83.0	354.0	1,487
KWP KWPT	3.3MW	320	1,000	531	150	30	1,145	58	1,261	1,321	83.0	354.0	1,487
KWP KWPT	4.0MW	285	860	615	160	30	587.1	55	697.1	757.1	73.5	355.6	904.1
KWP KWPT	5.5MW	370	1,200	670	180	40	1,245	48	1,341	1,471	94.0	431.5	1,659

Introduction of Turbine Coupling



① Clamping set on gearbox shaft	② Brake disc with disc pack
③ Intermediate shaft	④ Torque limiter with disc pack
⑤ Clamping set on generator shaft	

- Torque Limiters

When overload to be more than specified torque happened, slipping unit embedded in torque limiter cuts the power to protect power train components and it operates without remarkable decrease of torque during required life period. It is applied to over 2MW.

- Shaft Connection

It is easy to install because keyless type is applied when connecting shaft between generator and gearbox. Pretension nut enables to clamp bolt bv means of hand work without usinq hydraulic torque wrench.

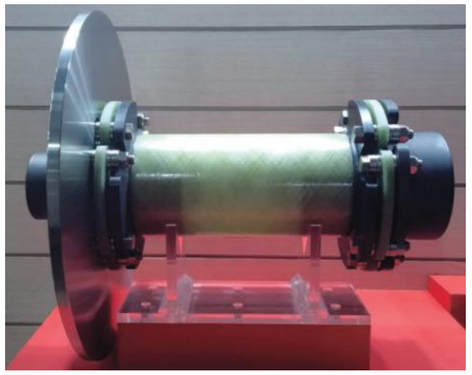
- Space Tube

When leakage current occurs, glass fiber reinforced plastic with superiority of electrical isolation and strength is applied in order to prevent the damage of power train components. It is designed to be able to endure temperature range of –30° C to +70° C.

- Miscellaneous

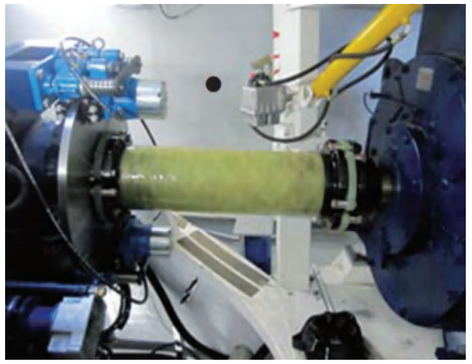
Exterior coupling parts is designed to meet ISO 12944.

Wind Turbine Coupling Product Series



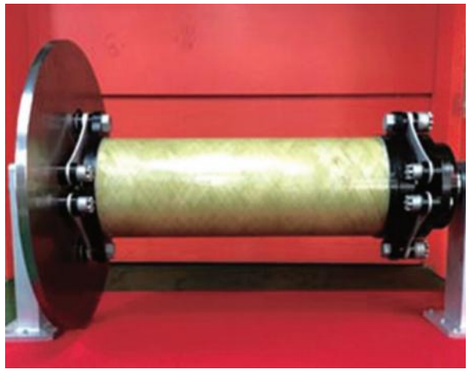
750KW

Rated torque:5,240Nm
Maximum torque:14,800Nm
Slip torque(Torque limiter):None
Max. axial misalignment: ± 15mm
Max. angle misalignment:2.0°
Max. radial misalignment:15mm
With Composite or steel materials spacer
With Composite materials disc pack



2MW

Rated torque:14500Nm
Maximum torque:15300Nm
Slip torque:16700~25900Nm
Max. axial misalignment: ± 6mm
Max. angle misalignment:1.0°
Max. radial misalignment:10mm
With Composite materials spacer
With Composite materials disc pack



3MW

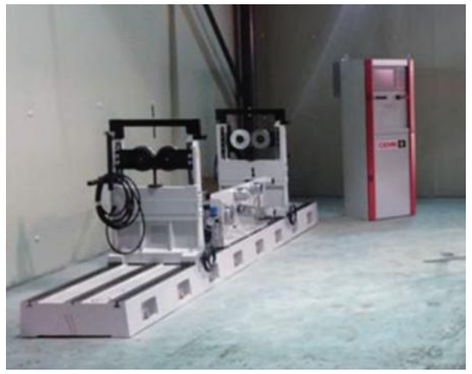
Rated torque: 21,000Nm
Maximum torque: 23,925Nm
Slip torque:30,000~35,000Nm
Max. axial misalignment: ± 10mm
Max. angle misalignment:1.0°
Max. radial misalignment: 33mm
With Composite or steel materials spacer
With steel laminated disc pack

Wind Turbine Coupling Product Series

5.5MW

Rated torque:50,950Nm
Maximum torque: 57,000Nm
Slip torque: 63,000–86,000Nm
Max. axial misalignment: ± 10mm
Max. angle misalignment: 1.0°
Max. radial misalignment:25mm
With Composite materials spacer
With Composite materials disc pack

Inspection



Balancing M/C

Attached Certificate

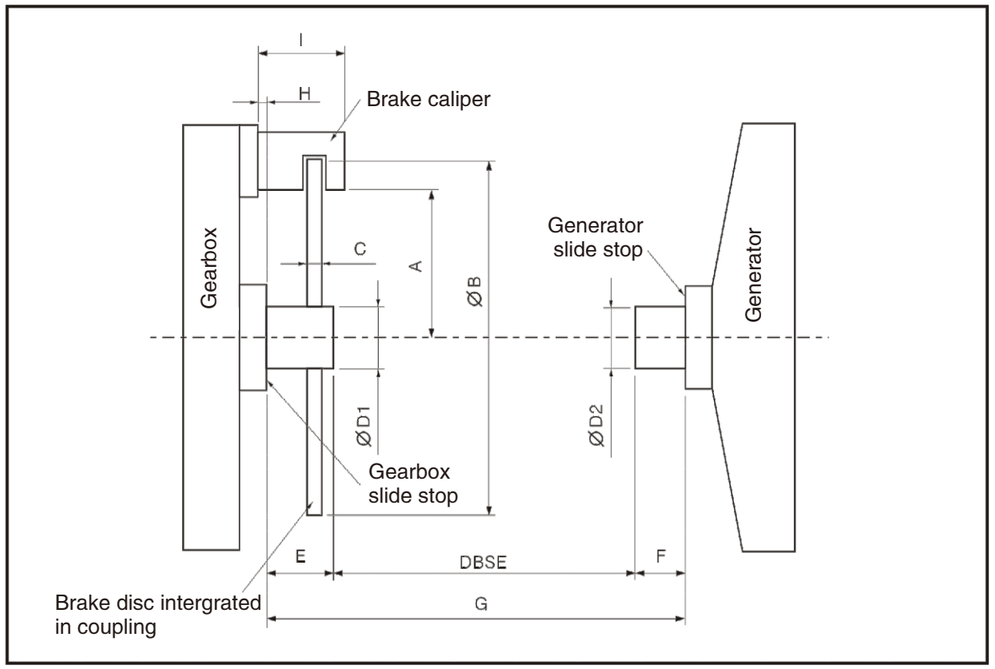
◎Slip torque report
◎Balancing report
◎Installation Manual

Torsion Test

Design Calculation

◎Critical speed
◎FE_Analysis(structure, vibration)
◎Fatigue life of the DLC
◎Bolted joints with detail tightening torque(VDI2230)

Order Specification



Name of wind turbine

Dimensions

A	mm	(with tolerance)
B	mm	
C	mm	(with tolerance)
D1	mm	(with tolerance)
D2	mm	(with tolerance)
DBSE	mm	
E	mm	
F	mm	
G	mm	
H	mm	
I	mm	

Technical data:

electrical power
operating speed
maximum speed
electric resistance
rated torque
max.torque in operation
minimum slip torque
maximum slip torque
maximum braking torque brake
disc material maximum axial misalignment
maximum angle misalignment
maximum radial misalignment