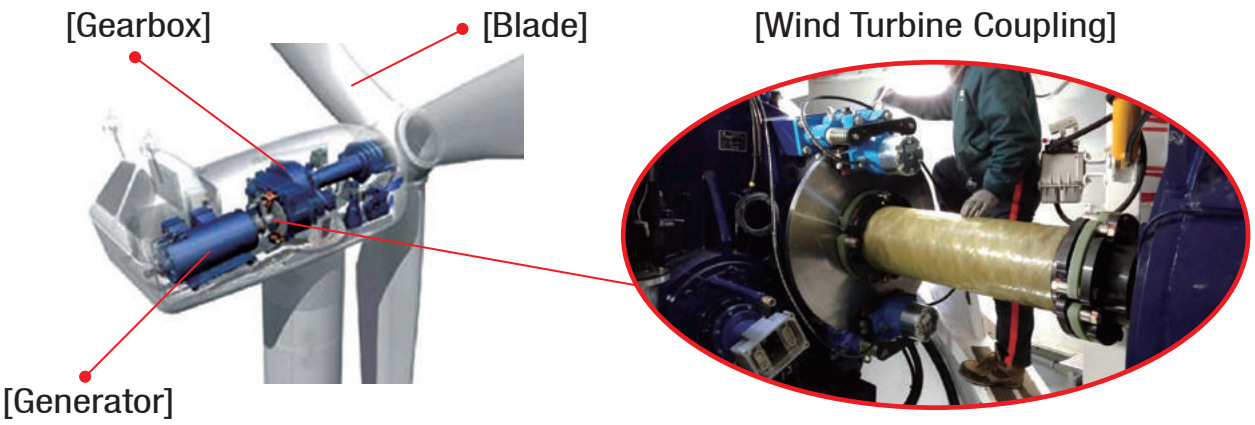
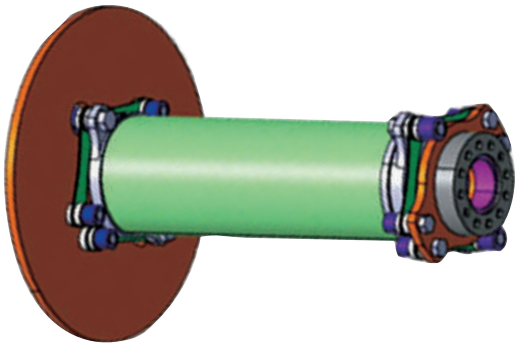
WIND-TURBINE COUPLING

JAC coupling

Introduction of
JAC Wind Turbine Coupling

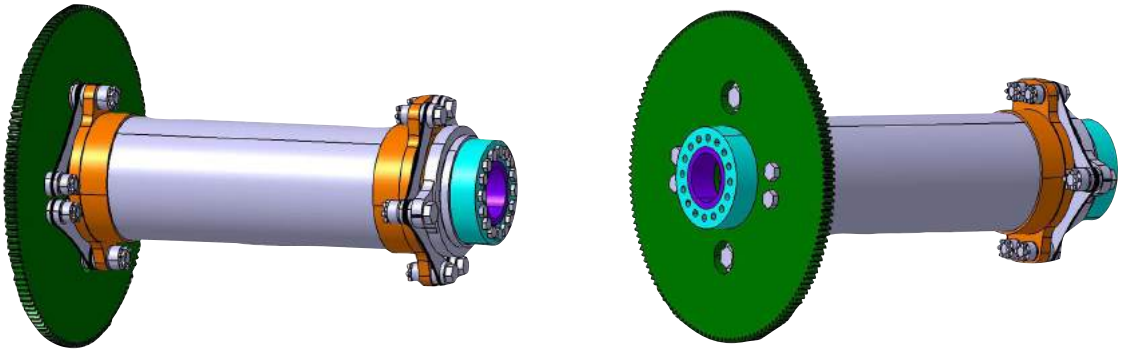


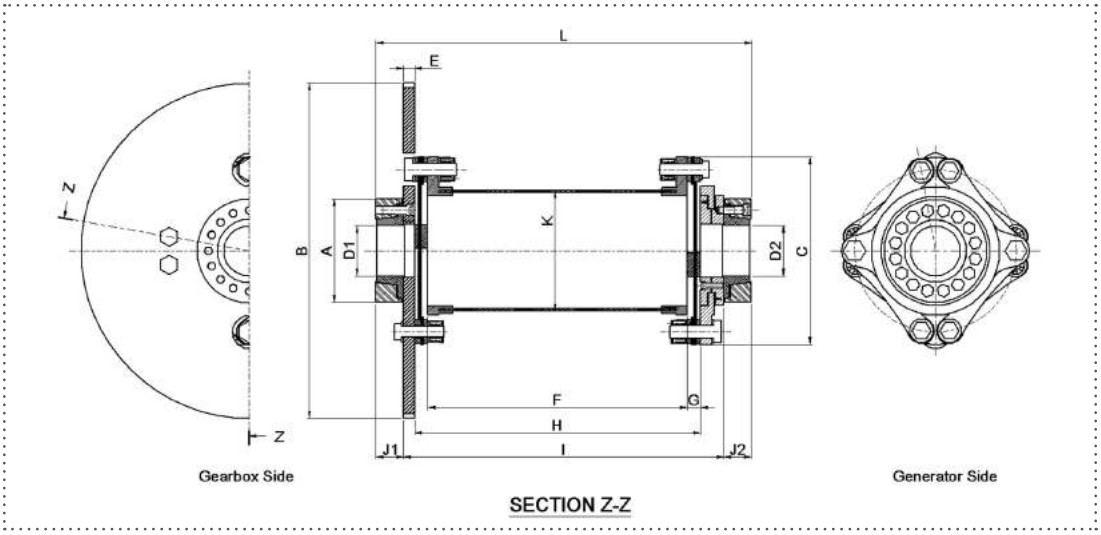


- Power transmission from gearbox to generator
- Accommodation of axial misalignment
- Electrical isolation between gearbox and generator
- Prevention of overload

Performance Information

Type	Torque			Speed		Misalignment		
	Rated (Nm)	Max. (Nm)	Slip (Nm)	Rated (Nm)	Max. (Nm)	Axial (mm)	Angle (deg)	Radial (mm)
0.75MW	7,800	8,500	N/A	750~ 1,500	1,735	±12	2	15.9
1.5MW	16,000	23,520	N/A	1,550	2,500	±8	1.5	8
2MW	14,500	15,300	16,700~ 25,900	800~ 1,610	1,820	±6	1	10
3MW	21,000	23,925	30,000~ 35,000	878~ 1,615	1,980	±10	1	33
5.5MW	50,950	57,000	63,000~ 86,000	350~ 1,300	1,500	±10	1	25





Dimension Information

Unit: mm

Type	Size	A	B	C	D1/ D2	E	F	G	H	I	J1/ J2	K	L
JWP JWP	0.75 MW	220	700	350	100/ 110	20	420	35	490	545	65	165	765
JWP JWP	1.5 MW	230	650	370	110/ 120	30	452	28	508	566	70	220	706
JWP JWPT	2 MW	265	830	400	130/ 140	30	905	55	1,015	1,115	76.5	JWP	1,268
JWP JWPT	3 MW	320	1,000	530	150	30	989	58	1,105	1,165	83	354	1,371
JWP JWPT	5.5 MW	370	1,200	670	180	40	1,159	48	1,375	1,498	94	431.5	1,686

※ JWPT Type is coupling embedded torque limiter. JWP Type is coupling not embedded torque limiter.

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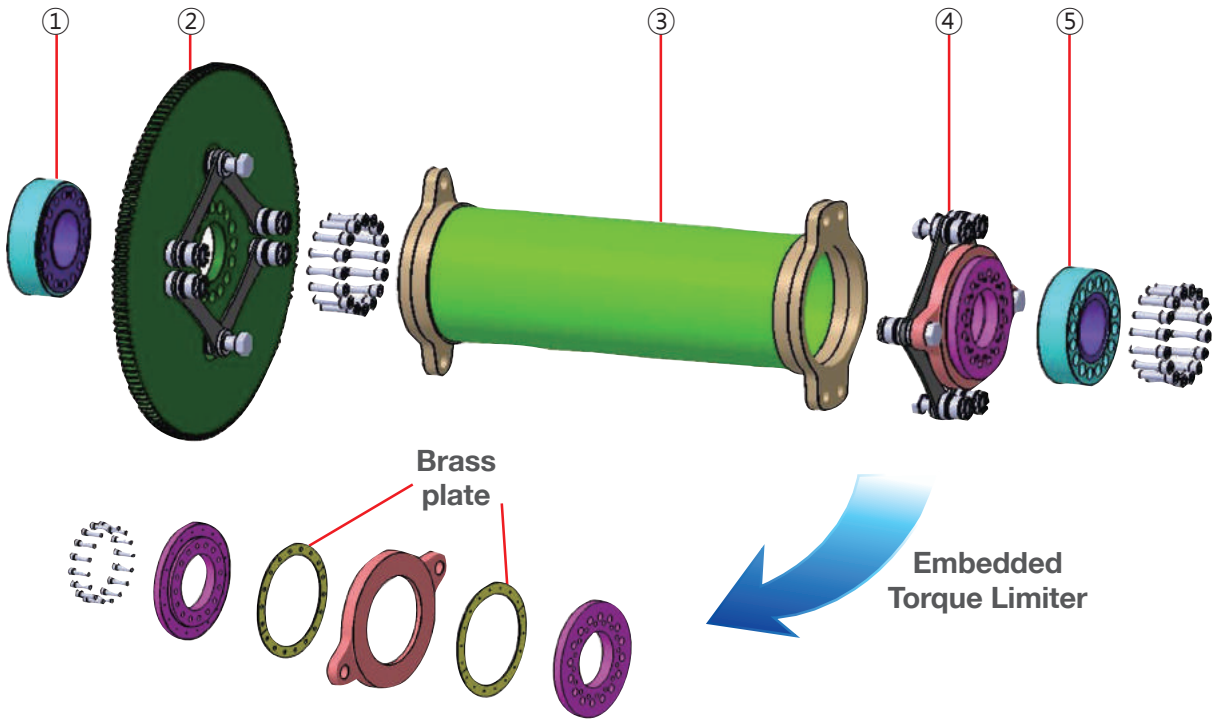
JAC Wind Turbine Coupling



① Clamping set on gearbox shaft
② Brake disc with disc pack
③ GFRP spacer
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 in order to connect the shaft between generator and gearbox.
Pretension nut enables to clamp bolt by means of hand work without using hydraulic torque wrench.

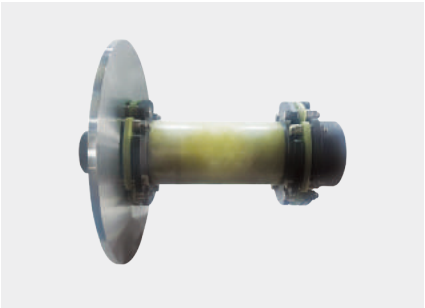
• Spacer Tube

When leakage current occurred, 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

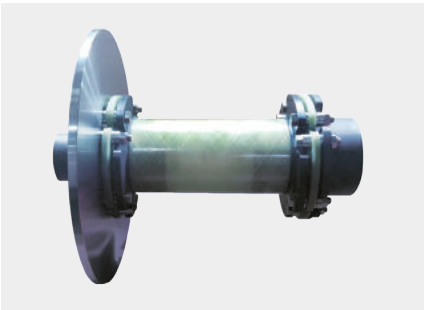
Exterior coupling parts are designed to meet ISO 12944 grade C3 for onshore and C4 for offshore.
Suitable damping capacity of material is provided effectively to prevent the vibration of axial direction.

Wind Turbine Coupling
Developed by JAC



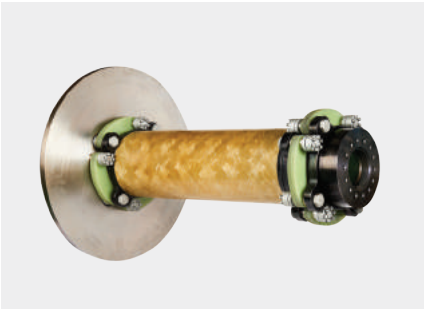
750KW

- Rated torque : 7,800Nm
- Maximum torque : 14,800Nm
- Slip torque (Torque limiter) : None
- Max. axial misalignment : ±12mm
- Max. angle misalignment : 2.0°
- Max. radial misalignment : 15mm
- Spacer made of composite or steel material
- Disc pack made of composite material



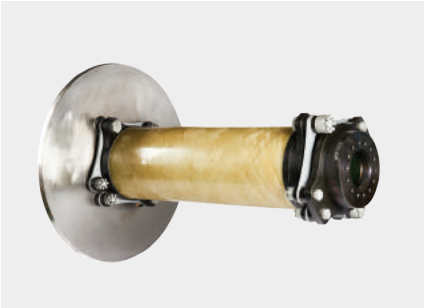
1.5MW

- Rated torque : 16,000Nm
- Maximum torque : 23,520Nm
- Slip torque (Torque limiter) : None
- Max. axial misalignment : ±8mm
- Max. angle misalignment : 1.5°
- Max. radial misalignment : 8mm
- Spacer made of composite material
- Disc pack made of composite material



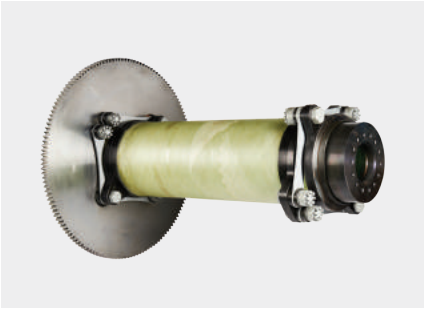
2MW

- Rated torque : 14,500Nm
- Maximum torque : 15,300Nm
- Slip torque : 16,700~25,900Nm
- Max. axial misalignment : ±6mm
- Max. angle misalignment : 1.0°
- Max. Parallel misalignment : 10mm
- Spacer made of composite material
- Disc pack made of composite material



3MW

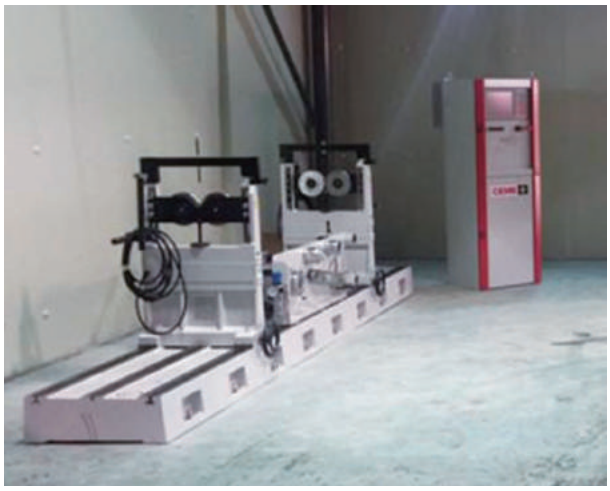
- Rated torque : 21,000Nm
- Maximum torque : 23,925Nm
- Slip torque : 30,000~35,000Nm
- Max. axial misalignment : ±10mm
- Max. angle misalignment : 1.0°
- Max. radial misalignment : 33mm
- Spacer made of composite material
- Steel laminated disc pack



5.5MW

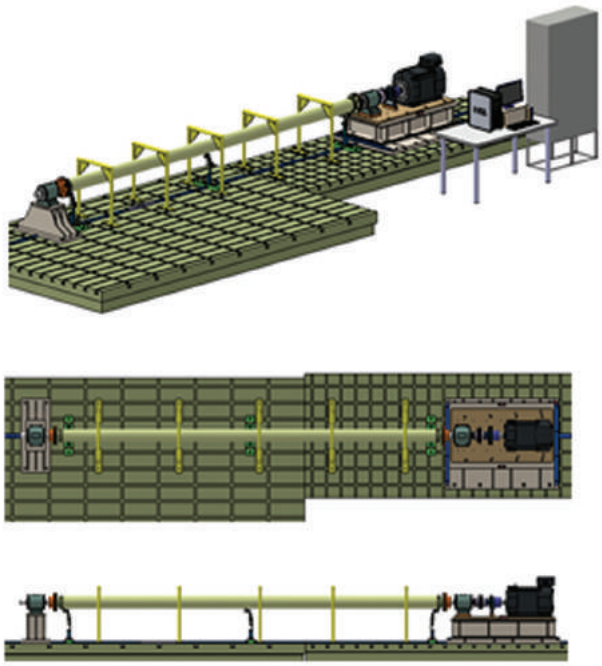
- Rated torque : 50,950Nm
- Maximum torque : 57,000Nm
- Slip torque : 63,000~86,000Nm
- Max. axial misalignment : ±10mm
- Max. angle misalignment : 1.0°
- Max. Parallel misalignment : 25mm
- Spacer made of composite material
- Steel laminated disc pack

Wind Turbine Coupling
Performance verification



[Balancing M/C]

[Torsion Tester]



[Rotation Whirling Tester]

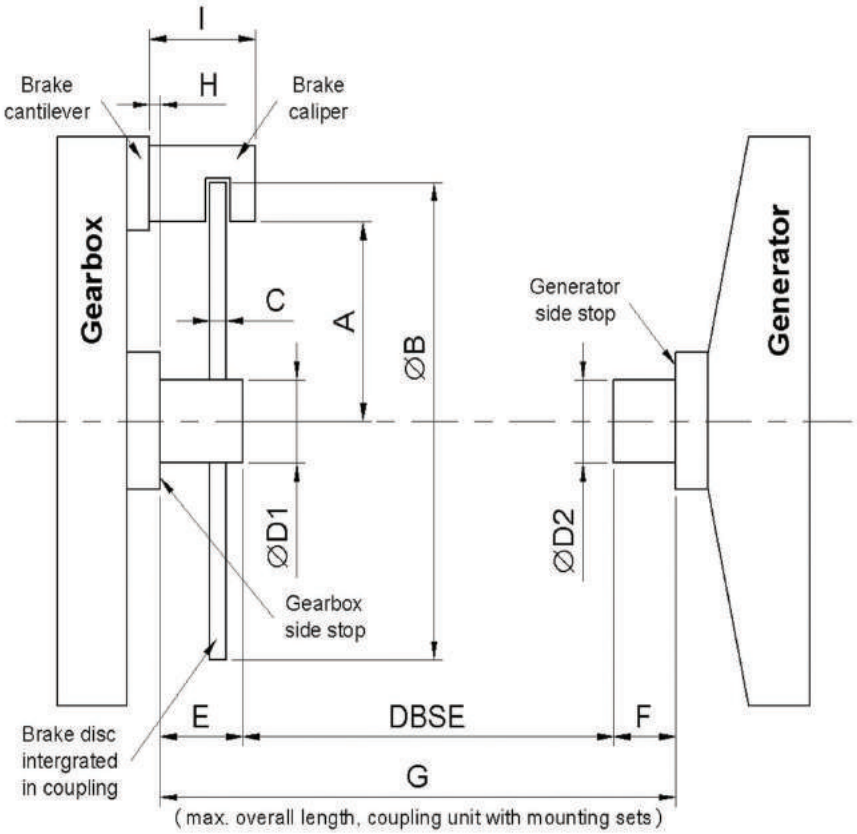
Technical documents

- Slip torque report
- Balancing report
- Installation Manual
- Technical Datasheet

Design Calculation

- Critical speed
- FE_Analysis (structure, vibration)
- Fatigue life of the DLC
- bolted joints according to VD12230

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(with tolerance)

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

※ The order specification sheet is requirerd to check your requirement of coupling

JAC coupling

Website : http://jacoup.co.kr
E-mail : jac@jacoup.co.kr

■Head Office& Factory
JAC Coupling, 69, Saebyuc-ro, Sasang-gu, Busan, Korea
Tel. +82-51-317-0822 Fax. +82-51-317-0855
■2nd Factory
Tel. +82-51-314-0822 Fax. +82-51-313-0855
■Branch Office
Seoul Office
Tel. +82-2-2671-0414 Fax. +82-2-2671-0413
Kyung-in Office
Tel. +82-32-576-0789 Fax. +82-32-576-0785