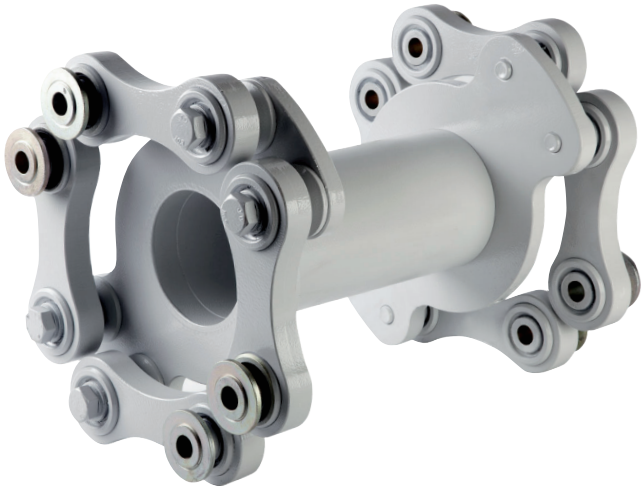
JAURE®

IXILFLEX® COUPLING



RegalRexnord™

EXPERIENCE, INNOVATION AND CLOSE COOPERATION WITH LEADING INTERNATIONAL COMPANIES.

JAURE® COUPLINGS AND POWER TRANSMISSION SOLUTIONS

We are a leading supplier of couplings and power transmission solutions. Experience, manufacturing expertise, innovation and close cooperation with leading international companies enable us to provide customized solutions to our customers.

For over 50 years, we have developed couplings for the most demanding applications in marine, wind, energy, steel, railway and paper industries among others.

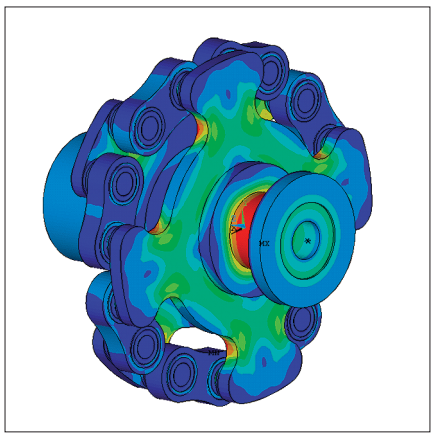
We have a broad range of manufacturing capabilities, particularly with respect to power and speed. We continue developing new products for future challenges.

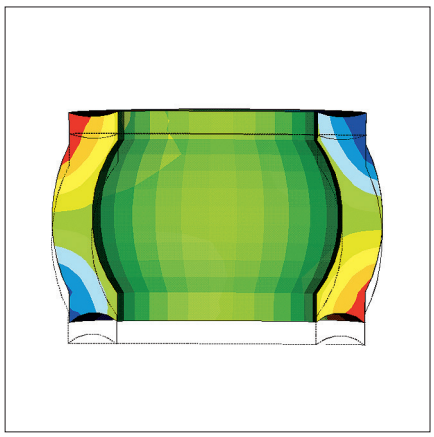
The integration of Kop-Flex® and Jaure coupling products has added to our ability to apply technical expertise in providing answers, products and services to our customers for their many varied applications globally.

IXILFLEX® COUPLING

IXILFLEX coupling was first introduced in windturbines. It has been making inroads for 10 years in other industries, such as marine propulsion, industry, railway and other specific applications like test benches.

IXILFLEX coupling is a link type coupling which absorbs misalignment through bushings linked to alternate flanges. These bushings are produced through the vulcanization of rubber to metal parts under high precompression.

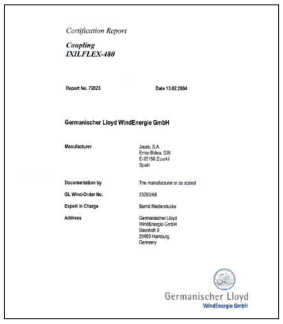




FEA of Ixilflex coupling and rubber bushing.

THE MAIN ADVANTAGES OF IXILFLEX COUPLINGS ARE:

- High misalignment capability: absorb higher axial and radial misalignment than conventional flexible couplings, with very low restoring forces
- High torque capability
- Bidirectional coupling: IXILFLEX couplings can operate cw and ccw.
- Quiet operation: transmitted noise is reduced.
- Torsional damping capability.
- Electrically insulated.
- Easy visual inspection and replacement of flexible elements.
- Fail-safe design.



Certification Report

Coupling
IXILFLEX-480

Report No. 72023 Date 13.02.2004

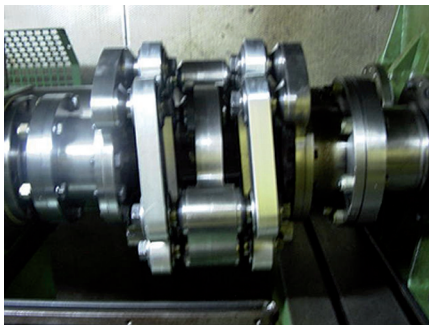
Germanischer Lloyd WindEnergie GmbH

Manufacturer	Jaure, S.A. Ernio Bidea, 5,N E-20750 Zumaia Spain
Documentation by	The manufacturer or as stated
GL Wind-Order No.	2326166
Expert in Charge	Bernd Niederstucke
Address	Germanischer Lloyd WindEnergie GmbH Stockdill 3 20459 Hamburg Germany

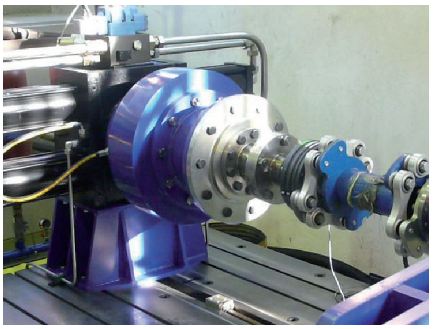
Germanischer Lloyd
WindEnergie GmbH

IXILFLEX couplings meet the requirements of classification societies and are, upon request, delivered with the official certificates.

In addition to our R&D department validation procedures, IXILFLEX® couplings are analysed by specific software based on FEA. We also collaborate with technological centers. Such collaboration, combined with our worldwide network of technical experts, enables us to provide innovative engineered solutions to our customers.



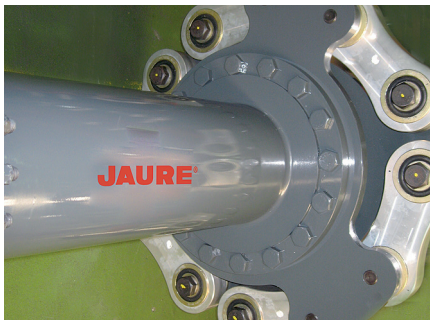
Misalignment fatigue testing.

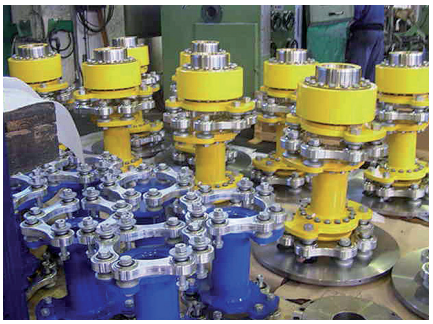


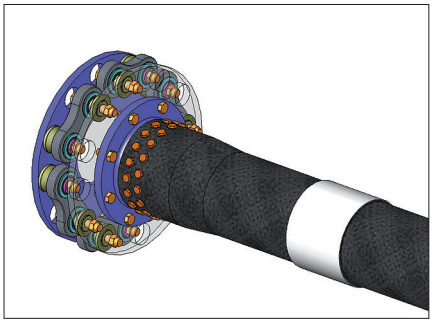
Torque fatigue testing.

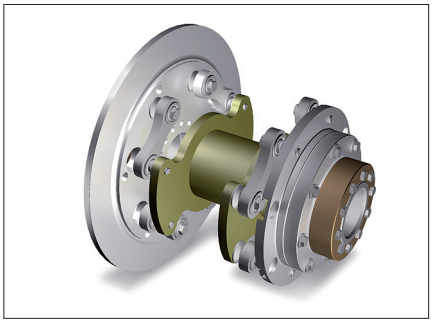
Thousands of IXILFLEX couplings are succesfully operating in various applications. A wide range of Jaure® product is available to meet each project's needs. Our brand names are recognized worldwide:

- **JSS** steel conventional shaftlines
- **JCFS** low weight carbon fibre shaftlines for long spans
- High Electrically insulated **JGFS** glass fibre shaftlines









COUPLING SELECTION

We offer both a standard range and engineered to order solutions of IXILFLEX® couplings.

The selection procedure is as follows:

$$Tn \geq \frac{9{,}55 \bullet P \bullet SF_t}{n}$$

Tn = IXILFLEX coupling nominal torque (kNm)

P = Transmitted Power (kW)

n = Speed (rpm)

SF_t = Temperature service factor (refer to Chart 1) For temperatures above 75ºC, please contact Jaure couplings engineering department at jaure.ptsolutions@regalbeloit.com (Regal)

The torque and speed ratings shown in the catalogue include the corresponding safety factors. But for critical applications (i.e. with frequent peak torques or long spans), additional service factors may be required and coupling selection must be confirmed by Regal Rexnord's engineering department.

Selection example

Power: 1200 Kw

Speed: 1500 rpm

Nominal torque:

$$Tn \geq \frac{9{,}55 \bullet 1200 \bullet 1}{1500} = 7{,}64 \text{ kNm}$$

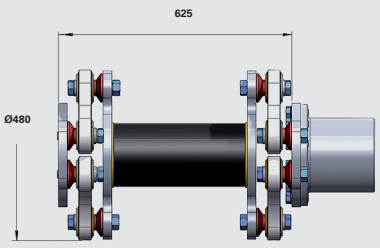
Peak torque: 11,46 kNm

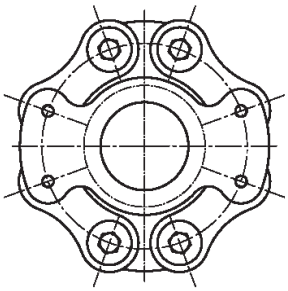
Continuous operation temperature: 40ºC

Distance between shaft ends: 625 mm

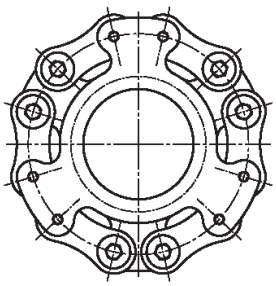
Selected coupling designation is:

IXILFLEX 480 – DBSE 625mm

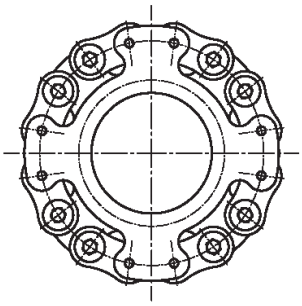




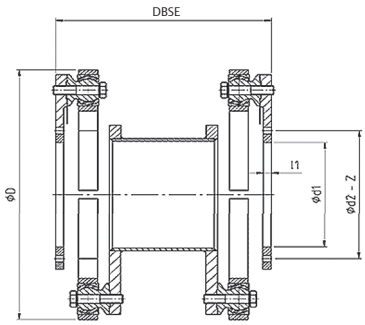
4 link design



6 link design



8 link design



IXILFLEX® Coupling

IXILFLEX SIZE	NOMINAL TORQUE TN	(1) MAX. TORQUE TP	(2) MAX. SPEED N	DIMENSIONS					T	WEIGHT M	INERTIA	(4) MAX. AXIAL MISALIGNMENT	(5) MAX. ANGULAR MISALIGNMENT
				D	D1	D2 - Z	(3) DBSE	L1					
IXILFLEX	KNM	KNM	R.P.M.	MM	MM	MM	MM	MM		M KG	J KGM^2	±KA [MM.]	±KW [DEG]
390	7	14	2690	390	155	190 - 8	400	20	4	49	0,9	12,5	4,0
480	9	18	2180	480	210	245 - 8	400	20	4	58	1,3		
510	11,5	23	2050	510	210	245 - 8	400	20	4	61	2,0		
495	14	28	2120	495	210	245 - 12	500	27	4	102	3,4	25,0	2,5
545	15,5	31	1920	545	225	270 - 12	500	27	4	118	4,0		
634	28,5	57	1650	634	280	310 - 12	500	27	6	307	19,5		
740	34,5	69	1410	740	300	345 - 16	500	27	6	355	22,4		
750	48	96	1400	750	300	345 - 16	600	36	4	475	43,4		
800	50,5	101	1310	800	310	385 - 16	600	27	8	440	28,0		
810	79	158	1290	810	310	385 - 16	600	36	6	547	50,0		
850	84	168	1230	850	310	385 - 16	600	36	6	602	56,0		
1006	103	206	1040	1006	420	515 - 24	750	36	6	690	64,4		
1020	140	280	1020	1020	420	515 - 24	750	36	8	800	80,1		
1096	153	306	950	1096	500	600 - 24	750	36	8	876	88,1		
1300	186	372	800	1300	700	800 - 24	750	36	8	964	96,9		

Larger sizes are available on demand.

1 Max. Torque Tp may occur in transient operation during limited time (i.e. start-up or shock condition).

2 Max. Speed N could be limited by the weight and whirling speed of the spacer. For higher speeds, please contact Regal Rexnord engineering department.

3 Dimension DBSE is the distance between shaft ends and is a variable parameter.

4 Max. Axial misalignment per 2 joints. The indicated values are maximum ones on transient operation. For combined Axial and Angular misalignment, please refer to chart 2. For continuous or higher misalignment values, please contact Regal Rexnord engineering department.

5 Max. Angular misalignment per single joint. The indicated values are maximum ones on transient operation. For combined Angular and Axial misalignment, please refer to chart 2. For continuous or higher misalignment values, please contact Regal Rexnord engineering department.

Chart 1 - Temperature service factor SFt

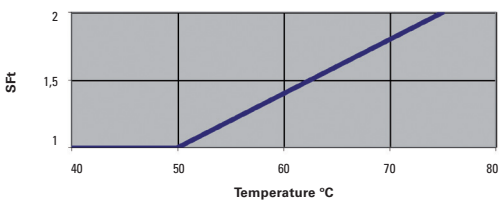
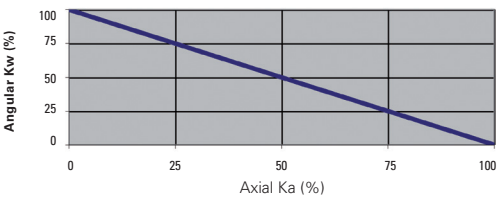
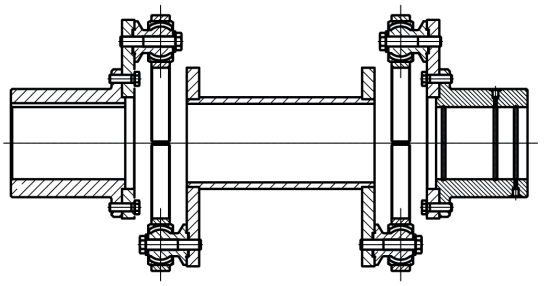


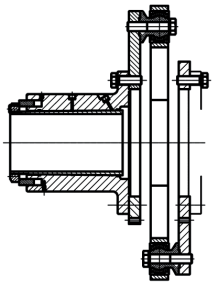
Chart 2 - Misalignment combination



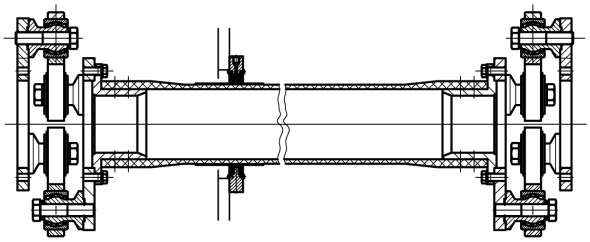
IXILFLEX® COUPLING DESIGNS



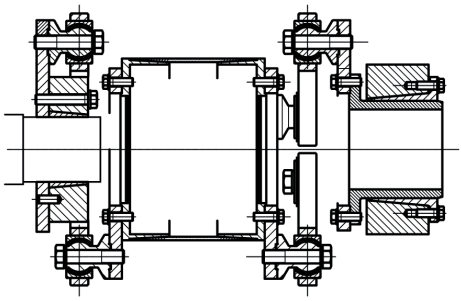
Type IX: Standard design with B01 keyway & E01 shrink fit shaft connections.



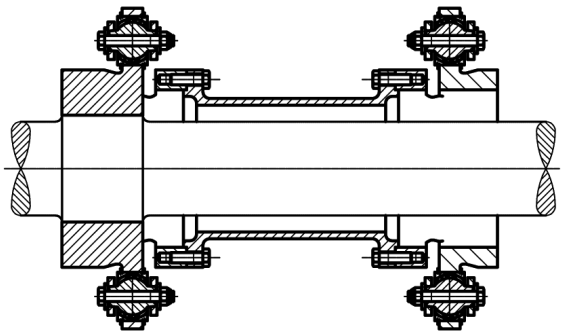
Type IU: Single joint design with JHC hydraulic shaft coupling.



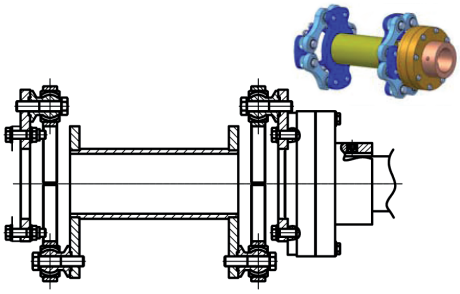
Type IX-JCFS: With carbon fibre spacer and bulkhead-seal.



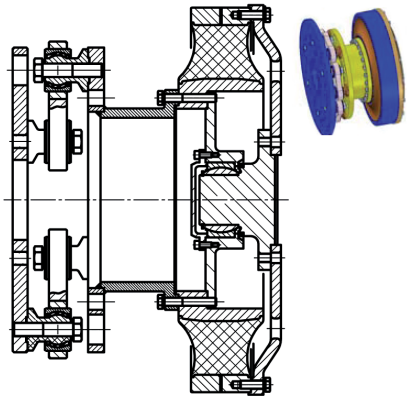
Type IX-JGFS: With glass fibre spacer and G03 clamping ring.



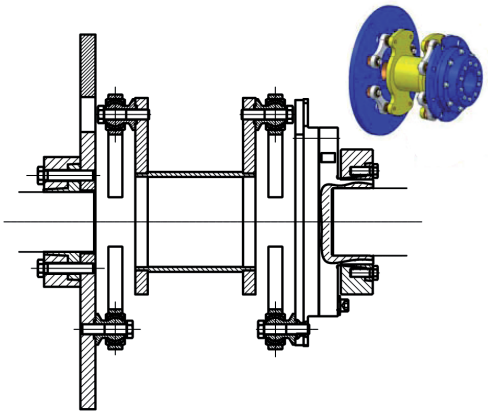
Type IX-FE: Special design for railway.



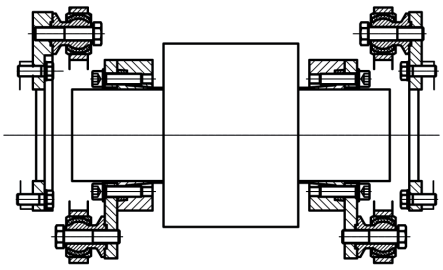
Type IX-JFTL: With torque limiter and B01 keyway connection.



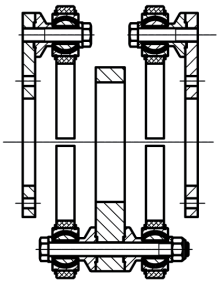
Type IU-HEC: Single joint combined with torsionally flexible coupling.



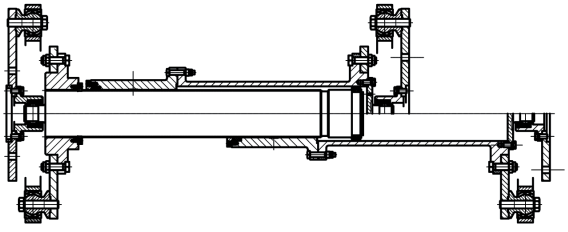
Type IX-JFTL-FD: With torque limiter and and brake disc. G03 clamping rings.



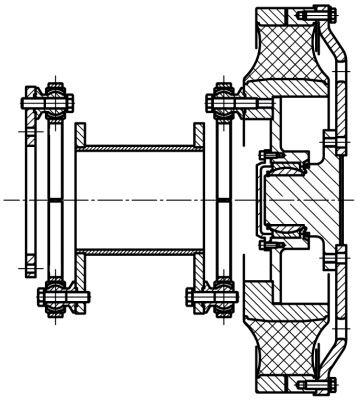
Type IX-TM: With torque measuring equipment.



Type IX-SC: For short distance connection.

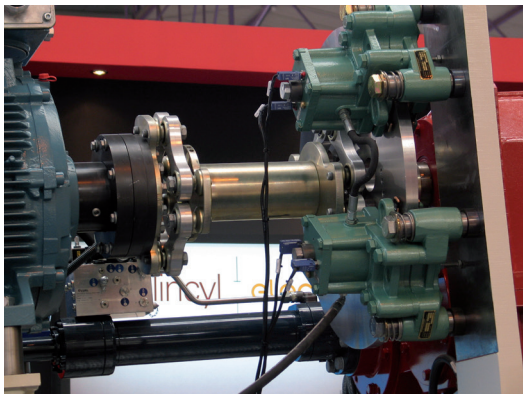


Type IX-CO: Telescopic, for axial stroke.

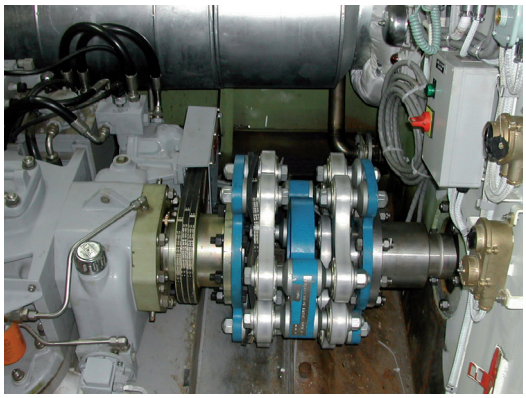


Type IX-HEC: High misalignment combined with torsionally flexible coupling.

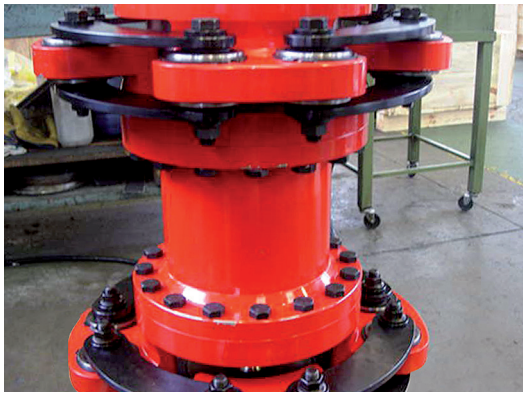
IXILFLEX® COUPLING REFERENCES



IXILFLEX coupling with torque limiter.

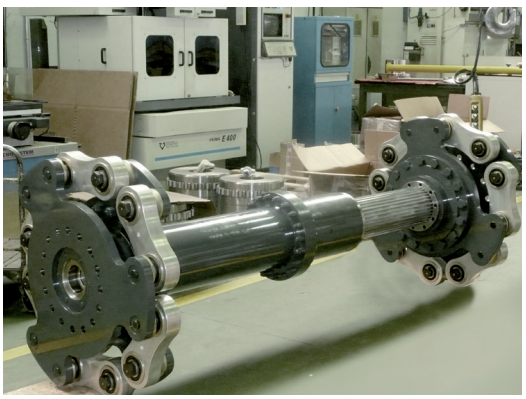


IXILFLEX coupling in waterjet applications.

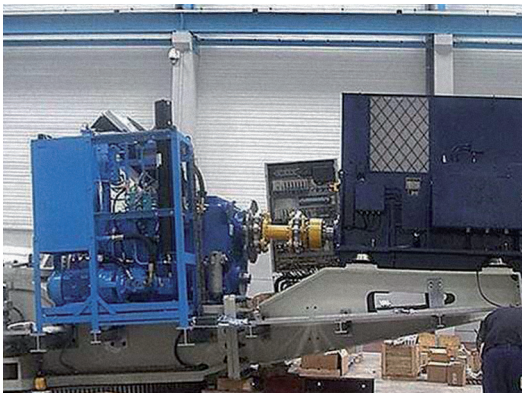


IXILFLEX coupling for railway.

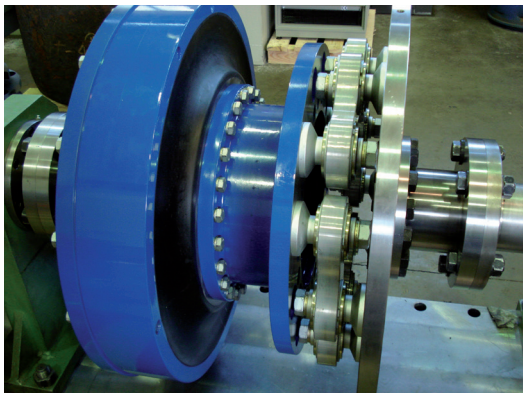
IXILFLEX couplings with steel spacer.



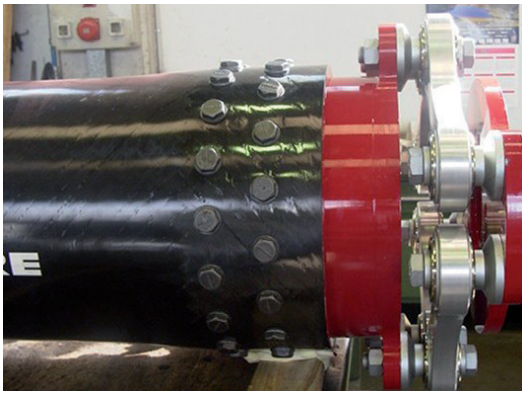
IXILFLEX coupling for test bench.



IXILFLEX coupling in wind turbine.

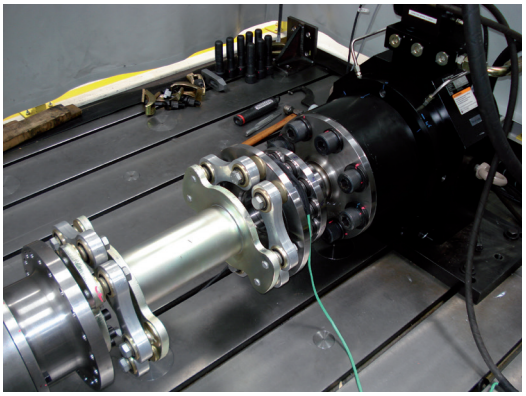


IXILFLEX® coupling combined with a highly elastic coupling.

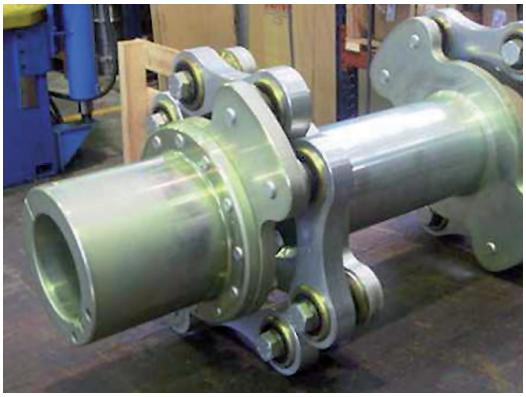


IXILFLEX coupling with JCFS composite spacer.

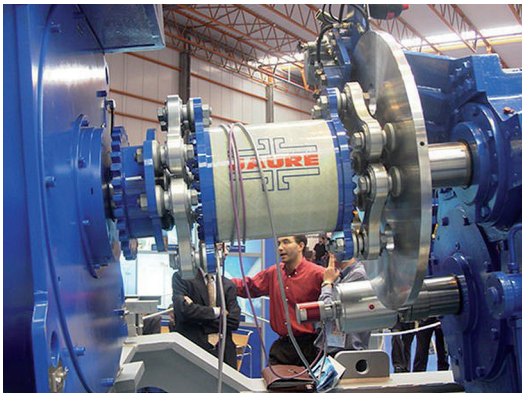
IXILFLEX coupling during installation.



IXILFLEX coupling on test bench.

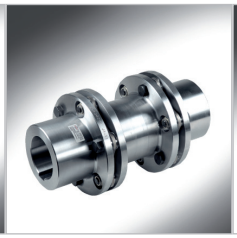
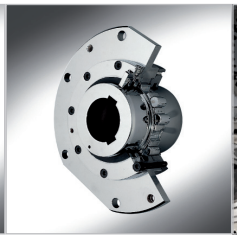


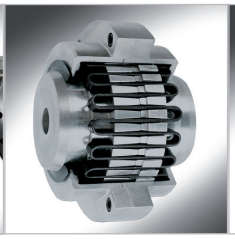
IXILFLEX coupling for high corrosion enviroment.



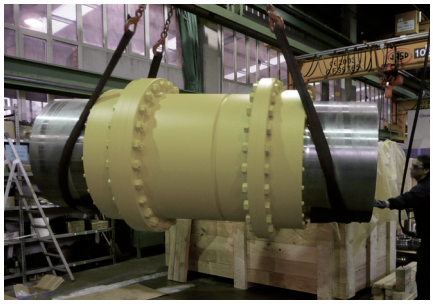
IXILFLEX coupling with JGFS composite spacer.

MANUFACTURING PROGRAM

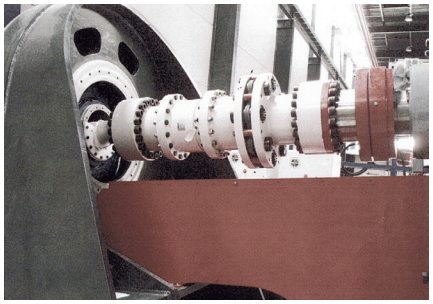






PRODUCT BRAND NAME	MT	LAMIDISC®	TCB / TCB-HD	AL-S / AL-SD / ALD	RECORD
TYPE & DESCRIPTION	**GEAR**	**DISC PACK**	**BARREL (DRUM TYPE)**	**GEAR SPINDLES**	**GRID / SPRING TYPE**
INDUSTRY APPLICATION					
Metals & Heavy duty	•	•	•	•	•
Minerals & Mills	•	•	•		•
Crane & Hoisting	•	•	•		•
Pulp & Paper	•	•			•
Petrochemical / Oil & Gas	•	•			•
Cooling Towers		•			
Machine Tools		•			
Marine	•	•	•		
Wind Turbines		•			•
Test Benches	•	•			
Railway	•	•			

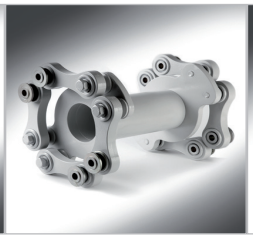
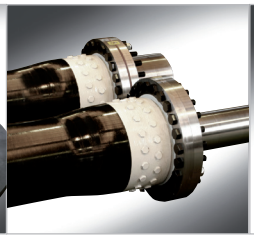
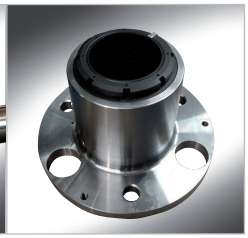


Special safety heavy duty gas nitrided gears



LAMIDISC coupling with torque limiter on test bench

Type Approvals (Marine & Wind)

					
JAUFLEX®	**IXILFLEX®**	**COMPOLINK®**	**JFTL TORQUE LIMITER**	**JCFS**	**JHC**
ELASTIC	**ELASTIC LINK**	**COMPOSITE LINK**	**TORQUE LIMITER**	**COMPOSITE SHAFTS**	**HYDRAULIC FIT (SHAFT COUPLINGS)**
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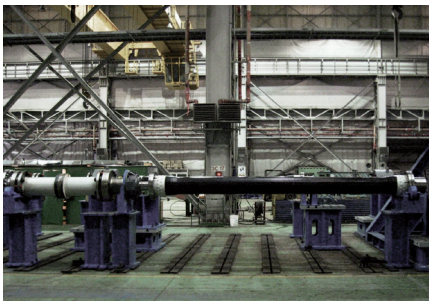
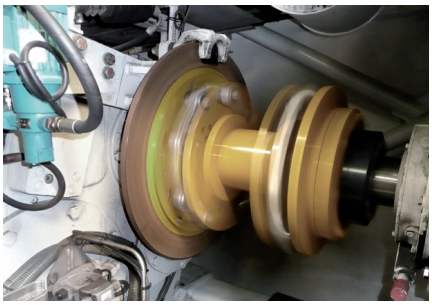
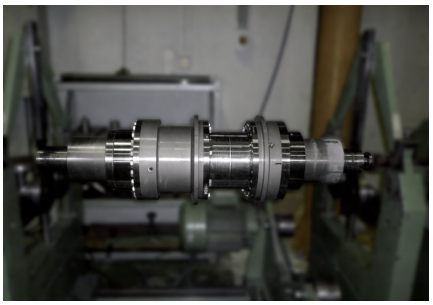


Carbon Fibre Shaft combined with LAMIDISC coupling



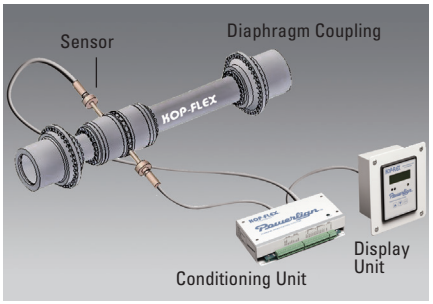
Torque monitoring on wind turbines



Double-gear couplings for railway

MANUFACTURING PROGRAM

Product Brand Name	MAX-C®	HIGH PERFORMANCE PROGRAM			KOP-FLEX GREASE	SERVICE
Type & Description	**Heavy duty elastic coupling**	**GEAR**	**DISC**	**DIAPHRAGM**	**Gear coupling / spindle grease**	**Repair & maintenance program**
INDUSTRY APPLICATION						
Metals & Heavy duty	•				•	•
Minerals & Mills	•				•	•
Crane & Hoisting	•				•	•
Pulp & Paper					•	•
Petrochemical / Oil & Gas	•	•	•	•	•	•
Cooling Towers					•	•
Machine Tools					•	•
Marine	•	•	•	•	•	•
Wind Turbines	•				•	•
Test Benches	•	•	•	•	•	•
Railway	•	•			•	•



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