CENTA POWER TRANSMISSION
LEADING BY INNOVATION

PRODUCT GUIDE

ENGLISH

PURE
POWER

CENTA redefines POWER.
POWER, to us, is more than merely strength.

POWER, to us, is the passion to find the best solution. To continuously improve successful concepts. To set new standards in performance, flexibility and service.

Each product bearing the name CENTA puts POWER into practice in a unique way. Ensuring pure power. Removing troublesome influences. Enabling optimum results.

CENTA Power Transmission.
Leading by Innovation.

CENTA POWER TRANSMISSION
LEADING BY INNOVATION

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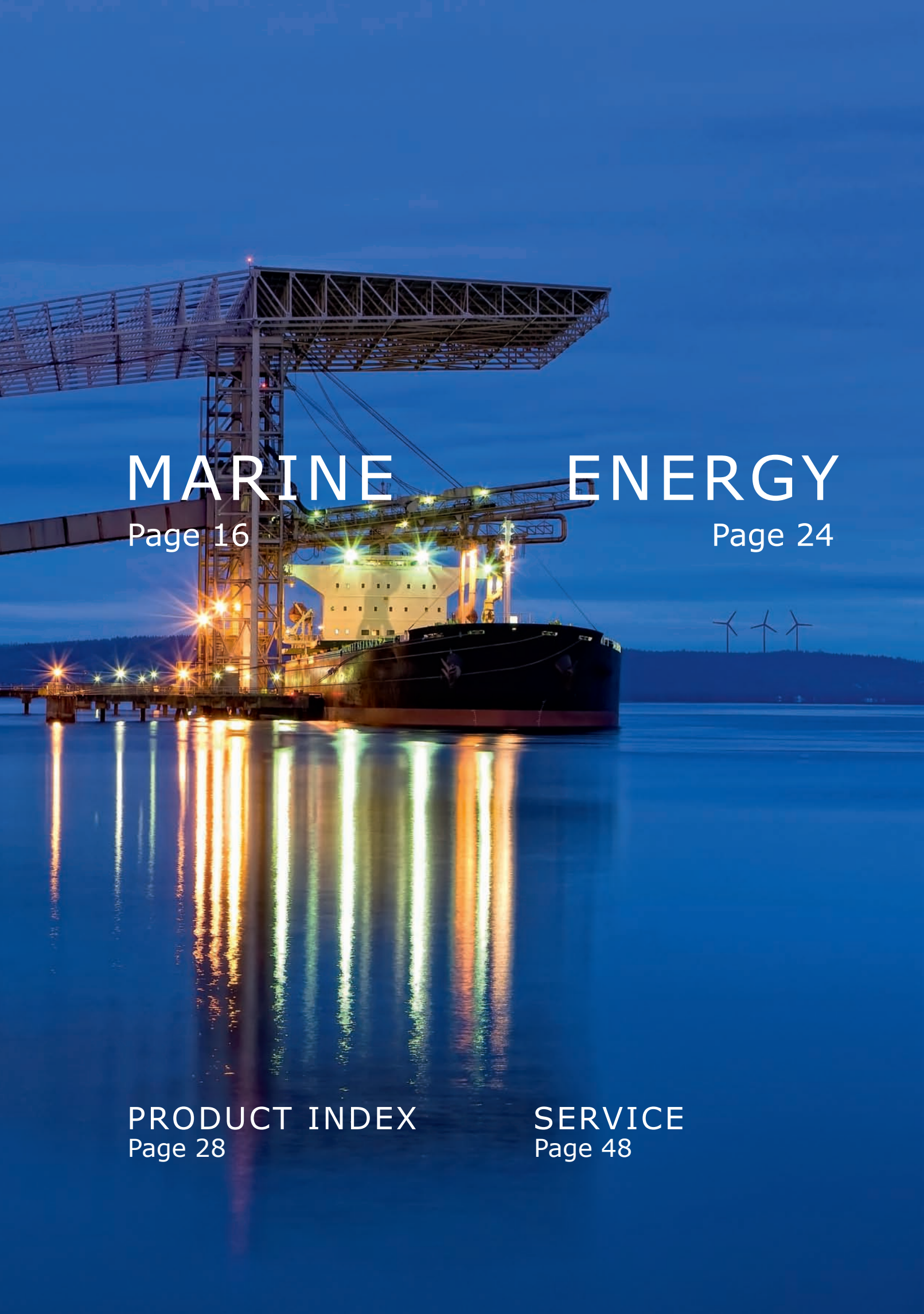


CENTA POWER TRANSMISSION
LEADING BY INNOVATION

PRODUCT GUIDE

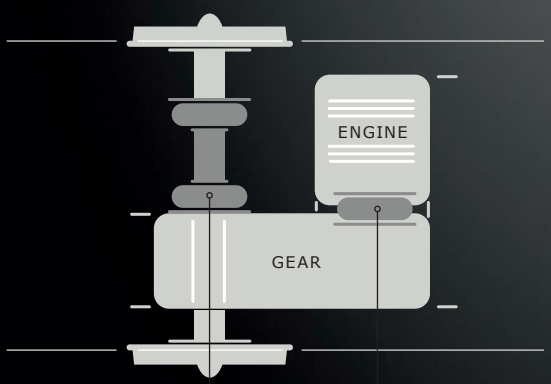
RAIL

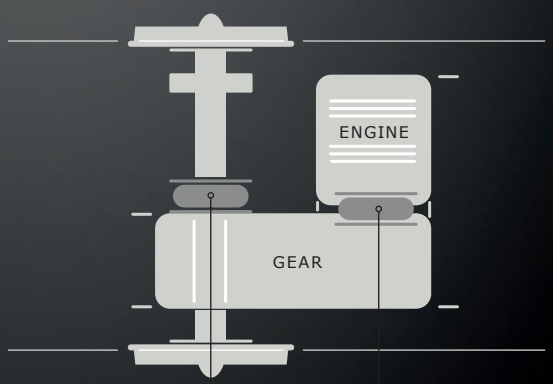
07

You create new connections.

We assist you
in keeping your mobility.

RAIL





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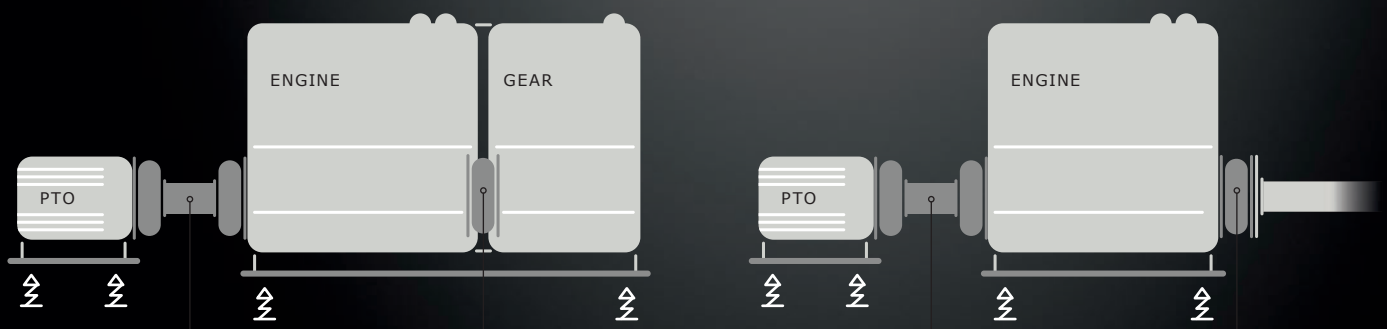
Which product for your purpose?
We will gladly assist –> www.centa.info/contact



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CENTA POWER TRANSMISSION
LEADING BY INNOVATION

PRODUCT GUIDE

INDUSTRY

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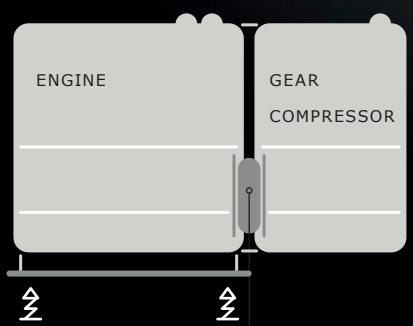
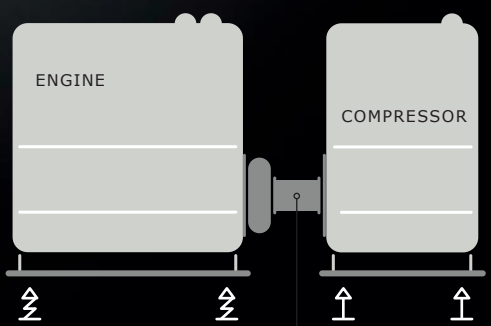
You pursue ambitious goals.

We effect peak performance
so that you can achieve them.

INDUSTRY





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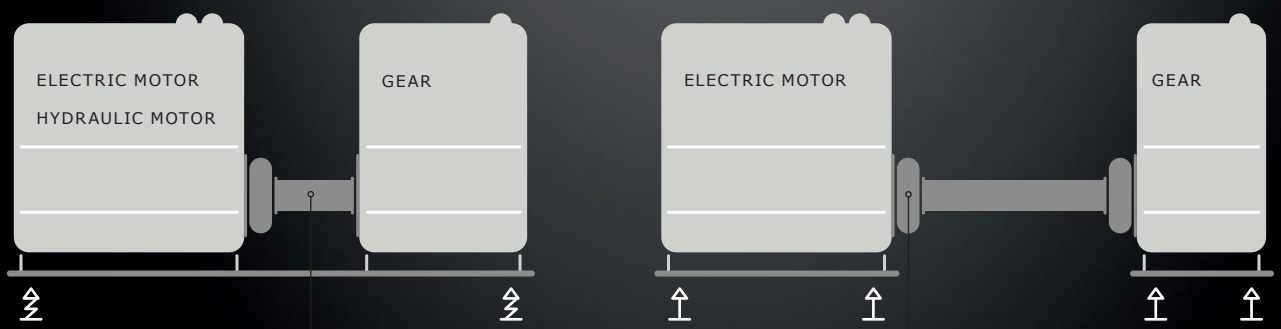
Which product for your purpose?
We will gladly assist –› www.centa.info/contact



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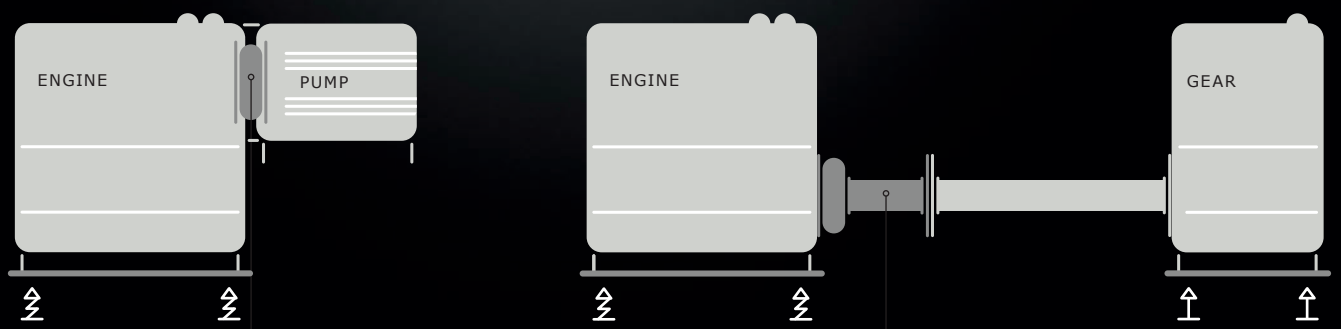
INDUSTRY



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CENTA POWER TRANSMISSION
LEADING BY INNOVATION

PRODUCT GUIDE

MARINE

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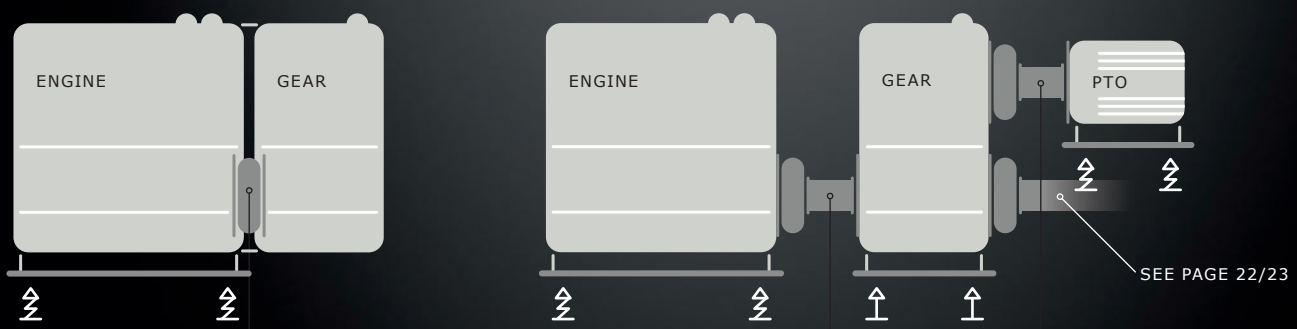
You determine the course.

We make sure
you reach safe shores.

MARINE



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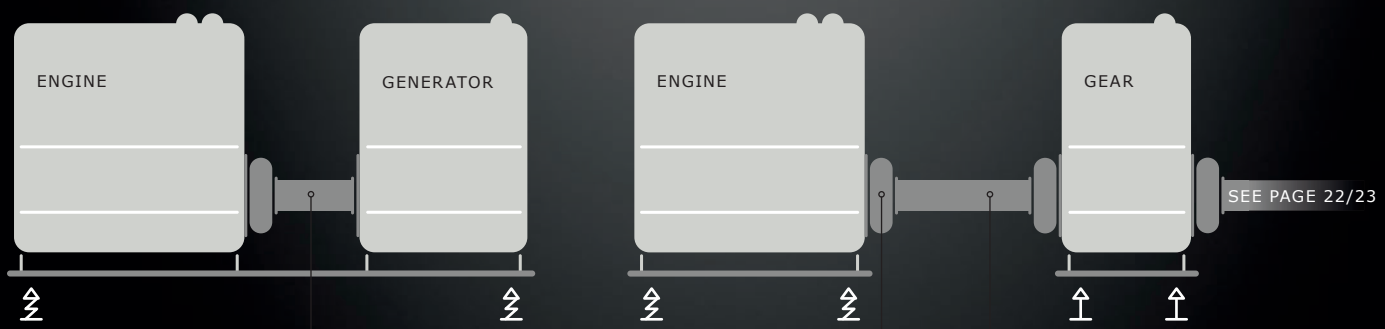
Which product for your purpose?
We will gladly assist –› www.centa.info/contact



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COUPLING + **SHAFT**

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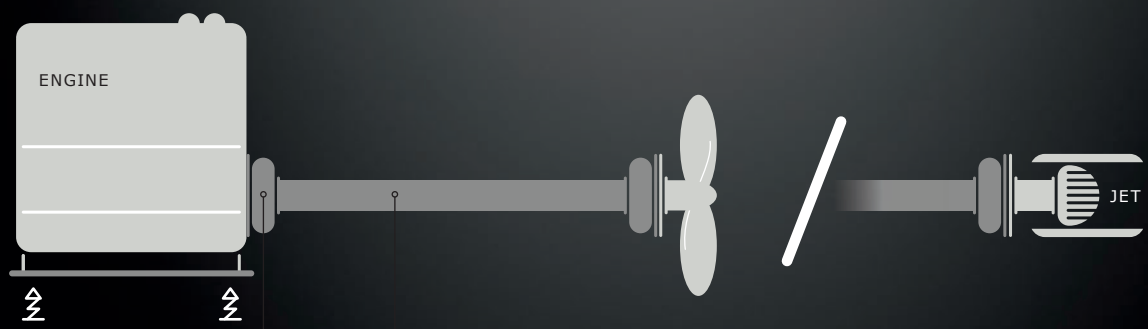

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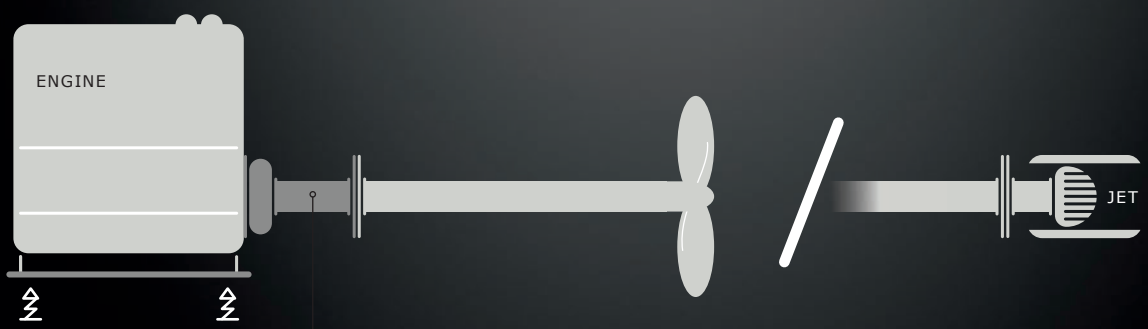

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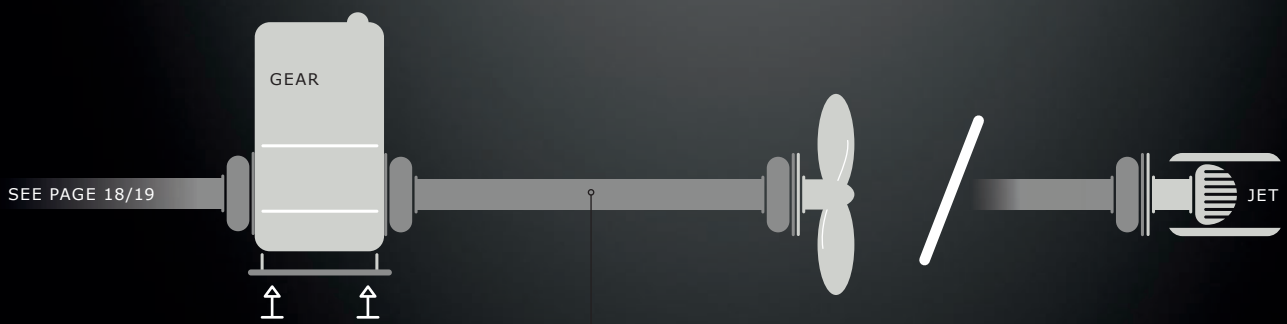

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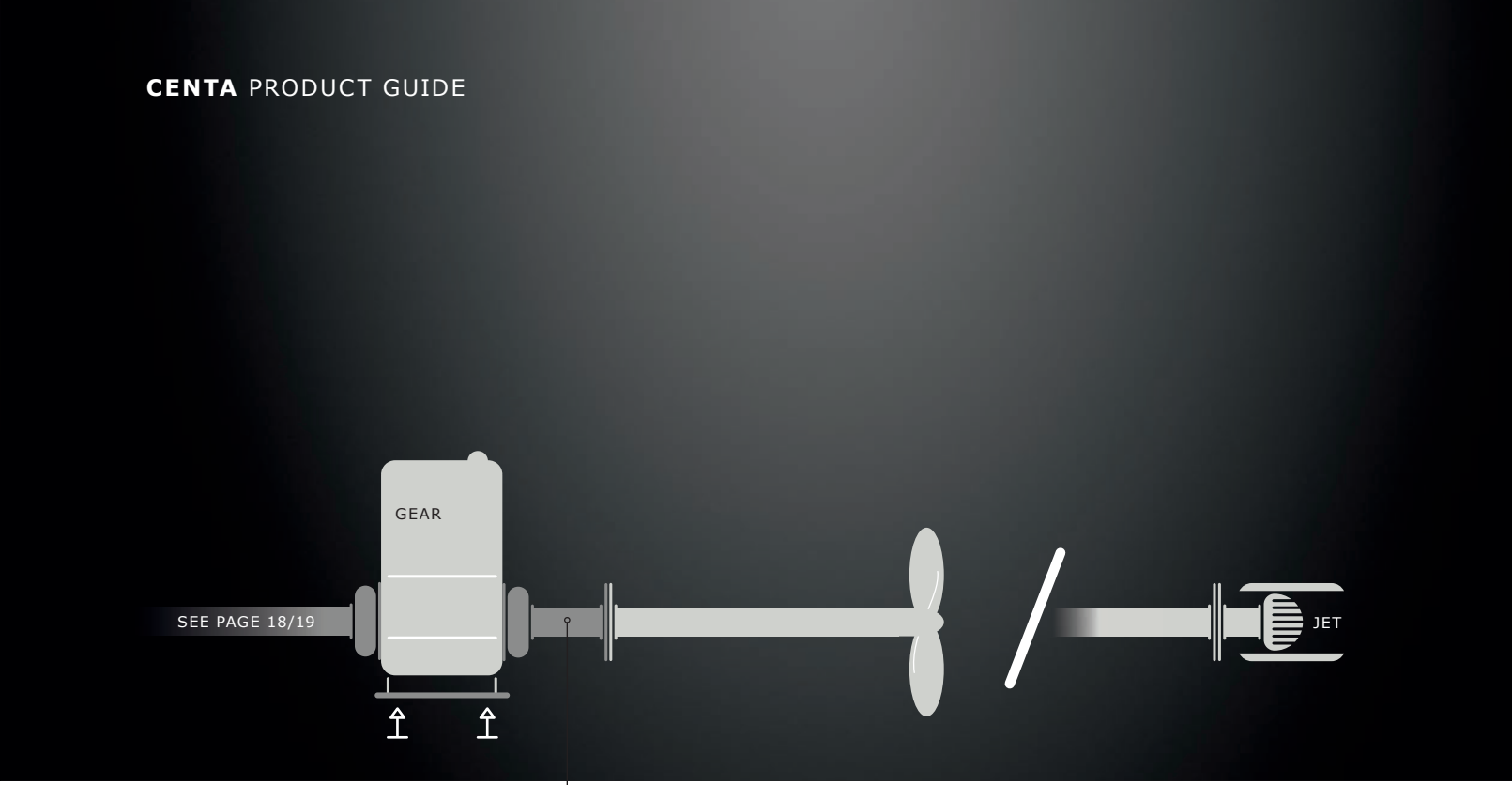

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CENTA POWER TRANSMISSION
LEADING BY INNOVATION

PRODUCT GUIDE

ENERGY

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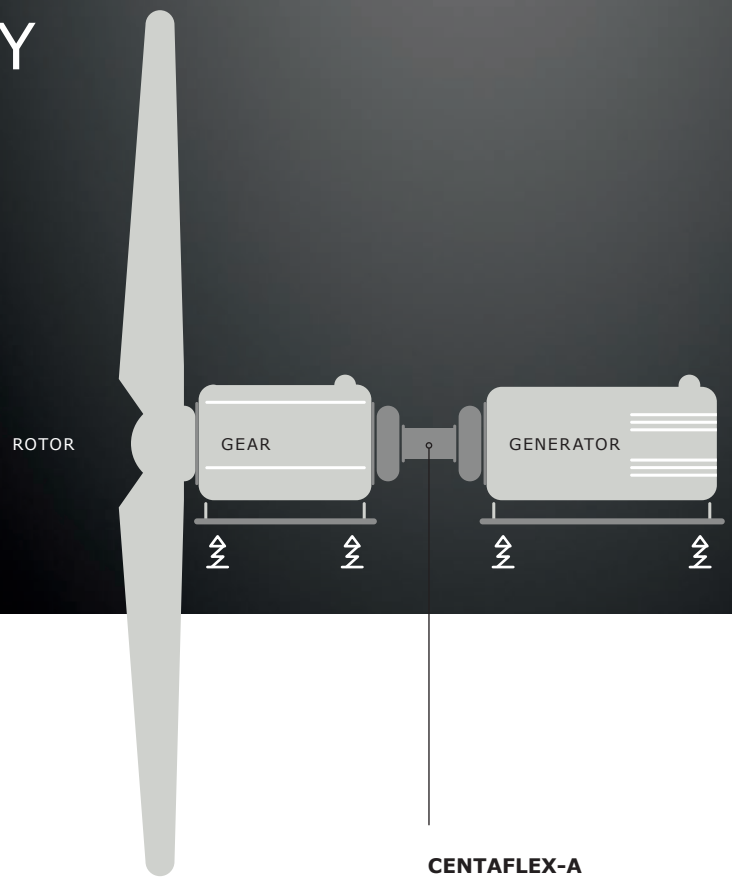
You invest in the future.

We deliver quality
which pays off in the long run.

ENERGY



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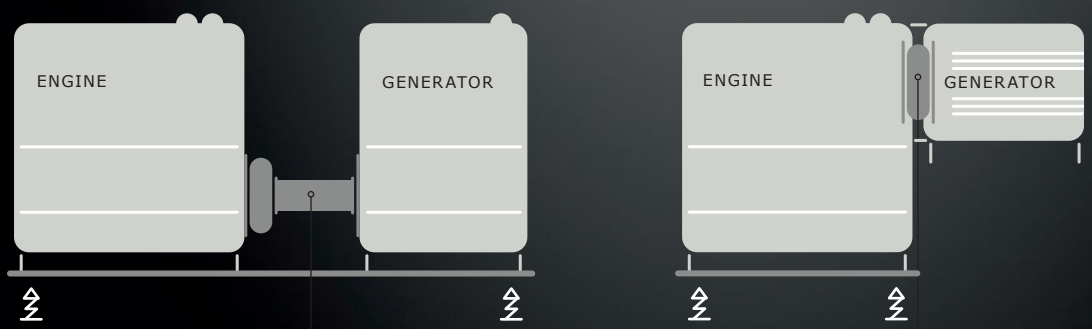
Which product for your purpose?
We will gladly assist –> www.centa.info/contact



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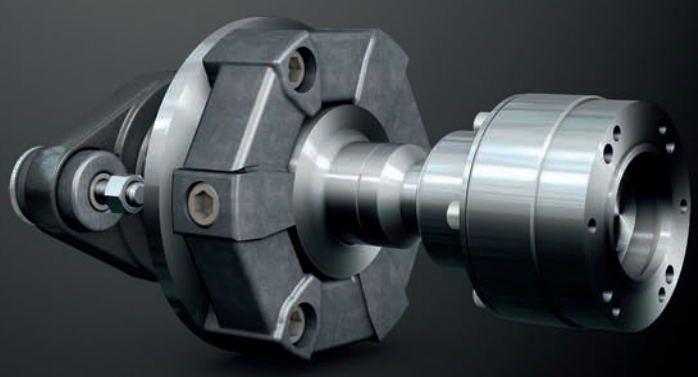
CENTA POWER TRANSMISSION
LEADING BY INNOVATION

PRODUCTS

CF-A

CF-ACV



CENTAFLEX-A

Highly flexible coupling for a wide range of applications. For a maximum of design variants.

Based on a highly elastic rubber element subject only to compressive stress. Extremely high-performing design with high torsional elasticity. Dampens torsional vibrations and shocks and compensates considerable axial, radial and angular misalignments. Electrically insulating and thermally resistant in silicon design. For rupture-proof and backlash-free transmission of high torques.

Available as axially blind fitting design with radial mountability. Rubber element available as split element for quick replacement. Easy handling and mountable with minimum effort. In various lengths adaptable to the installation requirements if applied as homokinetic shaft. Also available as carbon-fibre or glass-fibre designs.

torque range	0.01 to 12.5 kNm
elastic material	NR
	Si
temperature range	NR –45° to +80°C
	Si –45° to +120°C

more information	www.centa.info/cf-a

CENTAFLEX-ACV

Highly flexible homokinetic drive shaft for the connection of gear and propeller shaft. For applications with considerable angular deflections.

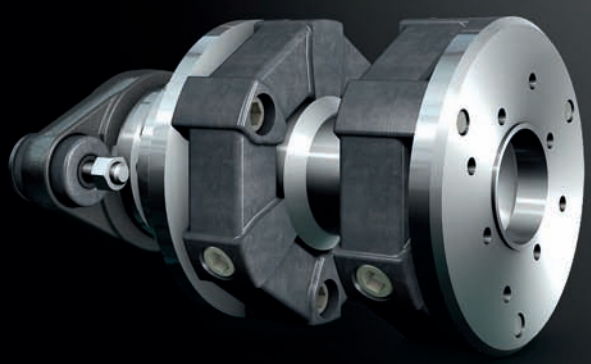
Torque transmission via a double-cardanic drive shaft with a CV joint on one side and a highly flexible rubber element on the other. Propeller thrust transmitted to the boat hull by a self-aligning thrust bearing. Specially designed to reduce noise and vibrations. Dampens torsional vibrations and shocks, interrupts structure-borne noise and tolerates (homokinetic) angular deflections of up to 8 resp. 3 degrees. Additionally offers a high degree of electrical insulation.

Mounted with minimum effort by means of a clamping hub. Delivered with fail-safe device and to a large extent ready to install.

torque range	0.16 to 11 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cf-acv

CF-AGM



CF-AM

CENTAFLEX-AGM

Highly flexible homokinetic drive shaft for the connection of gear and propeller shaft. For applications with moderate angular deflections.

Backlash-free torque transmission via a double-cardanic drive shaft with two highly flexible rubber elements. Propeller thrust transmitted to the boat hull by a self-aligning thrust bearing. Specially designed to reduce noise and vibrations. Dampens torsional vibrations and shocks, interrupts structure-borne noise and tolerates (homokinetic) angular deflections of up to 3 degrees. Additionally offers a high degree of electrical insulation.

Mounted with minimum effort by means of a clamping hub. Delivered with fail-safe device and to a large extent ready to install.

torque range	0.16 to 11 kNm
elastic material	NR
temperature range	–45° to +80°C
more information	www.centa.info/cf-agm

CENTAFLEX-AM

Highly flexible coupling for connecting gear and propeller shaft to isolate noise and vibration from the boat hull.

Backlash-free transmission of torque and propeller thrust via a highly flexible rubber element with thrust bearing. Specially designed to reduce noise and vibrations. Dampens torsional vibrations and shocks, interrupts structure-borne noise and compensates moderate axial, radial and angular misalignments. Additionally offers a high degree of electrical insulation. Available in a wide range of standard sizes covering engine power up to several hundred KW.

Mounted with minimum effort by means of a clamping hub. Delivered with fail-safe device and ready to install.

torque range	commercial	0.12 to 8 kNm
	pleasure	0.175 to 10 kNm
elastic material	NR	
temperature range	–45° to +80°C	
more information	www.centa.info/cf-am	

CF-B

CF-CO

CENTAFLEX-B

Flexible shaft coupling in economical design. For maximum application flexibility.

Extremely robust and fail-safe jaw-type design with elastomer element subjected only to compressive stress. Characterised by intermediate torsional stiffness with progressive characteristic. Dampens torsional vibrations and shocks and compensates axial, radial and angular misalignments. Many design variants and economical design. Oil-resistant and also available in thermally resistant design.

As drive shaft available in any length required by the installation requirements. Delivered preassembled. Axial or radial mounting with minimum effort. CENTALOC clamping or taper lock bushes optionally available to prevent wear and frictional corrosion on not backlash-free hub to shaft connections.

torque range	0.032 to 1.4 kNm
elastic material	PU
	TPE
temperature range	PU −40° to +80°C
	TPE −50° to +150°C

more information	www.centa.info/cf-b

CENTAFLEX-CO

Highly flexible coupling with almost linear characteristic. For drives subject to torsional vibration.

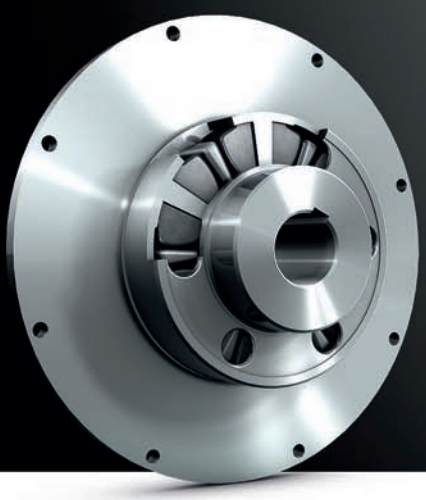
Extremely robust and fail-safe construction with rubber rollers subjected only to compressive stress. Characterised by almost constant torsional stiffness throughout the entire torque range. Dampens torsional vibrations and shocks and compensates moderate axial, radial and angular misalignments. With extremely compact dimensions, effectively ventilated and with high allowable energy loss. Suitable for high ambient temperatures. The HD design includes oil-resistance.

Blind assembly and free adjustability. Minimum maintenance effort. With flywheel connections acc. to SAE. Also available for non-standard flywheels.

torque range	0.08 to 0.5 kNm
elastic material	NR
	Si
temperature range	NR −45° to +80°C
	Si −45° to +120°C

more information	www.centa.info/cf-co

CF-D



CF-DS

CENTAFLEX-D

Flexible flange coupling with progressive characteristic. For use in heavy duty applications.

Extremely robust and fail-safe jaw-type construction with elastomeric buffers subjected only to compressive stress. Features medium torsional stiffness with progressive characteristic. Developed for a resonance-free operation of diesel-driven powertrains, particularly generators. Dampens torsional vibrations and shocks and compensates axial, radial and angular misalignments. Reliable and rupture-proof, in an especially short and economical design.

Blind assembly for minimum mounting effort. With flywheel connections acc. to SAE. Also available for non-standard flywheels.

torque range	0.28 to 40 kNm
elastic material	NBR
temperature range	–25° to +80°C

more information	www.centa.info/cf-d

CENTAFLEX-DS

Dual stage coupling with progressive characteristic. For smooth operation and reliable load transmission.

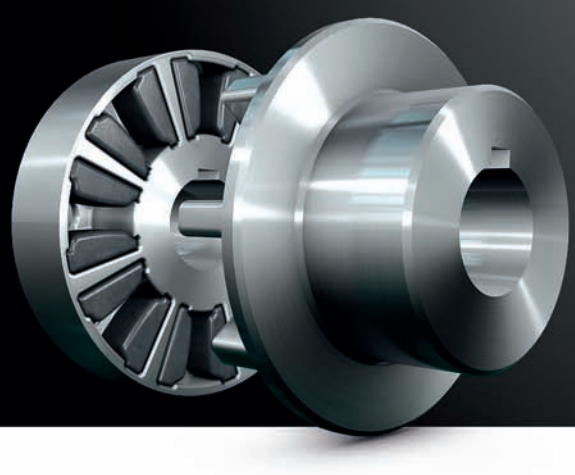
Combines good damping characteristics of a torsionally flexible roller coupling under partial load with the robustness of a claw-type coupling under full load. Extremely short and economic design for smooth operation at low idling speeds resp. for applications with high degree of idling. Effectively ventilated and with high allowable power loss.

Blind assembly for minimum mounting effort. Delivered with fail-safe device and flywheel connections acc. to SAE. Also available for non-standard flywheels.

torque range	0.15 to 1.75 kNm
elastic material	NBR NR
temperature range	–25° to +80°C

more information	www.centa.info/cf-ds

CF-E



CF-H

CENTAFLEX-E

Flexible shaft coupling for a wide range of applications. For safe transmission of high torques.

Extremely robust and fail-safe jaw-type construction with elastomeric elements subjected only to compressive stress. Features medium torsional stiffness with progressive characteristic. For resonance-free operation and reliable transmission of high torques at low reaction forces. Dampens torsional vibrations and shocks and compensates axial, radial and angular misalignments. Heavy duty performance and compact dimensioning. Oil and temperature-resistant, rupture-proof and available in numerous standard and special designs.

Available as homokinetic drive shaft in any length required by the installation. Axial blind assembly for minimum mounting effort.

torque range	0.075 to 40 kNm
elastic material	NBR
temperature range	–25° to +80°C

more information	www.centa.info/cf-e

CENTAFLEX-H

Torsionally stiff coupling with heavy duty performance. For resonance-free operation of diesel-hydraulic drives.

Based on a flexible element of heavy duty elastomer with built-in aluminium or steel bushes. Especially powerful and compactly dimensioned design with high torsional stiffness. Dampens torsional vibrations and shocks and compensates high axial as well as moderate radial and angular misalignments. At the same time very durable and economical. Oil-resistant and suitable for extremely high temperatures.

Blind assembly for minimum mounting effort. Available with CENTALOC clamping hub (page 32 · CF-B). With flywheel connections acc. to SAE. Also available for non-standard flywheels.

torque range	0.1 to 4 kNm
elastic material	TPE
temperature range	–50° to +150°C

more information	www.centa.info/cf-h

CF-K

CF-KE

CENTAFLEX-K

Compactly dimensioned coupling with high torsional stiffness. For resonance-free operation.

Material combination of steel and highly shock-resistant glass-fibre reinforced plastic. Highly robust and short design with high torsional stiffness for fail-safe transmission of small to medium operation ranges. Enables optimum design adaptation to existing space requirements. Extremely durable and economical. Oil-resistant and suitable for high ambient temperatures.

Blind assembly for minimum mounting effort. Delivered with preassembled hubstar and flywheel connections acc. to SAE. Also available with CENTALOC clamping hub (page 32 · CF-B) and for non-standard flywheels.

torque range	0.4 to 5.2 kNm
elastic material	GFK
temperature range	–40° to +150°C

more information www.centa.info/cf-k

CENTAFLEX-KE

Compactly dimensioned one piece design coupling with high torsional stiffness. For applications with radial misalignment.

Flexible element made of high-quality glass-fibre reinforced plastic with elastic rubber-coated bushes on the outer diameter. Highly robust and short design with high torsional stiffness protecting shafts and bearings from mechanical loads. Tolerates moderate misalignments in radial direction. At the same time very durable and economical. Additionally oil-resistant and suitable for high ambient temperatures.

Blind assembly for minimum mounting effort. Delivered ready to assemble and with flywheel connections acc. to SAE. Also available for non-standard flywheels.

torque range	0.2 to 0.6 kNm
elastic material	GFK
temperature range	–40° to +150°C

more information www.centa.info/cf-ke

CF-M

CF-R

CENTAFLEX-M

Highly flexible coupling for the connection of gear and propeller shaft. For applications with limited mounting space.

Backlash-free transmission of torque and propeller thrust via highly flexible rubber element. Specially designed to reduce noise and vibrations under confined space requirements. Dampens torsional vibrations and shocks, interrupts structure-borne noise and compensates axial, radial and angular misalignments. Additionally offers a high degree of electrical insulation.

Mounted with minimum effort by means of a clamping hub. Delivered with fail-safe device and ready to install. Further handling, maintenance and cost benefits by omitting additional components, such as spacers.

torque range	commercial	0.175 to 0.35 kNm
	pleasure	0.25 to 0.5 kNm
elastic material	NR	
temperature range	–45° to +80°C	

more information	www.centa.info/cf-m

CENTAFLEX-R

Highly flexible coupling with progressive characteristic. For heavy duty applications.

Extremely robust and fail-safe design with rubber rollers subjected only to compressive stress. Characterised by a slight stiffness at lower speeds and a moderately increased stiffness at rising torques. For smooth operation and reliable transmission over the entire operation range. Also effectively ventilated and with high allowable energy loss. Suitable for high ambient temperatures. HD design includes oil-resistance and even higher temperature resistance.

Delivered with fail-safe device and for a variety of shaft connections. With flywheel connections acc. to SAE. Also available for non-standard flywheels.

torque range	0.25 to 15 kNm	
elastic material	CENTALAN	
	HD	
temperature range	CENTALAN	–45° to +100°C
	HD	–45° to +130°C

more information	www.centa.info/cf-r

CF-RV

CF-T

CENTAFLEX-RV

Highly flexible intermediate coupling with progressive characteristic. For drive concepts with many drive shaft variants.

Combination of highly flexible roller coupling and built-in bearing support. Characterised by slight stiffness at lower speeds and moderately increased stiffness at rising torques. Dampens torsional vibrations and noise. Ensures smooth operation and long lifespan of the coupled units. HD design includes oil-resistance and even higher temperature resistance.

Minimum mounting and maintenance effort. With flywheel connections acc. to SAE. Also available for non-standard flywheels. CENTA FH flange bearing (page 42) is recommended for larger deflection angles of connected cardan shafts.

torque range	1.6 to 10 kNm	
elastic material	CENTALAN	
	HD	
temperature range	CENTALAN	–45° to +100°C
	HD	–45° to +130°C

more information	www.centa.info/cf-rv

CENTAFLEX-T

Torsionally stiff wedge type coupling with optimised geometry. For high torques in confined spaces.

Based on a bridge bearing principle allowing a high power density and good misalignment properties. Torsionally stiff design, however, highly flexible in axial and angular directions ensuring reliable compensation of misalignments. Proves superior when compared to standard wedge type solutions by an extremely compact design and high performance density achieved by optimising its geometry and omitting the hubstar.

Also available as homokinetic drive shaft. Further handling, maintenance and cost benefits through a reduced number of wedged elements. Easy and safe integration into the drive train.

torque range	1.2 to 24 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cf-t

CF-X

CM-B

CENTAFLEX-X

Torsionally stiff coupling with high power density. For applications under extreme conditions.

Based on a flexible element of heavy duty plastics with pressed-in steel bushes. Especially high-performance and rupture-proof design with high torsional stiffness. Bending elasticity properties allow for compensation of axial and angular misalignments. As a drive shaft, offers additional radial flexibility. Extremely light-weight and compact design. Oil-resistant, effectively ventilated and suitable for extremely high ambient temperatures.

Design type X-S features axial blind assembly for minimum mounting effort. With flywheel connections acc. to SAE.

torque range	0.01 to 1.5 kNm
elastic material	PA
temperature range	up to app. +150°C
more information	www.centa.info/cf-x

CENTAMAX-B

Robust coupling with high torsional flexibility, especially for independently mounted gensets. For backlash-free transmission of medium torques.

Backlash-free torque transmission via a steel flange onto a precompressed rubber element. Extremly fail-safe and low-wear design for transmission of medium torques. Characterised by high torsional flexibility with linear characteristic. Dampens torsional vibrations and shocks and compensates axial and angular misalignments. Economic design effectively ventilated and with high allowable energy loss.

Blind assembly for minimum mounting effort. Easy radial replacement and maintainable design. With flywheel connections acc. to SAE. Also available for non-standard flywheels and as shaft-to-shaft connection.

torque range	0.7 to 15 kNm
elastic material	NR
	Si
temperature range	NR −45° to +80°C
	Si −45° to +120°C
more information	www.centa.info/cm-b

CM-G

CM-HTC

CENTAMAX-G

Robust coupling with high torsional flexibility. For quick and easy mounting in drives subject to torsional vibration particularly on gensets.

Transmission of torque via toothed outer ring onto a rubber element. Additionally equipped with a taper locking bush for quick and easy installation. Highly dependable and fail-safe design. Characterised by high torsional flexibility with linear characteristic. Dampens torsional vibrations and shocks and compensates axial, radial and angular misalignments. Effectively ventilated and with high allowable energy loss.

Blind assembly for minimum mounting effort. With flywheel connections acc. to SAE. Also available for engine and generator connections acc. to DIN 6281.

torque range	1.2 to 7 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cm-g

CENTAMAX-HTC

Torsionally highly flexible coupling with high energy loss. For drives subject to torsional vibration.

Torque transmission via a toothed outer ring onto a rubber element divided into two slim halves. With optimised higher allowable energy loss due to increased surface, reduced heat dissipation and effective ventilation. Dampens torsional vibrations and shocks and compensates axial, radial and angular misalignments. Proves superior when compared to standard double couplings by extremely compact dimensions and economic design.

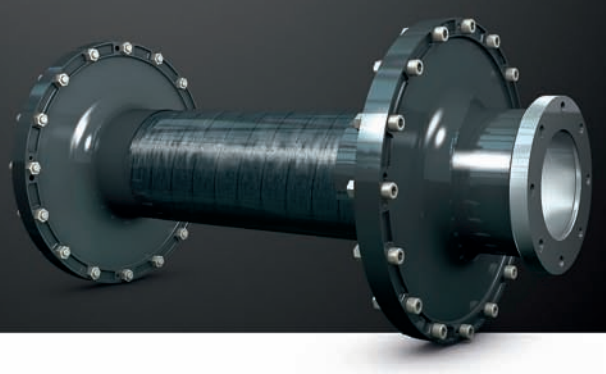
Blind assembly for minimum mounting effort. With flywheel connections acc. to SAE. Also available for non-standard flywheels.

torque range	5.4 to 45 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cm-htc

CM-S

CD-C



CENTAMAX-S

Robust coupling with high torsional flexibility. For resonance-free operation of drives susceptible to torsional vibration.

Torque transmission via a toothed outer ring onto a rubber element. Highly reliable and rupture-proof design for transmission of high torques in a compact design. Characterised by high torsional flexibility with linear characteristic. Dampens torsional vibrations and shocks and compensates axial, radial and angular misalignments. Effectively ventilated and with high allowable energy loss. Additionally oil-resistant in silicone design.

Blind assembly for minimum mounting effort. With flywheel connections acc. to SAE. Also available for non-standard flywheels.

torque range	0.1 to 24 kNm	
elastic material	NR	
	Si	
temperature range	NR	–45° to +80°C
	Si	–45° to +120°C

more information	www.centa.info/cm-s

CENTADISC-C

Light-weight drive shaft in two different plastic materials for a light-weight design.

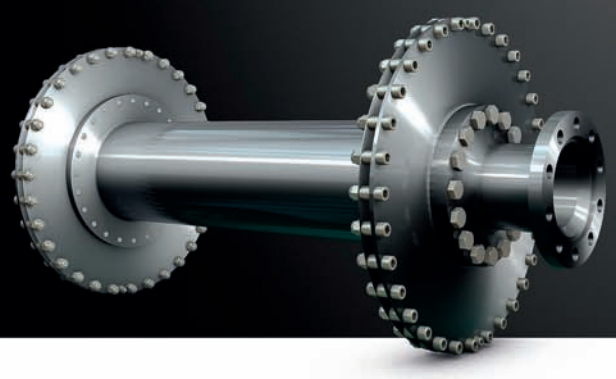
Double-cardanic system with two tandem membranes in series, made of heavy duty plastics for increased angular flexibility or with glass-fibre reinforced plastic for higher torque transmission. Torsionally stiff design, yet compensating considerable axial and angular misalignments. Ideal for long spans due to low weight and high strength as so eliminating the need for additional intermediate bearings. Extremely durable, also corrosion- and oil-resistant. Suitable for high ambient temperatures.

Available in any length with up to 10 metres per section. Radially mountable and with minimum maintenance effort. Further handling, maintenance and cost benefits by the omission of additional components, such as bearings and foundations.

torque range	1 to 40 kNm
elastic material	PA
	GFK
temperature range	–40° to +150°C

more information	www.centa.info/cd-c

CD-M



CENTADISC-M

High-performing drive shaft with tandem membrane. For light-weight design.

Double-cardanic system with two tandem membranes in series and an intermediate tube made of steel or carbon-fibre reinforced plastic. Torsionally stiff design, yet capable of compensating considerable axial misalignments. Ideal for long spans due to low weight and high strength as so eliminating the need for additional intermediate bearings. Extremely durable, also oil-resistant and suitable for high ambient temperatures.

Available in any length with up to 10 metres per section. Radially mountable and with minimum maintenance effort. Further handling, maintenance and cost benefits by the omission of additional components, such as bearings and foundations.

torque range	12.5 to 650 kNm
more information	www.centa.info/cd-m

CP

CENTA CLUTCH PACK

Versatile clutch coupling with flange bearing. For short engaging operations and effective protection against mechanical loads.

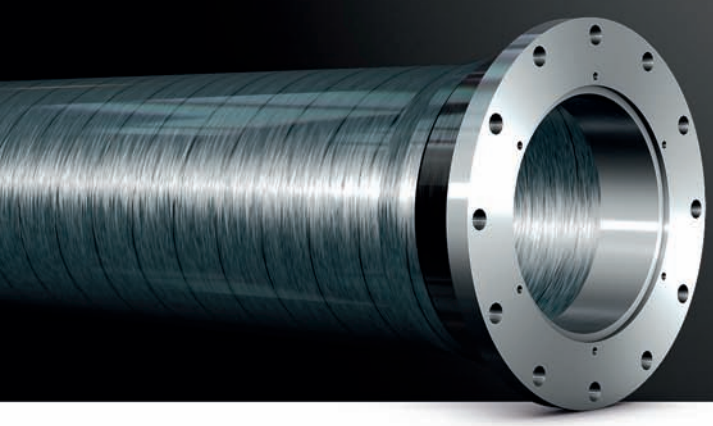
Combination of a torsional coupling with an electromagnetic clutch coupling, installed inside a flanged bearing housing. Highly robust design with reliable bearing. Allows starting and stopping the driven unit under load and protects connected shafts and bearings against harmful reaction forces. Effectively ventilated with high allowable energy loss. Short total length, extremely economic design when compared to standard hydraulically operated couplings.

Can be operated with on-board voltage. Delivered preassembled. With flywheel connections acc. to SAE.

torque range	0.7 to 4.2 kNm
elastic material	dependent upon the coupling installed
temperature range	dependent upon the coupling installed
more information	www.centa.info/cp

CARBON

FH



CENTA CARBON

Light-weight drive shaft made of carbon-fibre reinforced plastic. For energy-efficient power transmission while simultaneously permitting increased velocities of the driven machines.

Developed in cooperation with the Technical University of Darmstadt and leading classification societies. Strength and stability comparable to steel, but significant savings in weight. Combinable with a variety of flexible couplings and connecting elements for optimum adaption of the torsional situation. Extremely durable and noise damping. With low thermal expansion, fatigue-free and corrosion-proof.

Available in any length with up to 10 metres per section. Further handling, maintenance and cost benefits by the omission of additional components, such as bearings and foundations.

torque range	0.1 to 650 kNm
elastic material	CFK
temperature range	–40° to +90°C
more information	www.centa.info/carbon

CENTA FH

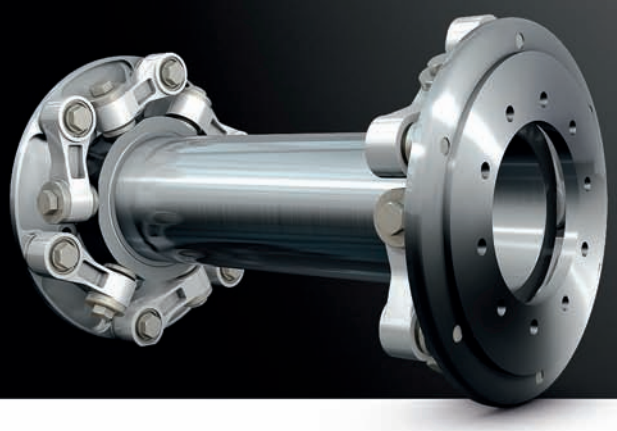
Flange bearing to protect engine crankshafts from high bending moments. For compensation of high forces resulting from large deflection angles of connected components.

Robust flanged bearing housing made of tempered aluminium. Extremely easy maintainable design on durable bearing. Takes up reaction forces and transmits them to the flywheel housing for the protection of the crankshaft and its bearing. Also available with speed-controlled centrifugal clutch for soft engagement of connected components. Extremely lightweight and compact design. Effectively ventilated.

Minimum mounting and maintenance effort. Preassembled as unit for flywheel connections acc. SAE.

torque range	0.77 to 24 kNm
elastic material	dependent upon the coupling installed
temperature range	dependent upon the coupling installed
more information	www.centa.info/fh

CL



CENTALINK

Torsionally stiff drive shaft with outstanding kinematics. For reliable misalignment compensation and smooth operation.

Equipped with links designed for push and pull, and bolted together with flexible rubber bushes. Extremely high-performing and torsionally stiff design with linear characteristic. Unique design with ability to compensate axial, radial and angular misalignments. In addition, offers the utmost degree of electrical insulation and reliable interruption of structure-borne noise. Protects the system against electrical corrosion and ensures significant reduction in noise transmission.

Reduces installation time to a minimum and keeps lifecycle costs low. Available in optional intermediate and special sizes within the wide standard series. Also available as carbon-fibre or glass-fibre design.

torque range	3.3 to 150 kNm
temperature range	–45° to +80°C

more information	www.centa.info/cl

CS-V

CENTASTART-V

Speed-controlled centrifugal clutch with high flexibility. For zero-loss power transmission.

Combination of a highly flexible rubber element, subjected only to compressive stress, and several centrifugal weights with friction lining connected by tension springs. Thermally resistant design with precisely determinable engaging speed. Allows complete separation of frictional connection as well as soft engaging and slip-free power transmission when reaching engagement speed. Extremely compact dimensions, additionally protects against overload.

Available in numerous standard and special designs. With flywheel connections acc. to SAE. Also available for non-standard flywheels.

torque range	0.08 to 2.5 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cs-v

CX-B

CX-K

CENTAX-SEC-B

Robust coupling in economic design. For drives with high axial misalignments.

Ring element featuring high torsional flexibility and radial capacity, combined with axial pins and bushes. Very reliable design, easy to install. With medium to high torsional flexibility. Available in various Shore hardness, ensuring optimum tuning of the torsional system. Dampens torsional vibrations and shocks and compensates considerable axial and radial misalignments. Effectively ventilated and with high allowable energy loss. Also available as segmented design.

Mounted axially or radially with minimum effort. Extreme easy maintainable and durable.

torque range	5.5 to 260 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cx-b

CENTAX-K

Torsionally high flexible coupling with compact dimensions. For maximum mounting ease.

Ring element featuring high torsional and radial flexibility, combined with elements of coupling type CENTAFLEX-K (page 35) which features axial and angular flexibility. Design with highly compact dimensions and mounting ease. Optimum adaption to the individual torsional requirements by use of various degrees of Shore hardness. Dampens torsional vibrations and shocks and compensates considerable axial and radial misalignments. Also flexible in angular direction. Available in numerous standard and special designs.

Blind assembly for minimum mounting effort. With flywheel connections acc. to SAE. Also available for non-standard flywheels and with CENTALOC clamping hub (page 32 · CF-B).

torque range	1.1 to 6 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cx-k

CX-NL

CX-G

CENTAX-SEC-NL

Torsionally high flexible coupling with linear characteristic. For applications in soft mounted drive concepts.

Ring element featuring high torsional and radial flexibility, combined with flexibility in axial and angular directions. Designed with amply dimensioned secondary inertia. With high torsional flexibility and extreme variable adaption to the individual torsional requirements by use of various degrees of Shore hardness. Dampens torsional vibrations and shocks and compensates considerable axial, radial and angular misalignments. Effectively ventilated and with high allowable energy loss.

Minimum mounting effort. Fail-safe device optionally available. With flywheel connections acc. to SAE.

torque range	1.1 to 25 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cx-nl

CENTAX-SEC-G

Highly elastic membrane coupling with high misalignment capability. For use in flexible-mounted drive concepts.

Rubber element featuring high torsional and radial flexibility, combined with a membrane flexible in axial and angular directions. With high torsional flexibility and especially ideal system adaption by selection of one row or multi-row arrangement and different degrees of Shore hardness. Dampens torsional vibrations and shocks and compensates axial, radial and angular misalignments. Effectively ventilated and with high allowable energy loss.

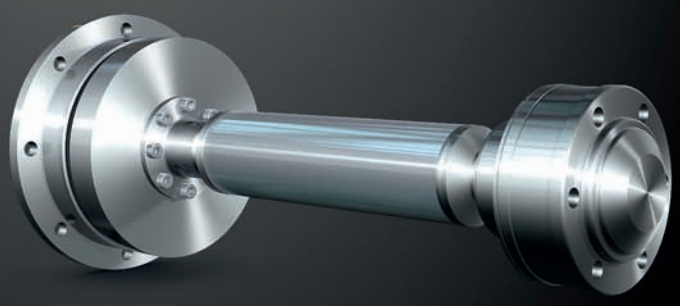
Available with ring element or with segmented rubber element. Fail-safe device optionally available. Flanges and hubs available in numerous variants.

torque range	2.25 to 650 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cx-g

CX-L

CX-TEST



CENTAX-SEC-L

Highly elastic link coupling with excellent misalignment capability. For use in soft-mounted drives.

Rubber element featuring high torsional and radial flexibility, combined with links flexible in axial and angular directions. With high torsional flexibility and especially ideal system adaption by selection of one row or multi-row arrangement and between different degrees of Shore hardness. Dampens torsional vibrations and shocks and compensates considerable axial, radial and angular misalignments. Additionally provides reliable acoustic decoupling. Effectively ventilated and with high allowable energy loss.

Available with ring element or with segmented rubber element. Fail-safe device optionally available. Flanges and hubs available in numerous variants.

torque range	2.25 to 330 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cx-l

CENTAX-TEST

Highly flexible test bed coupling for high speeds. For optimum test conditions.

Based on a highly flexible rubber element, combinable with homokinetic joints, cardan joints, slip joints, etc., as demanded by test requirements. Extremely adaptable design with high torsional flexibility. Dampens torsional vibrations and shocks and compensates axial, radial and angular misalignments. Suitable for high speed ranges and long-term tests.

Available in any length and mounting dimensions adaptable to the respective test situation. Easy mounting as slip joints and elements can be shifted in axial direction. Customised solutions for automatic docking onto combustion engines are optionally available.

torque range	0.28 to 0.45 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cx-test

CX-TT

CX-V

CENTAX-TT

Compact coupling with high performance density. For heavy duty applications with high speeds.

Design with segmented rubber elements, each consisting of two concentrically arranged precompressed rubber segments, which jointly transmit the torque. Extremely short and high-performing design. Characterised by medium torsional stiffness, especially variable adaption to the torsional system by adjusting the number and the arrangement of the segments. Dampens torsional vibrations and shocks and compensates axial and radial misalignments. Effectively ventilated and with high admissible energy loss.

Mounted with minimum effort, replaceable without movement of the coupled units.

torque range	17.6 to 500 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cx-tt

CENTAX-V

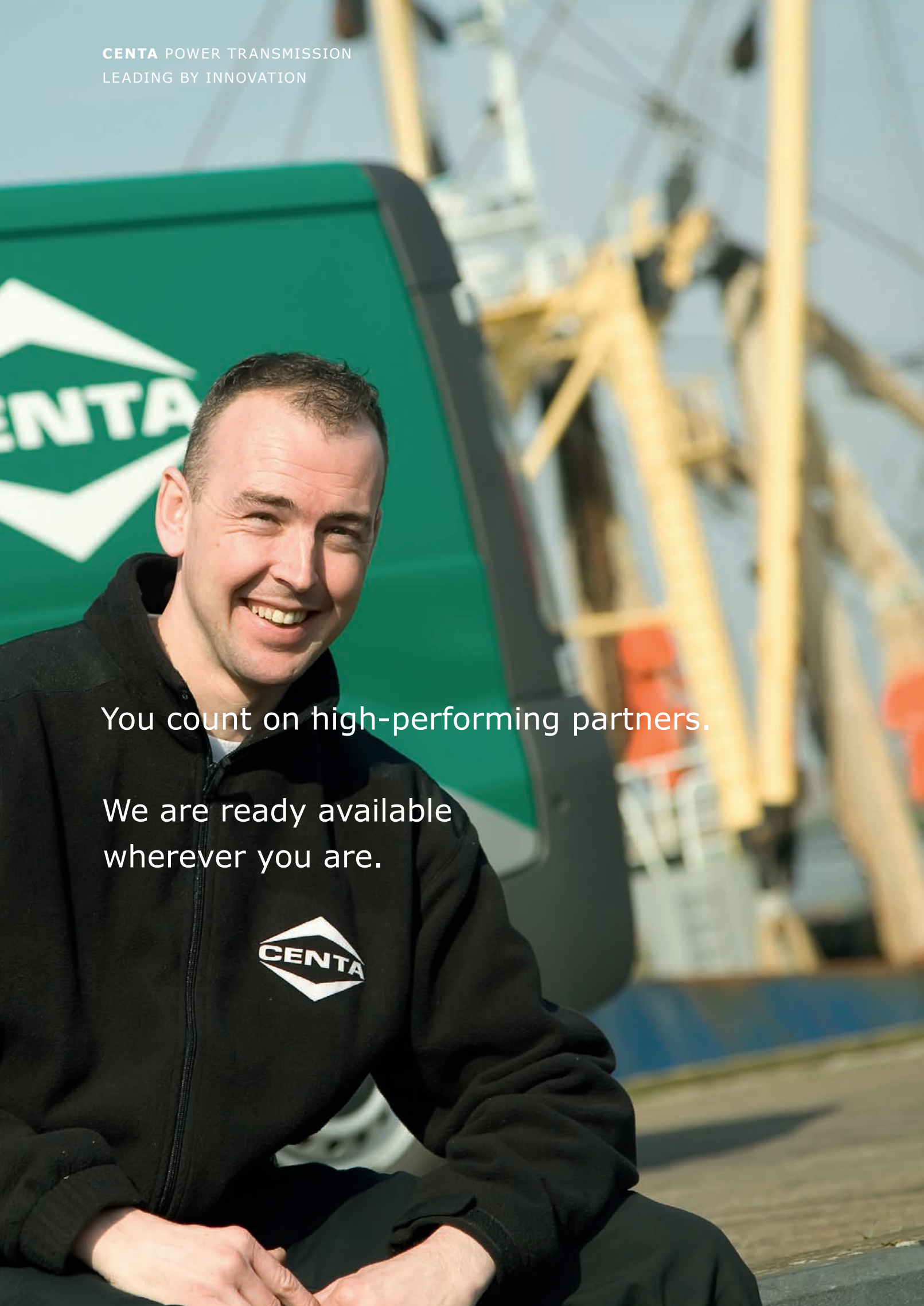
Torsionally highly flexible intermediate coupling with linear characteristic. For drive concepts with cardan shafts.

Safe transmission of torque via a highly flexible precompressed rubber element with precisely centred plain bearings. Characterised by high torsional flexibility with linear characteristic. Dampens torsional vibrations and noise, ensures smooth operation and long service life of the connected units. Also effectively ventilated and with high allowable energy loss.

Available with flywheel connections acc. to SAE and various cardan connections. Also available for non-standard flywheels. Flange bearing CENTA FH recommended for larger deflection angles (page 42).

torque range	0.23 to 50 kNm
elastic material	NR
temperature range	–45° to +80°C

more information	www.centa.info/cx-v



You count on high-performing partners.

We are ready available
wherever you are.

WORLDWIDE

SERVICE

NETWORK

Ten subsidiaries and 27 agencies combine to form a strong sales and service network ensuring expert consulting, local warehouses and quick replacement service all around the world. The 300 employees of the CENTA group have only one goal: to offer you the best service possible.

CONSULTING

Regardless whether you have a first draft or a finished copy, whether you need a standard solution or a completely new design: Your project is central to our consultation. We look forward to supporting you with our creativity and experience in order to find the perfect solution for your application. Let’s talk about it.

MODULARITY

For an optimum adaptation to your application situation, our couplings are available in wide standard series. The modular concept of the system allows for any intermediate and special sizes. In addition, we offer quick and efficient realisation of customised solutions as well as the integration of special parts and components from other manufacturers. For a precise result.

SERVICE

Whether during project planning and design, initial assembly and training, during servicing, measuring and maintenance work, or when procuring urgently needed spare parts:

CENTA is at your disposal at any time.

TEST ENGINEERING

Our designs are subject to extensive torsional vibration analysis, multib-mass and finite element analyses. Several test beds, each of them for different tasks and performance ranges, cover the practical side of our programme. In addition, we are in close contact with external research facilities as well as engineering and planning offices so that nothing is left to chance.

ENVIRONMENTAL MANAGEMENT

We conserve our available resources. To protect the environment, we commit to environmental protection standards according to ISO 14001. All environmental laws and regulations as well as additional recommendations are met and firmly integrated into the company's decision-making and implementation structures. That's how we understand sustainability.

QUALITY MANAGEMENT (IQ)

With an exemplary Quality Management, we ensure that our couplings withstand the roughest assignments. Selected materials combined with regular controls assure the high quality of our products. Our vision is intelligent solutions, which satisfy the highest design and quality demands. Your demands.

WWW.CENTA.INFO

PURE POWER

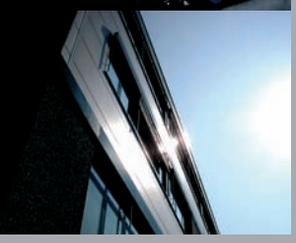
CENTA redefines POWER.
POWER, to us, is more than merely strength.

POWER, to us, is the passion to find the best solution. To continuously improve successful concepts. To set new standards in performance, flexibility and service.

CENTA PRODUCT GUIDE

Photos: gettyimages: Sami Heiskanen · photocase.de: bigway
istockphoto.com: MarkHatfield, cinoby, dell640 · CENTA Nederland

CENTA is the leading producer of flexible couplings for industrial, marine and power generating applications. Worldwide.



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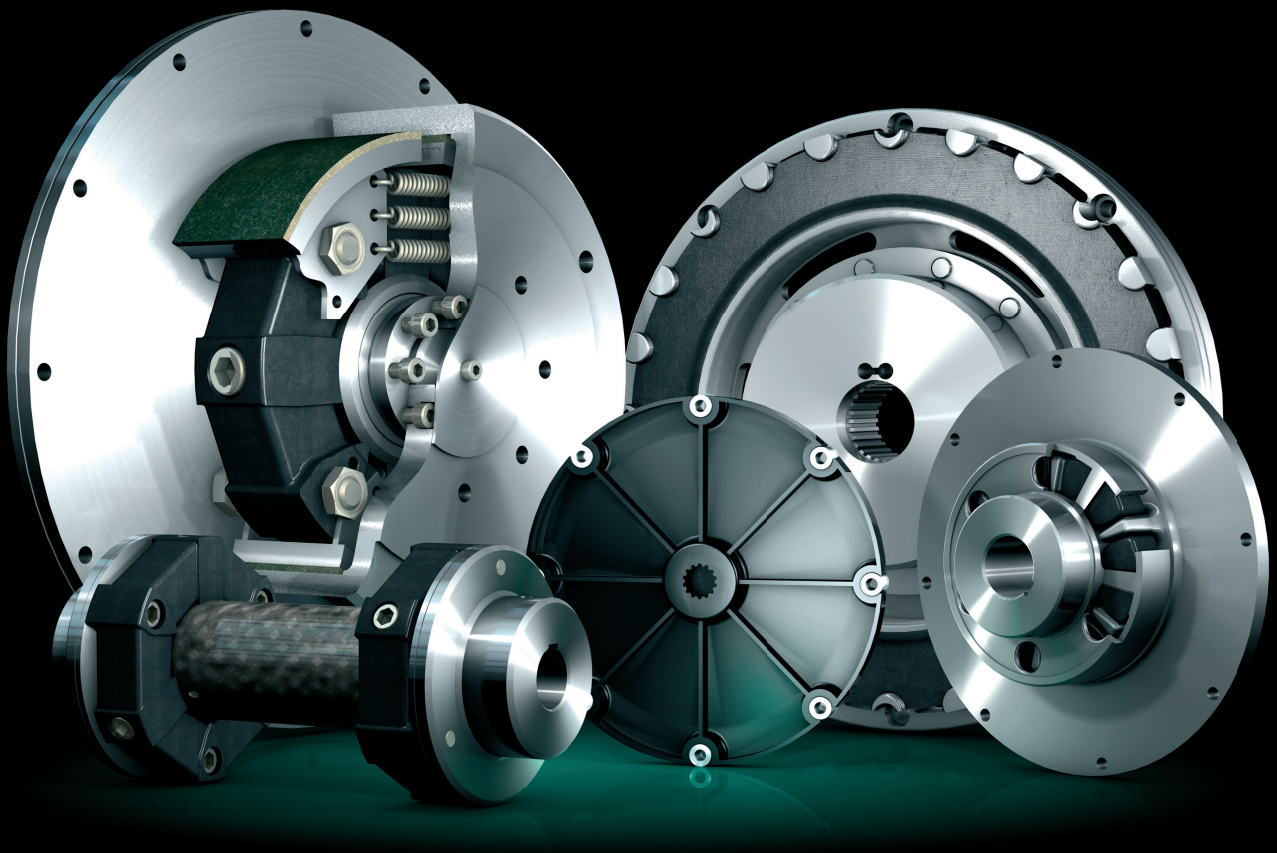
POWER TRANSMISSION
LEADING BY INNOVATION

CENTA

FLEXIBLE POWER TRANSMISSION
COUPLINGS AND DRIVESHAFTS



WWW.CENTA.INFO

CATALOG CENTA-INDUSTRY-E-09-09

Headquarters in Germany

CENTA was established in 1970 and since then has proved to be the most innovative designer of flexible couplings and shafts for difficult torsional vibration applications covering industrial and marine drives worldwide.

Today the international CENTA group of 11 companies is one of the worlds leading manufacturers for advanced power transmission products.

Broad Know How

More than 15 million CENTA couplings are installed worldwide thus providing an extraordinarily wide range of application knowledge ranging from simple drives to complex multi mass applications involving complicated torsional vibration calculations.

Worldwide Service

Subsidiary companies in 10 countries, licensees in 2 and 30 national distributors provide engineering support with local stocks of products and spares close to our customers worldwide.

Quality

Our QA-system was originally certified to ISO 9001 in 1990 by several international inspection and classification societies. About 65 type approvals have been granted to CENTA products.

All new designs are rigorously tested and their technical performance figures precisely measured in our own development department on a variety of dynamic test rigs that can induce torques of up to 750 kNm. CENTA is also certified to ISO 14001 for environment Management Systems.

The complete range of products

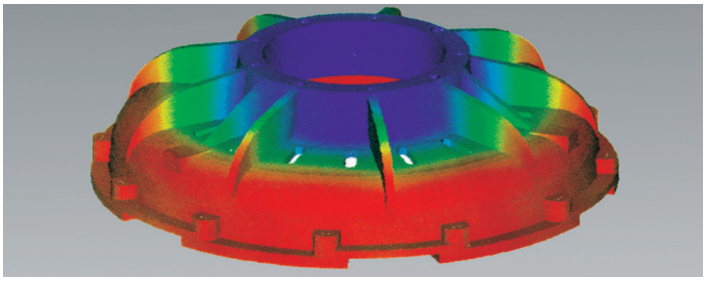
CENTA has 20 different types of flexible coupling, shafts and related products with numerous variations providing ideal solutions for almost every application, without the need to compromise solutions due to product limitations. These flexible couplings and shafts cover a broad torque range, from 10 Nm up to 650.000 Nm and they are successfully applied in all kind of industries, ship propulsions and auxiliary drives.

The next page shows examples of typical applications of our main areas of activities: Construction equipment, agricultural machines, power generation, compressors, train drives, boat and ship propulsion and general machinery.


Torsional vibration calculation and FEA

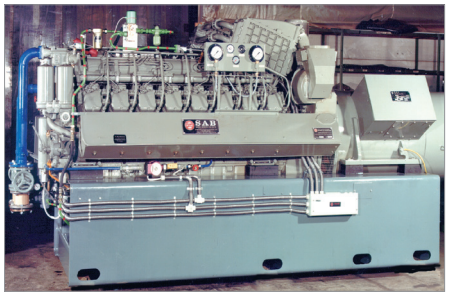

Engineering with 25 off 3D-CAD work stations


Testbench for 750 kNm

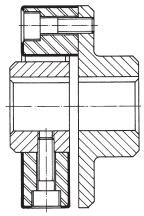
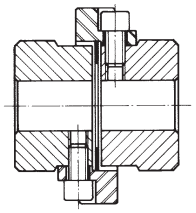
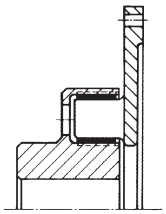
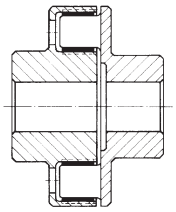
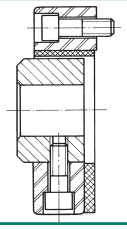
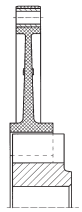
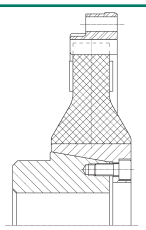
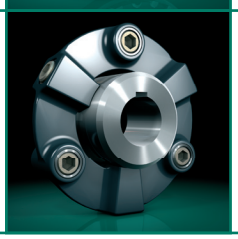
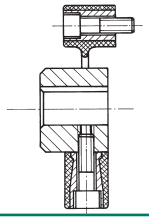

Finite Element Analysis


Computer controlled stock for 5400 pallets

Typical applications of CENTA products



CENTA___THE COMPLETE RANGE OF FLEXIBLE

SERIES			Nominal torque T_{KN} (Nm)	Torsional angle at nominal torque & characteristic	Elastic material & hardness Shore A	Allowable temperature ^{0}C	
CENTAFLEX®-A			10-14000	3^0 to $6^{0\ 1)}$ Linear	natural rubber 50^0 to 75^0 Shore $^{2)}$	-45 to +90	
CENTAFLEX®-B			32-1000 45-1400	4^0 Progressive $2{,}5^0$ Progressive	Polyurethan 90^0 Shore Hytrel 98^0 Shore	-40 to +80 -50 to +90	
CENTAFLEX®-D			280-20000	3^0 to $5^{0\ 1)}$ Progressive	N B R 50^0 to 75^0 Shore	-45 to +90	
CENTAFLEX®-E			75-20000	3^0 to $5^{0\ 1)}$ Progressive	N B R 75^0 Shore	-45 to +90	
CENTAFLEX®-H			100-4000	$0{,}2^0$ to $0{,}3^0$ Linear	Hytrel 98^0 Shore	-50 to +150	
CENTAFLEX®-K			200-5200	0,2	GFRP	-45 +100	
CENTAMAX®-S			100-40000	5 - $16^{0\ 1)}$ linear	natural rubber or silicone 50^0 - 75^0 Shore	-45 to +90 -40 to +120	
CENTAFLEX®-X			10-1500	$0{,}12^0$ Linear	Zytel	-50 to +150	

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1) depending on size
2) standard version: natural rubber; temperature resistant, special Silicone possible

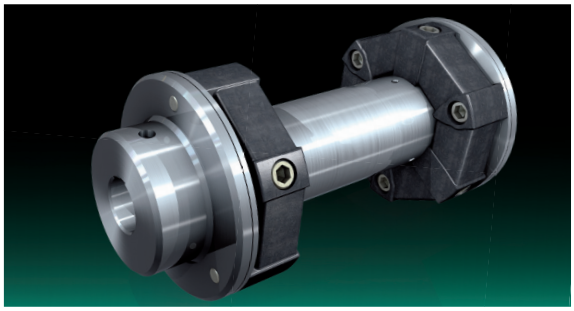
COUPLINGS FOR INDUSTRIAL APPLICATIONS

	Oil-resis-tant	Flexibility			Important Features	Important Areas of Application
		axial	radial	angular		
	○	●	●	●	Very versatile; in every aspect very flexible; free of backlash; adaptable; free of wear; numerous special designs, in particular flexible universal joint shafts. The original, patented design from the inventor.	Flexible couplings to be mounted on new or existing drive elements; ideal for application with considerable misaglinment, such as on diesel-engines, especially for front-power take-off; for generators, compressors, pumps, boats, etc. or for shaft to shaft drives with electric motors.
	●	●	◒	◒	Economical; simple, though of high quality; axial plug-in (blind fitting) jaw-coupling. Hubs of steel, bolted on claws of precision pressure die-cast aluminium parts with very smooth surface; standardized construction principle allows numerous variation in design; radial exchangability; flexible element can be installed without disturbing hubs.	To connect 2 shafts in all areas of machine drives, e.g. between electrical motors and gear boxes, compressors, pumps; also available with radially removable spacer for centrifugal pumps (DIN 740) or as flexible universal joint shaft of any length up to 6 m. Hubs with finished bore or Centaloc® spline clamping hub or taper bushes.
	◕	◕	◒	◒	Robust, simple, plug-in jaw-coupling; numerous types of flanges; suitable for standard (SAE or DIN) or non-standard flywheels; different lengths of hubs.	Diesel-generator and centrifugal pump sets, as well as similar drives with considerable inertia on the driven side. Type approval from all important classification societies.
	◕	◕	◒	◒	Robust, simple, plug-in jaw-coupling with large permissible finished bores. Various hub lengths. With type 3 radial exchange of rubber element - without disturbing the shafts.	General industrial use for the purpose of connecting 2 shafts, or flange to shaft.
	●	◕	◔	◔	Robust, plug-in, torsionally stiff coupling, always for torsionally subcritical drives, oil and temperature resistant. Type 4 with integrated flange-adaptor SAE 10", 11 1/2" and 14" for diesel flywheels.	Drives for flange-mounted hydraulic pumps on diesel engines - especially with wear resistant Centaloc® spline clamping hub; the ideal and widely used reliable coupling for hydrostatically driven construction machines. Available with a wide variety of pump mounting adaptors for diesel engines.
	●	●	◔	◔	A simple and economic blind assembly, coupling solution, using plastics and steel, for low inertia drives, such as hydrostatic pumps. A complete drive solution which includes the pump mounting plate is offered as required.	Drives for flange-mounted hydraulic pumps on diesel engines - especially with wear resistant Centaloc® spline clamping hub; the ideal and widely used reliable coupling for hydrostatically driven construction machines. Available with a wide variety of pump mounting adaptors for diesel engines.
	○	◕	◒	◕	Torsionally very soft, free of backlash, suitable for blind fitting, ventillated all over, dimensions to SAE J620. Hubs can be modified for all kind of shafts and splines , also with wearfree CENTALOC clamping, or with Taper-Lock bush.	Torsionally dificult Diesel drives, where the resonances must be shifted below idling speed. E.g. Splitter gears, screw compressors, boat drives, heat pumps, gen-sets, locomotives, pump sets, ship propulsion, also available with Type Approval from leading societies.
	●	◔ / Series G / ◒	○ / Series G / ◒	◒ / Series G / ◒	Torsionally very stiff, free of backlash, angulary flexible coupling; oil- and temperature-resistent.	Exactly aligned drives for precise, torsionally stiff and backlash free with exact, angular transmission, e.g. step motors, tachometer drives, feeding drives. Torsionally stiff universal joint shaft.
	very well suited ●	not suited ○				

CENTA Flexible shafts for marine and industry

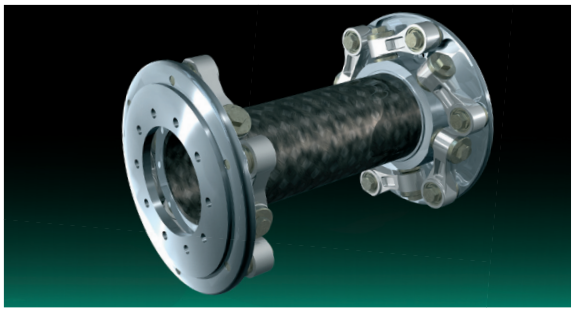
CENTAFLEX series AG, AGZ and A-GS

Torsionally soft, these economic flexible shafts use the outstanding CENTAFLEX A series elements, which compensate for axial, radial and angular misalignment. Suitable for all kind of applications. Continuous angular deflections of up to 2 degrees, per element, is possible
Torque range up to 14 kNm.



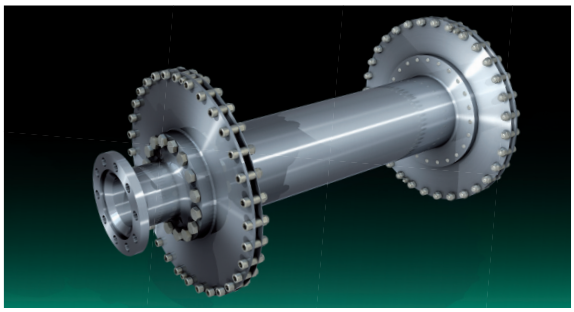
CENTALINK The silent drive shaft

Torsionally stiff but capable of compensating for substantial misalignments of all kinds while dampening transmitted noise. Proven over the years in many applications in shaft lines of up to 25 m in length, e.g. windturbines, pump sets and ship propulsion.
Torque range up to 540 kNm.



CENTADISC The lightweight drive shaft

Based on the proven and patented steel membrane design of the CENTAX series M coupling, and compensating for all kinds of misalignment. Lengths up to 10 m. Using intermediate bearings and additional membranes any length of shaft can be provided.
Torque range up to 500 kNm and more.



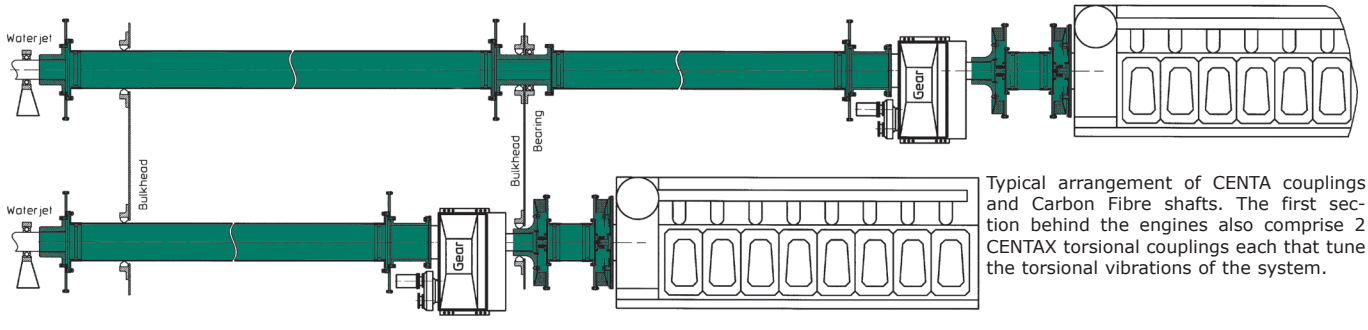
Shaft material

All flexible shafts can be manufactured using tubes from steel (or other conventional metals) or composites. CENTA has been in the forefront of composite shaft technology since 1996, delivering complete flexible shafts for fast ferries, naval and super luxury yachts, cruise ships and pump sets.

CENTA System engineering

CENTA engineers complete shaft systems including couplings, clutches, bearings and bulk head seals, having carried out the necessary torsional vibration and critical speed calculations. Complete flexible shaft systems up to 25m length and capable of transmitting 600 kNm torque have been provided for fast ferries with aluminium hulls.

CENTA shaft systems, especially those manufactured from composites connected by membranes provide light weight installations able to flex in all directions in order to avoid dangerous reaction forces from misalignments, thermal growth, distortion and movement of the hull or frame.
Suitable designs to connect diesel engines with gear units and gear units with water jets, azimuthing propellors and any other kind of driven units are available.



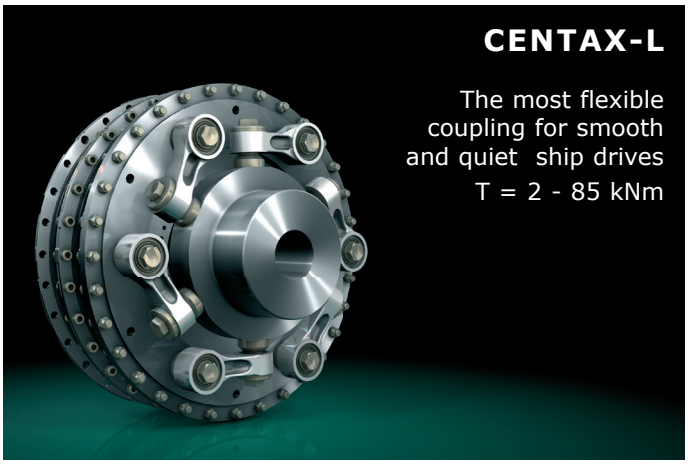
Typical arrangement of CENTA couplings and Carbon Fibre shafts. The first section behind the engines also comprise 2 CENTAX torsional couplings each that tune the torsional vibrations of the system.

CENTA power transmission for all flexible connections from engine to waterjet

CENTAX®-*SEC*

***S**uper **E**lastic **C**oupling system*

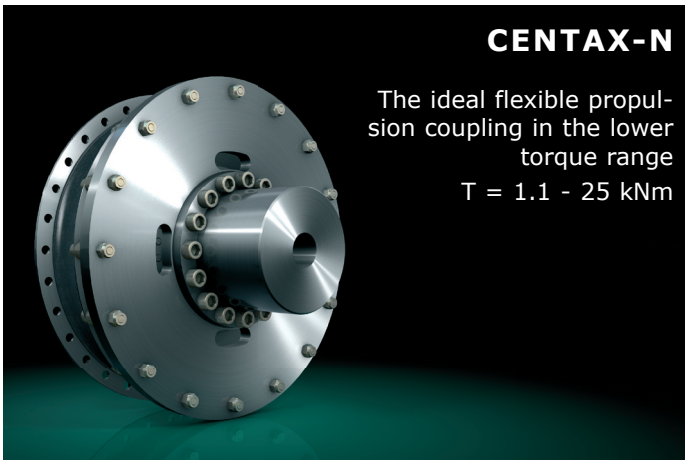
The complete range of couplings for main and auxiliary drives and large stationary diesel driven generators. The torque range covers almost all four stroke diesel engines available on the world markets.



CENTAX-L

The most flexible coupling for smooth and quiet ship drives

T = 2 - 85 kNm



CENTAX-N

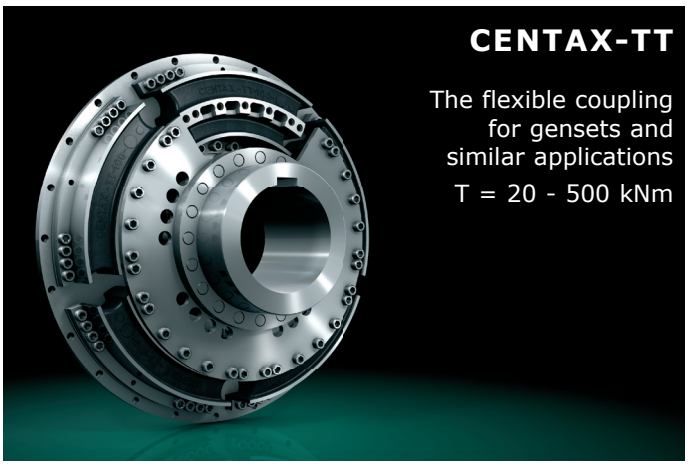
The ideal flexible propulsion coupling in the lower torque range

T = 1.1 - 25 kNm

CENTAX-GFS2

The flexible coupling for ship propulsion

T = 20 - 650 kNm



CENTAX-TT

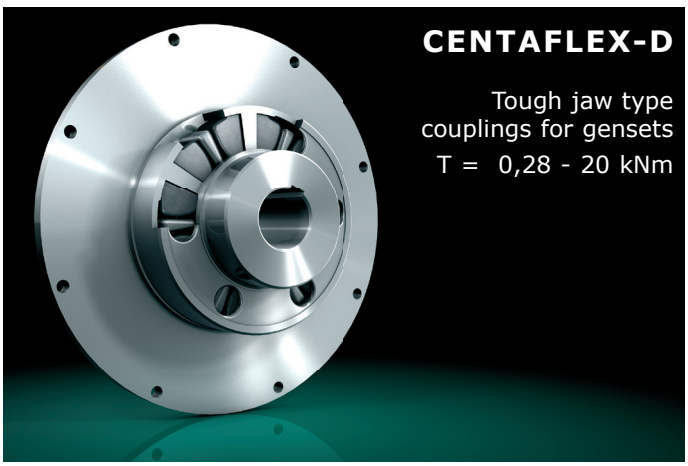
The flexible coupling for gensets and similar applications

T = 20 - 500 kNm

CENTAMAX-S

Torsionally highly elastic couplings for Diesel engines

T = 0,1 - 40 kNm



CENTAFLEX-D

Tough jaw type couplings for gensets

T = 0,28 - 20 kNm

CENTA POWER TRANSMISSION

LEADING BY INNOVATION

CENTA is the leading producer of flexible couplings for industrial, marine and power generating applications. Worldwide.

A family business with headquarters in Haan, Germany

Subsidiaries in 10 major industrial countries.
Agencies in 25 other countries.
Worldwide after-sales service with combined forces of over 400 staff.

Our success: over 15 million CENTA couplings installed since 1970.

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