

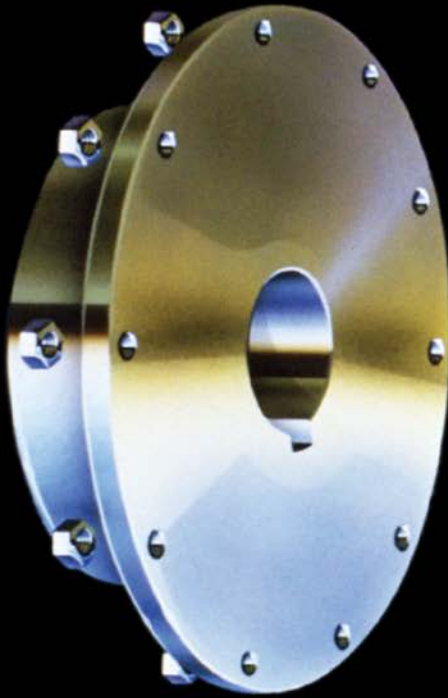
KOP-FLEX®



MAX-C® RESILIENT

SHAFT COUPLINGS

REGAL®



Rigid Hub



Sleeve



**Resilient
Blocks**



Hub

The Kop-Flex® MAX-C® Coupling Advantages:

- Transmits very high torque and cushions system shock
- Never needs lubrication
- Easy to assemble and install
- Operates in wet, gritty, hot and other tough conditions
- Can increase drive train and gear component life
- Does not need routine maintenance



Theory of Operation

A flexible coupling must perform two tasks: (1) transmit torque from driving to driven shaft and (2) accommodate shaft misalignments - angular, offset and axial. However, many applications require a third function. These applications involve severe torque fluctuations, starting and stopping of high inertia machinery, shock and impact loading and certain other types of torsional vibration problems characteristic of reciprocating equipment. This third function is to then provide the proper degree of resilience and damping.

Resilience is the capability of the coupling to assume relatively large torsional deflections under torque. That is what the MAX-C coupling supplies, a means to attenuate and dampen torsional shock loading and vibration while accommodating misalignment.

Coupling Design is the Key

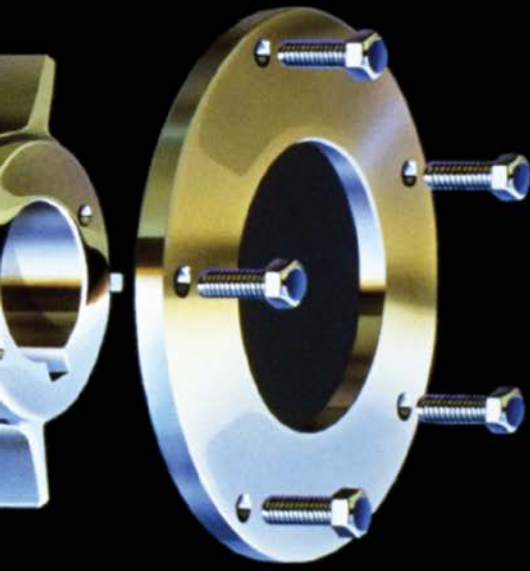
Kop-Flex MAX-C couplings employ three principle components: an outer sleeve, an inner flex hub, both made of metal and resilient drive blocks. When assembled, the

flex hub and sleeve form pockets (see cover photo) into which specially designed elastomer blocks are placed. The elastomer blocks are incompressible but the pockets allow block deformation under torque. The pockets are completely filled only under conditions of extreme overload and the coupling thus combines high load carrying capability with resilience. This provides smooth power transmission, day after day, year after year, without the coupling ever needing lubrication.

Superior Service Life

The Kop-Flex elastomer block materials (several different block compounds are available) are the key to the MAX-C coupling's ability to provide consistent torque transmission with long service life. No other coupling we know of will duplicate its performance and longevity. Block life is long, usually five years or more, but the blocks are easy to replace if useful service life has been reached. This makes the coupling virtually as good as new.

MAX -C[®] Resilient Shaft Couplings



End Ring

		Max-C [®] Coupling Type		
		Type K2	Type CB	Type WB
Electric Motors	Crane Drives	✓		
	Bow Thruster	✓	✓	
	Pumps	✓		
	Reduction Gears	✓		✓
	Feed Rolls	✓		✓
	Fans	✓		✓
	Conveyors	✓		
	Manipulators	✓		✓
Synchronous & Variable Frequency Motors	Centrifugal Compressors		✓	✓
	Speed Increaseers			✓
	Mill Pinions			✓
	Kiln Drives			✓
	Crushers			✓
	ID & FD Fans			✓
Diesel Engines	Generator Sets		✓	
	Fire Pumps		✓	
	Torque Convertors		✓	
	Marine Gears		✓	
	Dynamometers		✓	
	Drill Rigs		✓	
	Main Propulsion		✓	
	Bow or Stern Thruster		✓	

Prime Mover

b

Kop-Flex[®] MAX-C[®] couplings are available in 3 different models for use in different applications. The descriptions which follow as well as the general selection table should simplify your specifying.

MAX-C Type K2 Coupling for Standard Applications

The MAX-C Type K2 coupling is for use on shafts up to 8¾". It is designed for high shock and general duty industrial applications where a maintenance-free, non-lubricated coupling is desired.

Modern high-speed rolling and forming mills, feed and runout table roll drives plus crane drives for such as overhead cranes, bridge and trolley drives are typical Type K2 applications. FD and ID fan drives, oil and drilling rigs and material handling conveyors also use type K2.

Special elastomer for high strength and durability is utilized in the MAX-C Type K2 coupling. This elastomer is available in one compound and one hardness only.

MAX-C Type CB Coupling for High Torsional Resiliency on Shafts from 2½" to 17"

MAX-C Type CB coupling (low torsional stiffness) is characterized by high resiliency. Most diesel engine drives, where connected equipment shafts are from 2½" to 17" in diameter, can use the Type CB. It is specified extensively in marine applications where its resiliency and damping reduces vibration throughout the wide range of operating speeds demanded in ships.

The elastomer elements in the CB are available in different hardness grades to provide a wide range of resiliency and damping. This gives the torsional system analyst a choice of properties to obtain optimum drive system characteristics.

Torsional windup at peak torque is up to 7° with catalog designs. Special designs can be provided to achieve considerably greater values. Even more windup is possible by using two couplings in tandem.

MAX-C Type WB Coupling for Heavy-Duty Drives on Shafts from 2½" to 34"

The MAX-C Type WB coupling is designed to handle extremely high torques but at smaller angles of torsional displacement. That is, it provides higher torsional stiffness than the Type CB and has less resiliency than the CB. Torsional stiffness values are still quite low and fall into a range which is particularly suited for drives in which high impact loads are a factor and where moderate torsional stiffness and high damping capacity are needed such as synchronous motor and variable frequency (variable speed) motor drives. As with the CB, the WB coupling utilizes elastomers of different hardness grades to provide a wide range of torsional stiffness and damping properties.

For more information, see our Industrial Products Couplings Catalog – Form 8887E

KOP-FLEX[®]

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APPLICATION CONSIDERATIONS

The proper selection and application of power transmission products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Regal Beloit America, Inc. and/or its affiliates ("Regal") with respect to the use of products and components is given in good faith and without charge, and Regal assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

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