mecaloc®

Frictional shaft hub connections
Shrink Discs
Shaft Couplings with frictional locking

When you need ***absolute*** interference.....

www.nenco.org

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Frictional locking
Shrink Discs
Couplings with Shrink Discs

NENCO

Introduction to frictional shaft hub locking

NENCO, an ISO-9001 certified company was established in 1985 specializing into the design, manufacture and distribution of mechanical power transmission products.

NENCO has made pioneering contribution in frictional shaft hub locking and is the first Indian company to be awarded with a patent for improvements in the design of frictional connections.

Since then, NENCO has continued its research and development in this branch and have offered hundreds of fictional locking solutions for shaft diameters ranging from 2-600mm, and torque ratings up to 10,000 kNm. MECALOC devices transmit torque and/or axial force between a shaft and a hub, without a need for cutting a keyway, or a spline, by offering an absolute mechanical interference fit, with an advantage of a slide fit during assembly and disassembly.

The device works on the principal of utilizing the screw tension to convert into radial pressure over a taper wedge. This pressure expands the locking device to generate frictional locking force between the shaft and the hub, to offer a shrink fit. Reversal of the locking force mechanically removes the interference between the locking surfaces.

To a designer, MECALOC frictional locking offers superb advantages in terms of optimizing the space and material as frictional connection offer a very low notch factor as compared to the conventional locking systems based on thermal shrinkage, tapered or flat keys, or splined connections. Cost savings resulting from material savings can add up to almost 60%.

Our products find extensive applications in machine tools, automation, packaging, steel, cement, paper, textile, printing machinery, energy, power generation, mining and other heavy machinery.

More than often, NENCO works in close collaboration with their customers in offering the most optimal frictional shaft hub locking solution for just about any application where a hub connects to a shaft!

Large mecaloc shrink disc couplings for power generation.

CNC turning and machining centres produce parts of highest quality.

Shrink disc tested on an inhouse hydraulic test bench.

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Frictional locking
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Applications

Automation	Flanges & Flywheels	Rolls
Bevel gears	Food processing machines	Robotics
Brake drums	Gearboxes	Shaker screens
Briquetting press	Helical gears	Speed reducers
Cardan shafts	Levers and cams	Stackers and reclaimers
Cartoning machines	Mechanical presses	Sprockets
Carpet making machines	Milk processing machines	Sheaves
Confectionery machines	Machine tools	Sprockets
Clutches	Mixers and stirers	Test benches
Compressors	Packaging machines	Thermal power plants
Conveyors	Printing Machines	Oil refining machines
Conveyor Pulleys	Paper machinery	Weaving machines
Couplings	Pump impellers and rotors	Winches
Crushers	Steel plants	Wind energy
Fans	Soap machinery	Worm gears

Mecashrinc shrink disc for shaft dia 420 transmitting 900,000 Nm torque on a briquetting press in a steel plant.

Bucket wheel excavators

Stackers & reclaimers

Wind energy

Printing machines

Paper machinery

High speed cartoning machines.

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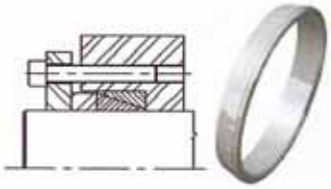
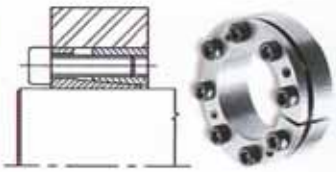
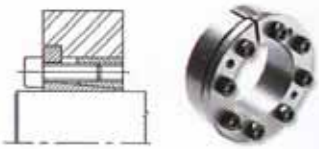
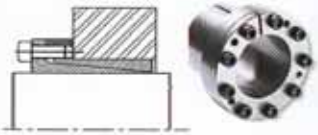
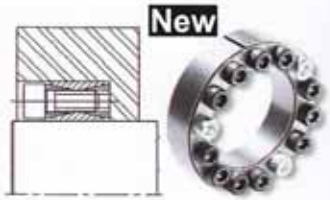
Design Options

Series	Shaft Range	Torque Range	Features	
mecaring		Internal Shaft hub locking		
4051	6-180mm	3Nm - 22,000 Nm	Low torque transmission Lean dimensions Can be used in series Needs customer clamping	
Series	**Shaft Range**	**Torque Range**	**Features**	
mecaioc		Internal Shaft hub locking		
5051	14-400mm	68Nm - 378Nm	High torque transmission Self Centering Concentric No axial positioning	
5052	14-400mm	68Nm - 378Nm	High torque Self Centering Concentric Axial positioning Better perpendicularity	
5057	6-165mm	21Nm-26,200 Nm	Medium torque Optimal d x D ratio Self Centering Concentric Axial positioning	
5072	25-520mm	650Nm-1390 kNm	Very High torque Self Centering High Concentricity	
5050	18-600mm	240Nm-770 kNm	Medium torque Not Self Centering Axial position of hub fixed	

Inch series available on request.

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Design Options

Series	Shaft Range	Torque Range	Features
mecashrince	External shaft hub locking		
6051	14-480mm	30Nm-1310 kNm	Self Centering Suitable for locking hollow shafts
6055	24-262mm	150Nm-18.3 kNm	High torque transmission Self Centering Concentric No axial positioning
6061	15-110mm	160 Nm-26000 kNm	Medium torque transmission Self Centering Concentric
mecashrince	Shaft Coupling with shrink discs		
FSD	70mm-340	6000Nm-853 kNm	Very High torque transmission High Concentricity Self Centering

New

Inch series available on request.

Safety Requirements:

Mecaloc frictional connecting devices need to be commissioned by skilled personnel, specially trained for the correct installation and operation. Failure to do so, may cause damage to the device and also possible injury to personnel as components may be thrown apart with force.

Optimal selection, sizing, with reference to power, speed, torque and adequate safety factors, is necessary for the performance of these devices. Please refer the catalog for the correct selection of the product. Also refer to the installation instructions for individual products before commissioning. If installation instructions are not available, please contact our engineering department for assistance.

Correct tolerances of the mating parts along with accurate alignment of the equipment is mandatory for optimal performance of our devices.

Mecaloc devices are shaft hub locking devices and are designed exclusively for the locking of a cylindrical shaft to a hub for transmission of torsional and axial force within permissible limits. The device is not intended or designed for any other use, than, mentioned hereto before. Mecaloc locking elements are not safety devices and cannot be used as torque limiting devices

All rotating devices need to be protected with suitable guards in accordance with the safety requirements defined, to avoid injury to personnel and damage to equipment and property.