

Since 1946, Climax Metal Products Company has grown into the leading source for engineered shaft locking solutions by providing outstanding customer service. Climax Shaft Collars, Rigid Couplings, and Keyless Locking Devices are manufactured with unsurpassed quality and stocked by distributors throughout North America.



### Keyless Locking Devices

Keyless Locking Devices (KLDs) are mechanical bushings used to connect power transmission components onto rotating shafts.



### Shaft Collars

Shaft collars are used to position or locate a component on a shaft.



### Rigid Couplings

Shaft couplings serve as components to time, join, or align shafts at lower speeds and torque, especially when zero backlash is desired.

## KEYLESS LOCKING DEVICES

Keyless Locking Devices (KLDs) are mechanical bushings used to connect power transmission components onto rotating shafts. Without the use of keyways, KLDs eliminate the problems associated with backlash including fretting, corroding, and wallowing.

KLDs work with straight bores and generous tolerances, reducing component machining and complexity cost. In addition, KLDs are installed and removed using simple hand tools; no heat or high forces are required.



### Keyless Locking Assemblies

Internal bushings installed between the shaft and the component bore, capable of transmitting high torque, thrust, and bending loads

As the high-strength screws are tightened, tapers simultaneously apply radial force on the shaft and the component bore, creating a high pressure mechanical interference fit

No key means infinite angular and axial positioning for precise alignment and timing

Easily mounted and removed in the field with standard hand tools

### Shrink Discs

External locking device mounted on the outside of a hub or hollow shaft, compressing it onto the driven shaft. Most typical application is hollow shaft gearbox

As the screws are tightened, tapers create a radial force on the hollow shaft compressing it onto the driven shaft creating a high-pressure mechanical interference fit

Keyless for infinite timing capability. Easily mounted and removed with ordinary hand tools

Outer rings are supplied zinc plated for added corrosion protection

## SHAFT COLLARS

Shaft collars are used to position or locate a component on a shaft, limit the travel of a shaft in reciprocating applications, or used as a spacer between components. Climax Metal Products Company provides a broad assortment of shaft collars to suit many customer applications. Climax collars fit imperial shaft sizes from 1/16" through 6" and metric shaft sizes from 2mm to 150mm. Shaft collars are made from mild steel, type 303 or 316 stainless steel, aluminum, or acetal. Steel collars are available in multiple finishes including black oxide, clear zinc, or yellow zinc.



Global Shaft Collars are an import line offered by Climax. Import shaft collars are available to fit imperial shaft sizes between 1/8" and 6" and metric shaft sizes from 3mm to 80mm.

Set Screw	One-Piece	Two-Piece
Most economical collar design	Additional holding power over set screw collars	Additional holding power over one-piece collars
Single cup point set screw impinges on the shaft	Single recessed or non-recessed tangential screw does not mar the shaft	Two recessed or non-recessed tangential screws do not mar the shaft
Requires disassembly of shaft components upon replacement	Requires disassembly of shaft components upon replacement	Replace without major disassembly of other components

## RIGID COUPLINGS

Shaft couplings serve as components to time, join, or align shafts at lower speeds and torque, especially when zero backlash is desired. Climax Metal Products Company provides a broad assortment of rigid shaft couplings to suit many customer applications. Climax rigid couplings fit imperial shaft sizes from 1/4" to 4-7/16" and metric shaft sizes from 6mm to 50mm. Rigid couplings are made from mild steel with a black oxide finish or type 303 stainless steel. Couplings are manufactured with and without keyways. Step-bore couplings are also available to attach two shafts of differing sizes.



**H2CC-Series Large Bore Two-Piece Clamping Couplings** transmit higher loads than antiquated cast iron couplings in a lighter and smaller envelope. The recessed screw head design provides an outside surface free of major projections for safety. H2CC-Series couplings are made from steel with a black oxide plating available to fit imperial sizes from 1-15/16" through 4-7/16".



Global Rigid Couplings are an import line offered by Climax. Import rigid couplings are available to fit imperial shaft sizes between 1/4" and 2" and metric shaft sizes from 6mm to 50mm.

Set Screw	One-Piece	Two-Piece
The most economical rigid coupling design	4 socket head cap screws provide holding power	8 socket head cap screws provide the holding power
Cup point set screws impinge the shaft, provides the holding power	Additional holding power over set screw couplings	Additional holding power over one-piece
Available with 4 set screws for extra holding power	Requires disassembly of shaft components upon replacement	Install/Replace without disassembly of other shaft components
Requires disassembly of shaft components upon replacement		Re-machinable couplings available for economical custom bores