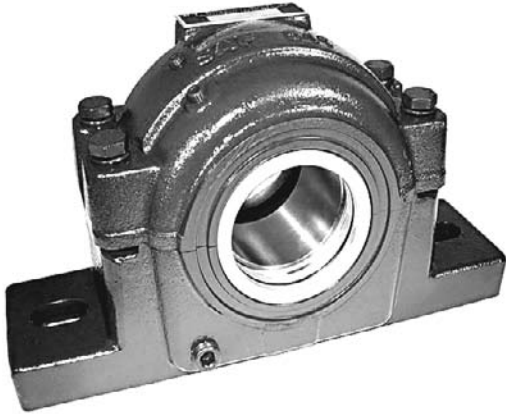


SAF Split Pillow Blocks



Features and Seal Options



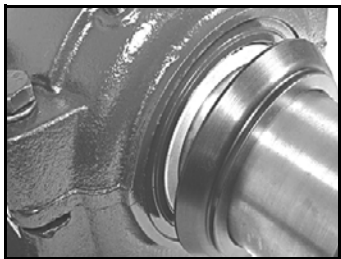
LER Seals PER Seals LER-DC EPR Cover

The new PTI SAF Series Pillow Blocks include unique features, multiple seal options and are stocked in 3 different housing materials: Cast Iron, Ductile Iron and Cast Steel. These units can handle a variety of application conditions including heavy loads, high and low speeds, grease or oil lube and offer seal options for the most challenging environments. This block is extremely versatile and economical. The SAF Block has industry standard mounting and shaft center height dimensions.

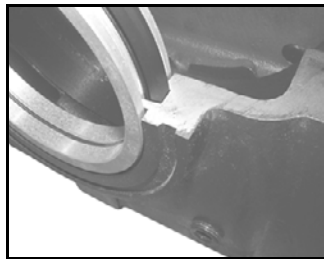
The new solid base housing is one of the most robust blocks available. The design includes an internal oil cross-port channel to ensure balanced oil levels for both sets of rollers of the spherical bearing. If high speed is a requirement, double row ball bearings can also be used. For circulation oil systems, large drain holes are standard on each side of the block. The drains accept standard oil site glasses.

Housing caps and bases are paired to ensure a controlled bearing fit; housing match marks are standard. Large pry slots help make access to the bearing easy.

The LER is a popular standard labyrinth seal for SAF blocks. The PER interchanges completely and includes an o-ring shaft seal for a snug fit on the shaft. The O-ring will cause the PER to generally spin with the shaft. The EPR end cover seals one end of the housing.



LER-DC Dust Cover/Wiper Seal can be used with both LER or PER seals. They provide an additional barrier and flinger for contaminants. The housings machined face provides for an ideal contact for the wiper seal to shroud seal area and create an additional labyrinth.

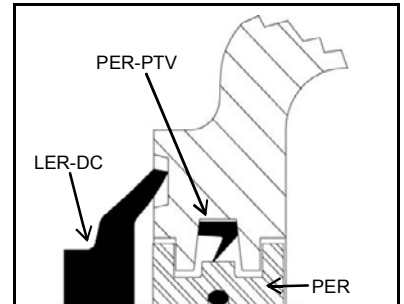


PER-PTV-ring is a lip contact seal installed over the PER and within the housing seal grooves. The PTV-ring seal allows the grease to slowly purge creating a barrier for contaminants. The lip contact seal can be reversed to also retain the grease for applications where contamination is of less concern or access for re-lube is difficult.

Seal Options:

1. LER Standard Labyrinth Seal
2. LER-DC Dust Cover/Wiper Seal for LER or PER Seals
3. PER Labyrinth with O-ring
4. PER-PTV-ring Seal for use with PER Labyrinth
5. TER Taconite with V-ring face seal
6. TER-OS Taconite Seal with Oil Seal.
7. EPR End Covers

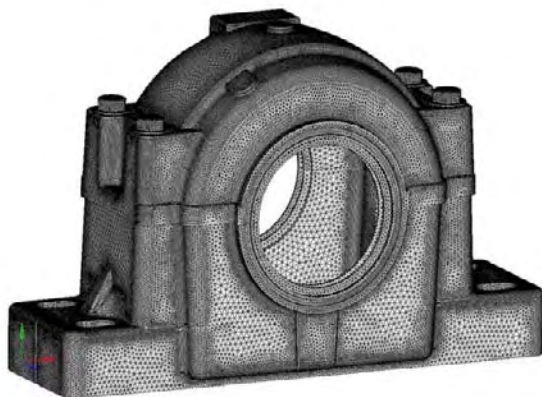
The LER-DC in combination with the PER and PER-PTV Seal, provides optimum protection for low speed application in harsh environments.



TER-OS Seal

The TER taconite seal is available in two versions...one with a V-ring face seal and the other with an oil seal as a shaft contact seal. Both include a felt shaft seal and an o-ring seal for the housing side to provide a tight yet flexible fit.

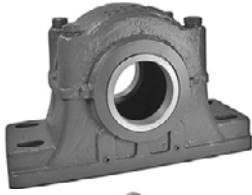
The Design



Finite Element Analysis "mesh" construction (shown on left) provides the model for analyzing static loads. The loading model is shown on the right.



More Split Pillow Blocks & Special Purpose Units



SAF and SDAF blocks for 222, 230, 231 and 232 series spherical roller bearings thru 18" shaft diameter are stock and larger sizes are available on request. Smaller sizes will accommodate double row ball bearings for high speed applications. Ductile Iron and Cast steel housing are also available, with stock typical on the popular sizes. Each have taconite seals and end cover options.



SDAF Asymmetric Series Split Blocks allow the spherical bearing to be positioned closer to the shaft locking device which reduces the resultant bending moment. Typically these split blocks are used on shaft sizes that exceed 18" diameter. However smaller units of this asymmetric design are also possible. Housings can be provided in Cast Iron, Ductile Iron or Cast Steel and for 231 and 232 large bore spherical roller bearings. The SE vertical labyrinth sealed units include an internal contact lip seal.



The new SNG Metric Plummer blocks interchange with the PTI SNHF series. Some additional seals are available for both the SNG 500 and SNG 600 series (for 222 and 223 series spherical bearings). Like the SAF series, the SNG will accommodate double row ball bearings for high speed applications. With the SNG unit, it will also accommodate 200 Series block requirements (direct mount) using felt seals and straight bore spherical bearings. FSSNG 4-Bolt Base units also available. SN 500, 600, 200 and 300 Series Metric Blocks are also available from stock.



The S3000 and SD3100 Series are both large bore adapter mounted Metric Plummer Blocks, designed for 230 and 231 Series Spherical Bearings. The SD units are available in cast iron, ductile and cast steel to 380mm shaft diameter. The S3000 Blocks are typically cast iron and available in ductile on request and thru 260mm Shaft diameter. These blocks are industry standard European Metric designs. Taconite seals and End Covers also available.



HSPA Take-Up Units are generally made to order and can be provided in shaft sizes thru 360 mm. Standard units accommodate 230, 222, 231 or 232 series tapered bore spherical bearings. These are normally used in pairs to tension large overland conveyor belt systems. Custom dimensions are possible to accommodate existing guides.



HFO & HFOE units are specifically designed for high speed fans intended for oil lubrication. Internal slingers distribute the oil lubricant evenly. Oil sight glasses are included for monitoring lubrication levels. These units will also accommodate oil circulation systems. Direct mount (straight bore) spherical bearings are the standard units. Housings for taper bore (adapter mount) bearings are available on request. Standard units are normal stock thru 170mm shaft diameters. Larger sizes on request. Housings are typically cast iron; ductile iron is available on request.

Custom Housings

PTI will modify existing housings to accommodate special mounting or application requirements. Customized cast housing shapes and features are also possible.



Oil Sight Glass



Optional Thermal Sensors on the name plate allow a quick visual of the operating temperatures. Sensors can be fitted to the name plate.



PTI can provide housings prepared to receive vibration and thermal sensors.



Split Block Bearings & Accessories



Spherical Roller & Double Row Ball Bearings



Spherical Roller



Double Row Ball

Spherical Roller Bearings are typically used for heavy loads and lower speeds, while Double Row Ball Bearings are primarily used for lighter loads and higher speeds. PTI offers both for our range of inch Split Pillow Blocks and metric Plummer Blocks. Stock Spherical Roller Bearing sizes include 230, 231, 232 & 223 series. Ball Bearing sizes include 1200, 1300, 2200 and 2300 Series. Both types are normally lubricated with grease, however oil is typically used for higher speeds. Split Block Housings can also accommodate both lubrication methods depending on seal options. For selection assistance consult PTI.

Adapter Sleeves - Standard & Hydraulic



Standard Adapter



Hydraulic Adapter

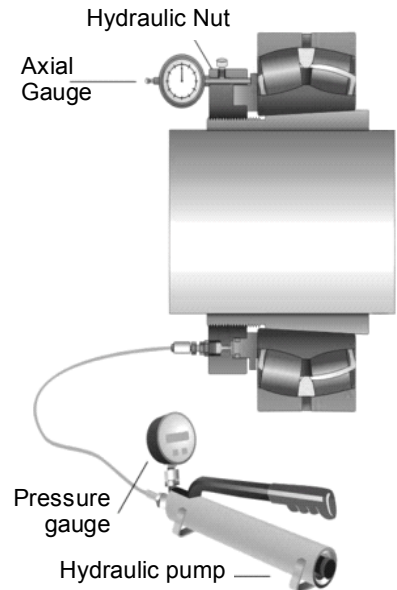
PTI stocks all of the standard inch and metric bore adapters for both tapered bore Spherical Roller Bearings and Double Row Ball Bearings used with standard split pillow blocks and plummer blocks.

Therefore both H-Series (with inch and metric bores) and SNW Adapters (with inch shaft) sizes are stock. Adapters 7-3/16" and larger will typically be offered as the hydraulic type which includes a provision for the bearing to be removed or adjusted during installation with hydraulic pressure. The hydraulic feature is especially helpful during installation should the initial position of the bearing be incorrect. Hydraulic pressure from a portable pump will loosen the bearing for repositioning.

Hydraulic Mounting Nuts



HMV.C Hydraulic Mounting Nuts are a re-usable tool to assist bearing installation. The face of the nut is a piston that will push on the bearing inner ring as hydraulic pressure develops from a hand pump. This pressure gently pushes the tapered bore bearing onto the tapered adapter, to a final recommend position. The process removes internal clearance from the bearing as the inner ring expands slightly effectively creating a press fit of the bearing onto the shaft. Mounting large units with spanner wrenches can be very difficult and the Hydraulic Nuts makes installation easy. Sizes thru 96 are normal stock. Larger sizes are also possible.



Spanner Wrenches

Spanner Wrenches thru size 44 (8" shaft diameter) are stock. For larger bearings, a hydraulic nut should be used to simplify bearing mounting on a tapered adapter.



Lock-nuts and Lock-washers

Locknuts and Lock-washers are available separately for use to secure direct mount straight bore bearings. Locknuts can also be customized with jack screws and will press on the bearing inner ring to assist bearing mounting. For infrequent mounting, this is an economical tool that will simplify installation.



Withdrawal Sleeves - Standard & Hydraulic



Standard Withdrawal Sleeve



Hydraulic Withdrawal Sleeve

Withdrawal sleeves are typically available for metric shaft diameters and include threads on the large end of the taper for a locknut to dismount the bearing. The Hydraulic removal feature, consists of oil grooves on the sleeve OD and ID to assist both mounting and removal. This feature is suggested for bearings above 200mm bore. Withdrawal sleeves for inch shaft diameters are also available on request.