Overview of Sherman & Reilly Transmission Sheaves

About Sherman & Reilly Transmission Sheaves
The sheaves described below are those that fit Sherman & Reilly 70 Series, 72 Series, 73 Series, and 78 Series blocks. All are made from the best materials for their purpose and are manufactured to render high performance, durability, and being easy on conductor. All turn on low-friction, sealed, lubricated-for-life ball bearings, which render 98% efficiency and assure long-term reliability and smooth, minimum-load stringing.

Three types of sheaves are available for Sherman & Reilly transmission blocks:

- **Polished-Groove Aluminum**
- **Urethane Lining on Aluminum**
- **Neoprene Lining on Aluminum**

**Polished-Groove Aluminum**
Sherman & Reilly polished-groove sheaves are made entirely of (virgin) A356-T6 Aluminum, which is the same material used for XS-100B frames, and which renders high-strength with light weight. The use of virgin materials and the manufacturing process together help assure that the sheaves are uniformly dense, with controlled impurities, and without voids, which help assure long life and help assure against sudden failure.

Polished-groove sheaves are very durable and are easy on common conductors. Consequently, blocks with polished-groove sheaves make a good choice for stringing common conductors under typical, non-energized conditions.

**Urethane Lining on Aluminum**
Sherman & Reilly urethane-lined aluminum sheaves are made identically to polished-groove sheaves (above) except that a premium-grade polyurethane lining is cast-in-place on the sheaves’ conductor-contact surface. The properties of the urethane and casting it in place on the bare sheave together assure a high-precision profile of the lined sheave. The urethane’s formulation assures resiliency to cushion conductors, as well as assures hardness, high load-bearing capacity, impact resistance, abrasion resistance, resistance to compression-set, and resistance to oil, ozone, and other environmentals – all of which contribute to long useful life, even under harsh field conditions. A-scale durometer hardness of the lining is 90-92.

Blocks with urethane-lined sheaves are especially appropriate for stringing conductor, static wire, and fiber optic cables.

**Neoprene Lining on Aluminum**
Sherman & Reilly neoprene-lined aluminum sheaves are made identically to polished-aluminum sheaves except that a semi-conductive neoprene lining is applied to the sheaves’ conductor-contact surface. The neoprene is vulcanized and post-cured to assure consistency and uniformity. In addition to its conductive properties and acting as a cushion for the conductor, neoprene lining has high abrasion resistance and durability. A-scale durometer hardness of the lining is 70-72.

Blocks with neoprene-lined sheaves help to conduct potentially harmful voltages/currents to ground during stringing operations. Blocks with neoprene-lined sheaves are, consequently, especially
appropriate for stringing in energized environments or in any environment where there is potential for induced or contact voltages/currents.

**How to Configure & Select Transmission Sheaves**
Deciding which sheaves to use in your blocks is a simple matter of determining the appropriate size and appropriate lining (if any).

The appropriate size is a simple function of the type/size of conductor being strung, the distance of the ruling span, and the difficulty of the terrain. A sheave sizing tool that can aid you in determining the appropriate sheave size is available in the Publications section of this page.

Not all sheave sizes are available in all block frames – larger sheaves require larger and more robust frames. Dimensional diagrams/tables and how sheave sizes match up with each block Series are described in *Sheave Dimensions & Specifications* in the Publications section of this page.

The appropriate lining, if any, is a function of the conductor (or cable) type and the conditions that will exist during stringing operations. The lining is then chosen to match the conductor type and the stringing conditions, often with direction from the conductor manufacturer.

Please refer to other publications found on this page and to the product pages of the respective stringing-block Series for more information about the sheaves, blocks, and accessories.

**For a Thorough Discussion on Transmission Blocks**, refer to the whitepaper “*Sheave, Block, and Accessory Selection for Transmission Conductor Installation*” found in the Publications section of this page.

**For Help with Configuring and Ordering Transmission Blocks**
If you are unsure how to configure your order and/or need a quote, then please consult your Sherman & Reilly Representative or consult Sherman & Reilly directly. Your Representative may be found [here](#). For help from Sherman & Reilly directly, you may call **1-800-251-7780** and ask for “Quotes.”