

# Welding turning rolls



PrestonEastin turning rolls are designed for 30 years of dependable, low-maintenance operation in harsh manufacturing environments.

## Find an ideal turning roll for your application

PrestonEastin offers three classes of turning rolls: standard turning rolls, constant centerline turning rolls and power elevating turning rolls.

Standard turning rolls support and rotate vessels ranging from 100 lbs (45 kg) to 400,000 lbs (181,437 kg) and workpiece diameters from 6 in (15 cm) to 30 ft (9 m).

Constant centerline turning rolls allow operators to adjust wheel spacing to accommodate workpieces with various diameters while maintaining the relative position of the welding tip. This configuration is ideal for in line manufacturing processes and automated welding cells where both variability and repeatability are desired.

Power elevating turning rolls accommodate the up and down movement of rolls. This configuration drastically improves setup times where high workpiece variability exists. They also work for non-cylindrical workpieces where multiple rolls are needed at varying centerline heights. Note that custom bases may be required to elevate and support workpieces.



### **Pairing drivers and idlers**

Choosing a turning roll goes beyond selecting an appropriate class since a turning roll driver (TDRA or driver) needs to be paired with a turning roll idler (TIRA or idler). Drivers and idlers work together to deliver high quality welds, improve productivity and lower the risk of operator injury.

One turning roll driver has enough rotational torque to rotate three times its static weight capacity. However, idlers are needed to accommodate the remaining static weight.

Generally, more than one idler is needed for longer (and heavier) workpieces. The spacing between drivers and idlers is determined by the workpiece's stiffness. Thinner walled workpieces require turning rolls to be placed closer together while thicker walled workpieces allow turning rolls to be spaced further apart. Generally, no more than 20 ft (6 m) between a driver and idler is recommended.

Explore the options below to learn more.

## **PRODUCT LOOKUP**

# Customizing turning rolls for harsh manufacturing

# environments

Consider customizing your turning roll to further streamline your operation. Customizations go beyond static capacity and rotational torque because center of gravity, size and surface area must all be considered. Common customizations include:

- Adjustable bases including: casters, fixed elevation and powered elevation
- Anti-creep devices
- Number of wheels
- Paint color
- Personalized controls
- Short or long frame turning rolls
- Wheel sizing

## Fitting a wheel

Selecting the right wheel can prevent workpiece slippage and maintain consistent speeds and welds. PrestonEastin offers three types of wheels in multiple sizes: rubber wheels, steel wheels and phenolic wheels.

- Rubber wheels are the most popular option since they have a higher weight capacity as well as a higher coefficient of friction with most surfaces. Standard PrestonEastin rubber wheels are 90 durometers.
- Steel wheels work well for higher capacity and higher temperature applications. They are ideal for situations where surface area engagement with the workpiece is limited.
- Phenolic wheels are needed when the desired combination of the operating temperature and / or workpiece engagement can't be met by rubber or steel.

When choosing a wheel, consider how much surface area you have to roll on, what operating temperatures the wheel will be exposed to during operation and the wall thickness of the workpiece. Consider that thin walled workpieces are more susceptible to deformation when engaging the turning rolls and therefore a greater surface area may be desired.

Selecting the right turning roll for your application can be deceptively complicated when considering all the variables of your manufacturing process, which is why we strongly recommend [requesting a quote](#) so an experienced sales engineer can assist you. No matter what your needs are, PrestonEastin can customize any product to your exact specifications.