

# DP-4 Dynamic Pivot Tensioner

The Dynamic Tensioner uses just a small space to provide constant pressure against a belt even as wear and stretch occur. Plus the tensioner can be locked statically into place if desired after tension is set.

## Operating Characteristics

Tensioner stroke - .50 inches (12.7mm) over a 22 degree arc

Range of adjustment - 1.12 inches (28.4mm)

Maximum force against belt - 5 pounds (2.3 kg) continuous, 15 pounds (6.8 kg) peak (10 pounds (4.6 kg) continuous available)

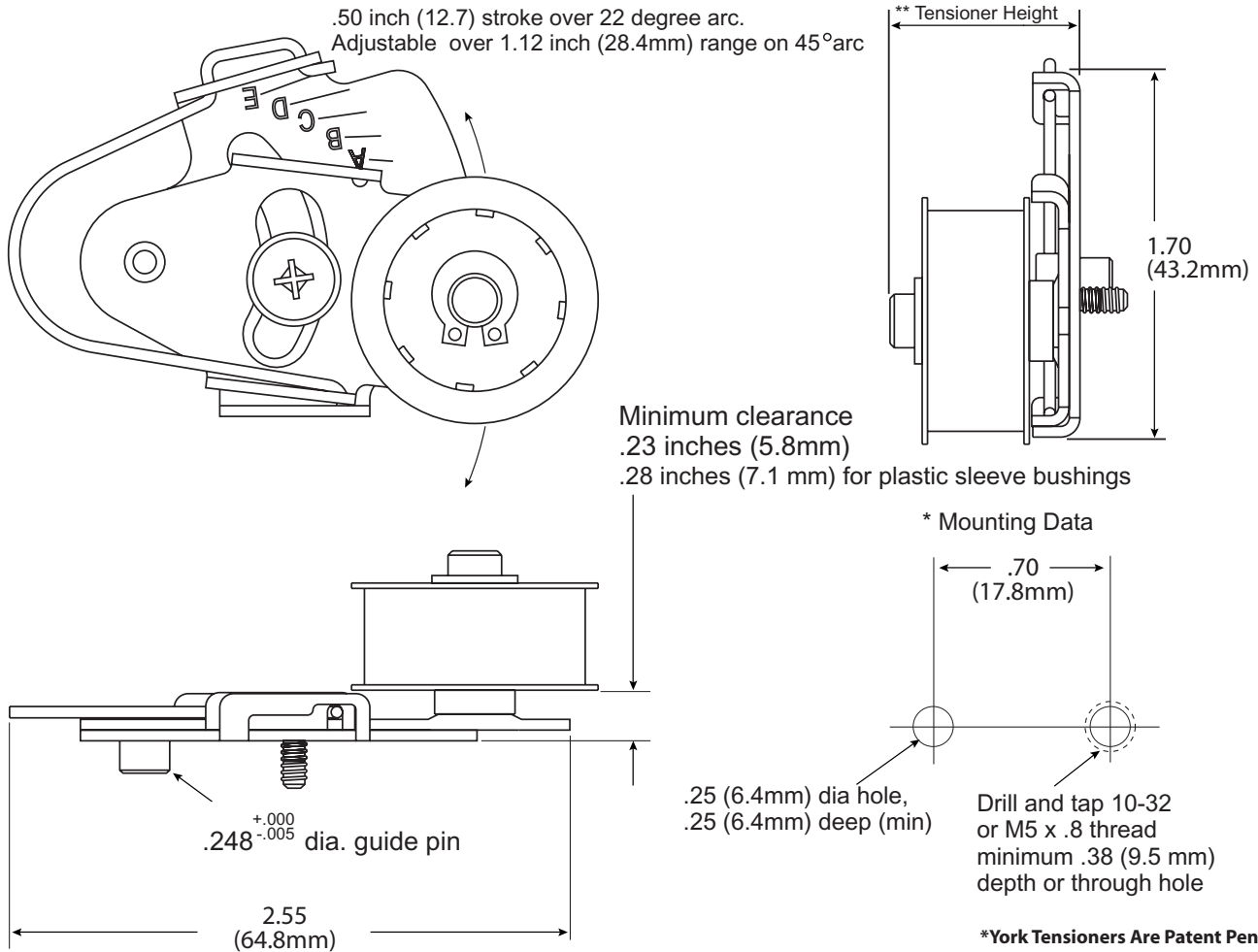
## \* Mounting Data:

- Approximate footprint without pulley of 1.70 inches (43.2mm) wide by 2.55 inches (64.8mm) long
- Minimum clearance from mounting surface to bottom of pulley is .23 inches (5.8mm) except plastic sleeve bearings require .28 inches (7.1mm) minimum clearance.
- Requires one hole tapped 10-32 or M5 x .8 either through sheetmetal, or blind hole with minimum .38 (9.7mm) thread depth.
- Also needs one .25 (6.4mm) diameter by .25 (6.4mm) min depth clearance hole. See drawing below.

**If needed, mounting spacers are available from York for higher than standard belt clearances.  
See [www.york-ind.com/spacers](http://www.york-ind.com/spacers) or contact York for details.**

## \*\* Tensioner Height

- To find your tensioner height, determine Pulley Width + Belt Clearance desired = X
- If X is less than or equal to .675 (17.1mm), tensioner height is 1.000 (25.4mm)
- If X is between .675 (17.1mm) and .950 (24.1mm), tensioner height is 1.275 (32.4mm)
- If X is larger than .950 (24.1mm), consult York Engineering.



**YORK**  
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## All York Size 4 Tensioners Include:

|   |   |
|---|---|
| 301 stainless steel construction for strength and harsh environments                      | Designs tested to over one million cycles   |
| Operating temperatures possible from -60°F to +185°F (-51°C to 85°C)                      | Survives salt spray, dust, and condensing high humidity environments with proper bearings   |
| Choice of idler pulley profiles - flat, 2mm GT, 3mm GT MXL, XL, 3mm HTD or 5mm HTD        | Idler pulleys available with sealed ball bearings, self lubricating plastic sleeves in aluminum pulleys or self lubricating all plastic pulleys |
| Ease of assembly with self locking, reusable Phillips hardware in 10-32 or M5 x.8 threads | Idler pulley retaining clip withstands minimum of 15 lbs (6.8 kg) pull force  |
| Downloadable CAD files for tensioners and pulleys   | Dynamic tensioners reference markings to aid in setting belt tension during assembly and service  |
| Free access to York's engineering staff for answers to design and application questions   | Conductive grease (sealed ball bearings) or static dissipative (plastic) to prevent static electricity build-up on belts                        |
| Special mounting bushing to aid in setting belt tension.                                  | Idler shafts are 416 stainless steel hardened to Rockwell C 38-42   |

## Operating Environments:

| Idler Pulley/Bearing Type  | Maximum Operating Temperature                     | Minimum Operating Temperature                         | High Dust Environments                            | High Humidity                           | Relative Cost  | Max Speed in RPM                                      |
|--|---|---|---|---|--|---|
| Aluminum/Ball Bearing  | 185°F (85°C)<br>- may be limited by belt max temp | -60°F (-51°C)   | Yes - Sealed ABEC Bearings With Conductive Grease | Yes                                     | More Expensive   | Limited by belt, not bearing                          |
| Aluminum/Plastic Self Lubricating Sleeve                                     | 185°F (85°C)<br>- may be limited by belt max temp | -40°F (-40°C)   | OK in most cases                                  | Yes                                     | Moderate - good for small and medium volumes               | Up to 4,500 RPM continuous with up to 9,000 RPM peak. |
| One Piece Self Lubricating Carbon Filled Polycarbonate UL V94-0 Flammability | 180°F (82°C)                                      | 20°F - consult York for designs down to -40°F (-40°C) | Generally not for extremely high dust areas       | Yes - to 95% but must be non condensing | Least Expensive. Need high volumes if custom mold required | Up to 4,500 RPM continuous with up to 7,000 RPM peak  |



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