

## Series 420 DSTT

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## Series 420 DSTT

## DESCRIPTION

Drive shafts and prop shafts transmit power in machinery throughout the world. In many cases they are driven to the limits in applications such as motor-sport or subject to occasional overload in applications such as factory drive systems.

Whatever the application an accurate and simple measurement of the torque transmitted can be invaluable to improve designs, protect the machinery and monitor or control its performance.

increase power efficiency on to your shaft, or enable a more efficient power output through your system.

The two systems offered by Datum Electronics provides effective on-shaft torque monitoring which will fit a wide range of shafts, which type will vary depending upon your requirements.

and is self powered. The second is the Series DSTT430 which is designed to be used as a trials kit, which is powered by batteries, which uses short range telemetry technology transmitted to a receiver.

The first is the Series DSTT420 which is designed to fit on to permanent installations

## FEATURES

The DSTT offers on-shaft torque monitoring providing a range of different analysis allowing you to increase power efficiency on to your shaft, or enable a more efficient power output through your system. You can record and analyse the data, allowing you to make minor changes enabling you to gain that extra efficiency that you require. The type of event analysis provided by the DSTT includes:

## MEASUREMENT ANALYSIS

On-Shaft Torque  
Shaft Strains  
(bending, axial etc...)  
Shaft Speed (non standard)  
Shaft Power (non standard)

## DRIVE TRAIN ANALYSIS

Torque levels  
Transient Event Analysis  
Offset and Cyclic Load  
Overload protection  
Condition Monitoring  
Economic Drive Control  
Peak Torque Analysis

## SPECIFICATIONS

All Power SAE Industrial Universal Joints also known as Spicer® Drive Shafts series are in common usage on over the road vehicles, industrial and off highway applications. They are designed for long life at moderate torque levels though they are capable of with standing high momentary torques such as those encountered in starting a load or a vehicle moving. They tend to be the most economical solution for applications where minimum swing diameters are not a requirement.

## APPLICATIONS

The Drive Shaft Torque transducers have a system accuracy of 0.1% to 0.25% depending upon the size and Diameter of the shaft. The level of torque being measured is again dependant upon shaft size with the diameter ranging from 20mm up to 400mm. It outputs in digital data (RS232) with an output of 4-20mA or 0-10VDC as required.



## On-Shaft Torque Monitoring for your Drive Shaft

## DSTT420

Series DSTT420 is our 'permanent' solution which is self-powered, allowing the transducer to be installed on the majority of drive shafts and is robust enough to work in harsh environments. There is no need to move or disrupt the equipment connected to the drive shaft, we can install directly on to the shaft. This is the recommended option for continuous condition monitoring.

## DSTT430

Series DSTT430 is our Trials version of the permanent solution. The Series 430 is battery powered and a completely self-contained shaft unit that uses short range telemetry technology to transmit the digital data to a receiver. The receiver has a transmission range of up to 30 metres and can sample raw data at 300 samples per second. The battery can be replaced or re-charged as and when necessary.