



# PRODUCT BULLETIN

## Caliper Disc Brakes

ZF Caliper Disc Brakes are available in floating caliper and fixed caliper types. The floating caliper brakes are offered in spring, hydraulic, or mechanical apply models. The fixed caliper brakes are hydraulic apply with opposing pistons. ZF Caliper Disc Brakes are ideal for providing service, emergency, and secondary braking for applications in the agricultural, construction, mining, and forestry industries.



### 515 Series Caliper Disc Brakes

#### Description

ZF 515 Series Brakes are referred to as floating calipers. They are relatively compact in size. The lining on one side of the ZF 515 Calipers is stationary, while the lining on the opposite side actuates to provide clamping force.

For this reason the 515 series brakes must be allowed to slide on the mounting pins or shoulder bolts so it can self align on the rotating brake disc and provide equal clamping force on the rotor from both linings.

The 515 **Mechanical Apply** design uses a mechanical lever and cam system to apply and release the brake. This design can be used with a rotor 5/16 to 1/2 inch thick having a diameter of 6 inch or larger.



The 515 **Hydraulic Apply** design uses a modulated hydraulic pressure source, such as a master cylinder, to control brake torque. These brakes use a 1 1/2 inch diameter actuation piston. They are

designed to be used with a rotor 3/8 to 1/2 inch thick having a diameter of 6 inch or larger.



The 515 **Spring Apply, Hydraulic Release** design uses a stack of Belleville springs to apply the brake and hydraulic pressure from a source such as a master cylinder to release the brakes. This design can be used with a rotor 5/16 to 1/2 inch thick having a diameter of 6 inch or larger.

#### Applications

Rough Terrain Forklift, Log Forwarder, Front End Loader, Concrete Saw, Knuckle Boom, Grape Harvester, Brush Cutter and Chopper, Locomotive, Compactor Equipment, Cable Puller and Tensioner.



## 520 Series Caliper Disc Brakes

### Description

All ZF 520 Series Disc Brake designs are hydraulic apply. Although these brakes are available in several different designs, the operation of each is the same. The 520 Series Brakes are mounted stationary, or "fixed", relative to the rotor.

These calipers are available with various diameter actuation piston. The larger the piston diameter the greater the capacity for clamping force. Each side of the caliper contains a piston that actuates to provide clamping force.

ZF 520 Caliper Disc Brakes use a modulated hydraulic pressure source, such as a master cylinder, to control brake torque.



### Applications

Ag Sprayer, Road Grader, Asphalt Paver, Mine Loaders, Personnel Carrier, Tracked Maintenance Vehicle, Agriculture Equipment, Oil Field Maintenance, Airport Tow Tractors, Locomotives

## 530 Series Caliper Disc Brakes

### Description

The ZF 530 Series Spring Apply, Hydraulic Release Caliper Disc Brakes use a stack of Belleville springs to apply the brake and hydraulic pressure to release the brake.

This series of brakes is a floating caliper design, which uses either a rectangular or triangular mounting bracket to hold the brake in position relative to the rotor. The brake slides on the mounting bracket.

The models in this series of caliper disc brakes are designed for use with a rotor thickness ranging between 5/16 and 1/2 inch having a diameter of 9 inch or larger.

### Applications

Underground Mining Vehicles, Road Reclaimers, Driveline Parking Brake, Road Graders, Exploration Drill, Road Wideners, Asphalt Pavers, Airport Equipment, Locomotives



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