WC BRANHAM®
SOLUTIONS IN MOTION

Pneumatic Spring Applied Brakes

Emergency Stopping and Position Holding

Other high quality service type caliper disc brakes manufactured by W.C. Branham Inc. : Pneumatic, Hydraulic, Mechanical, Hydraulic Spring Applied and Dual Function Mechanical/Hydraulic. Brake Discs and Disc/Hub Assemblies too.

How Do They Work?

Active minimum air pressure releases the brake piston (pulls the brake piston away) from the brake disc rotor and stores that energy in one or more Belleville disc spring stacks depending on model.

Then, at loss of air pressure the energy stored in the disc spring stack is emitted driving the brake piston and engaging the disc rotor for positive stopping and holding. Most models can also be mounted on a linear rail or plate.

PFS Series Caliper Disc Brakes are intended to be used for intermittent emergency stopping and holding applications due to the relationship between spring force and friction pad wear. Consult factory for use on cyclic applications.

Common Features:

- Cast aluminum construction | Hardcoated housings | Non-asbestos friction material | Replaceable friction pads | Buna-N seals | Float mount | Belleville disc spring stack(s) | .45 coefficient of friction | 100 PSI (6.9 Bar) Max. Pressure.
- Standard models for brake disc thicknesses of 5/32, 1/4, 3/8, 1/2, 5/8, 3/4, 1.0 and 1-1/8 inches.

Optional Features:

- Viton® seals
- Electro-Nickel Plating
- Stainless Steel Hardware
- Fitment for other brake disc thicknesses including metric sizes possible. Consult with factory.

An American Company
Family Owned and Operated

Models

PFS38 Series | 85 PSI (5.9 Bar) Release Pressure

Single Belleville Disc Spring Stack | 216 lb. (960 N) Tangential Force at zero friction pad wear | 3350 in. lbs. F. using 30 inch disc diameter at maximum tangential force | 480 lb. clamping force | Unlimited disc diameter | 2.00 sq. in. total friction pad area | .46 cu. In. wearable friction material | 3.25 in. piston diameter

PFS38

PFS47 Series | 85 PSI (5.9 Bar) Release Pressure

Single Belleville Disc Spring Stack | 465 lb. (2068 N) Tangential Force at zero friction pad wear | 6570 in. lbs. F. using 30 inch disc diameter at maximum tangential force | 1033 lb. clamping force | Unlimited disc diameter | 4.10 sq. in. total friction pad area | .758 cu. In. wearable friction material | 4.625 in. piston diameter

PFS47

PFS200 Series | 85 PSI (5.9 Bar) Release Pressure

Dual Belleville Disc Spring Stacks | 929 lb. (4132 N) Tangential Force at zero friction pad wear | 6626 in. lbs. F. using 16 inch disc diameter at maximum tangential force | 2065 lb. clamping force | Up to 16 inch disc diameter | 8.19 sq. in. total friction pad area | 1.82 cu. In. wearable friction material | 4.625 in. piston diameter x 2 stage

PFS200

Models

PFS200SUL | Unlimited Disc Series | 85 PSI (5.9 Bar) Release Pressure

Dual Belleville Disc Spring Stacks | 929 lb. (4132 N) Tangential Force at zero friction pad wear | 13,129 in. lbs. F. using 30 inch disc diameter at maximum tangential force | 2065 lb. clamping force | Unlimited disc diameter | 8.19 sq. in. total friction pad area | 1.82 cu. In. wearable friction material | 4.625 in. piston diameter x 2 stage

PFS200SUL

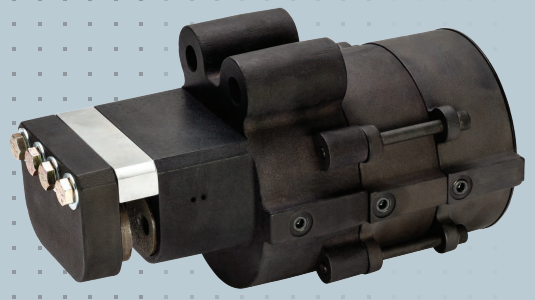
PFS200UL-EP | Extended Pad Series | 85 PSI (5.9 Bar) Release Pressure

Dual Belleville Disc Spring Stacks | 929 lb. (4132 N) Tangential Force at zero friction pad wear | 13,129 in. lbs. F. using 30 inch disc diameter at maximum tangential force | 2065 lb. clamping force | From 12 inch to unlimited disc diameter | 23.89 sq. in. total friction pad area | 7.72 cu. in. of wearable material | 4.625 in. piston diameter x 2 stage

PFS200UL-EP

PFS400F | 100 PSI (6.9 Bar) Release Pressure

Dual Belleville Disc Spring Stacks | 1859 lb. (8269 N) Tangential Force at zero friction pad wear | 35,568 in. lbs. F. using 40 inch disc diameter at maximum tangential force | 4130 lb. clamping force | From 12 inch to unlimited disc diameter | 8.19 sq. in. total friction pad area | 1.82 cu. in. of wearable material | 4.625 in. piston diameter x 3 stage



PFS400F

Models

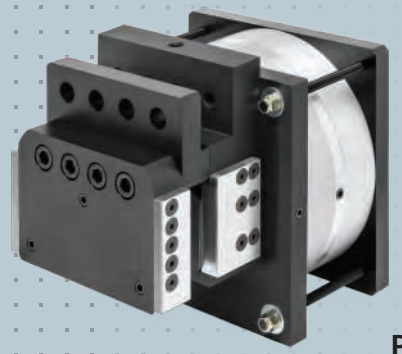
PFS400F-EP | Extended Pad Series | 100 PSI (6.9 Bar) Release Pressure

Dual Belleville Disc Spring Stacks | 1859 lb. Tangential Force at zero friction pad wear | 35,568 in. lbs. F. using 40 inch disc diameter at maximum tangential force | 4130 lb. clamping force | 23.89 in. sq. total friction pad area | 7.72 cu. in. of wearable material | From 12 inch to unlimited disc diameter | 4.625 in. piston diameter x 3 stage

PFS400F-EP

PFS520 | 75 PSI (5.2 Bar) Release Pressure

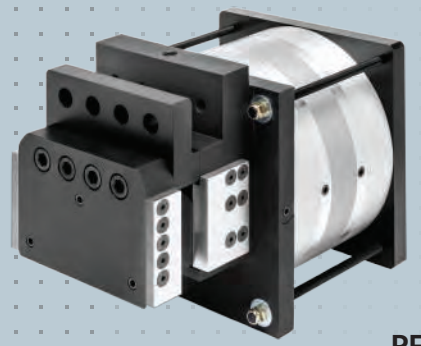
Aluminum Construction | Dual Belleville Disc Spring Stacks | Quick Change Pad Feature | Fits on Brake Discs Diameters from 20 inches to Unlimited Diameter | Non-Asbestos Friction Material | Spring Stacks in Parallel | 6,419 lb. Maximum Tangential Force | 110,325 in. lbs. F using 40 inch Disc Diameter | 62.0 in. sq. total friction pad area | 22.0 cu. in. of wearable material | 14,264 lb. Clamping Force | 12.0 in. piston diameter x 2 stage



PFS520

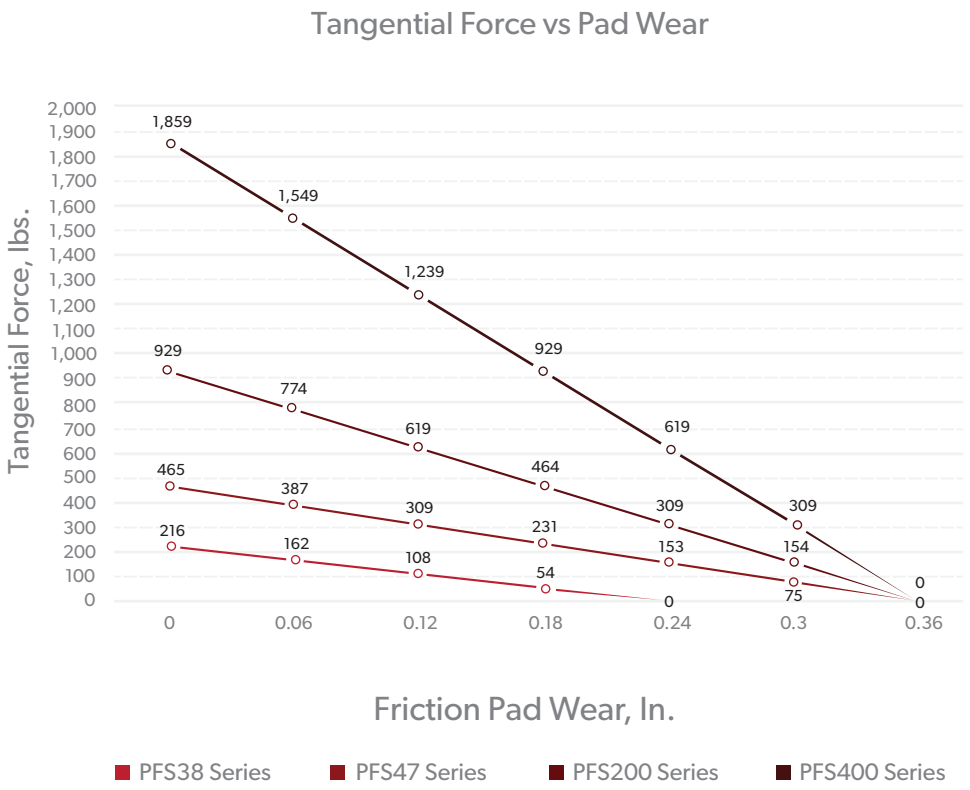
PFS522 | 85 PSI (5.9 Bar) Release Pressure

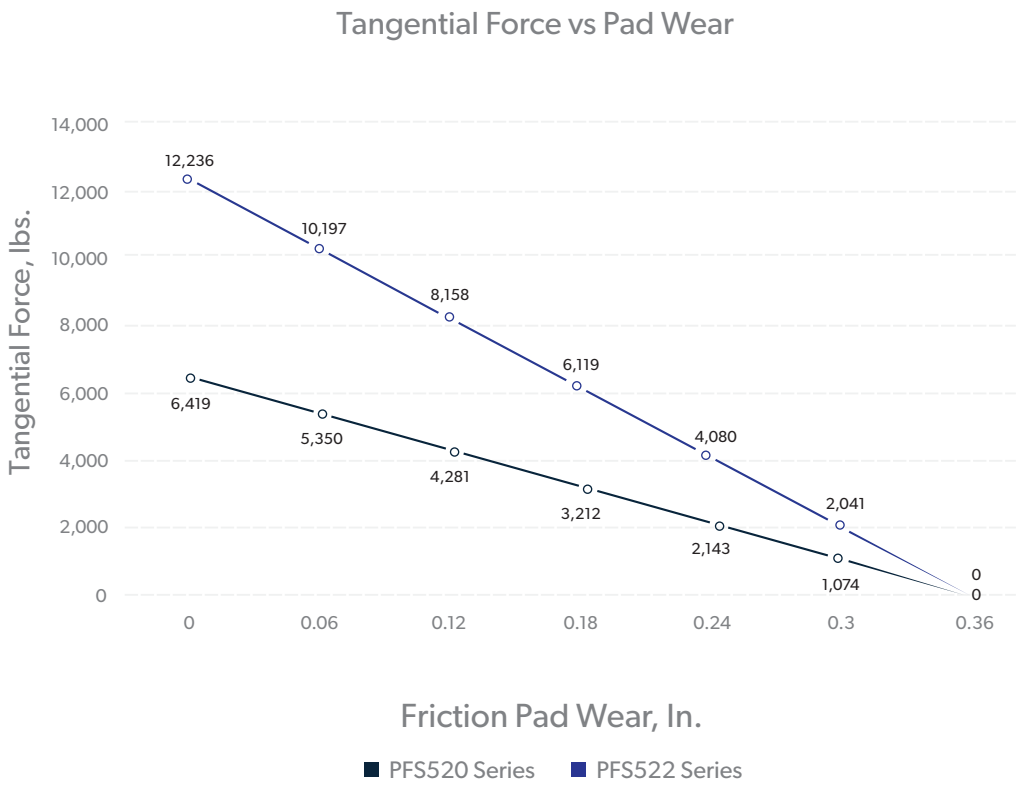
Aluminum Construction | Dual Belleville Disc Spring Stacks | Quick Change Pad Feature | Fits on Brake Discs Diameters from 20 inches to Unlimited Diameter | Non-Asbestos Friction Material | Spring Stacks in Parallel | 12,236 lb. Maximum Tangential Force | 220,651 in. lbs. F using 40 inch Disc Diameter | 62.0 in. sq. total friction pad area | 22.0 cu. in. of wearable material | 27,192 lb. Clamping Force | 12.0 in. piston diameter x 3 stage



PFS522

Tangential Force vs Pad Wear

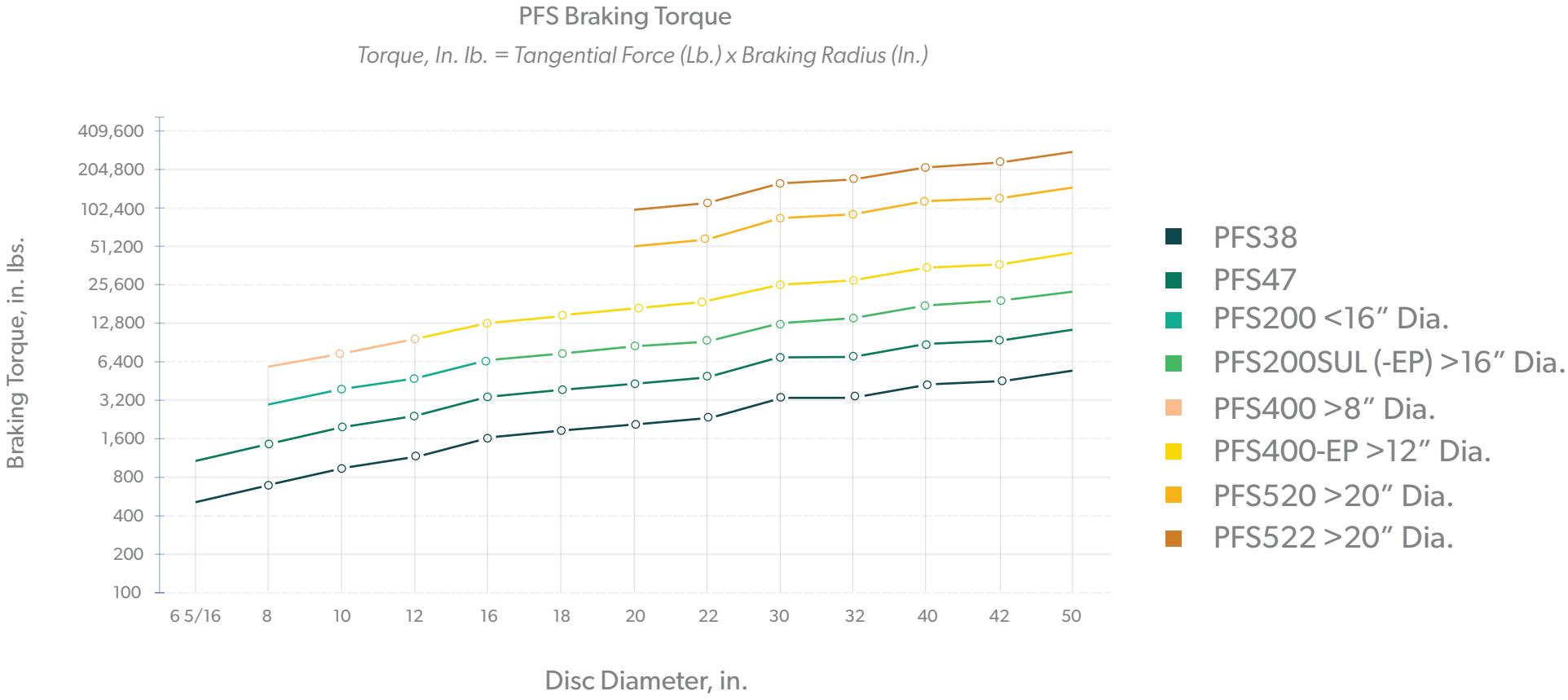




LET US HELP YOU WITH YOUR APPLICATION. **CONTACT US TODAY!**

OFFICE
398 Troy Street River Falls, WI 54022

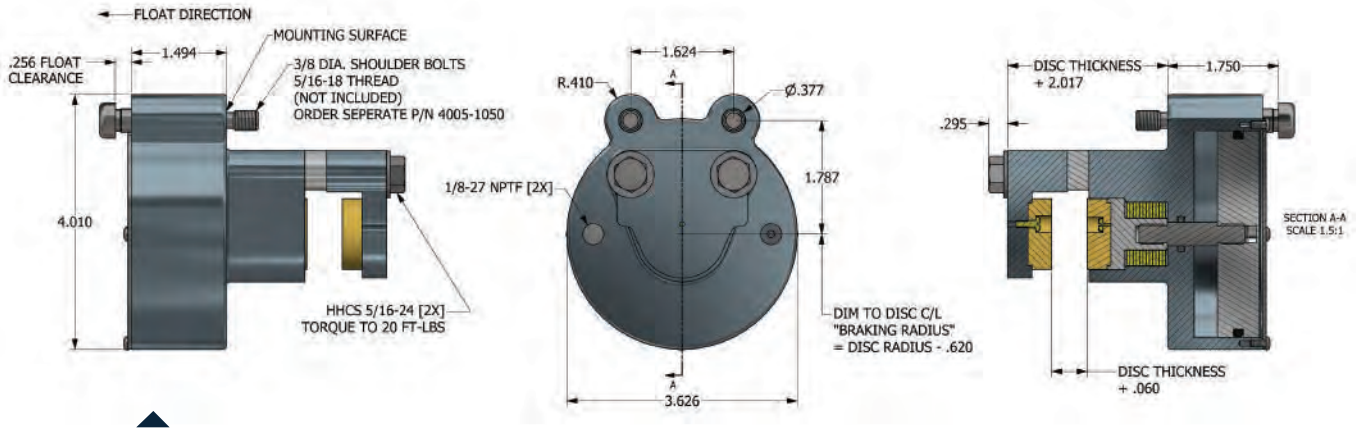
PFS Braking Torque at Various Disc Diameters



Find CAD Drawings at WCBranham.com

PFS38 SERIES

Torque, In. lb. = Tangential Force (Lb.) x Braking Radius (In.) • *Tangential Force (Lb.) = Clamping Force (Lb.) x .45 (coeff. of friction)*



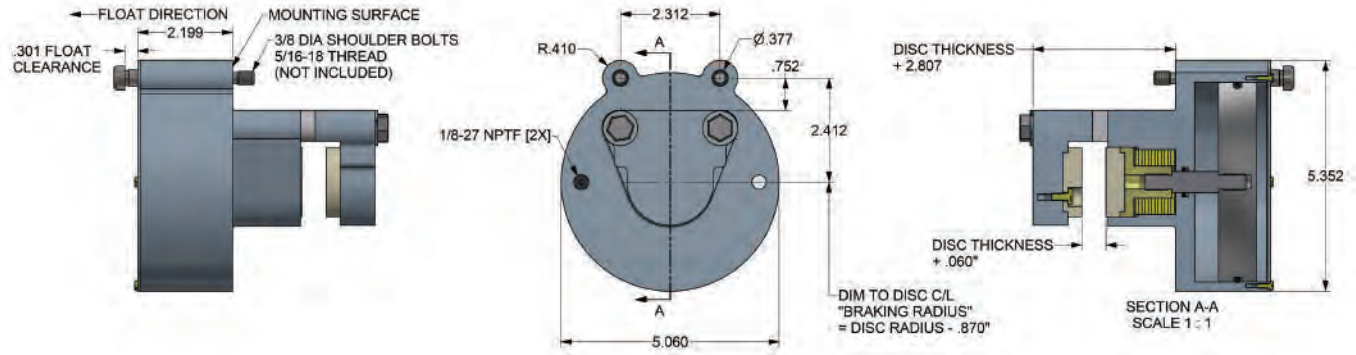
216 Lb. (960 N) Tangential Force . . . . . **480** Lb. (2135 N) Clamping Force . . . . . **2.4** Lb. (1.08 Kg.) Unit Weight

Force @ zero pad wear. Pad wear reduces force.

Standard Models

- 4005-0200/PFS38AF/.156 in. Disc Thickness
- 4005-0201/PFS38BF/.250
- 4005-0202/PFS38LF/.375
- 4005-0203/PFS38EF/.500

PFS47 SERIES



465 Lb. (2068 N) Tangential Force . . . . . **1,033** Lb. (4595 N) Clamping Force . . . . . **5.5** Lb. (2.49 Kg.) Unit Weight

Force @ zero pad wear. Pad wear reduces force.

Standard Models

- 4004-0222/PFS47AF/.156 in. Disc Thickness
- 4004-0225/PFS47BF/.250
- 4004-0226/PFS47LF/.375
- 4004-0227/PFS47EF/.500
- 4004-0281/PFS47JF/.625
- 4004-0256/PFS47TF/.750

Find CAD Drawings at WCBranham.com

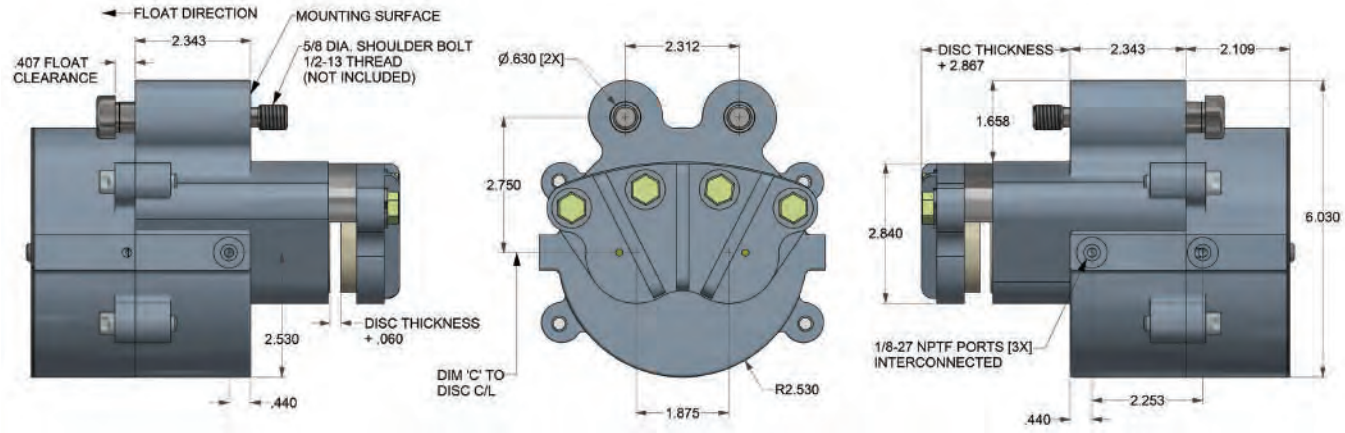
PFS200 SERIES

Standard Models

- 4004-0231/PFS200AF/.156 in. Disc Thickness
- 4004-0232/PFS200BF/.250
- 4004-0233/PFS200LF/.375
- 4004-0234/PFS200EF/.500
- 4004-0265/PFS200TF/.750

For Disc Diameters Greater than 16.0 inchec see PFS200SUL Below • *Torque, In. lb. = Tangential Force (Lb.) x Braking Radius (In.)*

Tangential Force (Lb.) = Clamping Force (Lb.) x .45 (coeff. of friction)



929 Lb. (4132 N) Tangential Force

2,065 Lb. (9185 N) Clamping Force

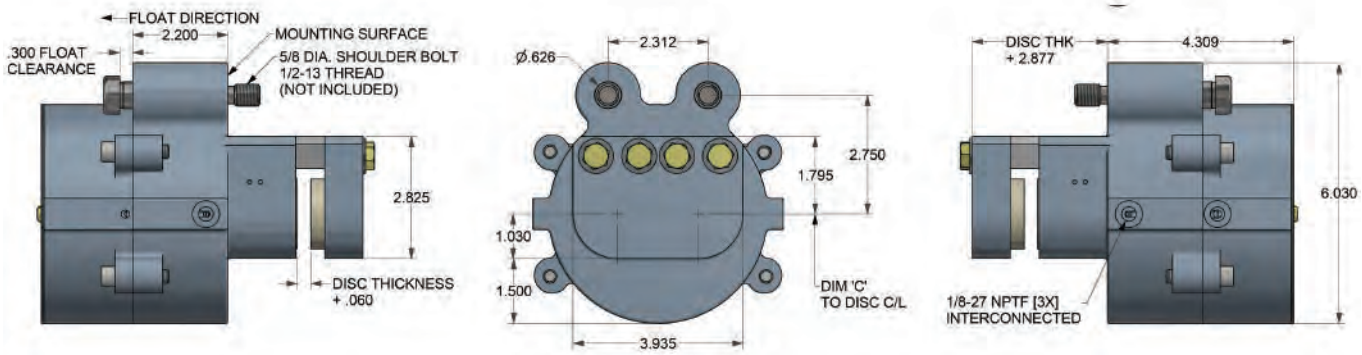
11.6 Lb. (5.26 Kg.) Unit Weight

Force @ zero pad wear. Pad wear reduces force.

PFS200SUL SERIES

Standard Models

- 4005-0030/PFS200SAUL/.156 in. Disc Thickness
- 4005-0031/PFS200SBUL/.250
- 4005-0032/PFS200SLUL/.375
- 4005-0033/PFS200SEUL/.500
- 4005-0034/PFS200SJUL/.625
- 4005-0035/PFS200STUL/.750
- 4005-0036/PFS200SOUL/1.00
- 4005-0037/PFS200SQUL/1.125



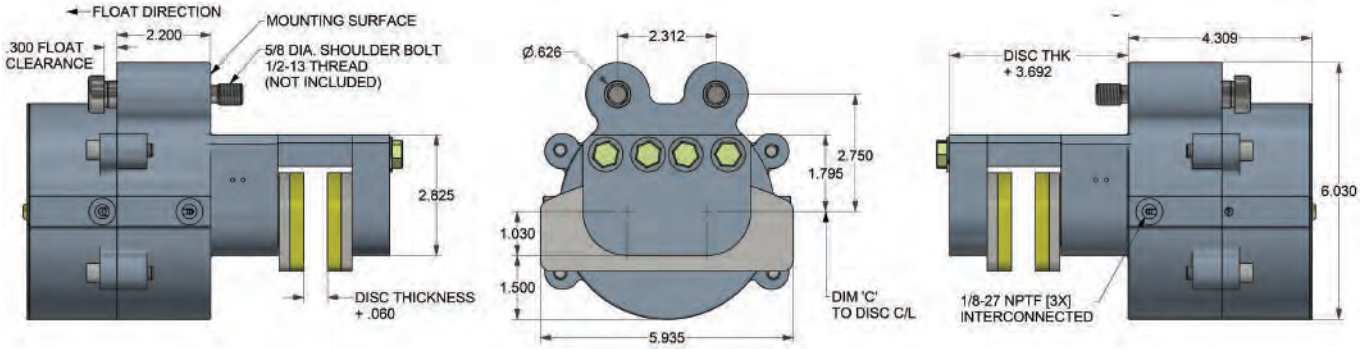
PFS200/PFS200SUL/PFS200SUL-EP Braking Radii • **Braking Radius, Inches = Sq. Root (Dim. "C" Squared + .8789)**

DISC DIA.	8.0	10.0	12.0	16.0	18.0	20.0	22.0	30.0
DIM. 'C'	3.03	4.03	5.03	7.03	8.03	9.03	10.03	14.03
BRAKING RADIUS	3.17	4.14	5.11	7.09	8.08	9.08	10.07	14.06

Find CAD Drawings at WCBranham.com

PFS200UL-EP EXTENDED PAD SERIES

Torque, In. lb. = Tangential Force (Lb.) x Braking Radius (In.) • *Tangential Force (Lb.) = Clamping Force (Lb.) x .45 (coeff. of friction)*



929 Lb.

(4132 N) Tangential Force . . . . . .

2,065 Lb.

(9185 N) Clamping Force . . . . . .

12.00 Lb.

(5.44 Kg.) Unit Weight

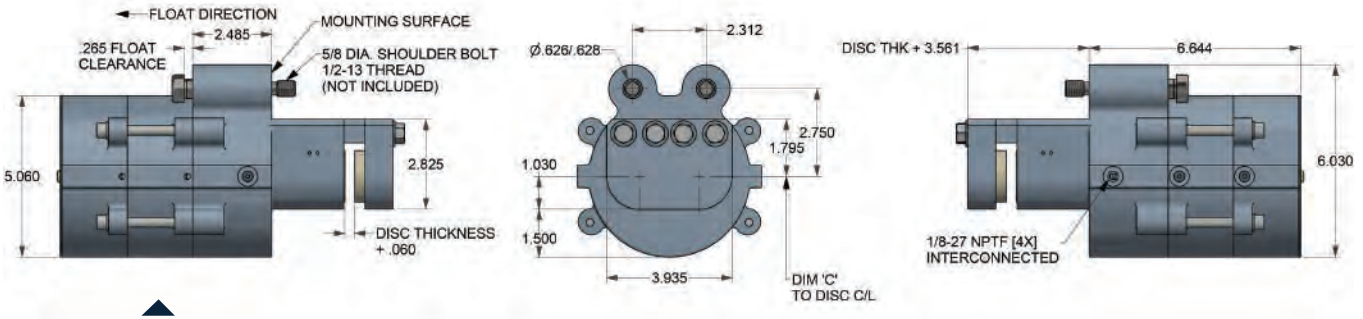
Force @ zero pad wear. Pad wear reduces force.

Standard Models

- 4005-0139/PFS200AFUL-EP/.156 in. Disc Thickness
- 4005-0140/PFS200IFUL-EP/.187
- 4005-0141/PFS200BFUL-EP/.250
- 4005-0142/PFS200LFUL-EP/.375
- 4005-0143/PFS200EFUL-EP/.500
- 4005-0144/PFS200JFUL-EP/.625
- 4005-0145/PFS200TFUL-EP/.750
- 4005-0146/PFS200OFUL-EP/1.00
- 4005-0147/PFS200QFUL-EP/1.125

PFS400 SERIES

See PFS200SUL-EP/PFS400/PFS400-EP Braking Radii Opposite Page • *Braking Radius, Inches = Sq. Root (Dim. "C" Squared + .8789)*



1,859 Lb.

(8269 N) Tangential Force . . . . . .

4,130 Lb.

(18,371 N) Clamping Force . . . . . .

16.8 Lb.

(7.62 Kg.) Unit Weight

Force @ zero pad wear. Pad wear reduces force.

Standard Models

- 4004-0771/PFS400AF/.156 in. Disc Thickness
- 4004-0772/PFS400BF/.250
- 4004-0773/PFS400LF/.375
- 4004-0774/PFS400EF/.500
- 4004-0775/PFS400JF/.625
- 4004-0776/PFS400TF/.750
- 4004-0777/PFS400OF/1.00
- 4004-0778/PFS400QF/1.125

Standard Models

- 4005-0125/PFS400IF-EP/.187 in. Disc Thickness
- 4005-0126/PFS400BF-EP/.250
- 4005-0127/PFS400LF-EP/.375
- 4005-0128/PFS400EF-EP/.500
- 4005-0129/PFS400JF-EP/.625
- 4005-0130/PFS400TF-EP/.750
- 4005-0131/PFS400OF-EP/1.00
- 4005-0132/PFS400QF-EP/1.125

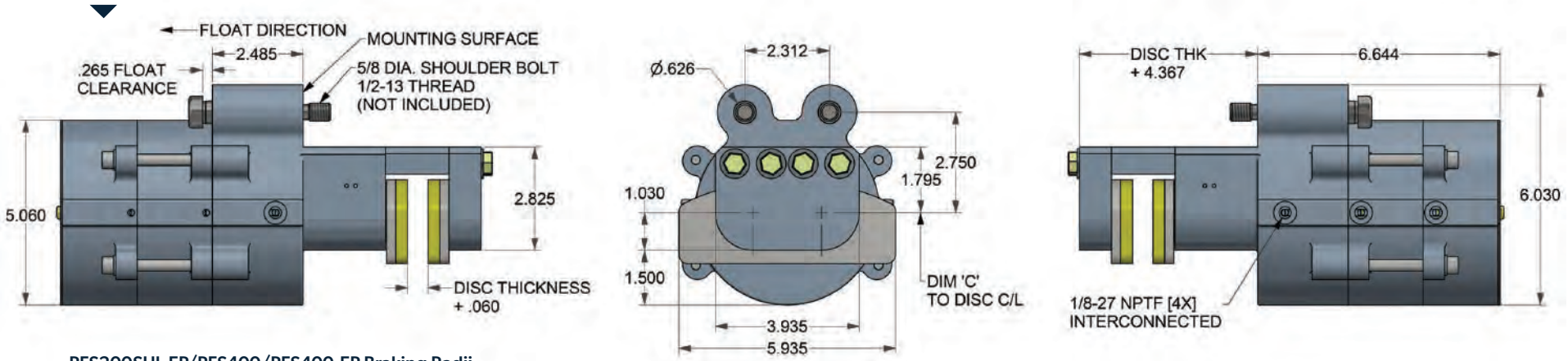
PFS400-EP EXTENDED PAD SERIES

Find CAD Drawings at WCBranham.com • Torque, In. lb. = Tangential Force (Lb.) x Braking Radius (In.) • Braking Radius, Inches = Sq. Root (Dim. "C" Squared + .8789)

Tangential Force (Lb.) = Clamping Force (Lb.) x .45 (coeff. of friction)

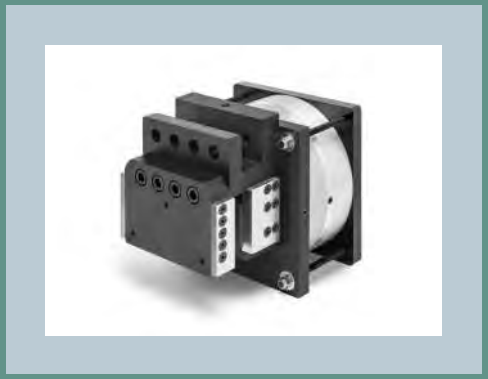
1,859 Lb. (8269 N) Tangential Force . . . . . **4,130** Lb. (18,371 N) Clamping Force . . . . . **17.2** Lb. (7.80 Kg.) Unit Weight

Force @ zero pad wear. Pad wear reduces force.



PFS200SUL-EP/PFS400/PFS400-EP Braking Radii

DISC DIA.	8.0	10.0	12.0	16.0	18.0	20.0	22.0	30.0
DIM. 'C'	3.03	4.03	5.03	7.03	8.03	9.03	10.03	14.03
BRAKING RADIUS	3.17	4.14	5.11	7.09	8.08	9.08	10.07	14.06

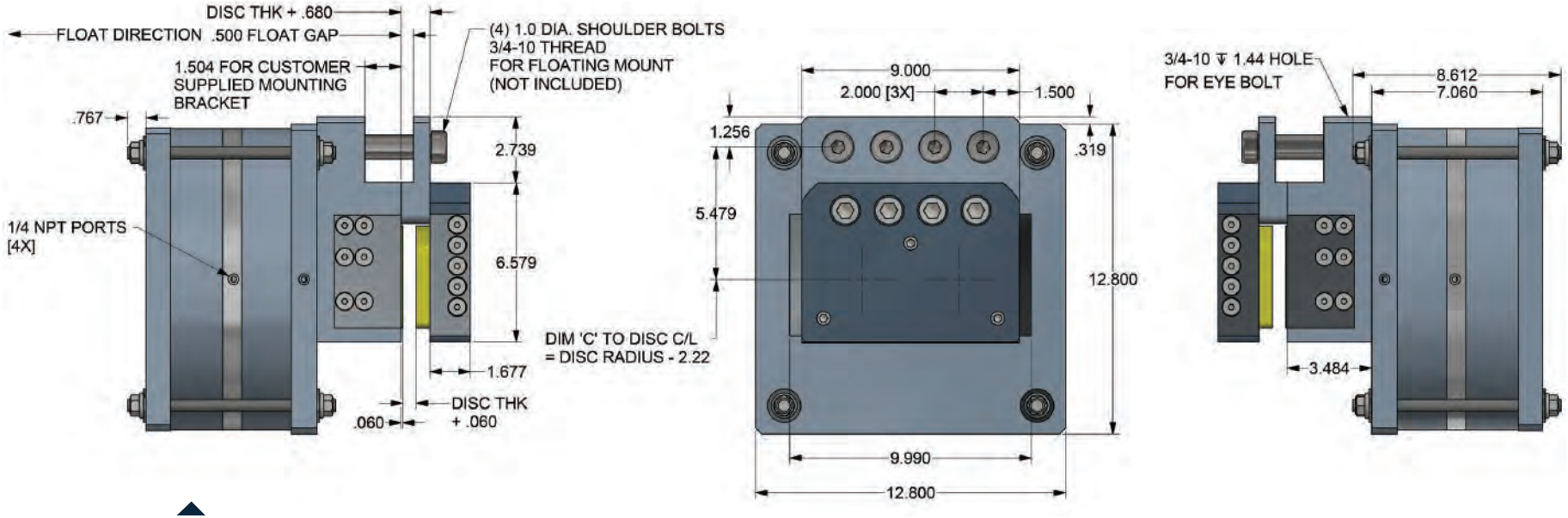


Standard Models

- 4252-0093/PFS520SE/.500 in. Disc Thickness
- 4252-0094/PFS520SJ/.625
- 4252-0095/PFS520ST/.750
- 4252-0096/PFS520SO/1.00
- 4252-0097/PFS520SQ/1.125

PFS520 SERIES

Find CAD Drawings at WCBranham.com • *Torque, In. lb. = Tangential Force (Lb.) x Braking Radius (In.)*



6,419 Lb. (28,553 N) Tangential Force . . . . . **14,264** Lb. (63,449 N) Clamping Force . . . . . **123** Lb. (55.79Kg.) Unit Weight

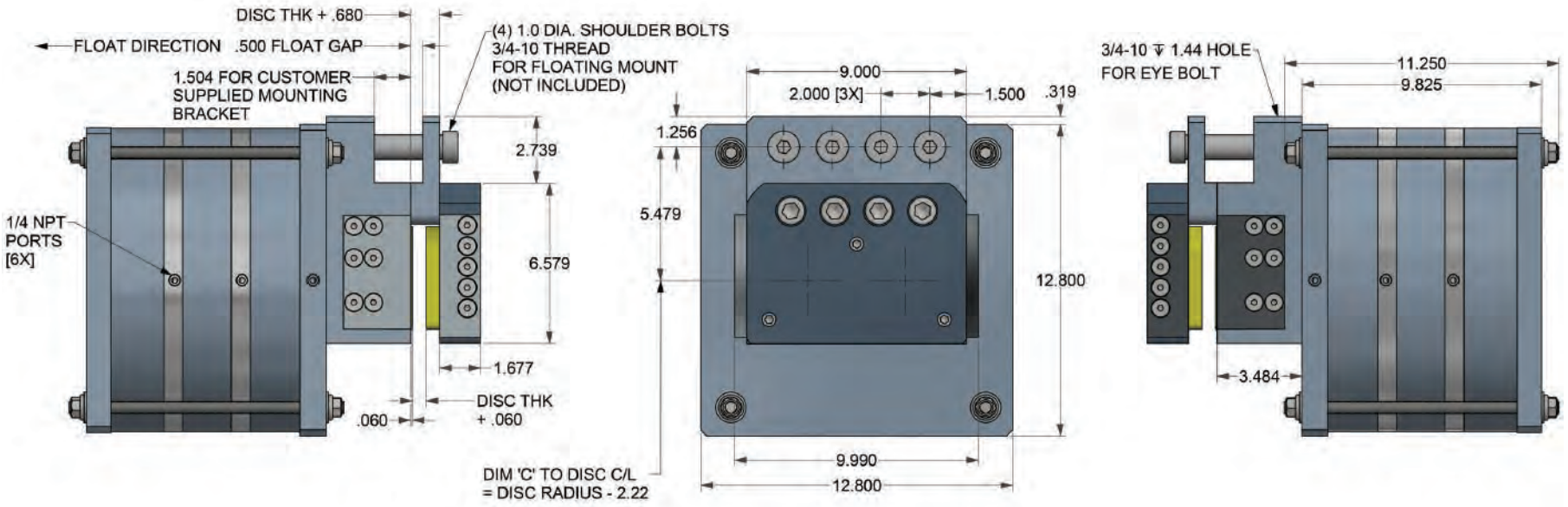
Force @ zero pad wear. Pad wear reduces force.

Standard Models

- 4252-0080/PFS522SE/.500 in. Disc Thickness
- 4252-0081/PFS522SJ/.625
- 4252-0082/PFS522ST/.750
- 4252-0083/PFS522SO/1.00
- 4252-0084/PFS522SQ/1.125

PFS522 SERIES

Tangential Force (Lb.) = Clamping Force (Lb.) x .45 (coeff. of friction) • *Braking Radius, Inches = Sq. Root (Dim. "C" Squared + 4.00)*



12,236 Lb. (54,428 N) Tangential Force . . . . . **27,192** Lb. (120,956 N) Clamping Force . . . . . **169.5** Lb. (76.88 Kg.) Unit Weight

Force @ zero pad wear. Pad wear reduces force.

WC BRANHAM®
SOLUTIONS IN MOTION

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