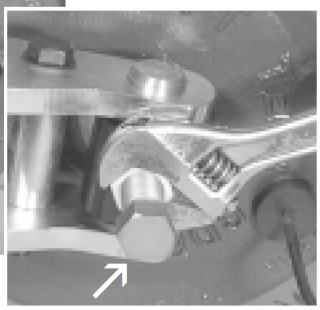
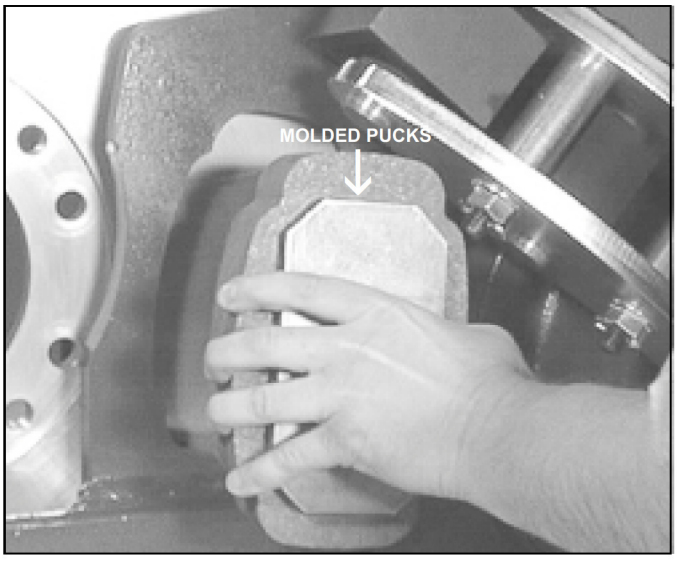
Adjusting for wear is easy. When the armature gap indicator has recessed approx. 1/16 inch, return it to the flush position by turning the wear adjustment nut.

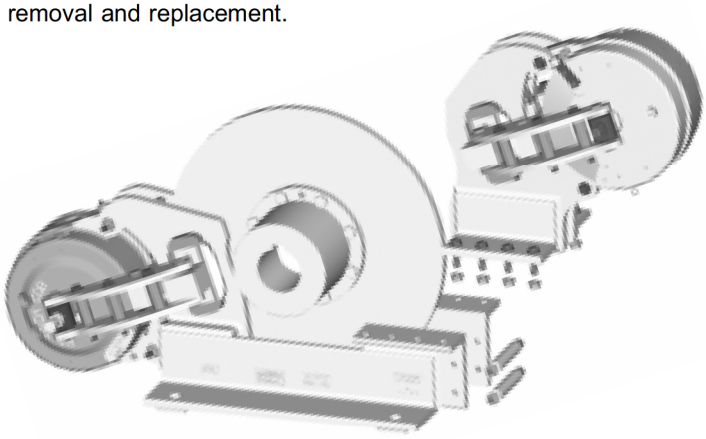
ADJUSTMENT NUT



JAM NUT



Caliper arms swing up exposing friction pucks for easy removal and replacement.



Installation requires no modification. Mounting bolt hole pattern meets AISE Brake Standard #11. Centerline of the disc maintains the same position relative to the motor as the center line of drum. Second caliper is removed to allow for ease of installation.

CDB 2329A and CDB 3034A

Caliper Disc Brake Balanced Design

- *Dual calipers to minimize shaft bending*
- *Spring applied, electrically released*
- *Operates in series or shunt*
- *Installation requires no modification*
- *Conforms to new AISE Brake Standard #11*

The dual acting calipers minimize shaft bending that occurs with single acting calipers. They are typically used on extended gearbox shafting or motors that are not built to mill duty standards.

The PT Tech CDB-A Caliper Disc Brakes are designed to upgrade AISE and CMAA cranes to the higher performance and the ease of maintenance of a caliper disc brake. Upgrading to the PT Tech Caliper Disc Brake will result in the following advantages:

1) Wear adjustment is far easier.
2) Less frequent need for wear adjustments.
3) Improved wear life.
4) Replacing friction pucks is substantially quicker.
5) Friction pucks weigh less than drum brake shoes.
6) Eliminates drag and slip problems due to drum thermal expansion.
7) Significantly better resistance to heat checking.
8) Sealed and lubricated pivot points.
9) Coils are common to three size brakes.

CDB-A Brakes have the same mounting bolt hole pattern as the drum brakes they replace.

CDB-A Brakes conform to the new AISE Brake Standard published in August, 1997.

MAXIMUM TORQUE (lb-ft)				
	SERIES WOUND		SHUNT WOUND	
Brake	½ hour	1 hour	½ hour	1 hour
2329A	4000	2600	4000	3000
3034A	6000	3900	6000	4500

Footnote: Refer to other sizes

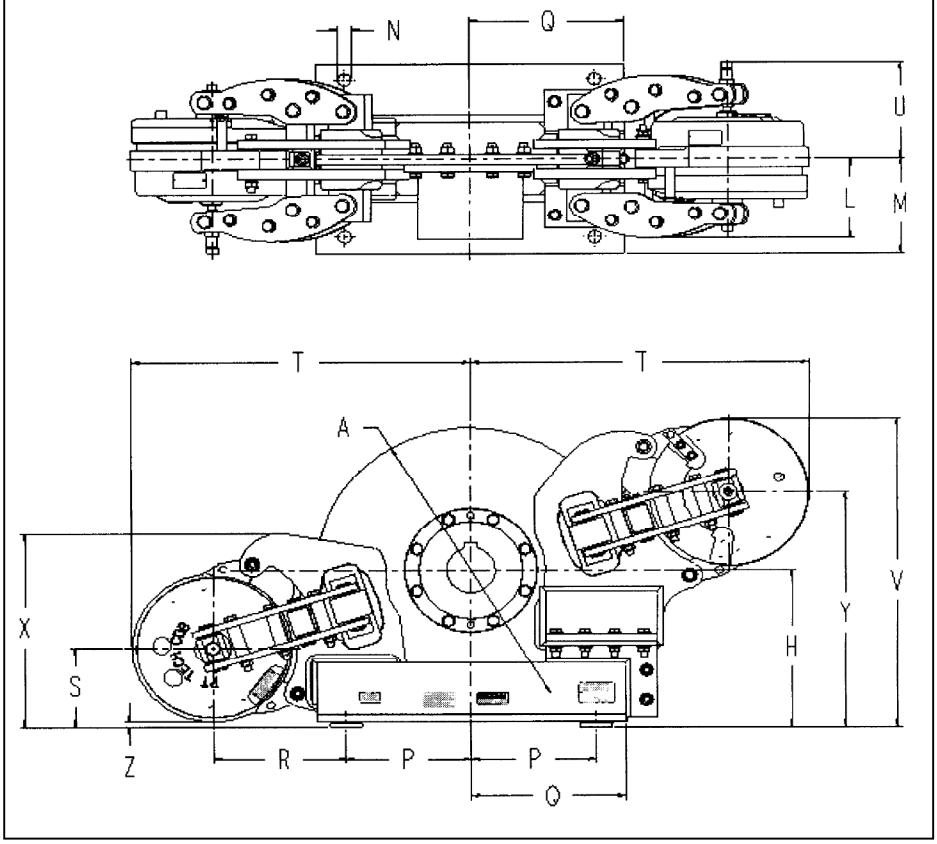
PT Tech
POWER TRANSMISSION TECHNOLOGY INC.
1441 WOLF CREEK TRAIL, P.O. BOX 305
SHARON CENTER, OH 44274-0305
TEL (330) 239-4933 • FAX (330) 239-2012

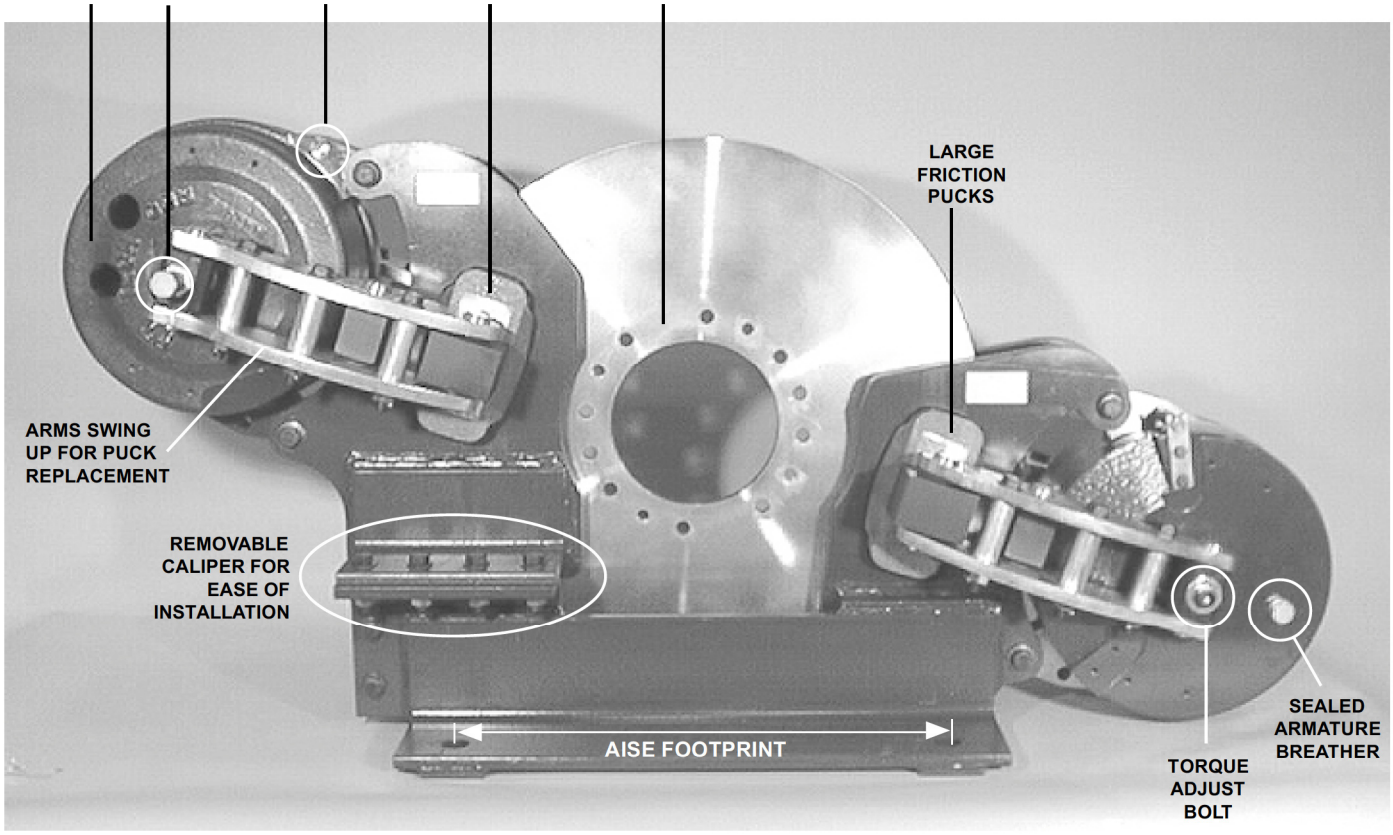
DIMENSIONAL DATA • BRAKE		
DIMENSIONS ARE IN INCHES	2329A	3034A
A	29	34
H	15.88	19
L	8	8.75
M	9.64	11.9
N	1.38	1.56
P	11.75	13.25
Q	14.5	17.0
R	12.44	13.38
T	31.75	34.13
U	11.69	11.69
V	31.40	35.25
X	19.55	22
Y	23.75	27.63
Z	.45	2.8

PERFORMANCE DATA • BRAKE		
	2329A	3034A
Energy Capacity* ft-lbs/hr	15,000,000	15,000,000
Max Speed	1,740 rpm	1,650 rpm
Torque Rating lb-ft	4,000	6,000

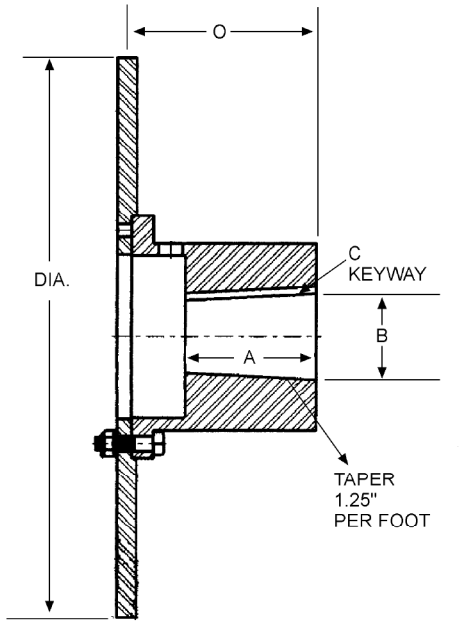
* For high energy applications contact PT Tech about using ventilated discs.

DIMENSIONAL COMPARISON





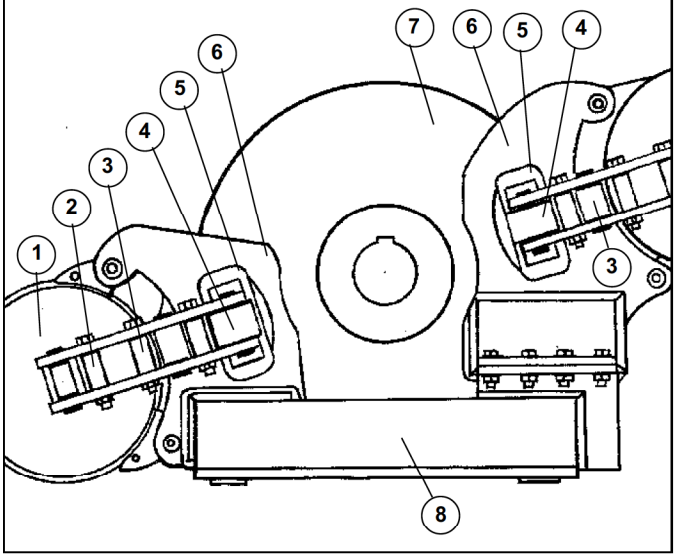
DISC DATA



DIMENSIONAL DATA

	2329A	3034A
Diameter	29"	34"
Thickness	1"	1"
A. Length thru Bore		
Motor Size: 614/814	5.0	5.0
616/816	5.5	5.5
618/818	6.0	6.0
620/820	6.75	6.75
622/822	-	7.25
624/824	-	9.25
B. Bore		
Motor Size: 614/814	4.25	4.25
616/816	4.625	4.625
618/818	5.0	5.0
620/820	5.875	5.875
622/822	-	6.25
624/824	-	7.0
O. Centerline Distance		
Motor Size: 614/814	8.25	10.25
616/816	8.25	10.25
618/818	8.75	10.25
620/820	9.75	10.25
622/822	9.75	10.75
624/824	9.75	10.75

HOW CDB-A WORKS



CDB-A balanced brakes have dual calipers. Each operates as follows:

CDB-A brakes are spring applied and electrically released. When power is turned off the torque spring assembly pushes the armature away from the magnet body (#1) which in turn forces the caliper arms out.

The caliper arms (#2) articulate about the sealed and lubricated pivot points (#3) forcing the pusher plates (#4) to press on the friction pucks (#5).

The friction pucks are held in machined pockets in the base's tower (#6). As the pressure plates exert a squeezing force, the pucks pinch the disc (#7). The resulting torque reaction load is directly transmitted from the pucks to the tower that is welded to the base (#8).

The caliper arms do not carry the torque reaction load. This allows them to easily accommodate the axial movement of the DC motor.

When power is applied to the coil, the armature is attracted towards the magnet body thus collapsing the spring. This allows the caliper arms to open thereby removing the squeezing force on the pucks. In this state, the friction pucks account for negligible drag.

The disc has far greater exposed swept area than a drum thus its energy dissipation capability is far superior to a drum. This allows the brake to operate cooler and avoid fade problems.

Discs are far less susceptible to heat checking because they absorb energy from both sides, therefore avoiding high thermal stresses common in brake drums.

WHEN CONVERTING

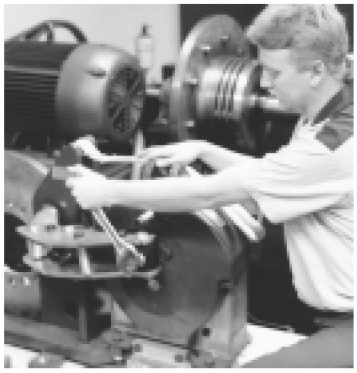
CDB-A brakes directly replace drum brakes. They have the same mounting footprint and torque capacity as drum brakes. When converting, it is critical that the disc's centerline is in the same position as the drum's centerline. (see sketch)

If the installation conforms to AISE's dimensional standard for DC mill motors, then when ordering all that is required is the DC mill motor number. In all other installations, please provide a drawing of the existing brake wheel.

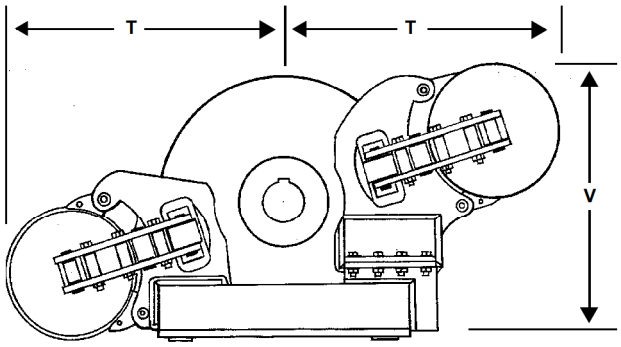
APPLICATION ASSISTANCE

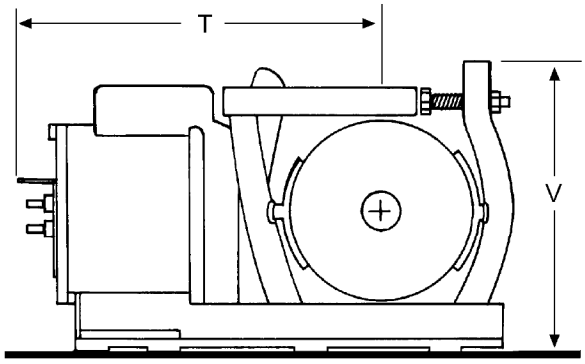
PT Tech has been analyzing and solving shockload problems for heavy industry since 1980. Our application engineers regularly visit mills to better appreciate the problems that plant engineers and maintenance people face.

FIELD SERVICE



The people at PT Tech who build our disc brakes also go into the field to service them when needed. PT Tech supports its commitment to excellent field service with a large inventory of parts and a 24-hour service Hotline.





	2329A			3034A[1]		
	PTT	CH	SQ-D	PTT	CH	SQ-D
S	X	18.13	19.50	X	X	X
T	31.75	30.38	39.75	34.13	X	X
V	31.35	30.38	34.87	35.25	X	X

[1] An equivalent drum brake does not exist

PT Tech
POWER TRANSMISSION TECHNOLOGY INC.

WARRANTY: PT Tech guarantees all its products will leave the factory in good condition. PT Tech warrants its products against defects in workmanship and material for a period of 365 days (one year) after shipment. Adjustments under this warranty will be made only after completion of inspection of the part or product in PT Tech's factory. PT Tech's liability under the warranty shall extend only to the replacement or correction of any defective part or product determined by PT Tech's inspection as not conforming to this warranty. Under no circumstances shall PT Tech be liable for consequential or incidental damages. This warranty shall not apply to any product which shall have been repaired or altered without PT Tech's knowledge and consent or operated or installed contrary to PT Tech's instruction or subjected to misuse, improper maintenance, or damaged by accident or negligence.

PERFORMANCE ASSURANCE: Rated torque and speeds are provided by PT Tech to assist the buyer in selecting the proper product. In addition, engineering assistance is offered by PT Tech for design and application of custom designed drives. Since the actual performance characteristics of the buyer's equipment cannot be completely analyzed nor duplicated in laboratory tests, performance assurance of all PT Tech products in the buyer's applications is the responsibility of the buyer. Performance assurance is usually accomplished through manufacture of a prototype by PT Tech and a test or qualification program on the part of the buyer. *Rotating equipment is potentially dangerous and should be properly guarded. The user should check all applicable safety codes in his area and provide suitable guards.*

PRINTED IN USA

SC/9/00