

# POWER TRANSMISSION

**GEARBOXES  
CALIPER DISC BRAKES  
CLUTCHES**



# TOLOMATIC HAS THE RESOURCES TO HELP YOU GET WHAT YOU NEED.

## PRODUCTS AND PEOPLE YOU NEED TO GET THE JOB DONE RIGHT.

At Tolomatic we have the resources and the experience to give you what you need when you need it. Working together we can find solutions whether it is a new feature, better performance or a whole new product line. Our sales department will make sure all your questions are answered. Our engineers will assist you with your application design. Our model shop will make all the tooling and specials you need for a new product—not in 6 months or a year—but when you need them.

## QUALITY PRODUCTS, COMPETITIVELY PRICED, WHEN YOU WANT THEM.

Our engineering laboratory pushes our products to the breaking point running them 24 hours a day, 7 days a week for millions of cycles looking for ways to improve them. They work with R&D to develop new manufacturing techniques and to perfect new products. For each new product, detailed engineered drawings are converted into hand-crafted sample products for testing, then precision tooling is built on site by Tolomatic's own skilled craftsmen with the highest standards of quality, care and dedication to details. The products are tested again by engineering and by selected field representatives. Tolomatic has heavily invested in research to guarantee you delivery of the highest quality products not in months or weeks, but within days of your order, and with a warranty rate less than 1/2 of 1%.

## UNCONDITIONAL 100% SATISFACTION GUARANTEE.

Tolomatic has built its reputation on customer satisfaction. For over 50 years it has been our policy that, if for any reason you have a problem with any Tolomatic product ordered, we will do whatever it takes to make sure you are 100% satisfied. Working together we will arrive at a solution that works best for you.

## TOLOMATIC TRAINING CENTER

There is a Tolomatic product for just about every application that may come your way and it is our goal to remove every obstacle, give you every tool, device and piece of knowledge necessary to learn how to size and apply Tolomatic products. That is why we supply the most advanced in-depth training in the industry— free of charge to all our distributors and their customers.



*Located in west suburban Minneapolis, Minnesota, Tolomatic headquarters (a 100,000 sq. ft. state-of-the-art facility) is designed for improved communication and manufacturing techniques to meet customer needs today and well into the future.*

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# The Tolomatic Difference

Over 50 Years of Proven Performance

## EXCELLENT TECHNICAL SUPPORT



### OUR PEOPLE MAKE THE DIFFERENCE!

Expect prompt, courteous replies to all of your application and product questions.

## INDUSTRY LEADING DELIVERIES



**STANDARD CATALOG PRODUCTS SHIP IN FIVE WORKING DAYS OR LESS** - same day for many items. Modified and custom products ship weeks ahead of the competition. Every product is built with **ENDURANCE TECHNOLOGY** components and quality tested before shipment.

## CONVENIENT ORDERING



[www.tolomatic.com](http://www.tolomatic.com) or **1.800.328.2174** - whichever is most convenient to you. You can be assured of speedy service either way.

# The Tolomatic Difference

Over 50 Years of Proven Performance

## CREATIVE SOLUTIONS...ENGINEERED DAILY

### STANDARD PRODUCTS



ISO 9001 quality procedures combined with **ENDURANCE TECHNOLOGY** for trouble-free installation and start-up.

- Over 35 distinct product lines detailed in over 4,000 web pages.
- User specified stroke length is standard.

### MODIFIED PRODUCTS



Modified products, like this spring applied brake with modified pressure chamber for low pressure release, extend the range of environments and applications where Tolomatic products can be used.

- Modifications include user specified tapped holes, materials, lubricants, coatings, and/or mounting brackets.

### CUSTOM PRODUCTS



Challenges like this multi-axis actuator built to fit a manufacturer's motion, space and accuracy requirements are a regular part of our daily activities.

- Custom solutions for unique motion requirements.
- We will work with you to design a motion product within your space, budget, and time requirements.

# The Tolomatic Difference

A USEFUL WEB SITE: [www.tolomatic.com](http://www.tolomatic.com)

## COMPLETE INFORMATION AVAILABLE ONLINE

PRODUCT SUPPORT AVAILABLE 24/7 AT [www.tolomatic.com](http://www.tolomatic.com)

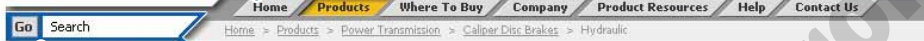
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Check the home page for news and featured products

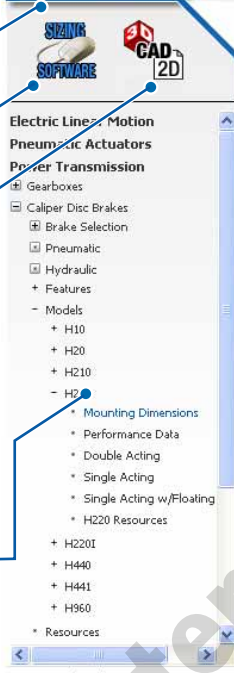


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Search tool gets the information you need - fast!



Easy access to sizing software

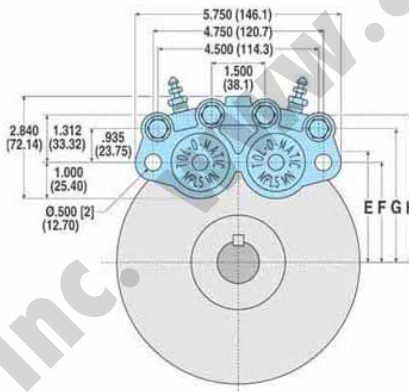


2D drawings and 3D models available on the web  
 • Available in many popular formats

Similar to Windows Explorer®, this handy navigation is always available

### Power Transmission - Hydraulic Caliper Disc Brakes - Mounting Dimensions

#### H220: Mounting Dimensions



Disc Diameter	6.313"	8"	10"	12"	16"
E	2.38"	3.15"	4.11"	5.08"	7.21"
F	2.13"	3.00"	4.00"	5.00"	7.09"
G	3.07"	3.94"	4.94"	5.94"	8.03"
H	3.45"	4.32"	5.32"	6.32"	8.41"
J	4.30"	5.17"	6.17"	7.17"	9.26"

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**SLIDE-RITE™ GEARBOX and  
SLIDE-RITE™CR GEARBOX**

Pages 2 through 7



**FLOAT-A-SHAFT (FAS) GEARBOX**

Pages 8 through 24

Visit [www.tolomatic.com](http://www.tolomatic.com) for the latest updates, CAD files and ordering.

- SLIDE-RITE GEARBOX
- ENDURANCE TECHNOLOGY
- APPLICATION EXAMPLE
- COMPACT SERIES 1:1 RATIO
- STANDARD SERIES 1:1 RATIO
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- SELECTION
- INSTALLATION
- SHAFT & KEYWAY REQUIREMENTS

# Slide-Rite® & Slide-Rite® CR Gearbox

SLIDE-RITE GEARBOX

## COMPACT SIZE & STANDARD SIZE

ENDURANCE TECHNOLOGY

APPLICATION EXAMPLE

COMPACT SERIES 1:1 RATIO

STANDARD SERIES 1:1 RATIO

STANDARD SERIES 3:2 RATIO

STANDARD SERIES 2:1 RATIO

FLOAT-A-SHAFT

APPLICATIONS

INTRODUCTION

COMPACT SERIES 1:1 RATIO

STANDARD SERIES 1:1 RATIO

STANDARD SERIES 3:2 RATIO

STANDARD SERIES 2:1 RATIO

STANDARD SERIES 2.5:1 RATIO

SELECTION

INSTALLATION

SHAFT & KEYWAY REQUIREMENTS

The **Slide-Rite®**, like the classic **Float-A-Shaft®**, is a universal right angle gearbox. It consists of two 45° helical gears that mesh at right angles, designed to turn power at 90°. It can be operated in either direction and can slide axially along the drive or driven shaft.

The **Slide-Rite®** gearbox's unique floating design maintains perfect shaft alignment allowing for easy installation.

A solid one-piece aluminum housing seals the gears from outside contaminants, providing for smooth operation in even the harshest industrial environments.

### ENDURANCE TECHNOLOGY <sup>SM</sup>

Look for this endurance technology symbol indicating our durability design features

#### LEAK-PROOF PERFORMANCE

- One-piece housing, one-piece geared shaft and sealed bearings offer leak-proof performance and excellent service life

#### PRELUBRICATED

- Prelubricated for long, trouble-free service

#### ONE-PIECE GEARED SHAFT

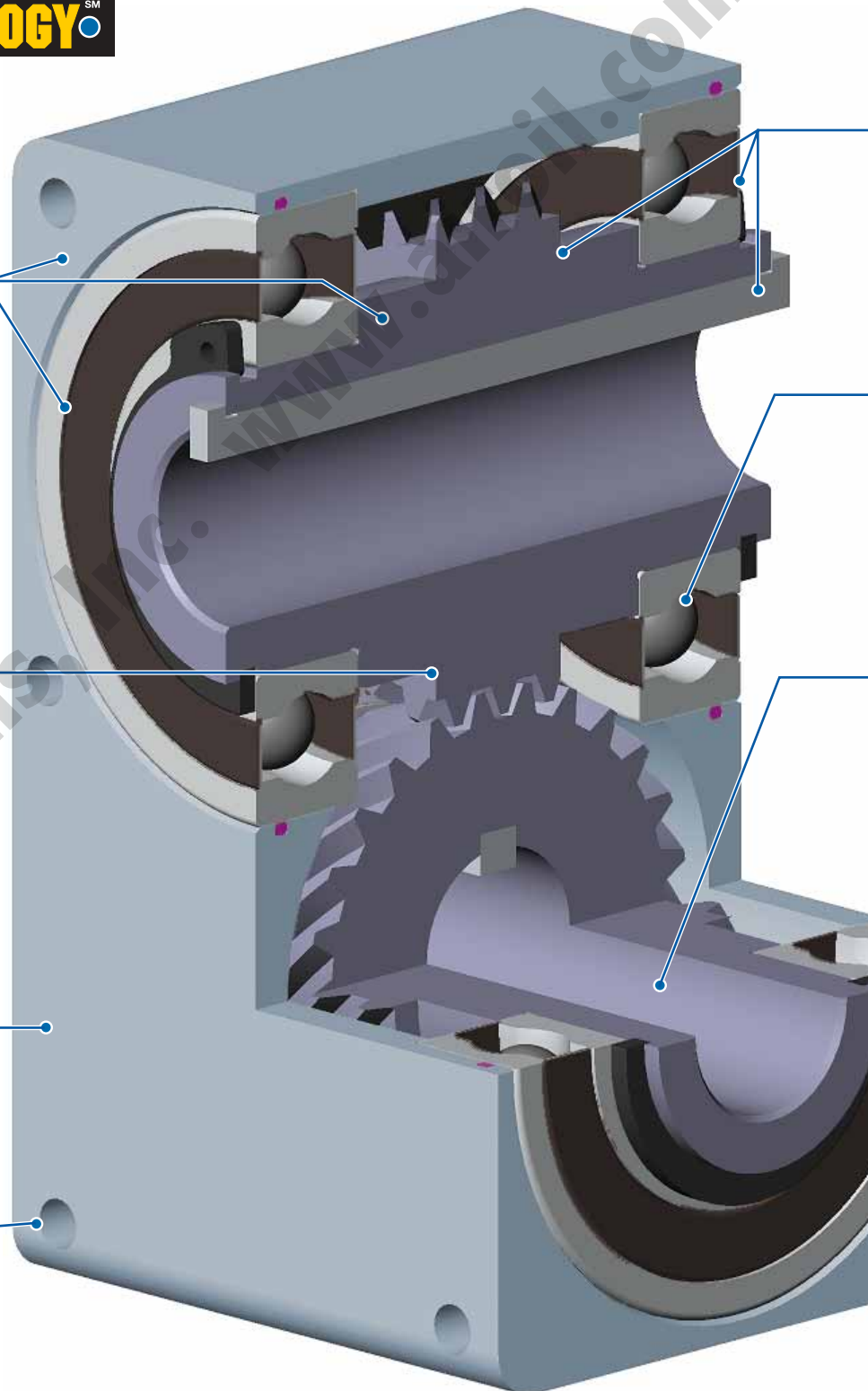
- Fewer parts to wear out

#### USES STANDARD TRANSMISSION SHAFTING

#### HARD COATED ALUMINUM CASE

- Resists corrosion and forms its own lubricant reservoir

#### THREADED MOUNTING HOLES



Air-Oil Systems



## APPLICATION EXAMPLE

The specially selected corrosion resistant components of the **Slide-Rite®CR** Gearbox make it the perfect choice for environmentally challenging applications.

### SLIDE-RITE®CR FEATURES:

#### • HELICAL GEARS, KEYS, RETAINING RINGS •

##### • ALLOY STEEL •

- 45 degree helical gears are hardened alloy steel
- High performance, long life construction

##### • NICKEL PLATED •

- Corrosion resistant electroless nickel-plated geared sleeves, keys and retaining rings

#### • BEARINGS AND BEARING RACES •

##### • HARDENED STEEL •

- High performance, long life materials

##### • STAINLESS STEEL •

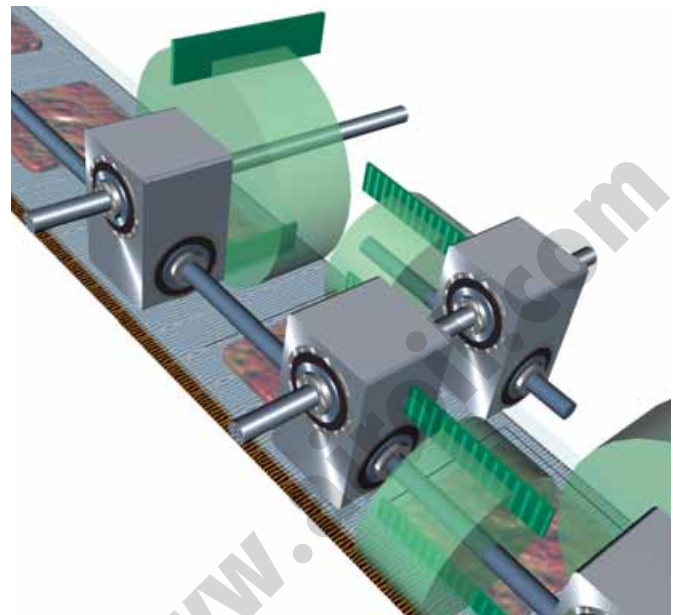
- Corrosion resistant stainless steel balls and races

#### • PRECISION GROUND BORES •

##### • SPECIFICATIONS •

- Max speed: 1,200 RPM
- Backlash: < 1 degree
- Bidirectional
- Slide through bore: limited only by length of keyway on shaft

Specifications and endurance technology features apply to all sizes of Slide-Rite® gearboxes.



#### Application Description:

A manufacturer of frozen pizzas needed a way to cut and seal the plastic packaging for multiple sizes of their signature square pizza.

#### Application Requirements:

- Output of 60 pizzas per minute
- 4" adjustment range
- No maintenance - washdown environment

#### Tolomatic Solution: Slide-Rite®CR Gearboxes

The sealed, high speed, corrosion resistant design of the Slide-Rite®CR provides the high throughput necessary in this application. Other important application design features: Using multiple right angle gearboxes, a single motor, located outside the wash down area, synchronously drives both cutting and sealing units. The slide through bore feature of the Slide-Rite® offers adjustability for several pizza sizes.

## COMPACT SIZE – 1:1 RATIO – U.S. & METRIC

### AVAILABLE STYLES

1:1 US STANDARD  
1:1 METRIC

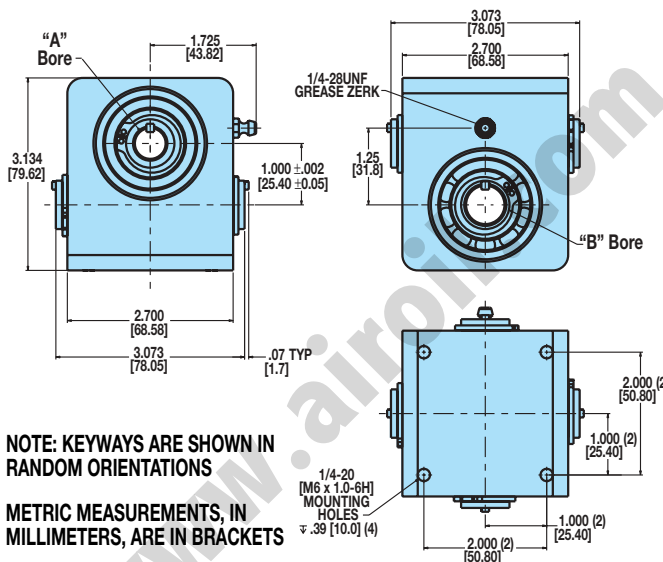


1:1 SLIDE-RITE®CR; US STANDARD



### DIMENSIONS

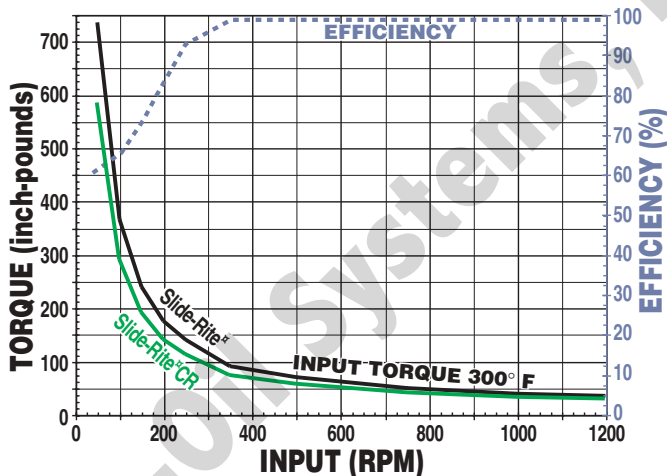
Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### PERFORMANCE DATA

#### High Torque Ball Bearings

#### Torque and Efficiency vs RPM at Maximum Operating Temperature



#### Models and Bore Dimensions

#### COMPACT SIZE – 1:1 RATIO – U.S. HIGH TORQUE BALL BEARING

SLIDE-RITE® MODEL NUMBER	SLIDE-RITE®CR MODEL NUMBER	RH or LH	"A" BORE		"B" BORE		APPROX. WEIGHT (LBS.)
			BORE SIZE (IN.)	WxD KEYWAY (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)	
0120-0400	0120-0420	RH	1/2	1/8 x 1/16	1/2	1/8 x 1/16	2.7
0121-0400	0121-0420	LH	1/2	1/8 x 1/16	1/2	1/8 x 1/16	2.7
0122-0400	0122-0420	RH	1/2	1/8 x 1/16	5/8	1/8 x 1/16	2.6
0123-0400	0123-0420	LH	1/2	1/8 x 1/16	5/8	1/8 x 1/16	2.6
0124-0400	0124-0420	RH	5/8	1/8 x 1/16	5/8	1/8 x 1/16	2.5
0125-0400	0125-0420	LH	5/8	1/8 x 1/16	5/8	1/8 x 1/16	2.5

#### COMPACT SIZE – 1:1 RATIO – METRIC HIGH TORQUE BALL BEARING

MODEL NUMBER	RH or LH	"A" BORE		"B" BORE		APPROX. WEIGHT (kg.)
		BORE SIZE (mm)	WxD KEYWAY (mm)	BORE SIZE (mm)	WxD KEYWAY (mm)	
0120-0410	RH	12	4 x 2	12	4 x 2	1.2
0121-0410	LH	12	4 x 2	12	4 x 2	1.2
0122-0410	RH	12	4 x 2	15	5 x 2.5	1.2
0123-0410	LH	12	4 x 2	15	5 x 2.5	1.2
0124-0410	RH	15	5 x 2.5	15	5 x 2.5	1.1
0125-0410	LH	15	5 x 2.5	15	5 x 2.5	1.1

## STANDARD SIZE – 1:1 RATIO – U.S. & METRIC

### AVAILABLE STYLES

1:1 US STANDARD  
1:1 METRIC

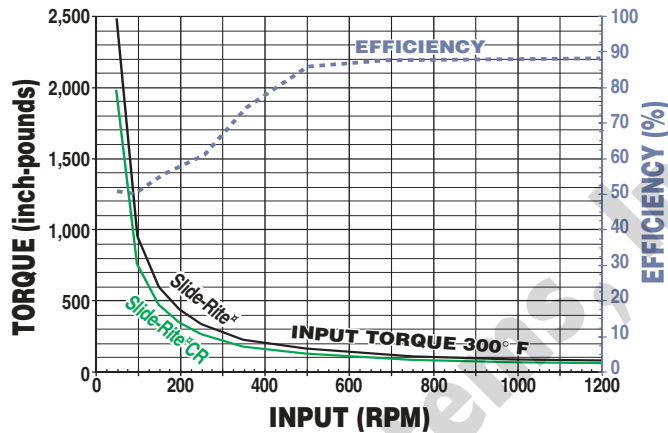


1:1 SLIDE-RITE®CR; US STANDARD



### PERFORMANCE DATA

**High Torque Ball Bearings**  
**Torque and Efficiency vs RPM**  
**at Maximum Operating Temperature**



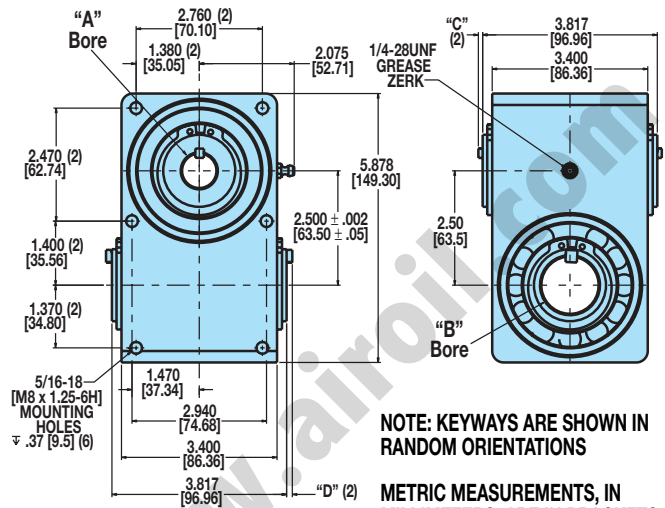
### Models and Bore Dimensions

#### STANDARD SIZE – 1:1 RATIO – U.S. HIGH TORQUE BALL BEARING

SLIDE-RITE® MODEL NUMBER	SLIDE-RITE®CR MODEL NUMBER	RH or LH	"A" BORE			"B" BORE			APPROX. WEIGHT (LBS.)
			BORE SIZE (IN.)	WxD KEYWAY (IN.)	"C" DIM. (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)	"D" DIM. (IN.)	
0220-0400	0220-0420	RH	3/4	3/16 x 3/32	.10	3/4	3/16 x 3/32	.10	10.7
0221-0400	0221-0420	LH	3/4	3/16 x 3/32	.10	3/4	3/16 x 3/32	.10	10.7
0222-0400	0222-0420	RH	3/4	3/16 x 3/32	.10	1	1/4 x 1/8	.13	10.4
0223-0400	0223-0420	LH	3/4	3/16 x 3/32	.10	1	1/4 x 1/8	.13	10.4
0224-0400	0224-0420	RH	3/4	3/16 x 3/32	.10	1-1/4	1/4 x 1/8	.13	9.9
0225-0400	0225-0420	LH	3/4	3/16 x 3/32	.10	1-1/4	1/4 x 1/8	.13	9.9
0226-0400	0226-0420	RH	1	1/4 x 1/8	.13	1	1/4 x 1/8	.13	10.0
0227-0400	0227-0420	LH	1	1/4 x 1/8	.13	1	1/4 x 1/8	.13	10.0
0228-0400	0228-0420	RH	1	1/4 x 1/8	.13	1-1/4	1/4 x 1/8	.13	9.6
0229-0400	0229-0420	LH	1	1/4 x 1/8	.13	1-1/4	1/4 x 1/8	.13	9.6
0230-0400	0230-0420	RH	1-1/4	1/4 x 1/8	.13	1-1/4	1/4 x 1/8	.13	9.1
0231-0400	0231-0420	LH	1-1/4	1/4 x 1/8	.13	1-1/4	1/4 x 1/8	.13	9.1

### DIMENSIONS

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



#### STANDARD SIZE – 1:1 RATIO – METRIC HIGH TORQUE BALL BEARING

MODEL NUMBER	RH or LH	"A" BORE			"B" BORE			APPROX. WEIGHT (kg.)
		BORE SIZE (mm)	WxD KEYWAY (mm)	"C" DIM. (mm)	BORE SIZE (mm)	WxD KEYWAY (mm)	"D" DIM. (mm)	
0220-0410	RH	20	6 x 3	3.2	20	6 x 3	3.2	4.8
0221-0410	LH	20	6 x 3	3.2	20	6 x 3	3.2	4.8
0222-0410	RH	20	6 x 3	3.2	25	8 x 3.5	3.2	4.7
0223-0410	LH	20	6 x 3	3.2	25	8 x 3.5	3.2	4.7
0224-0410	RH	20	6 x 3	3.2	30	8 x 3.5	3.2	4.5
0225-0410	LH	20	6 x 3	3.2	30	8 x 3.5	3.2	4.5
0226-0410	RH	25	8 x 3.5	3.2	25	8 x 3.5	3.2	4.5
0227-0410	LH	25	8 x 3.5	3.2	25	8 x 3.5	3.2	4.5
0228-0410	RH	25	8 x 3.5	3.2	30	8 x 3.5	3.2	4.4
0229-0410	LH	25	8 x 3.5	3.2	30	8 x 3.5	3.2	4.4
0230-0410	RH	30	8 x 3.5	3.2	30	8 x 3.5	3.2	4.2
0231-0410	LH	30	8 x 3.5	3.2	30	8 x 3.5	3.2	4.2

## STANDARD SIZE – 3:2 RATIO – U.S.

SLIDE-RITE GEARBOX

ENDURANCE TECHNOLOGY

APPLICATION EXAMPLE

COMPACT SERIES 1:1 RATIO

STANDARD SERIES 1:1 RATIO

STANDARD SERIES 3:2 RATIO

STANDARD SERIES 2:1 RATIO

FLOAT-A-SHAFT

APPLICATIONS

INTRODUCTION

COMPACT SERIES 1:1 RATIO

STANDARD SERIES 1:1 RATIO

STANDARD SERIES 3:2 RATIO

STANDARD SERIES 2:1 RATIO

STANDARD SERIES 2.5:1 RATIO

SELECTION

INSTALLATION

SHAFT & KEYWAY REQUIREMENTS

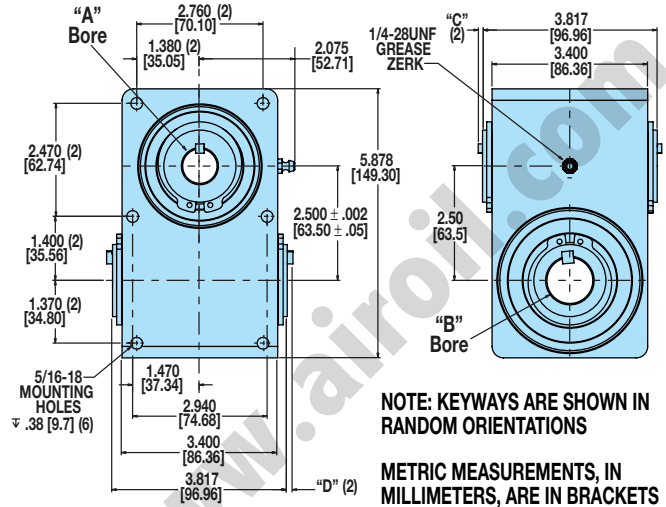
### AVAILABLE STYLES

3:2 US STANDARD



### DIMENSIONS

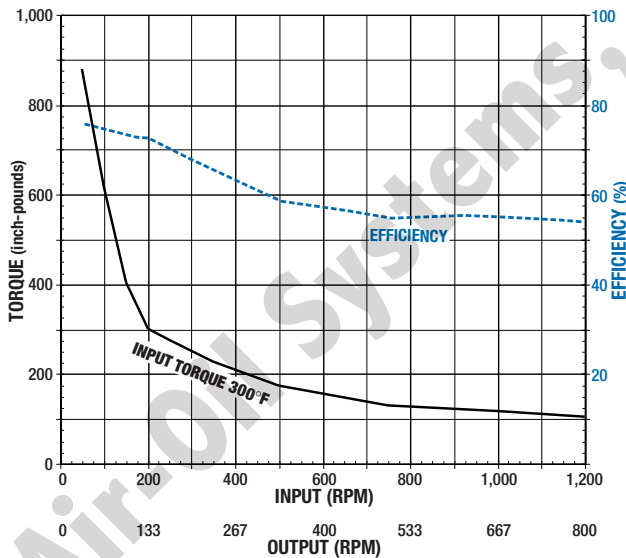
Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### PERFORMANCE DATA

#### High Torque Ball Bearings

#### Torque and Efficiency vs RPM at Maximum Operating Temperature



#### Models and Bore Dimensions

#### STANDARD SIZE – 3:2 RATIO – U.S. HIGH TORQUE BALL BEARING

MODEL NUMBER	RH or LH	"A" BORE			"B" BORE			APPROX. WEIGHT (LBS.)
		BORE SIZE (IN.)	WxD KEYWAY (IN.)	"C" DIM. (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)	"D" DIM. (IN.)	
0320-0460	RH	3/4	3/16 x 3/32	.10	3/4	3/16 x 3/32	.10	10.3
0321-0460	LH	3/4	3/16 x 3/32	.10	3/4	3/16 x 3/32	.10	10.3
0322-0460	RH	3/4	3/16 x 3/32	.10	1	1/4 x 1/8	.13	10.0
0323-0460	LH	3/4	3/16 x 3/32	.10	1	1/4 x 1/8	.13	10.0
0324-0460	RH	3/4	3/16 x 3/32	.10	1-1/4	1/4 x 1/8	.13	9.5
0325-0460	LH	3/4	3/16 x 3/32	.10	1-1/4	1/4 x 1/8	.13	9.5
0326-0460	RH	1	1/4 x 1/8	.13	1	1/4 x 1/8	.13	9.6
0327-0460	LH	1	1/4 x 1/8	.13	1	1/4 x 1/8	.13	9.6
0328-0460	RH	1	1/4 x 1/8	.13	1-1/4	1/4 x 1/8	.13	9.1
0329-0460	LH	1	1/4 x 1/8	.13	1-1/4	1/4 x 1/8	.13	9.1
0330-0460	RH	1-1/4	1/4 x 1/8	.13	1-1/4	1/4 x 1/8	.13	8.7
0331-0460	LH	1-1/4	1/4 x 1/8	.13	1-1/4	1/4 x 1/8	.13	8.7

Air-Ohl Systems, Inc.

## STANDARD SIZE – 2:1 RATIO – U.S.

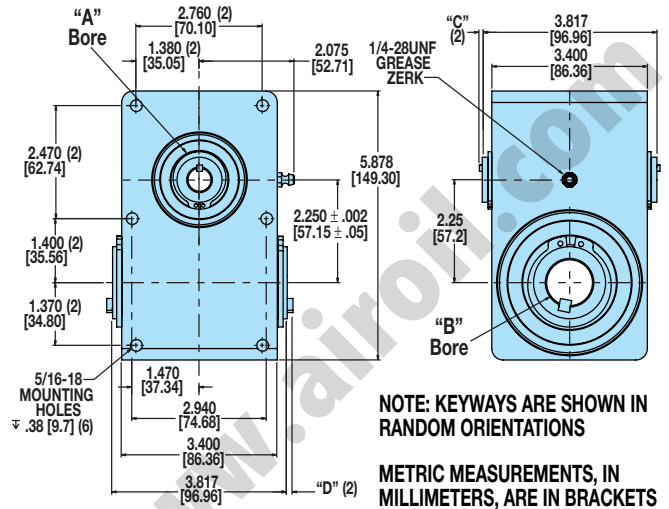
### AVAILABLE STYLES

2:1 US STANDARD



### DIMENSIONS

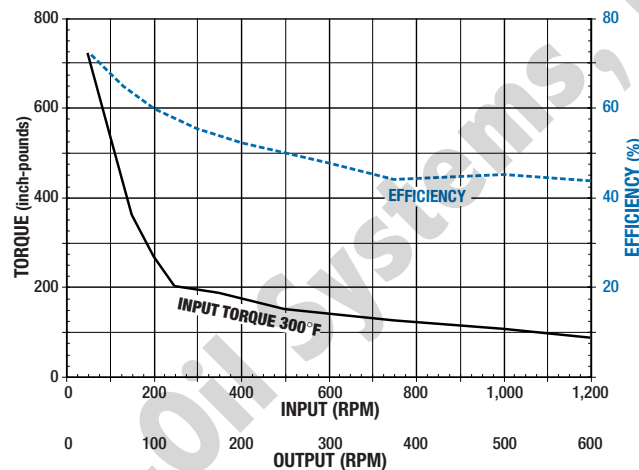
Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### PERFORMANCE DATA

#### High Torque Ball Bearings

#### Torque and Efficiency vs RPM at Maximum Operating Temperature



#### Models and Bore Dimensions

#### STANDARD SIZE – 2:1 RATIO – U.S. HIGH TORQUE BALL BEARING

MODEL NUMBER	RH or LH	"A" BORE			"B" BORE			APPROX. WEIGHT (LBS.)
		BORE SIZE (IN.)	WxD KEYWAY (IN.)	"C" DIM. (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)	"D" DIM. (IN.)	
0220-0460	RH	1/2	1/8 x 1/16	.07	3/4	3/16 x 3/32	.10	10.7
0221-0460	LH	1/2	1/8 x 1/16	.07	3/4	3/16 x 3/32	.10	10.7
0222-0460	RH	1/2	1/8 x 1/16	.07	1	1/4 x 1/8	.13	10.4
0223-0460	LH	1/2	1/8 x 1/16	.07	1	1/4 x 1/8	.13	10.4
0224-0460	RH	1/2	1/8 x 1/16	.07	1-1/4	1/4 x 1/8	.13	9.9
0225-0460	LH	1/2	1/8 x 1/16	.07	1-1/4	1/4 x 1/8	.13	9.9
0226-0460	RH	5/8	1/8 x 1/16	.07	3/4	3/16 x 3/32	.10	10.0
0227-0460	LH	5/8	1/8 x 1/16	.07	3/4	3/16 x 3/32	.10	10.0
0228-0460	RH	5/8	1/8 x 1/16	.07	1	1/4 x 1/8	.13	9.6
0229-0460	LH	5/8	1/8 x 1/16	.07	1	1/4 x 1/8	.13	9.6
0230-0460	RH	5/8	1/8 x 1/16	.07	1-1/4	1/4 x 1/8	.13	9.1
0231-0460	LH	5/8	1/8 x 1/16	.07	1-1/4	1/4 x 1/8	.13	9.1
0232-0460	RH	3/4	3/16 x 3/32	.10	3/4	3/16 x 3/32	.10	10.0
0233-0460	LH	3/4	3/16 x 3/32	.10	3/4	3/16 x 3/32	.10	10.0
0234-0460	RH	3/4	3/16 x 3/32	.10	1	1/4 x 1/8	.13	9.6
0235-0460	LH	3/4	3/16 x 3/32	.10	1	1/4 x 1/8	.13	9.6
0236-0460	RH	3/4	3/16 x 3/32	.10	1-1/4	1/4 x 1/8	.13	9.1
0237-0460	LH	3/4	3/16 x 3/32	.10	1-1/4	1/4 x 1/8	.13	9.1

## APPLICATIONS

### YOU CAN'T FIND A MORE FLEXIBLE GEAR DRIVE

If the distances between take-ups are varied during operation, both shafts can be slid axially through the Float-A-Shaft. They're available in right or left hand drives to meet your exact requirements. And what's more, the shaft's direction is reversible to suit your changing operation.

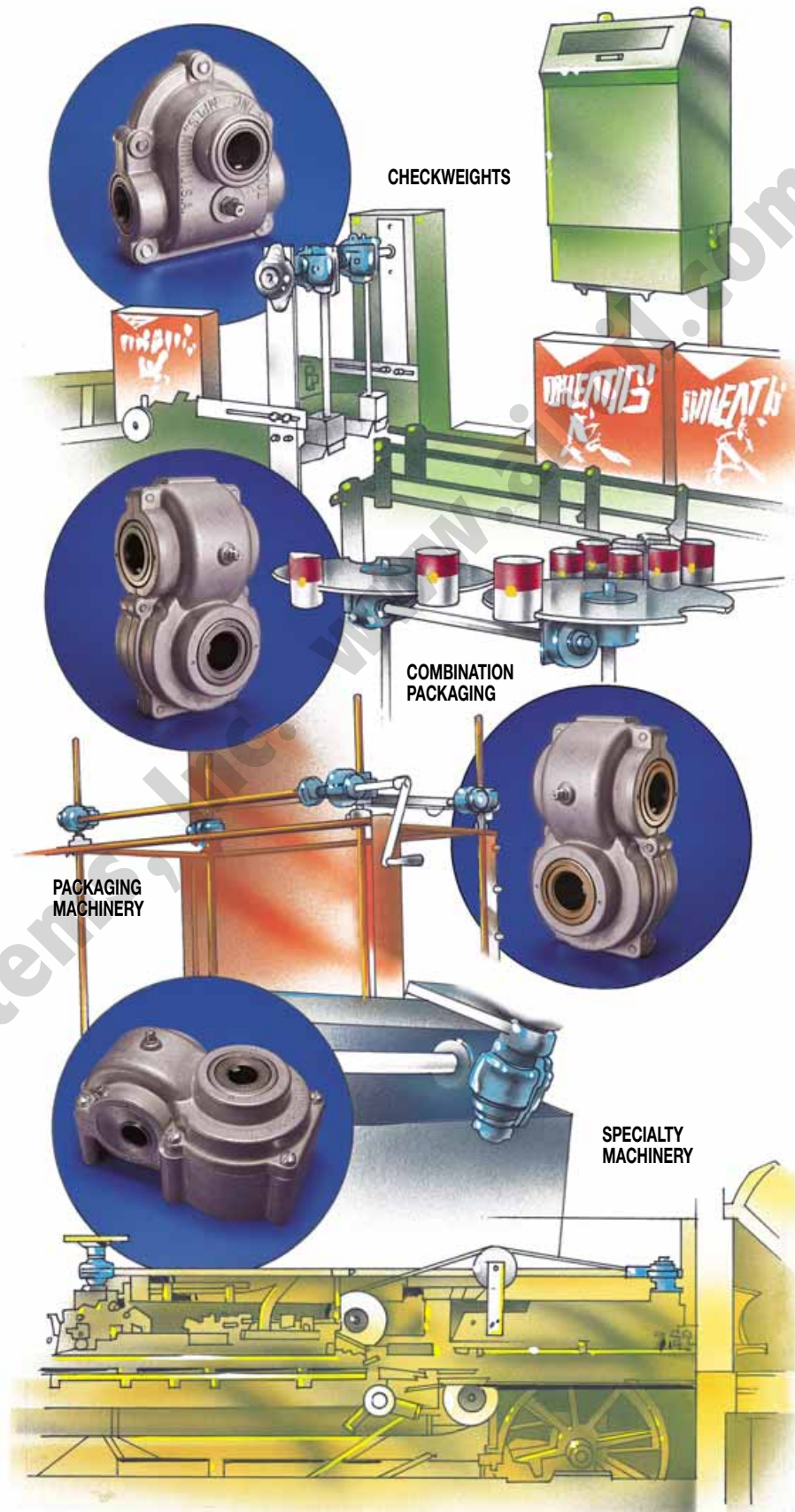
### FLOAT-A-SHAFT IS EASILY INSTALLED

An ingenious installation technique and one piece assembly eliminates coupling and shaft alignment problems.

Tolomatic makes the best right angle gear drives you can buy. We're out to prove that no one can get you around a corner faster than Tolomatic.

*NOTE: Pillow block bearing supports are recommended on all Float-A-Shaft applications. Effectively mounted directly between the Float-A-Shaft unit and the load, the pillow block bearing supports will absorb any shaft deflection or sideloading and assure alignment.*

*NOTE: All Float-A-Shaft units have 3° to 5° of backlash on reversal of input.*



Air-Oil Systems

## INTRODUCTION

### TOLOMATIC IS TURNING THINGS AROUND

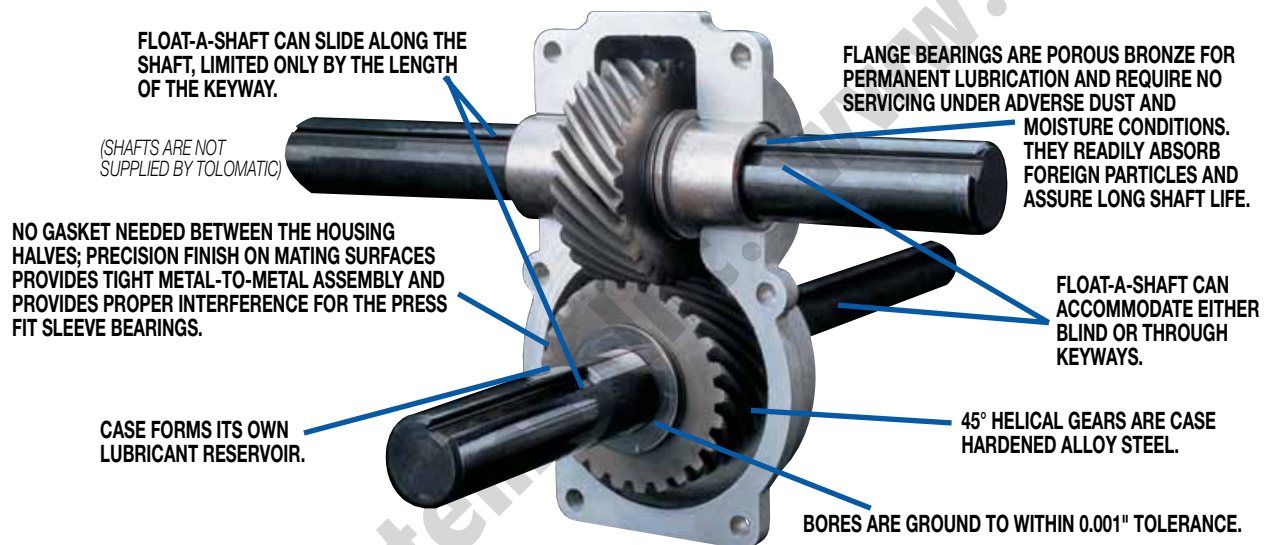
Tolomatic's Float-A-Shaft right angle gear drive was invented 50 years ago, and the competition still hasn't caught up. That's because Tolomatic gearboxes "float" on rotating shafts. Along with the Slide-Rite gearbox, no other design has the versatility, durability, safety, or the ease of operation as Float-A-Shaft.

Float-A-Shaft is a universal right angle gear drive coupling. It consists of two 45° helical gears that mesh at right angles, designed to turn power around any corner. Float-A-Shaft can be operated in either direction and can slide axially along the drive or driven shaft.

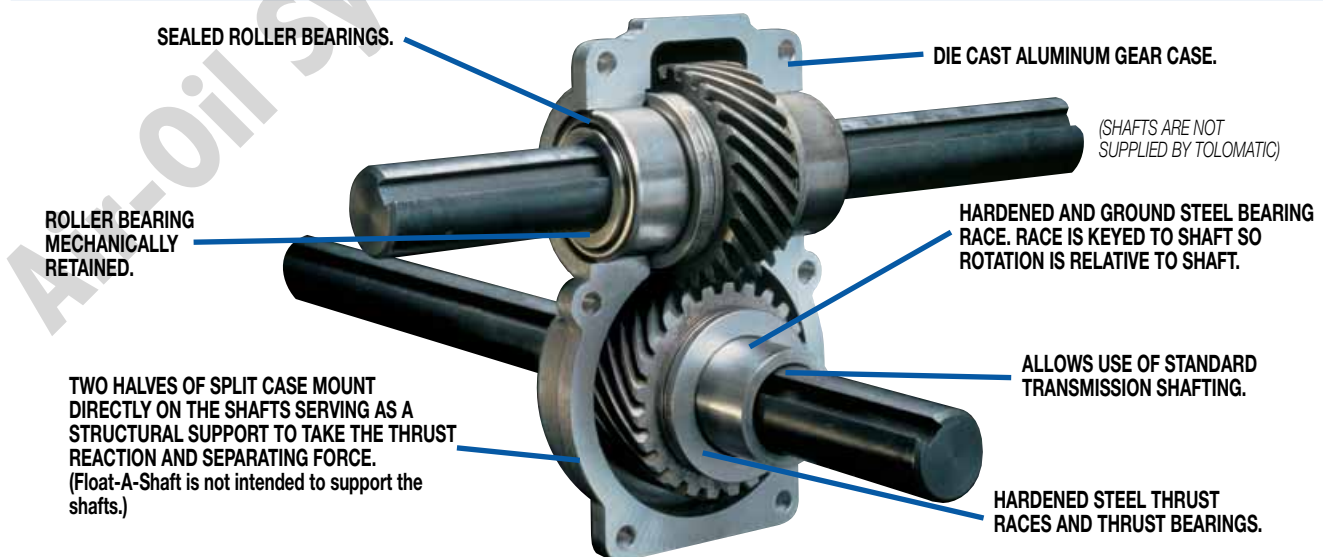
A lightweight aluminum housing encloses the gears, serving as a structural support and a lubricant reservoir. The gears mount directly on the shafts through keyways in the gears and shafts. These rugged and durable hardened helical gears have been field-proven for 50 years, assuring dependable operation. Yet with all of that, Float-A-Shaft retains a compact design well suited for use in tight quarters.

Float-A-Shaft's unique floating design maintains perfect alignment. It also eliminates dangerous chain sprocket drives and the additional adjustments required for chain drive applications.

### LOW TORQUE JOURNAL BEARING SERIES



### HIGH TORQUE ROLLER BEARING SERIES



# Float-A-Shaft Gearbox

## COMPACT SERIES - 1:1 RATIO - US & METRIC

### AVAILABLE STYLES

#### Low Torque Journal Bearings

##### Standard

1-1/2 lbs. (0.68 kgs.)



##### Foot Mount

1-3/4 lbs. (0.79 kgs.)



### AVAILABLE STYLES

#### High Torque Roller Bearings

##### Standard

1-1/2 lbs. (0.68 kgs.)



##### Foot Mount

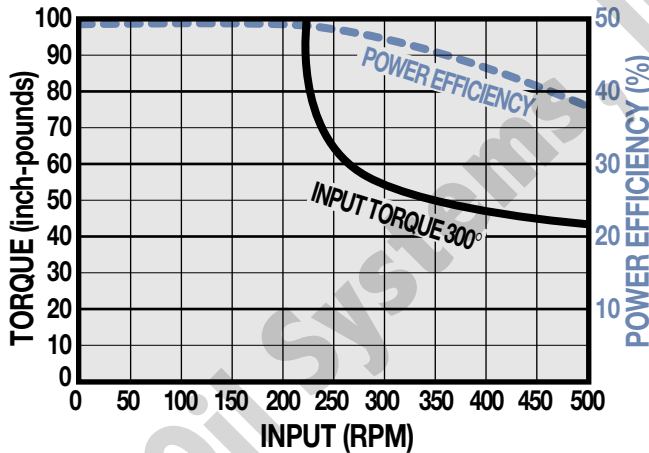
1-3/4 lbs. (0.79 kgs.)



### PERFORMANCE DATA

#### Low Torque Journal Bearings

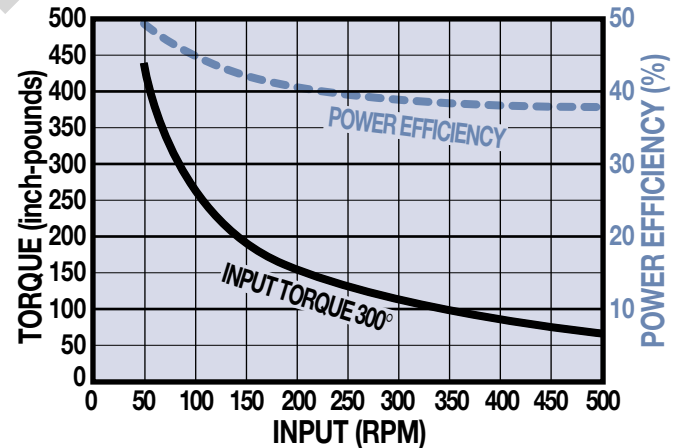
Torque and Efficiency vs RPM at Maximum Bearing Temperature



### PERFORMANCE DATA

#### High Torque Roller Bearings

Torque and Efficiency vs RPM at Maximum Bearing Temperature



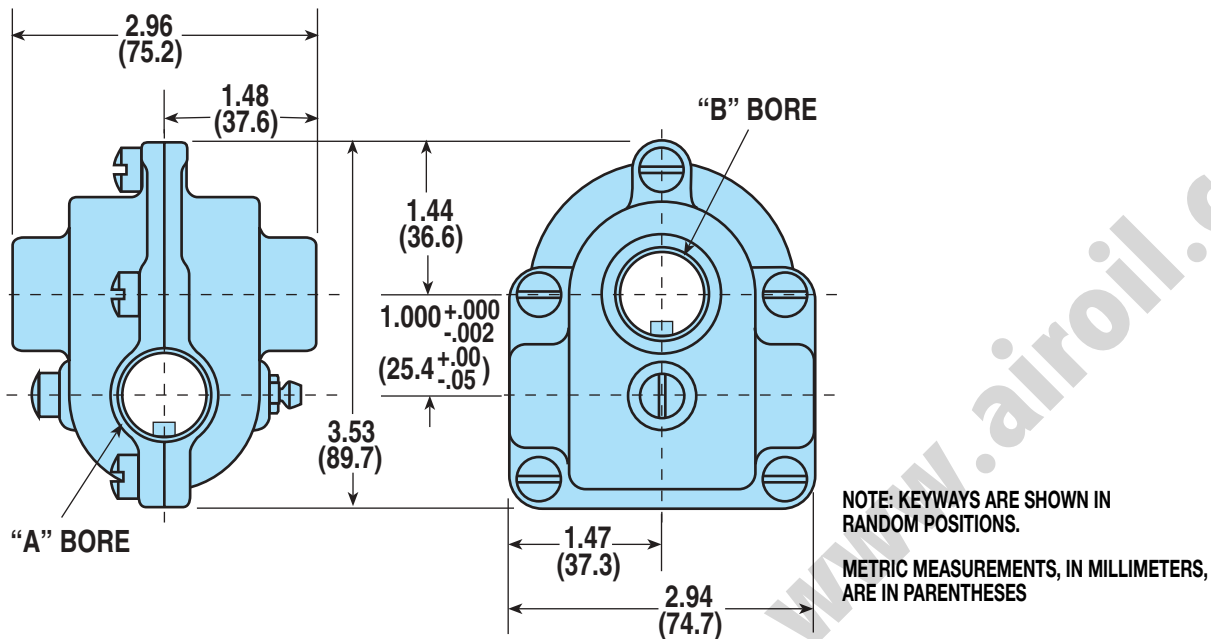
Air-Online.com



## COMPACT SERIES - 1:1 RATIO - US & METRIC

**DIMENSIONS: COMPACT STANDARD HIGH TORQUE & LOW TORQUE BEARINGS**

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### Models and Bore Dimensions

#### U.S. - COMPACT STANDARD - 1:1

LOW TORQUE JOURNAL BEARING & HIGH TORQUE ROLLER BEARING

LOW TORQUE JOURNAL MODEL NO.	HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
			BORE SIZE (IN.)	WxD KEYWAY (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)
0106-0000	0105-0100	RH	1/2	1/8 x 1/16	1/2	1/8 x 1/16
0105-0000	0106-0100	LH	1/2	1/8 x 1/16	1/2	1/8 x 1/16
0108-0000	0107-0100	RH	1/2	1/8 x 1/16	5/8	1/8 x 1/16
0107-0000	0108-0100	LH	1/2	1/8 x 1/16	5/8	1/8 x 1/16
0110-0000	0109-0100	RH	5/8	1/8 x 1/16	5/8	1/8 x 1/16
0109-0000	0110-0100	LH	5/8	1/8 x 1/16	5/8	1/8 x 1/16

#### METRIC - COMPACT STANDARD - 1:1

HIGH TORQUE ROLLER BEARING

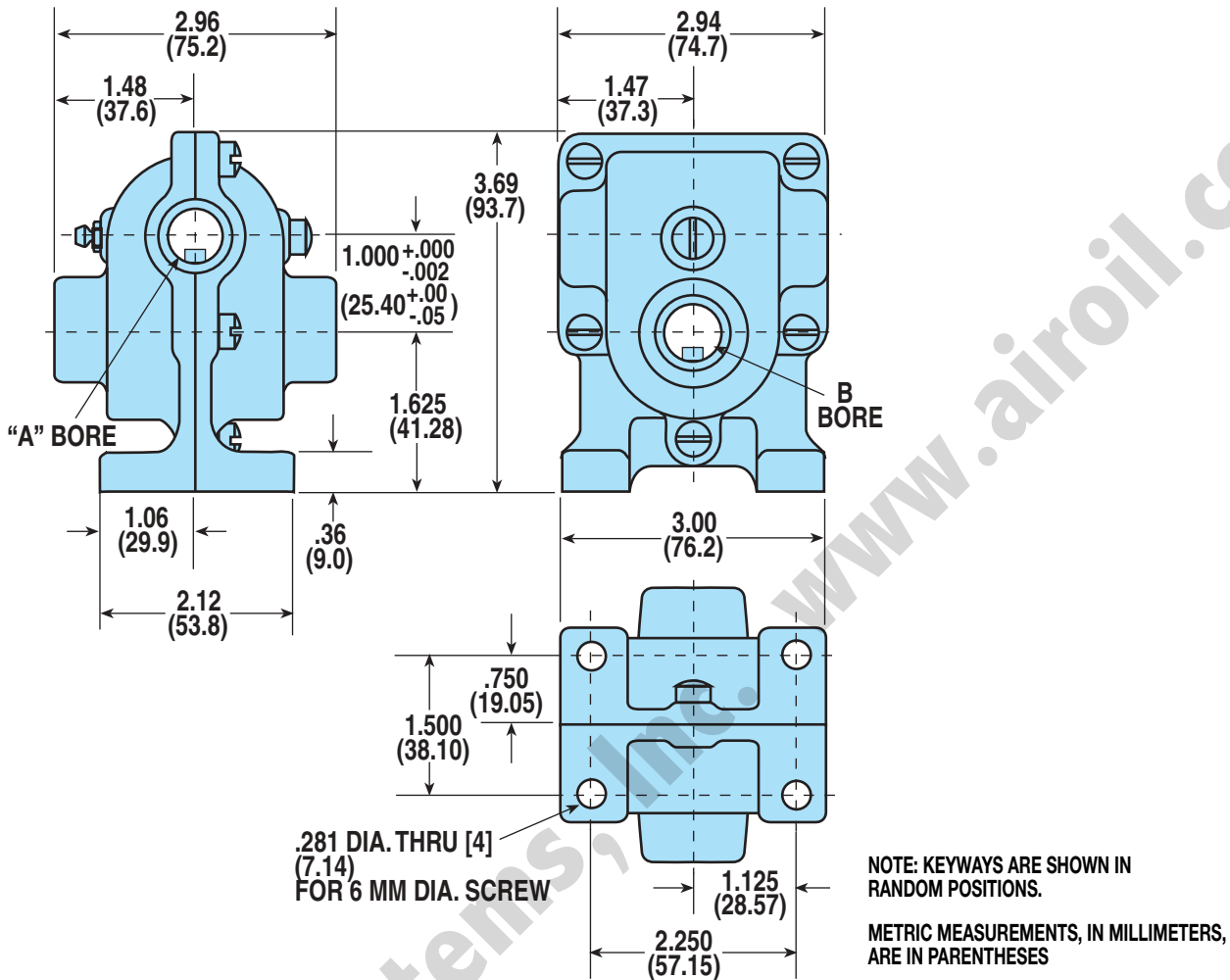
HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (MM)	WxD KEYWAY (MM)	BORE SIZE (MM)	WxD KEYWAY (MM)
0120-0100	RH	12	4 x 2	12	4 x 2
0121-0100	LH	12	4 x 2	12	4 x 2
0122-0100	RH	12	4 x 2	15	5 x 2.5
0123-0100	LH	12	4 x 2	15	5 x 2.5
0124-0100	RH	15	5 x 2.5	15	5 x 2.5
0125-0100	LH	15	5 x 2.5	15	5 x 2.5

NOTE: METRIC SIZES AVAILABLE ONLY IN HIGH TORQUE ROLLER BEARING MODELS.

## COMPACT SERIES - 1:1 RATIO - US & METRIC

**DIMENSIONS: COMPACT FOOT MOUNT HIGH TORQUE & LOW TORQUE BEARINGS**

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### Models and Bore Dimensions

#### U.S. - COMPACT FOOT MOUNT - 1:1

LOW TORQUE JOURNAL BEARING & HIGH TORQUE ROLLER BEARING

LOW TORQUE JOURNAL MODEL NO.	HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
			BORE SIZE (IN.)	WxD KEYWAY (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)
0112-0000	0111-0100	RH	1/2	1/8 x 1/16	1/2	1/8 x 1/16
0111-0000	0112-0100	LH	1/2	1/8 x 1/16	1/2	1/8 x 1/16
0114-0000	0113-0100	RH	1/2	1/8 x 1/16	5/8	1/8 x 1/16
0113-0000	0114-0100	LH	1/2	1/8 x 1/16	5/8	1/8 x 1/16
0116-0000	0115-0100	RH	5/8	1/8 x 1/16	5/8	1/8 x 1/16
0115-0000	0116-0100	LH	5/8	1/8 x 1/16	5/8	1/8 x 1/16

#### METRIC - COMPACT FOOT MOUNT - 1:1 HIGH TORQUE ROLLER BEARING

HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (MM)	WxD KEYWAY (MM)	BORE SIZE (MM)	WxD KEYWAY (MM)
0126-0100	RH	12	4 x 2	12	4 x 2
0127-0100	LH	12	4 x 2	12	4 x 2
0128-0100	RH	12	4 x 2	15	5 x 2.5
0129-0100	LH	12	4 x 2	15	5 x 2.5
0130-0100	RH	15	5 x 2.5	15	5 x 2.5
0131-0100	LH	15	5 x 2.5	15	5 x 2.5

**NOTE: METRIC SIZES AVAILABLE ONLY IN HIGH TORQUE ROLLER BEARING MODELS.**

## STANDARD SERIES - 1:1 RATIO - US & METRIC

### AVAILABLE STYLES

#### Low Torque Journal Bearings

##### Standard

5 lbs. (2.27 kgs.)



##### Flat Base

5-3/4 lbs. (2.61 kgs.)



### AVAILABLE STYLES

#### High Torque Roller Bearings

##### Standard

5-1/2 lbs. (2.49 kgs.)



##### Flat Base

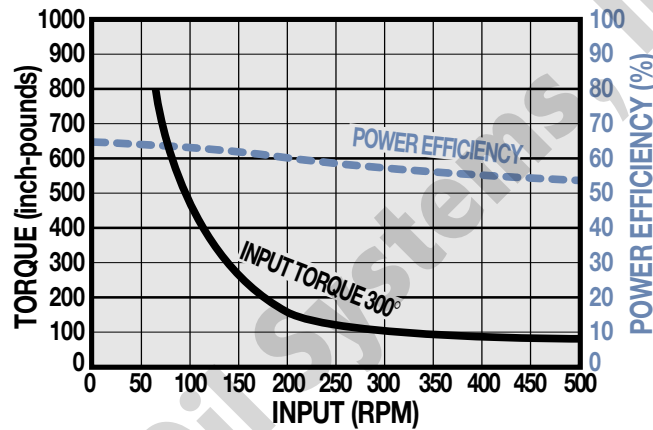
6-1/2 lbs. (2.95 kgs.)



### PERFORMANCE DATA

#### Low Torque Journal Bearings

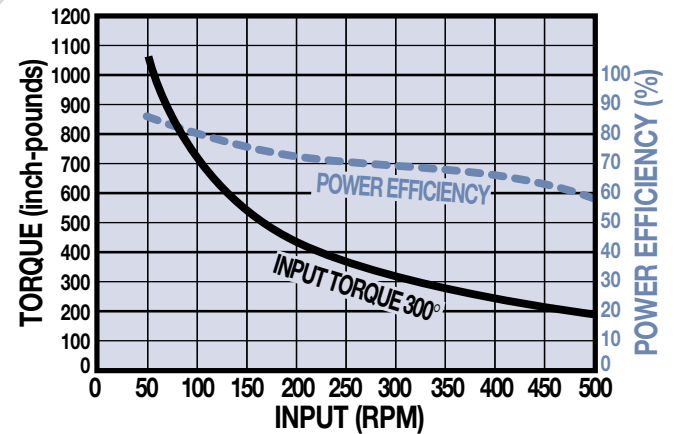
**Torque and Efficiency vs RPM at Maximum Bearing Temperature**



### PERFORMANCE DATA

#### High Torque Roller Bearings

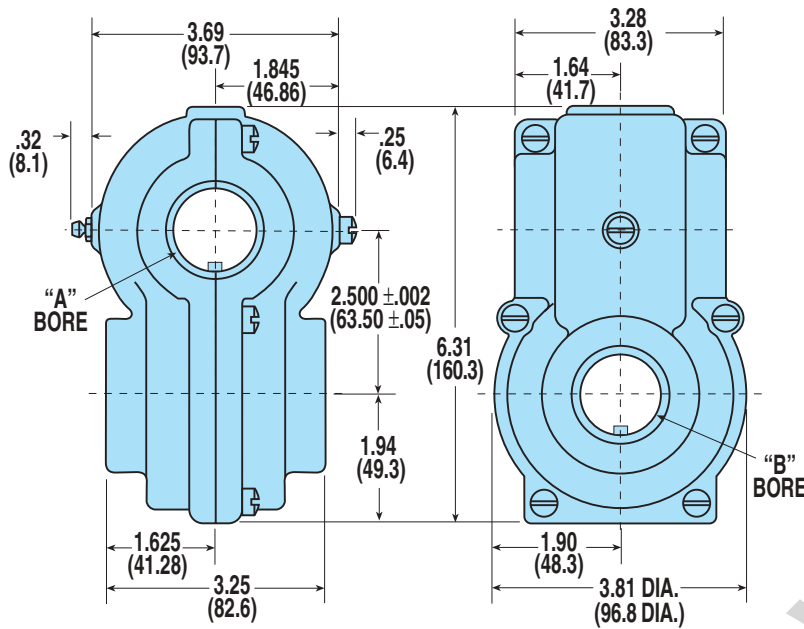
**Torque and Efficiency vs RPM at Maximum Bearing Temperature**



## STANDARD SERIES - 1:1 RATIO - US & METRIC

**DIMENSIONS: STANDARD HIGH TORQUE & LOW TORQUE BEARINGS**

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



NOTE: KEYWAYS ARE SHOWN IN RANDOM POSITIONS.

METRIC MEASUREMENTS, IN MILLIMETERS, ARE IN PARENTHESES

### Models and Bore Dimensions

#### U.S. - STANDARD - 1:1

##### LOW TORQUE JOURNAL BEARING & HIGH TORQUE ROLLER BEARING

LOW TORQUE JOURNAL MODEL NO.	HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
			BORE SIZE (IN.)	WxD KEYWAY (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)
0204-0000	0203-0200	RH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0203-0000	0204-0200	LH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0208-0000	0205-0200	RH	3/4	3/16 x 3/32	1	1/4 x 1/8
0207-0000	0206-0200	LH	3/4	3/16 x 3/32	1	1/4 x 1/8
0212-0000	0207-0200	RH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
0211-0000	0208-0200	LH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
0216-0000	NA	RH	3/4	3/16 x 3/32	1-1/2	3/8 x 3/16
0215-0000	NA	LH	3/4	3/16 x 3/32	1-1/2	3/8 x 3/16
0220-0000	0209-0200	RH	1	1/4 x 1/8	1	1/4 x 1/8
0219-0000	0210-0200	LH	1	1/4 x 1/8	1	1/4 x 1/8
0224-0000	0211-0200	RH	1	1/4 x 1/8	1-1/4	1/4 x 1/8
0223-0000	0212-0200	LH	1	1/4 x 1/8	1-1/4	1/4 x 1/8
0228-0000	NA	RH	1	1/4 x 1/8	1-1/2	3/8 x 3/16
0227-0000	NA	LH	1	1/4 x 1/8	1-1/2	3/8 x 3/16
0232-0000	0213-0200	RH	1-1/4	1/4 x 1/8	1-1/4	1/4 x 1/8
0231-0000	0214-0200	LH	1-1/4	1/4 x 1/8	1-1/4	1/4 x 1/8
0236-0000	NA	RH	1-1/4	1/4 x 1/8	1-1/2	3/8 x 3/16
0235-0000	NA	LH	1-1/4	1/4 x 1/8	1-1/2	3/8 x 3/16
0240-0000	NA	RH	1-1/2	3/8 x 3/16	1-1/2	3/8 x 3/16
0239-0000	NA	LH	1-1/2	3/8 x 3/16	1-1/2	3/8 x 3/16

#### METRIC - STANDARD - 1:1 HIGH TORQUE ROLLER BEARING

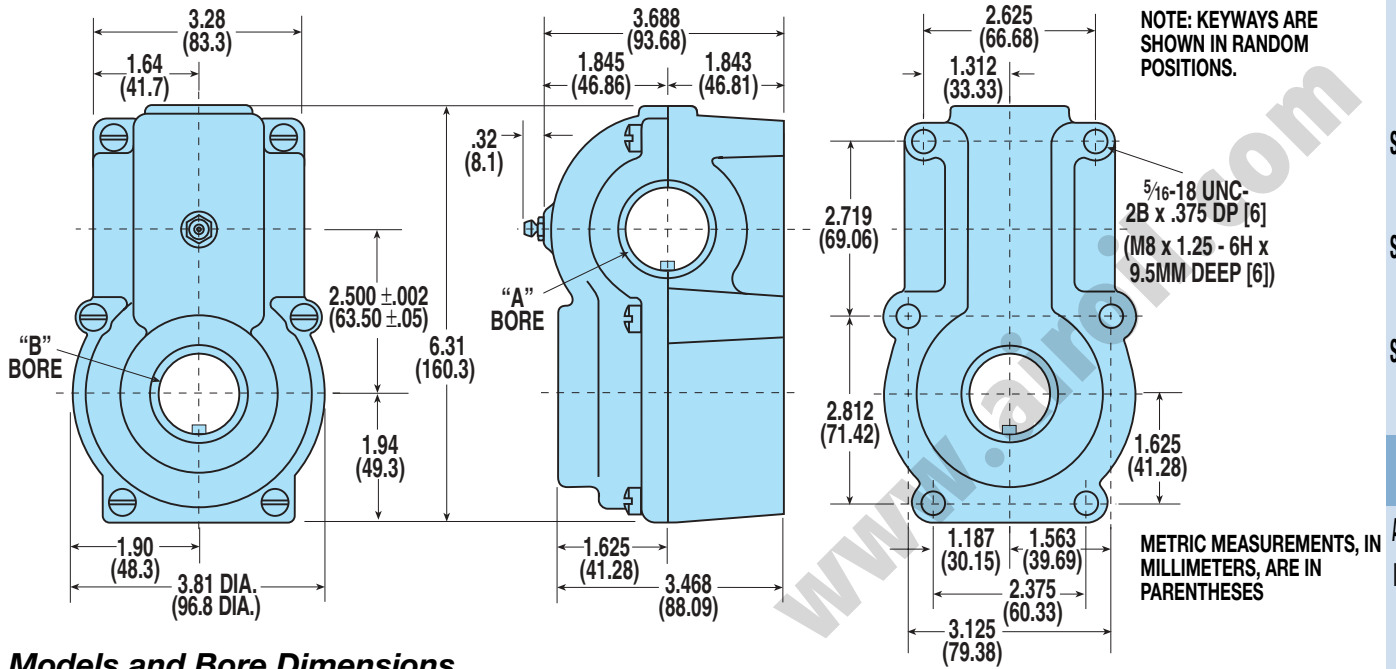
HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (MM)	WxD KEYWAY (MM)	BORE SIZE (MM)	WxD KEYWAY (MM)
0308-0200	RH	20	6 x 3	20	6 x 3
0309-0200	LH	20	6 x 3	20	6 x 3
0310-0200	RH	20	6 x 3	25	8 x 3.5
0311-0200	LH	20	6 x 3	25	8 x 3.5
0312-0200	RH	20	6 x 3	30	8 x 3.5
0313-0200	LH	20	6 x 3	30	8 x 3.5
0314-0200	RH	25	8 x 3.5	25	8 x 3.5
0315-0200	LH	25	8 x 3.5	25	8 x 3.5
0316-0200	RH	25	8 x 3.5	30	8 x 3.5
0317-0200	LH	25	8 x 3.5	30	8 x 3.5
0318-0200	RH	30	8 x 3.5	30	8 x 3.5
0319-0200	LH	30	8 x 3.5	30	8 x 3.5

NOTE: METRIC SIZES AVAILABLE ONLY IN HIGH TORQUE ROLLER BEARING MODELS.

## STANDARD SERIES - 1:1 RATIO - US & METRIC

**DIMENSIONS: STANDARD FLAT BASE HIGH TORQUE & LOW TORQUE BEARINGS**

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### Models and Bore Dimensions

#### U.S. - STANDARD FLAT BASE - 1:1

LOW TORQUE JOURNAL BEARING & HIGH TORQUE ROLLER BEARING

LOW TORQUE JOURNAL MODEL NO.	HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
			BORE SIZE (IN.)	WxD KEYWAY (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)
0245-0000	0217-0200	RH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0246-0000	0218-0200	LH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0247-0000	0219-0200	RH	3/4	3/16 x 3/32	1	1/4 x 1/8
0248-0000	0220-0200	LH	3/4	3/16 x 3/32	1	1/4 x 1/8
0249-0000	0221-0200	RH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
0250-0000	0222-0200	LH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
0251-0000	NA	RH	3/4	3/16 x 3/32	1-1/2	3/8 x 3/16
0252-0000	NA	LH	3/4	3/16 x 3/32	1-1/2	3/8 x 3/16
0253-0000	0223-0200	RH	1	1/4 x 1/8	1	1/4 x 1/8
0254-0000	0224-0200	LH	1	1/4 x 1/8	1	1/4 x 1/8
0255-0000	0225-0200	RH	1	1/4 x 1/8	1-1/4	1/4 x 1/8
0256-0000	0226-0200	LH	1	1/4 x 1/8	1-1/4	1/4 x 1/8
0257-0000	NA	RH	1	1/4 x 1/8	1-1/2	3/8 x 3/16
0258-0000	NA	LH	1	1/4 x 1/8	1-1/2	3/8 x 3/16
0269-0000	0227-0200	RH	1-1/4	1/4 x 1/8	1-1/4	1/4 x 1/8
0270-0000	0228-0200	LH	1-1/4	1/4 x 1/8	1-1/4	1/4 x 1/8
0271-0000	NA	RH	1-1/4	1/4 x 1/8	1-1/2	3/8 x 3/16
0272-0000	NA	LH	1-1/4	1/4 x 1/8	1-1/2	3/8 x 3/16
0273-0000	NA	RH	1-1/2	3/8 x 3/16	1-1/2	3/8 x 3/16
0274-0000	NA	LH	1-1/2	3/8 x 3/16	1-1/2	3/8 x 3/16

#### METRIC - STANDARD FLAT BASE - 1:1

HIGH TORQUE ROLLER BEARING

HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (MM)	WxD KEYWAY (MM)	BORE SIZE (MM)	WxD KEYWAY (MM)
0328-0200	RH	20	6 x 3	20	6 x 3
0329-0200	LH	20	6 x 3	20	6 x 3
0330-0200	RH	20	6 x 3	25	8 x 3.5
0331-0200	LH	20	6 x 3	25	8 x 3.5
0332-0200	RH	20	6 x 3	30	8 x 3.5
0333-0200	LH	20	6 x 3	30	8 x 3.5
0334-0200	RH	25	8 x 3.5	25	8 x 3.5
0335-0200	LH	25	8 x 3.5	25	8 x 3.5
0336-0200	RH	25	8 x 3.5	30	8 x 3.5
0337-0200	LH	25	8 x 3.5	30	8 x 3.5
0338-0200	RH	30	8 x 3.5	30	8 x 3.5
0339-0200	LH	30	8 x 3.5	30	8 x 3.5

NOTE: METRIC SIZES AVAILABLE ONLY IN HIGH TORQUE ROLLER BEARING MODELS.

# Float-A-Shaft Gearbox

## STANDARD SERIES - 3:2 RATIO - US & METRIC

### AVAILABLE STYLES

#### Low Torque Journal Bearings

##### Standard

5-3/4 lbs. (2.61 kgs.)

##### Flat Base

5-3/4 lbs. (2.61 kgs.)



### AVAILABLE STYLES

#### High Torque Roller Bearings

##### Standard

6 lbs. (2.72 kgs.)

##### Flat Base

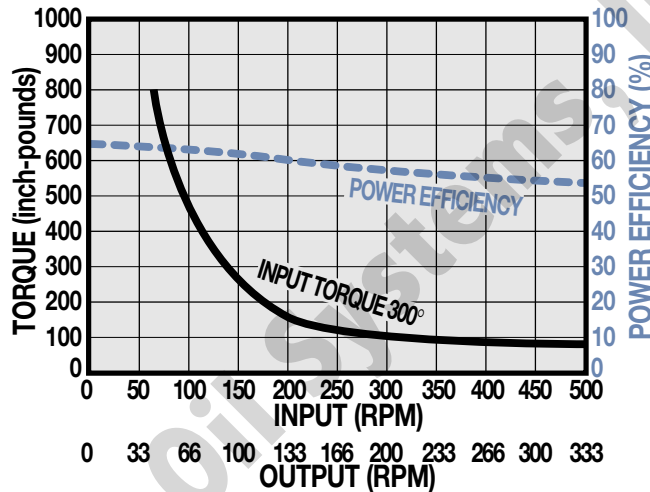
6-3/4 lbs. (3.06 kgs.)



### PERFORMANCE DATA

#### Low Torque Journal Bearings

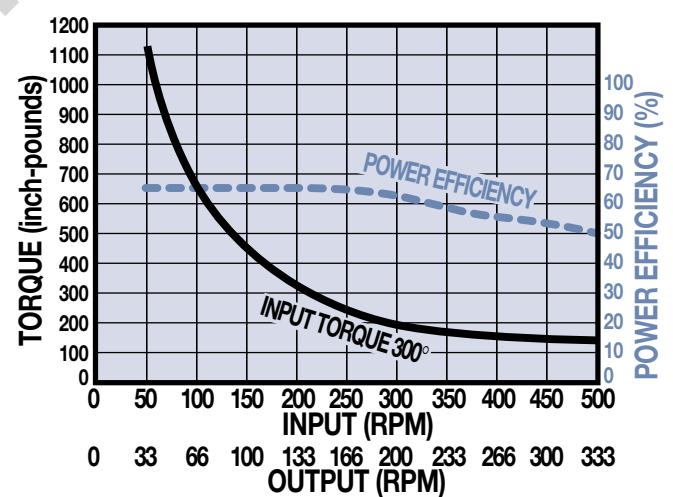
**Torque and Efficiency vs RPM at Maximum Bearing Temperature**



### PERFORMANCE DATA

#### High Torque Roller Bearings

**Torque and Efficiency vs RPM at Maximum Bearing Temperature**

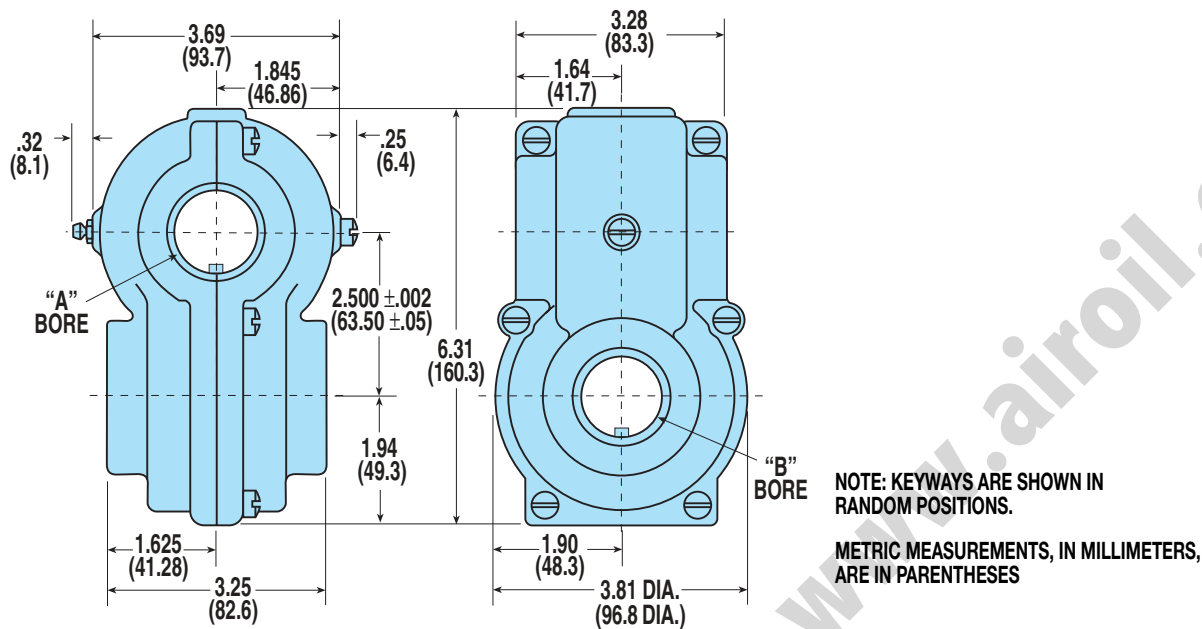


Air-Oil Separator

## STANDARD SERIES - 3:2 RATIO - US & METRIC

**DIMENSIONS: STANDARD HIGH TORQUE & LOW TORQUE BEARINGS**

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### Models and Bore Dimensions

#### U.S. - STANDARD - 3:2

LOW TORQUE JOURNAL BEARING & HIGH TORQUE ROLLER BEARING

LOW TORQUE JOURNAL MODEL NO.	HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
			BORE SIZE (IN.)	WxD KEYWAY (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)
0241-0000	0231-0200	RH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0242-0000	0232-0200	LH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0259-0000	0233-0200	RH	3/4	3/16 x 3/32	1	1/4 x 1/8
0260-0000	0234-0200	LH	3/4	3/16 x 3/32	1	1/4 x 1/8
NA	0235-0200	RH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
NA	0236-0200	LH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
0261-0000	0237-0200	RH	1	1/4 x 1/8	1	1/4 x 1/8
0262-0000	0238-0200	LH	1	1/4 x 1/8	1	1/4 x 1/8
0263-0000	0239-0200	RH	1	1/4 x 1/8	1-1/4	1/4 x 1/8
0264-0000	0240-0200	LH	1	1/4 x 1/8	1-1/4	1/4 x 1/8
0265-0000	0241-0200	RH	1-1/4	1/4 x 1/8	1-1/4	1/4 x 1/8
0266-0000	0242-0200	LH	1-1/4	1/4 x 1/8	1-1/4	1/4 x 1/8

NOTE: FOR LOW TORQUE JOURNAL BEARING MODELS  
THE "A" BORE CONTAINS THE 20 TOOTH GEAR. THE "B" BORE CONTAINS THE 30 TOOTH GEAR.

NOTE: FOR HIGH TORQUE ROLLER BEARING MODELS  
THE "A" BORE CONTAINS THE 20 TOOTH GEAR. THE "B" BORE CONTAINS THE 30 TOOTH GEAR.

#### METRIC - STANDARD - 3:2 HIGH TORQUE ROLLER BEARING

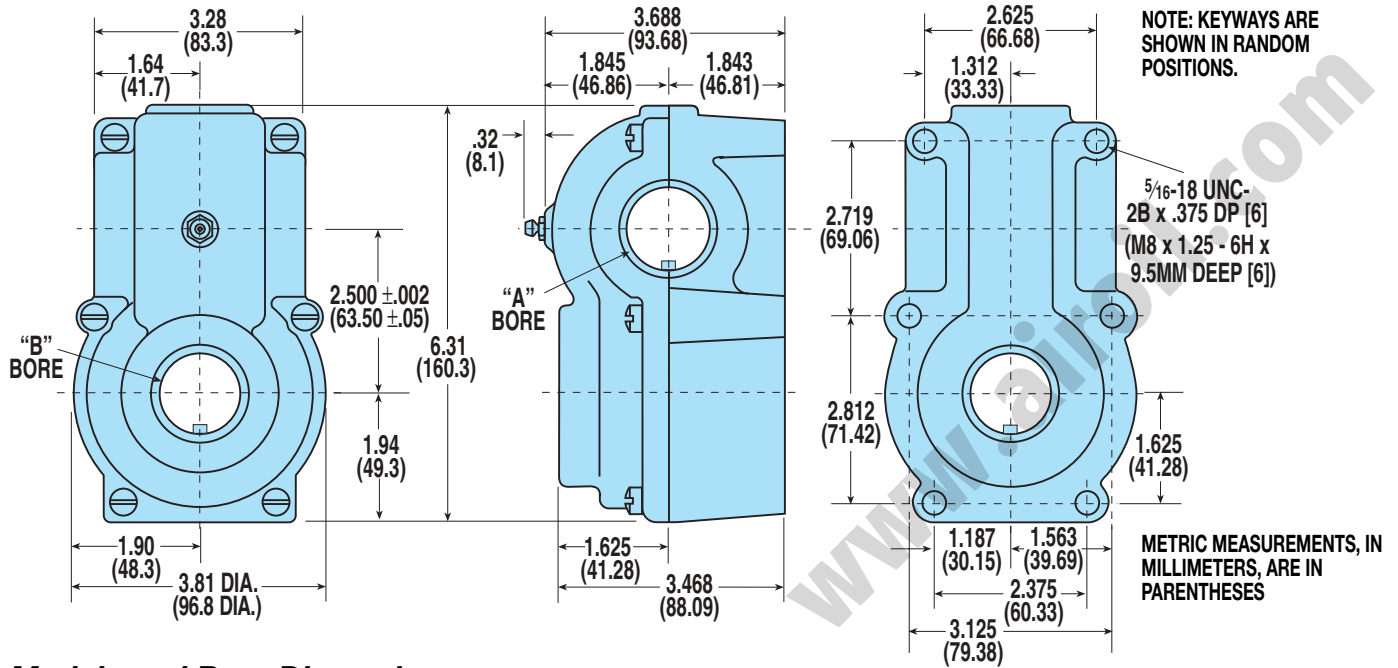
HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (MM)	WxD KEYWAY (MM)	BORE SIZE (MM)	WxD KEYWAY (MM)
0354-0200	RH	25	8 x 3.5	25	8 x 3.5
0355-0200	LH	25	8 x 3.5	25	8 x 3.5
0356-0200	RH	25	8 x 3.5	30	8 x 3.5
0357-0200	LH	25	8 x 3.5	30	8 x 3.5
0358-0200	RH	30	8 x 3.5	30	8 x 3.5
0359-0200	LH	30	8 x 3.5	30	8 x 3.5

NOTE: METRIC SIZES AVAILABLE ONLY IN HIGH TORQUE ROLLER BEARING MODELS.

## STANDARD SERIES - 3:2 RATIO - US & METRIC

**DIMENSIONS: STANDARD FLAT BASE HIGH TORQUE & LOW TORQUE BEARINGS**

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### Models and Bore Dimensions

#### U.S. - STANDARD FLAT BASE - 3:2

LOW TORQUE JOURNAL BEARING & HIGH TORQUE ROLLER BEARING

LOW TORQUE JOURNAL MODEL NO.	HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
			BORE SIZE (IN.)	WXD KEYWAY (IN.)	BORE SIZE (IN.)	WXD KEYWAY (IN.)
0277-0000	0245-0200	RH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0278-0000	0246-0200	LH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0279-0000	0247-0200	RH	3/4	3/16 x 3/32	1	1/4 x 1/8
0280-0000	0248-0200	LH	3/4	3/16 x 3/32	1	1/4 x 1/8
NA	0249-0200	RH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
NA	0250-0200	LH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
0281-0000	0251-0200	RH	1	1/4 x 1/8	1	1/4 x 1/8
0282-0000	0252-0200	LH	1	1/4 x 1/8	1	1/4 x 1/8
0283-0000	0253-0200	RH	1	1/4 x 1/8	1-1/4	1/4 x 1/8
0284-0000	0254-0200	LH	1	1/4 x 1/8	1-1/4	1/4 x 1/8
0285-0000	0255-0200	RH	1-1/4	1/4 x 1/8	1-1/4	1/4 x 1/8
0286-0000	0256-0200	LH	1-1/4	1/4 x 1/8	1-1/4	1/4 x 1/8

#### METRIC - STANDARD FLAT BASE - 3:2

HIGH TORQUE ROLLER BEARING

HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (MM)	WXD KEYWAY (MM)	BORE SIZE (MM)	WXD KEYWAY (MM)
0374-0200	RH	25	8 x 3.5	25	8 x 3.5
0375-0200	LH	25	8 x 3.5	25	8 x 3.5
0376-0200	RH	25	8 x 3.5	30	8 x 3.5
0377-0200	LH	25	8 x 3.5	30	8 x 3.5
0378-0200	RH	30	8 x 3.5	30	8 x 3.5
0379-0200	LH	30	8 x 3.5	30	8 x 3.5

NOTE: FOR LOW TORQUE JOURNAL BEARING MODELS  
THE "A" BORE CONTAINS THE 20 TOOTH GEAR. THE "B" BORE CONTAINS THE 30 TOOTH GEAR.

NOTE: FOR HIGH TORQUE ROLLER BEARING MODELS  
THE "A" BORE CONTAINS THE 20 TOOTH GEAR. THE "B" BORE CONTAINS THE 30 TOOTH GEAR.



## STANDARD SERIES - 2:1 RATIO - US & METRIC

### AVAILABLE STYLES

#### Low Torque Journal Bearings

##### Standard

3-1/2 lbs. (1.59 kgs.)



### AVAILABLE STYLES

#### High Torque Roller Bearings

##### Standard

6-1/4 lbs. (2.84 kgs.)



##### Flat Base

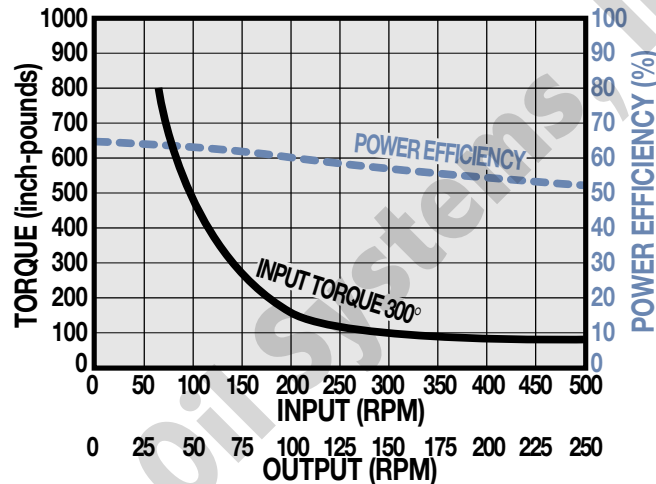
6-3/4 lbs. (3.06 kgs.)



### PERFORMANCE DATA

#### Low Torque Journal Bearings

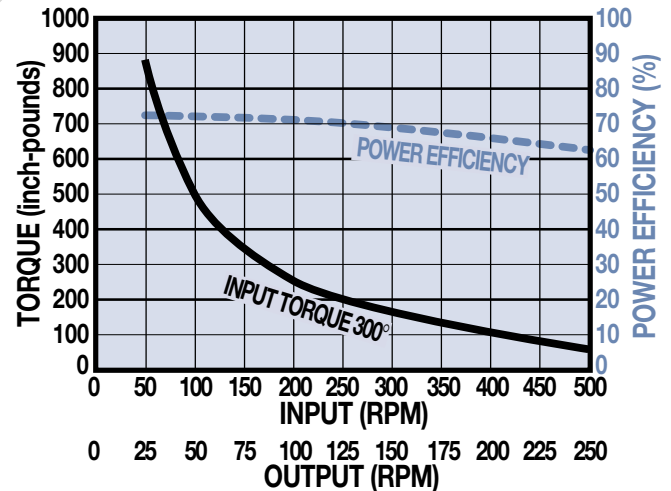
Torque and Efficiency vs RPM at Maximum Bearing Temperature



### PERFORMANCE DATA

#### High Torque Roller Bearings

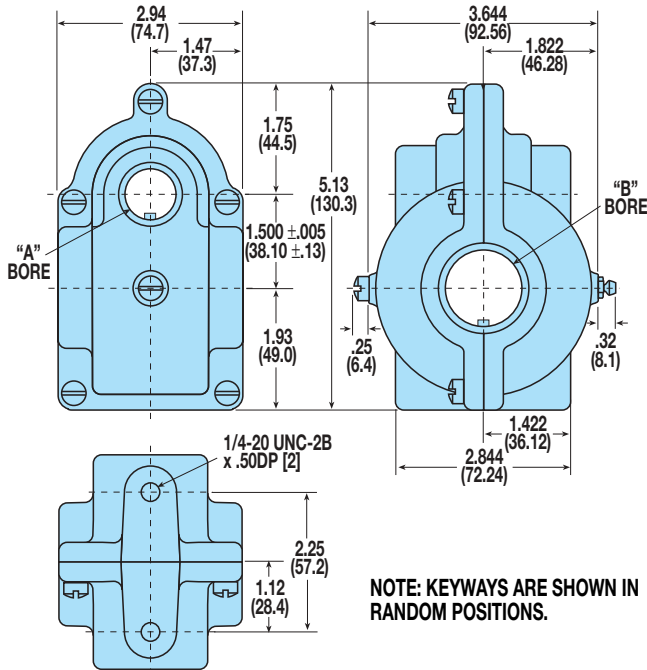
Torque and Efficiency vs RPM at Maximum Bearing Temperature



## STANDARD SERIES - 2:1 RATIO - US & METRIC

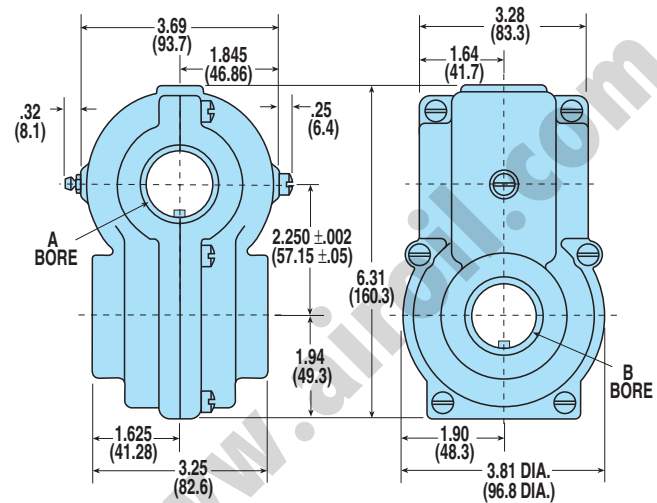
### DIMENSIONS: STANDARD LOW TORQUE BEARINGS

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### DIMENSIONS: STANDARD HIGH TORQUE BEARINGS

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### Models and Bore Dimensions

#### U.S. - STANDARD - 2:1

#### LOW TORQUE JOURNAL BEARING & HIGH TORQUE ROLLER BEARING

LOW TORQUE JOURNAL MODEL NO.	HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
			BORE SIZE (IN.)	WxD KEYWAY (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)
0304-0000	0259-0200	RH	1/2	1/8 x 1/16	3/4	3/16 x 3/32
0303-0000	0260-0200	LH	1/2	1/8 x 1/16	3/4	3/16 x 3/32
0308-0000	0261-0200	RH	1/2	1/8 x 1/16	1	1/4 x 1/8
0307-0000	0262-0200	LH	1/2	1/8 x 1/16	1	1/4 x 1/8
0312-0000	0263-0200	RH	1/2	1/8 x 1/16	1-1/4	1/4 x 1/8
0311-0000	0264-0200	LH	1/2	1/8 x 1/16	1-1/4	1/4 x 1/8
0318-0000	0265-0200	RH	5/8	1/8 x 1/16	3/4	3/16 x 3/32
0317-0000	0266-0200	LH	5/8	1/8 x 1/16	3/4	3/16 x 3/32
0322-0000	0267-0200	RH	5/8	1/8 x 1/16	1	1/4 x 1/8
0321-0000	0268-0200	LH	5/8	1/8 x 1/16	1	1/4 x 1/8
0326-0000	0269-0200	RH	5/8	1/8 x 1/16	1-1/4	1/4 x 1/8
0325-0000	0270-0200	LH	5/8	1/8 x 1/16	1-1/4	1/4 x 1/8
NA	0271-0200	RH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
NA	0272-0200	LH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
NA	0273-0200	RH	3/4	3/16 x 3/32	1	1/4 x 1/8
NA	0274-0200	LH	3/4	3/16 x 3/32	1	1/4 x 1/8
NA	0275-0200	RH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
NA	0276-0200	LH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8

NOTE: FOR LOW TORQUE JOURNAL BEARING MODELS: THE "A" BORE CONTAINS THE 10 TOOTH GEAR. THE "B" BORE CONTAINS THE 20 TOOTH GEAR.

#### METRIC - STANDARD - 2:1

#### HIGH TORQUE ROLLER BEARING

HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (MM)	WxD KEYWAY (MM)	BORE SIZE (MM)	WxD KEYWAY (MM)
0390-0200	RH	15	5 x 2.5	20	6 x 3
0391-0200	LH	15	5 x 2.5	20	6 x 3
0392-0200	RH	15	5 x 2.5	25	8 x 3.5
0393-0200	LH	15	5 x 2.5	25	8 x 3.5
0394-0200	RH	15	5 x 2.5	30	8 x 3.5
0395-0200	LH	15	5 x 2.5	30	8 x 3.5

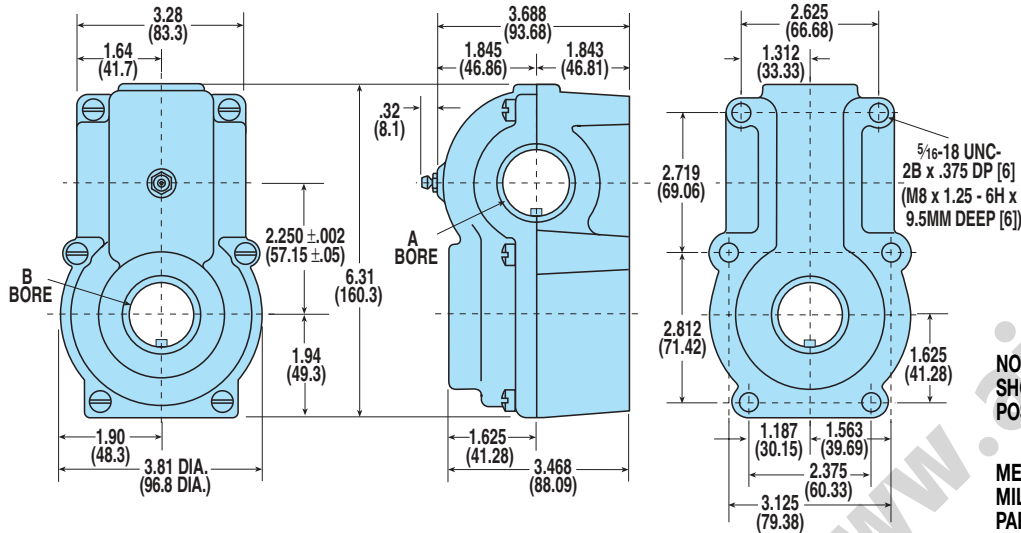
NOTE: METRIC SIZES AVAILABLE ONLY IN HIGH TORQUE ROLLER BEARING MODELS.

NOTE: FOR HIGH TORQUE ROLLER BEARING MODELS: THE "A" BORE CONTAINS THE 15 TOOTH GEAR. THE "B" BORE CONTAINS THE 30 TOOTH GEAR.

## STANDARD SERIES - 2:1 RATIO - US & METRIC

**DIMENSIONS: STANDARD FLAT BASE HIGH TORQUE BEARINGS**

Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### Models and Bore Dimensions

#### U.S.- STANDARD FLAT BASE - 2:1 HIGH TORQUE ROLLER BEARING

HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (IN.)	WxD KEYWAY (IN.)	BORE SIZE (IN.)	WxD KEYWAY (IN.)
0279-0200	RH	1/2	1/8 x 1/16	3/4	3/16 x 3/32
0280-0200	LH	1/2	1/8 x 1/16	3/4	3/16 x 3/32
0281-0200	RH	1/2	1/8 x 1/16	1	1/4 x 1/8
0282-0200	LH	1/2	1/8 x 1/16	1	1/4 x 1/8
0283-0200	RH	1/2	1/8 x 1/16	1-1/4	1/4 x 1/8
0284-0200	LH	1/2	1/8 x 1/16	1-1/4	1/4 x 1/8
0285-0200	RH	5/8	1/8 x 1/16	3/4	3/16 x 3/32
0286-0200	LH	5/8	1/8 x 1/16	3/4	3/16 x 3/32
0287-0200	RH	5/8	1/8 x 1/16	1	1/4 x 1/8
0288-0200	LH	5/8	1/8 x 1/16	1	1/4 x 1/8
0289-0200	RH	5/8	1/8 x 1/16	1-1/4	1/4 x 1/8
0290-0200	LH	5/8	1/8 x 1/16	1-1/4	1/4 x 1/8
0291-0200	RH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0292-0200	LH	3/4	3/16 x 3/32	3/4	3/16 x 3/32
0293-0200	RH	3/4	3/16 x 3/32	1	1/4 x 1/8
0294-0200	LH	3/4	3/16 x 3/32	1	1/4 x 1/8
0295-0200	RH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8
0296-0200	LH	3/4	3/16 x 3/32	1-1/4	1/4 x 1/8

#### METRIC - STANDARD FLAT BASE - 2:1 HIGH TORQUE ROLLER BEARING

HIGH TORQUE ROLLER MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (MM)	WxD KEYWAY (MM)	BORE SIZE (MM)	WxD KEYWAY (MM)
0422-0200	RH	15	5 x 2.5	20	6 x 3
0423-0200	LH	15	5 x 2.5	20	6 x 3
0424-0200	RH	15	5 x 2.5	25	8 x 3.5
0425-0200	LH	15	5 x 2.5	25	8 x 3.5
0426-0200	RH	15	5 x 2.5	30	8 x 3.5
0427-0200	LH	15	5 x 2.5	30	8 x 3.5

NOTE: METRIC SIZES AVAILABLE ONLY IN HIGH TORQUE ROLLER BEARING MODELS.

NOTE: FOR HIGH TORQUE ROLLER BEARING MODELS THE "A" BORE CONTAINS THE 15 TOOTH GEAR. THE "B" BORE CONTAINS THE 30 TOOTH GEAR.

# Float-A-Shaft Gearbox

## STANDARD SERIES - 2½:1 RATIO - US

### AVAILABLE STYLES

#### Low Torque Journal Bearings

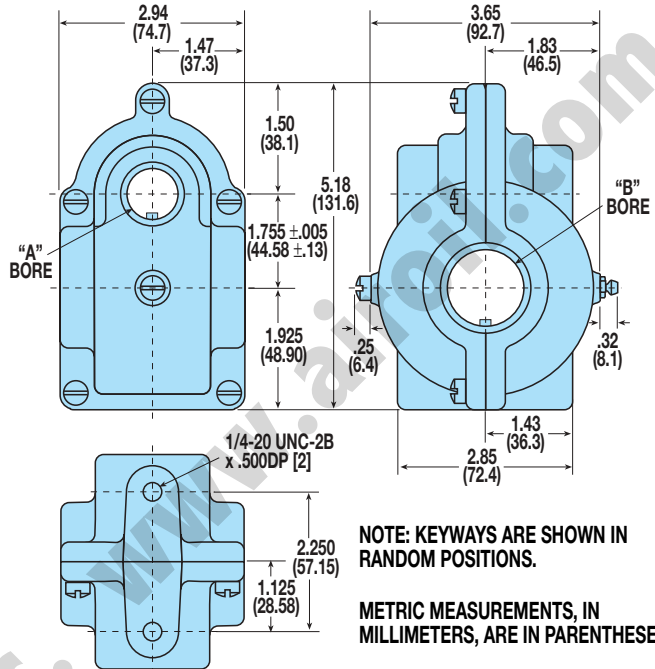
##### Standard

3-1/2 lbs. (1.59 kgs.)



### DIMENSIONS: STANDARD LOW TORQUE BEARINGS

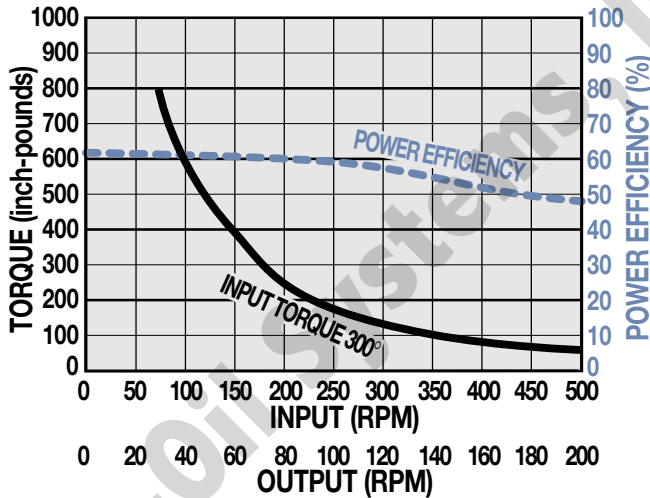
Model Builder 3D CAD Available at: [www.tolomatic.com](http://www.tolomatic.com)



### PERFORMANCE DATA

#### Low Torque Journal Bearings

#### Torque and Efficiency vs RPM at Maximum Bearing Temperature



#### Models and Bore Dimensions

#### U.S. - STANDARD - 2½:1 LOW TORQUE JOURNAL BEARING

LOW TORQUE JOURNAL MODEL NO.	RH OR LH	"A" BORE		"B" BORE	
		BORE SIZE (IN.)	WXD KEYWAY (IN.)	BORE SIZE (IN.)	WXD KEYWAY (IN.)
0403-0000	LH	1/2	1/8 x 1/16	3/4	3/16 x 3/32
0404-0000	RH	1/2	1/8 x 1/16	3/4	3/16 x 3/32
0407-0000	LH	1/2	1/8 x 1/16	1	1/4 x 1/8
0408-0000	RH	1/2	1/8 x 1/16	1	1/4 x 1/8
0411-0000	LH	1/2	1/8 x 1/16	1-1/4	1/4 x 1/8
0412-0000	RH	1/2	1/8 x 1/16	1-1/4	1/4 x 1/8
0417-0000	LH	5/8	1/8 x 1/16	3/4	3/16 x 3/32
0418-0000	RH	5/8	1/8 x 1/16	3/4	3/16 x 3/32
0421-0000	LH	5/8	1/8 x 1/16	1	1/4 x 1/8
0422-0000	RH	5/8	1/8 x 1/16	1	1/4 x 1/8
0425-0000	LH	5/8	1/8 x 1/16	1-1/4	1/4 x 1/8
0426-0000	RH	5/8	1/8 x 1/16	1-1/4	1/4 x 1/8

NOTE: THE "A" BORE CONTAINS THE 10 TOOTH GEAR. THE "B" BORE CONTAINS THE 25 TOOTH GEAR.

# SELECTION

## 1.) DETERMINE INPUT TORQUE AND RPM REQUIRED

To select the Slide-Rite®, Slide-Rite®CR Gearbox, or Float-A-Shaft gearbox required for your application, you must determine the input torque and RPM required for your application. The maximum RPM rating for the Float-A-Shaft is 500 RPM, for the Slide-Rite® and the Slide-Rite®CR Gearbox it's 1200 RPM.

## 2.) NEED A GEAR RATIO OTHER THAN 1:1?

When utilizing the Float-A-Shaft ratioed units, the highest RPM shaft speed on either the input or the output shaft should not exceed 500 RPM. For the Slide-Rite ratioed units, the shaft speed (input or output) should not exceed 1200 RPM.

## 3.) REFER TO THE CATALOG PAGE FOR THE RATIO YOU HAVE SELECTED

Find your input torque in inch-pounds for the selected gearbox unit on the graph and intersect it with the RPM of the input shaft. In general, gearbox capacity increases as listed below:

- 1.) Float-A-Shaft: Compact: Low Torque Journal Bearings
- 2.) Float-A-Shaft: Compact: High Torque Roller Bearings
- 3.) Slide-Rite CR: Compact
- 4.) Float-A-Shaft: Standard: Low Torque Journal Bearings
- 5.) Slide-Rite: Compact
- 6.) Slide-Rite CR: Standard
- 7.) Float-A-Shaft: Standard: High Torque Roller Bearings
- 8.) Slide-Rite: Standard

For ratios other than 1:1 refer to the performance graph for that Float-A-Shaft gearbox. When torque vs RPM intersects below the 300°F curve, you have selected a gearbox suitable for your application.

If your torque vs RPM intersection point is above the 300°F curve, then you do not have a proper application for that gearbox. Your options are to reduce either your input torque or RPM to get under the 300°F curve or try a gearbox with greater capacity.

## 4.) SELECT PROPER BORE SIZE

After gearbox series selection, choose the bore size that suits your shaft requirements. (NOTE: Float-A-Shaft high torque roller bearing models and Slide-Rite 1:1 ratio models are available in metric sizes also.)

## 5.) DETERMINE YOUR OUTPUT TORQUE

## SLIDE-RITE™ & SLIDE-RITE™CR SELECTION EXAMPLE

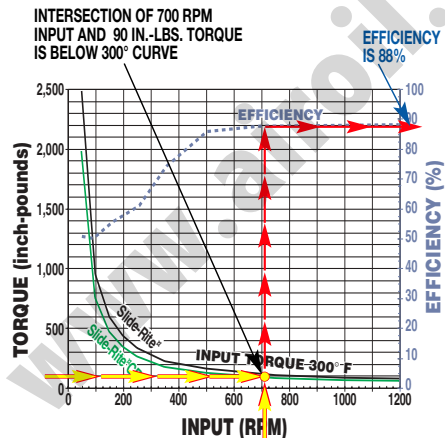
Example: Slide-Rite® Gearbox Standard Series at 700 RPM and 90 inch-pounds of input torque (Refer to the graph shown below. From page 5)

Output torque = (Input torque) (efficiency) (ratio)  
 Output torque = (90 in.-lbs.) (.88) (1:1)  
 Output torque = 79 in.-lbs.

### PERFORMANCE DATA

#### High Torque Ball Bearings

Torque and Efficiency vs RPM at Maximum Bearing Temperature



## FLOAT-A-SHAFT SELECTION EXAMPLE

Multiply the input torque by the gearbox's efficiency times the gear ratio. See examples:

Output torque = (Input torque) (efficiency) (ratio)

Example: 3:2 Ratio Journal Bearing Float-A-Shaft at 50 RPM and 500 inch-pounds of input torque (See graph below. From page 16)

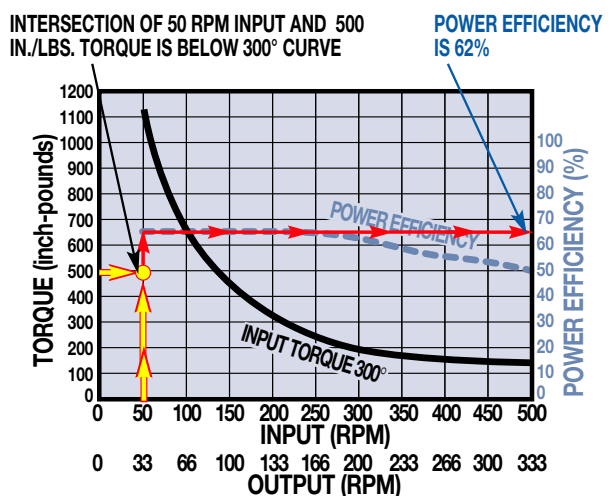
Output torque = (500 in.-lbs.) (.62) (3:2)  
 Output torque = 465 in.-lbs.

## STANDARD SERIES 3:2 RATIO

### PERFORMANCE DATA

#### Low Torque Journal Bearings

Torque and Efficiency vs RPM at Maximum Bearing Temperature



# Gearbox

SLIDE-RITE GEARBOX

ENDURANCE TECHNOLOGY

APPLICATION EXAMPLE

COMPACT SERIES 1:1 RATIO

STANDARD SERIES 1:1 RATIO

STANDARD SERIES 3:2 RATIO

STANDARD SERIES 2:1 RATIO

FLOAT-A-SHAFT

APPLICATIONS

INTRODUCTION

COMPACT SERIES 1:1 RATIO

STANDARD SERIES 1:1 RATIO

STANDARD SERIES 3:2 RATIO

STANDARD SERIES 2:1 RATIO

STANDARD SERIES 2.5:1 RATIO

SELECTION

INSTALLATION

SHAFT & KEYWAY REQUIREMENTS

## INSTALLATION



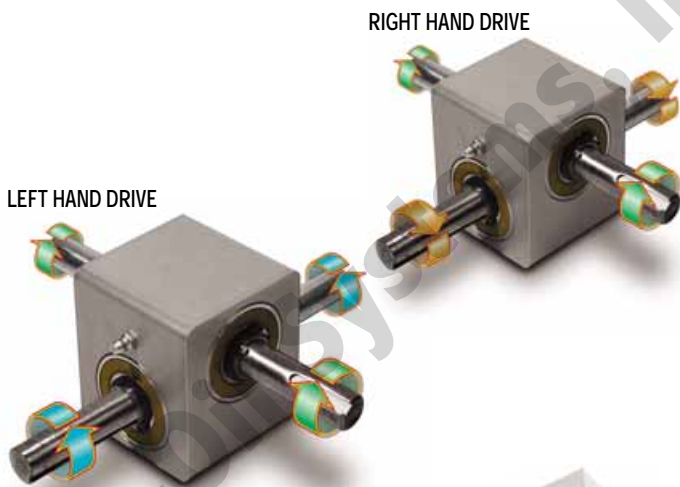
A plastic or cardboard dowel is inserted through the shaft bores during assembly and shipped in place. It allows you to install the Slide-Rite®, Slide-Rite®CR Gearbox, or Float-A-Shaft gearbox on your shafts in less than a minute.

To install your gearbox, simply line up the keyway on your shaft with the key and bore of the gearbox. Push the shaft through into place! The dowel falls out the other side and can be thrown away.

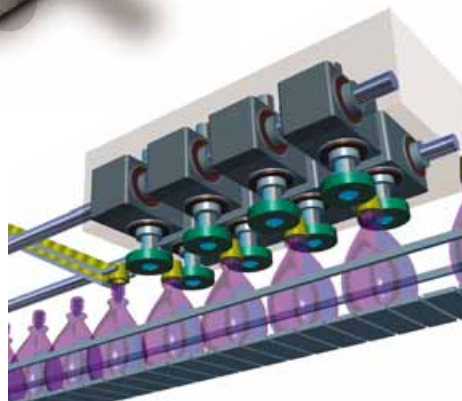
Gearboxes need not be disassembled and reassembled during installation. The dowel holds the gears in perfect alignment during installation and protects the precision internal parts from contamination and damage during shipping.

This fast and easy method of installation can be used whenever the keyways on your shafts extend out to the end of the shafts. For shafts with shorter keyways, the Float-A-Shaft can be built around the shaft. (Slide-Rite® and Slide-Rite®CR gearboxes cannot be disassembled.)

### Rotation of left hand and right hand drive compared, Slide-Rite® gearbox shown



This bottle capping application utilizes both left hand and right hand gearboxes



## SHAFT & KEYWAY REQUIREMENTS

### Shaft Diameter

Tolerance of plus 0.000 in. to minus 0.002 in. is recommended and should have runout within 0.002 in. TIR.

### Shaft Material

Use only alloy steel or stainless-steel for shafting, having a minimum hardness of RC40, or transmission shafting grade like 4140 or equivalent.

### Shaft Finish

In stationary applications the shaft finish should be 64 RMS or better. Shaft finish for traversing applications should be 32 RMS.

### Shaft Straightness

Shaft should be straight within 0.0015 in. TIR. per foot.

### Keyway

Keyway should be made up to 0.001 oversize than the nominal. See dimension table for nominal keyway sizes. Sharp edges of keyway should be avoided.

### Shaft Support

The shafts should be supported rigidly with either bearing blocks or pillow blocks to avoid excessive deflection.

Gearbox bearings are designed to support the internal thrust and radial loads generated by the gear teeth. Shaft support should be located as close to the gearbox body as the application will allow. Supports greater than 25" from gearbox body (20" for compact models) can reduce gearbox efficiency and, ultimately, its life.

### Lubrication, all gearboxes

An extreme-pressure synthetic lubricant which exhibits excellent anti-wear and rust protection qualities such as Anderol® 786 [14 oz. cartridge #0100-1604] or equivalent is recommended.

Temperature range	..... 0 - 300°F
NGLI Number	..... 2
Dropping Point (ASTM D566)	..... 525+
Penetration Worked (ASTM D217)	..... 300
Evaporation (ASTM D972)	..... under 1%

Slide-Rite® Gearbox is a registered trademark of Tolomatic, Inc.

Anderol® 786 is a registered trademark of the Anderol Company, [www.anderol.com](http://www.anderol.com)

### Lubrication, Slide-Rite® gearboxes

The Slide-Rite® Gearbox is lubricated at the factory and is ready for installation. **For most applications the unit is greased for life.** (See the Slide-Rite Gearbox service sheet [#0100-4002 at [tolomatic.com](http://tolomatic.com)] for lubrication guidelines.)



## CALIPER DISC BRAKES

### ***Pneumatic Brakes***

Pages 32 through 37

### ***Spring Applied Brakes***

Pages 66 through 79

### ***Hydraulic Brakes***

Pages 38 through 49

### ***Discs, Hubs and Bushings***

Pages 80 through 87

### ***Hydraulic/Mechanical Brakes***

Pages 50 through 55

### ***Tension Control Combinations***

Page 88

### ***Mechanical Brakes***

Pages 56 through 65

Visit [www.tolomatic.com](http://www.tolomatic.com) for the latest updates and ordering.

FEATURES

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PNEUMATIC  
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HYDRAULIC  
BRAKES

H10

H20

H220

H220I

H441

H960

HYDRAULIC/  
MECHANICAL  
BRAKE  
COMBOS

H/ME20

H/ME220

MECHANICAL  
BRAKES

ME10

ME20

ME220

MB3

SPRING  
APPLIED  
BRAKES

FS20

FS220

FS220I

FS595

DISCS  
HUBS &  
BUSHINGS

TENSION  
CONTROL  
COMBINATIONS

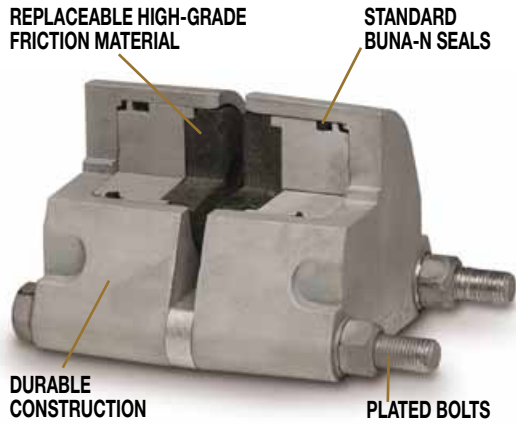
INTENSIFIER

SELECTION

WORKSHEET

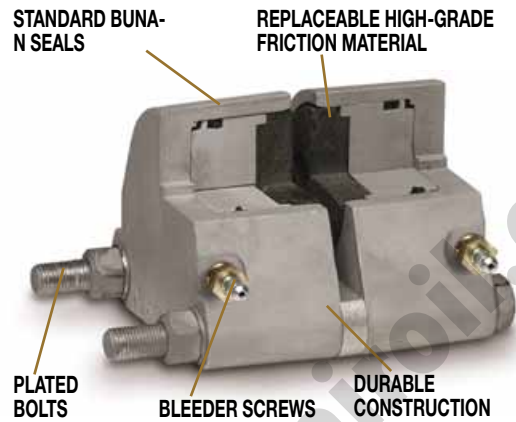
## FEATURES

### PNEUMATIC BRAKES



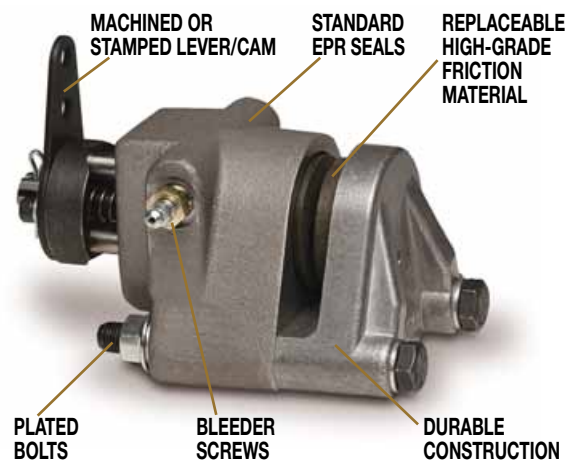
Tolomatic manufactures pneumatic brakes in three sizes: P10 Series, P20 Series and P220 Series. Available in both double acting or single acting. These brakes feature replaceable, high-grade friction material, standard Buna-N seals, aluminum construction and zinc plated bolts. Options include EPR seals, Viton® seals, retractable pistons and floating bracket. (See pages 32 to 37)

### HYDRAULIC BRAKES



Tolomatic hydraulic caliper disc brakes are available in the widest range of sizes. From the H10 Series up to the H960 Series, these brakes are sure to supply the braking torque you need for your application. Available in both double acting or single acting (depending on model). These brakes feature replaceable, high-grade friction material, standard Buna-N seals, aluminum or cast iron construction (depending on model), bleeder screws and zinc plated bolts. Options include EPR seals, Viton® seals, retractable pistons and floating brackets. (See pages 38 to 49)

### HYDRAULIC / MECHANICAL BRAKES



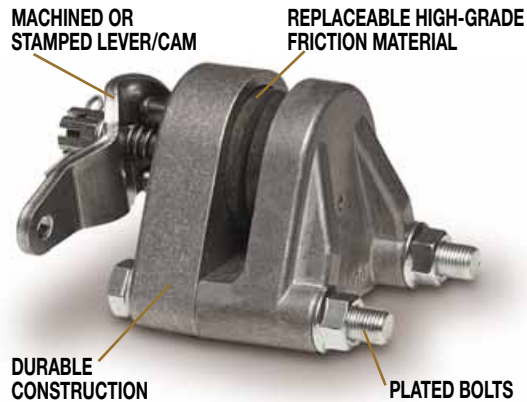
These Tolomatic brakes combine hydraulic and mechanical braking in one caliper. Available in the H/ME20 Series and H/ME220 Series these single acting calipers deliver high braking torque in a small package. Features include: replaceable, high-grade friction material, standard EPR seals, aluminum or cast iron construction (depending on model), bleeder screws and zinc plated bolts. Options include Buna-N seals, Viton® seals and floating brackets. (See pages 50 to 55)

- FEATURES
- APPLICATIONS
- SELECTION GRAPHS
- PNEUMATIC BRAKES
- P10
- P20
- P220
- HYDRAULIC BRAKES
- H10
- H20
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- H441
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- HYDRAULIC/MECHANICAL BRAKE COMBOS
- H/ME20
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- FS20
- FS220
- FS220I
- FS595
- DISCS HUBS & BUSHINGS
- TENSION CONTROL COMBINATIONS
- INTENSIFIER
- SELECTION WORKSHEET



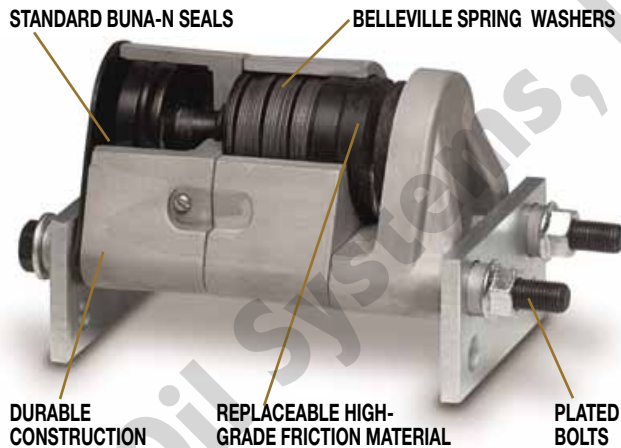
## FEATURES

### MECHANICAL BRAKES



Tolomatic manufactures a broad range of mechanical brakes in these series: ME10, ME20, ME220 and MB3. Designed for use in areas that do not have access to other types of power, these single acting calipers feature replaceable, high-grade friction material, aluminum or cast iron construction (depending on model) and zinc plated bolts. (See pages 56 to 65)

### SPRING APPLIED BRAKES



Tolomatic offers spring applied brakes in sizes ranging from FS20 Series to FS595 Series. These brakes require pressure (normally hydraulic) for disc release. Braking force is provided by a stack (or stacks) of Belleville spring washers. The concave washers are capable of storing enormous force. When the brake is pressurized a piston(s) moves to compress the spring washer stack(s), thus releasing the disc. These calipers feature replaceable, high-grade friction material, aluminum or cast iron construction (depending on model), Buna-N seals and zinc plated bolts. Options include EPR seals, retractable pistons and manual compensators. (See pages 66 to 79)

### DISC AND HUBS

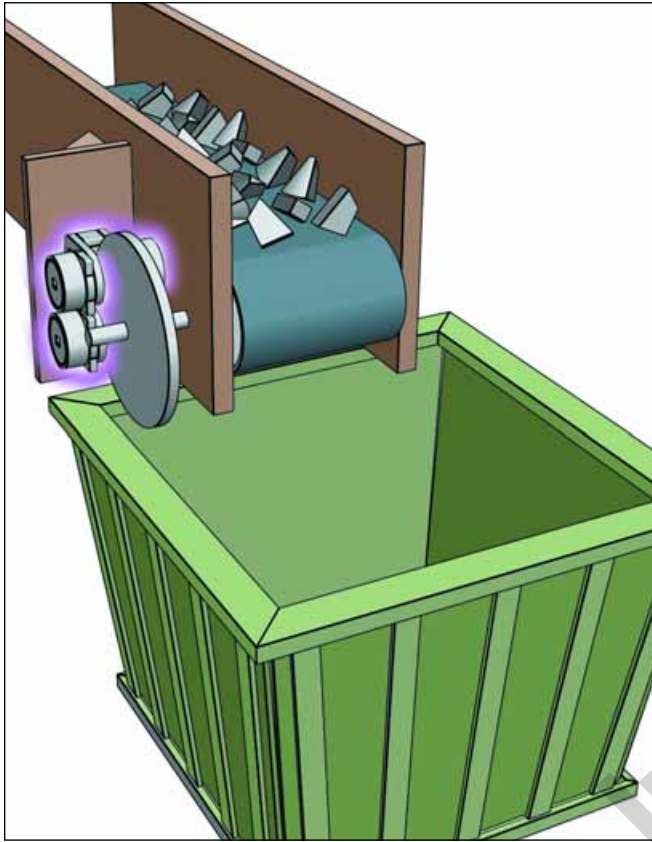


Tolomatic offers several discs and hubs to fit your application. Most are made of carbon 1010 steel, are flat within .010 inch, stress relieved and blanchard ground to an 80 (RMS) microinch finish. Discs also feature socket head cap screw fasteners and key way set screws. Standard disc diameters are 6-5/16, 8, 10, 12 and 16 inches. Disc thicknesses range from 5/32" to 1/2". Available: Fixed Hub and Disc Assemblies, Fixed Hub and Disc Assemblies with Q.D. Bushings, Q.D. Bushings and Hubs, One-Piece Hub and Disc, Blank Disc, Disc with Bolt Circles and Pilot Holes, and Ventilated Disc. (See pages 80 to 87)

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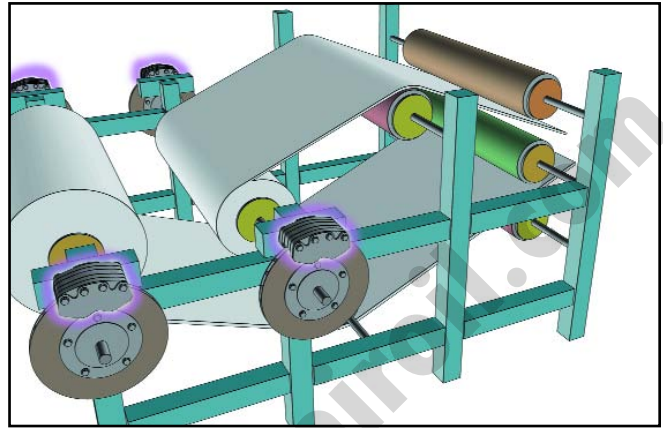
## APPLICATIONS

### CONVEYOR BELT EMERGENCY BRAKE



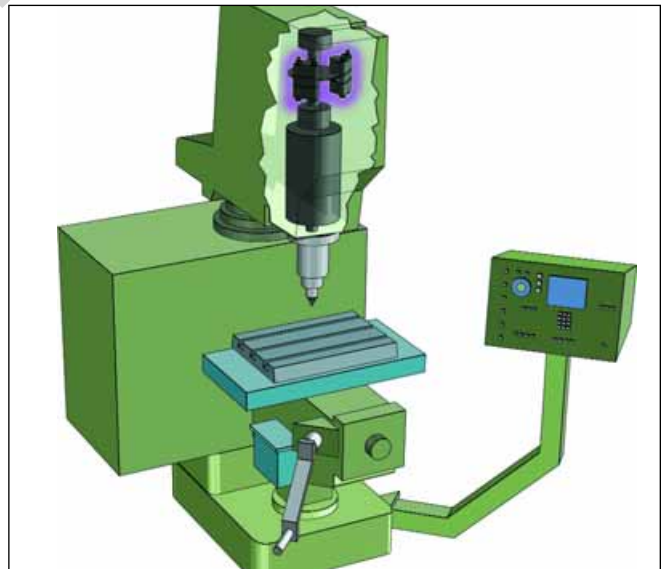
Tolomatic caliper disc brakes find uses in industrial settings all over the world. Used on everything from assembly lines to wind generators and lawn maintenance equipment, Tolomatic calipers offer the braking capacity you need at an economical price. The variety of sizes, maximum torque output and thermal capabilities insure you will find the optimal brake for your application. These illustrations are meant to help you to see ways that our calipers will work for you. Above a Spring Applied Brake is used on a conveyor belt. In this application it will provide braking when hydraulic pressure is *Not* provided to the brake. This type of braking is especially useful in situations where safety is an issue. Since a Spring Applied Brake requires hydraulic pressure to *Release* the brake, in a power shut down these brakes will engage providing positive braking.

### TENSIONING APPLICATION



Another great place for Tolomatic brakes is tensioning/-constant slip applications. Used in everything from mylar balloon fabrication to web presses, Tolomatic pneumatic brakes provide dynamic tensioning that is adjusted by the air pressure supplied to the caliper. Because of the constant nature of this type of braking, caliper and disc are sized on thermal characteristics rather than torque.

### MACHINE COMPONENTS



Here two Tolomatic pneumatic brakes are used to increase the productivity of a CNC milling machine. In the original design users had to wait for the machine to coast to a stop before a part could be removed or a tool changed. Electronic deceleration proved to be expensive and harmful to the motor. Tolomatic caliper disc brakes improved stopping time by 500 percent, increasing the machine's productivity and safety.

FEATURES

APPLICATIONS

SELECTION  
GRAPHSPNEUMATIC  
BRAKES

P10

P20

P220

HYDRAULIC  
BRAKES

H10

H20

H220

H220I

H441

H960

HYDRAULIC/  
MECHANICAL  
BRAKE  
COMBOS

H/ME20

H/ME220

MECHANICAL  
BRAKES

ME10

ME20

ME220

MB3

SPRING  
APPLIED  
BRAKES

FS20

FS220

FS220I

FS595

DISCS  
HUBS &  
BUSHINGSTENSION  
CONTROL  
COMBINATIONS

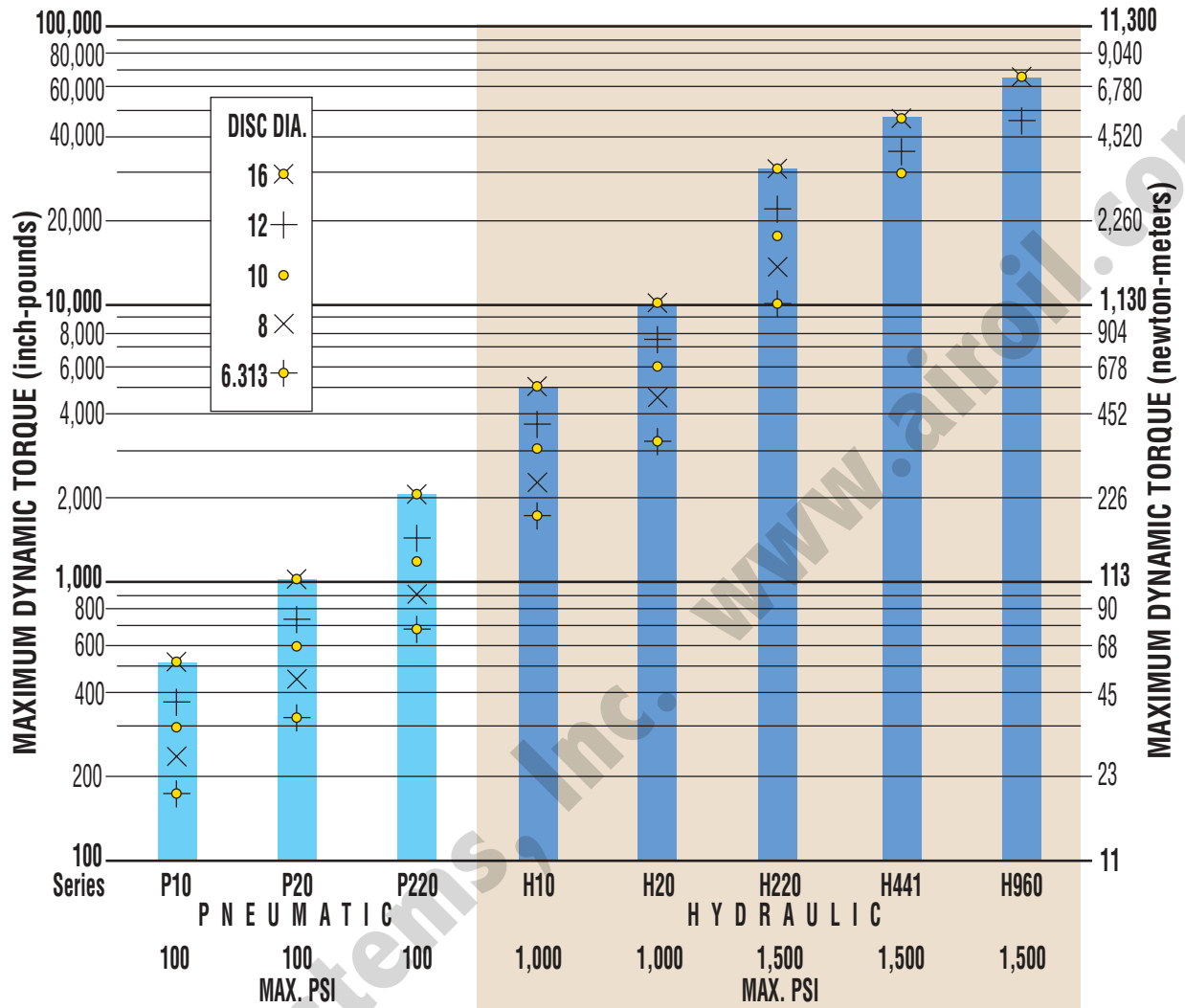
INTENSIFIER

SELECTION

WORKSHEET

## SELECTION GRAPH & TABLE

### DYNAMIC TORQUE - PNEUMATIC, HYDRAULIC



The table below includes the same information as the graph above (adding discs not sold by Tolomatic) with the maximum dynamic torque [inch-pounds] for each series brake using the disc size in left column and PSI at the bottom of the table.

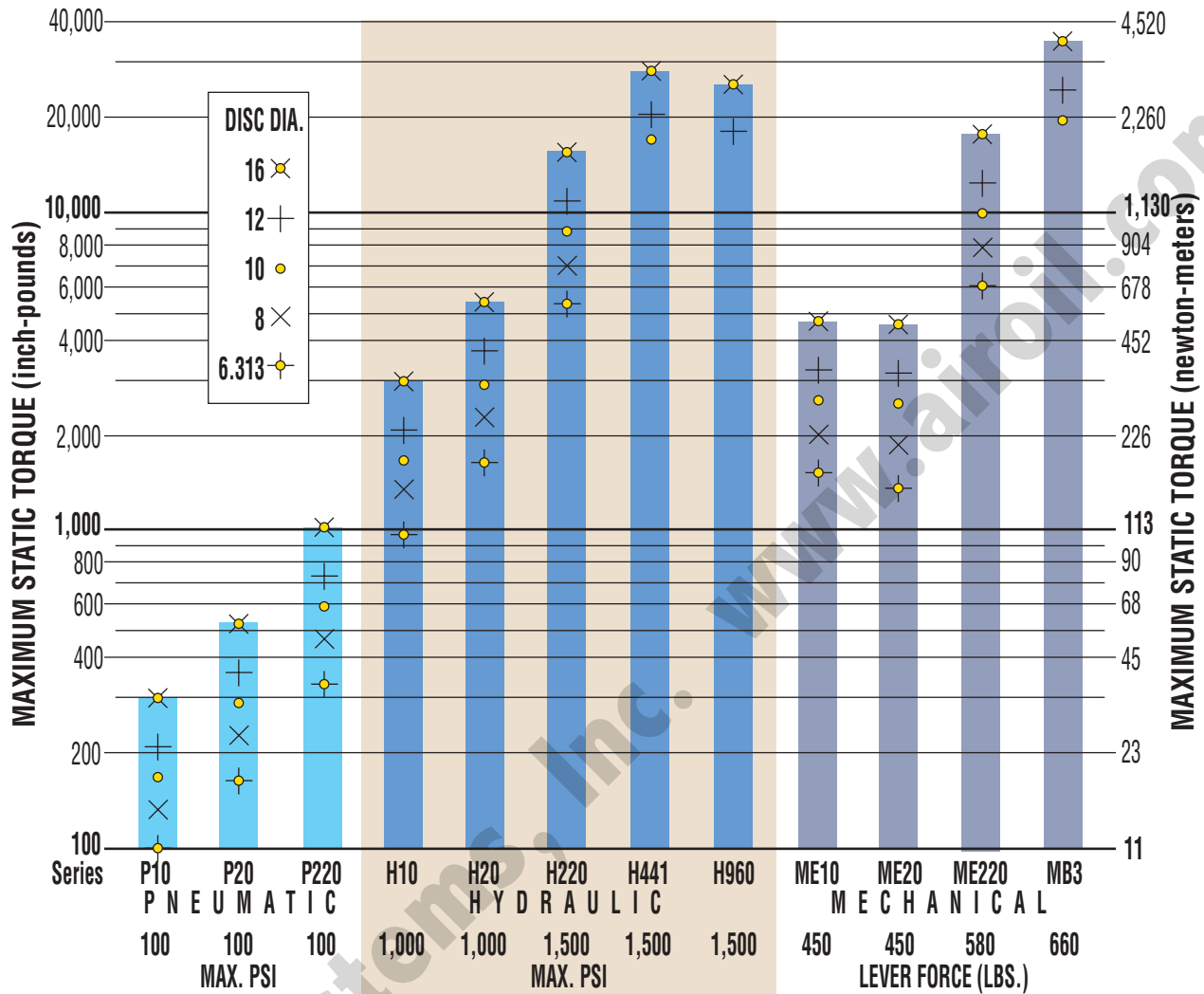
Disc Dia.	P10	P20	P220	H10	H20	H220	H441	H960
6.313	174	328	685	1,737	3,285	10,282		
8	233	450	907	2,328	4,500	13,608		
10	303	594	1,184	3,028	5,940	17,755	19,539	
12	373	738	1,463	3,728	7,380	21,946	24,834	45,672
14	443	882	1,771	4,428	8,820	26,568	30,129	56,052
16	513	1,026	2,076	5,128	10,260	31,147	35,424	66,432
18							40,719	76,812
20							46,014	
22							51,309	
24							56,606	
	100	100	100	1,000	1,000	1,500	1,500	1,500
	PNEUMATIC			HYDRAULIC				

NOTE: GREY BACKGROUND INDICATES DISC SIZES NOT AVAILABLE FROM TOLOMATIC.

**Note: Selection instructions and formulae begin on page 89 of this catalog. Please refer to these instructions or call 1-800-328-2174 for assistance.**

## SELECTION GRAPH & TABLE

### STATIC TORQUE - PNEUMATIC, HYDRAULIC, MECHANICAL



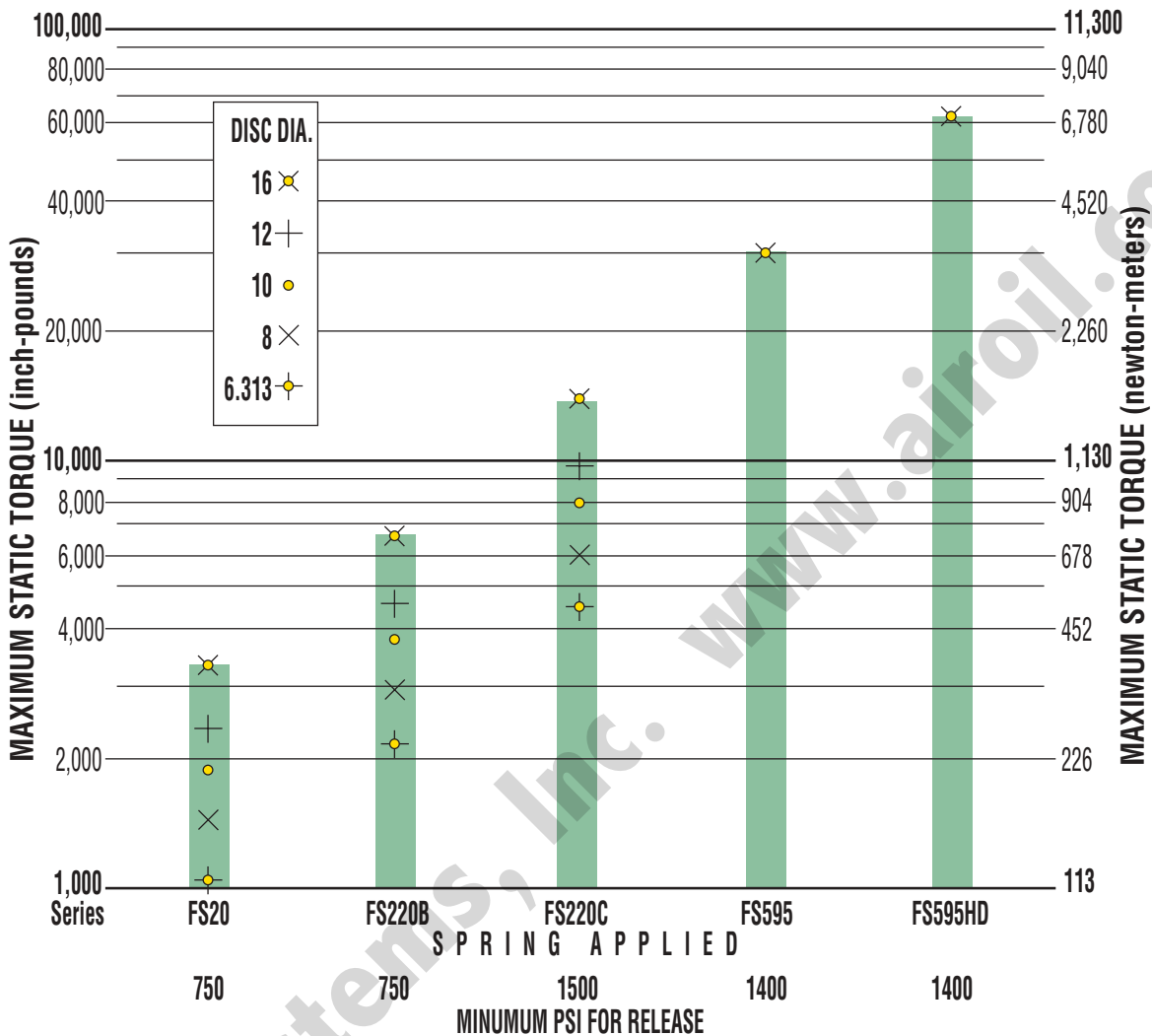
The table below includes the same information as the graph above (adding discs not sold by Tolomatic) with the maximum static torque [inch-pounds] for each series brake using the disc size in left column and PSI (or Lever Force) at the bottom of the table.

Disc Dia.	P10	P20	P220	H10	H20	H220	H441	H960	ME10	ME20	ME220	MB3
6.313	99	164	343	993	1,642	5,141			1,502	1,381	5,851	
8	133	225	454	1,330	2,250	6,804			2,012	1,891	7,744	
10	173	297	592	1,730	2,970	8,878	11,679		2,618	2,497	10,104	19,893
12	213	369	732	2,130	3,690	10,973	14,844	26,664	3,223	3,102	12,489	24,506
14	253	441	886	2,530	4,410	13,284	18,009	32,724	3,828	3,707	15,120	29,120
16	293	513	1,038	2,930	5,130	15,574	21,174	38,784	4,433	4,312	17,726	33,733
18							24,339	44,844				38,347
20							27,504					42,960
22							30,669					47,573
24							33,834					52,187
26												56,800
28												61,414
30												66,027
	100	100	100	1,000	1,000	1,500	1,500	1,500	450	450	580	660
	PNEUMATIC			HYDRAULIC			MECHANICAL					

NOTE: GREY BACKGROUND INDICATES DISC SIZES NOT AVAILABLE FROM TOLONATIC.

## SELECTION GRAPH & TABLE

### STATIC TORQUE - SPRING APPLIED



The table below includes the same information as the graph above (adding discs not sold by Tolomatic) with the maximum static torque [inch-pounds] for each series brake using the disc size in left column and release pressure (PSI) at the bottom of the table.

Disc Dia.	FS20	FS220B	FS220C	FS595	FS595 Dual
6.313	1,061	2,213	4,522		
8	1,453	2,930	5,985		
10	1,918	3,822	7,809		
12	2,383	4,724	9,652		
14	2,848	5,715	11,676	26,426	52,853
16	3,313	6,705	13,699	31,046	62,093
18				35,666	71,333
20				40,286	80,573
22				44,906	89,813
24				49,526	99,053
26				54,146	108,293
28				58,766	117,533
30				63,386	126,733
	750	750	1500	1400	1400

**Note: Selection instructions and formulae begin on page 89 of this catalog. Please refer to these instructions or call 1-800-328-2174 for assistance.**

NOTE: GREY BACKGROUND INDICATES DISC SIZES NOT AVAILABLE FROM TOLOMATIC.

## P10 SERIES - ALUMINUM

### AVAILABLE STYLES

#### Double Acting

FIXED MOUNT - FIXED DISC



PICTURED: 0701-0000

#### Single Acting

FIXED MOUNT - FLOATING DISC



PICTURED: 0705-0000

#### Single Acting with Floating Bracket

FLOATING MOUNT - FIXED DISC



PICTURED:  
0705-0001

### P10 SPECIFICATIONS

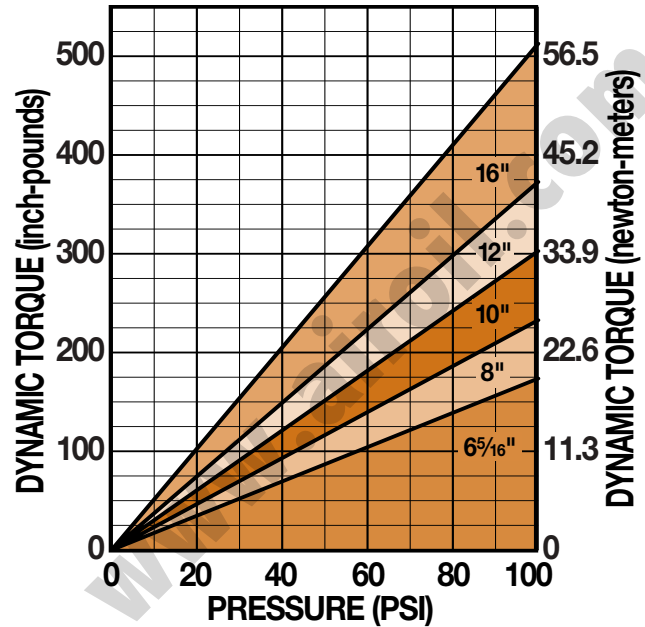
Maximum Pressure Rating:	100 PSI
Accommodates Tolomatic disc diameters:	6-5/16", 8", 10", 12", 16"
Maximum disc diameter:	none
Housing Material:	Extruded aluminum
Bolts:	Zinc plated grade 5
Seals:	Buna-N Standard
Wearable friction material:	0.46 cu. in.
Wearable friction material/retractable models:	0.11 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	2.00 sq. in.
Piston diameter:	1.125 in.
Fluid displacement, non-retractable:	Single acting = 0.029 cu. in. Double acting = 0.029 cu. in.

#### OPTIONS

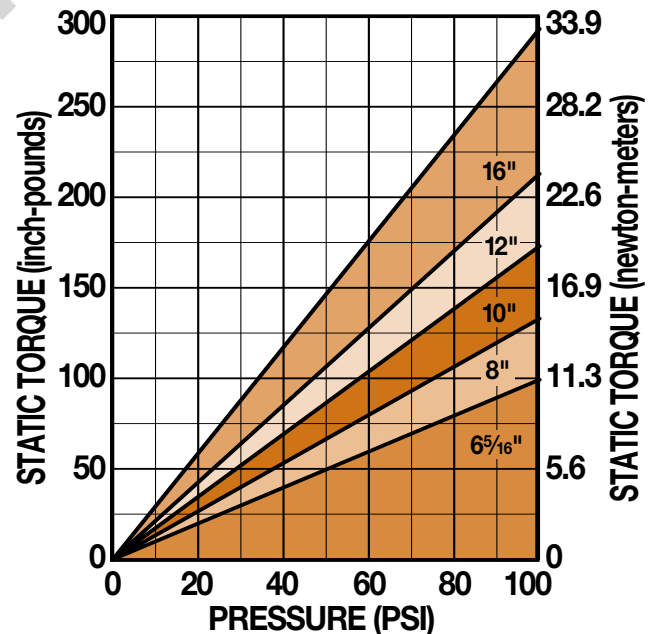
Seals:	EPR seals
Pistons:	Retractable piston(s)
Floating bracket:	Stamped steel construction

### PERFORMANCE DATA

#### Dynamic Torque vs Pressure



#### Static Torque vs Pressure



### DISC SIZING EQUATIONS

$$\text{DYNAMIC TORQUE (IN.-LBS.)} = 0.70 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

$$\text{STATIC (PARKING) TORQUE (IN.-LBS.)} = 0.40 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

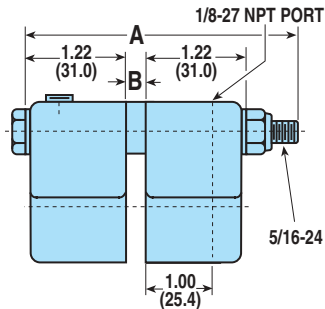
$$\text{BRAKING RADIUS (IN.)} = [\text{DISC DIAMETER} \div 2] - 0.675$$

## P10 SERIES - ALUMINUM

### DOUBLE ACTING FIXED MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4" 3/8" 1/2"

Weight 1.0 lbs. .45 kgs.

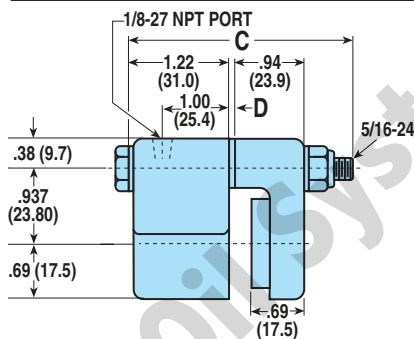


MODEL CODE	DISC THK.	A	B	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
P10DA	5/32"	3.50"	.281"	Double Acting	0701-0000
P10DAR	5/32"	3.50"	.281"	Double Acting, Retractable Pistons	0708-0000
P10DB	1/4"	3.50"	.375"	Double Acting	0702-0000
P10DBR	1/4"	3.50"	.375"	Double Acting, Retractable Pistons	0709-0000
P10DER	1/2"	4.00"	.625"	Double Acting, Retractable Pistons	0709-0003
P10DL	3/8"	4.00"	.500"	Double Acting	0702-0002
P10DLR	3/8"	4.00"	.500"	Double Acting, Retractable Pistons	0709-0002

### SINGLE ACTING FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4"

Weight .75 lbs. .34 kgs.



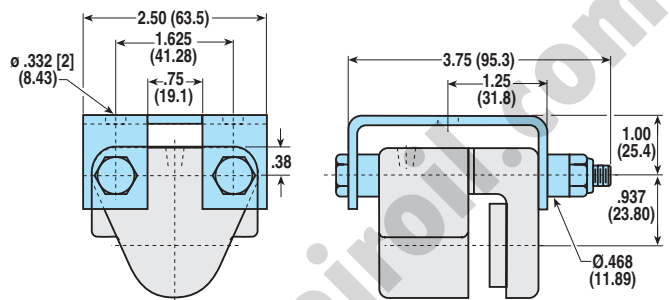
MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
P10SA	5/32"	3.00"	—	Single Acting	0705-0000
P10SB	1/4"	3.00"	.094"	Single Acting	0703-0000

### SINGLE ACTING WITH FLOATING BRACKET

FIXED MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 1.5 lbs. .68 kgs.

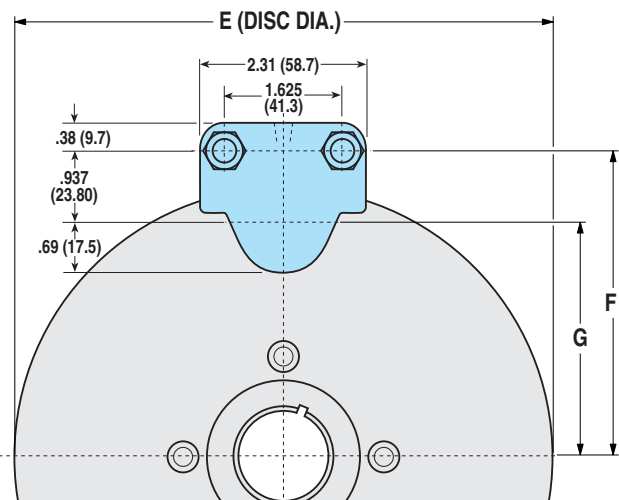


See SINGLE ACTING dimensional drawing for additional measurements

MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
P10SAF	5/32"	3.00"	—	Single Acting, Floating Bracket	0705-0001
P10SBF	1/4"	3.00"	.094"	Single Acting, Floating Bracket	0703-0001

### MOUNTING DIMENSIONS

Disc Diameter	E	6.313"	8"	10"	12"	16"
	F	3.469"	4.313"	5.313"	6.313"	8.313"
Braking Radius	G	2.482"	3.325"	4.325"	5.325"	7.325"



### BRAKE MODEL LETTER CODES

<b>A</b> 5/32" Thick Disc	<b>E</b> 1/2" Thick Disc	<b>P</b> Pneumatic Brake
<b>B</b> 1/4" Thick Disc	<b>F</b> Floating Bracket Mount	<b>R</b> Retractable Piston(s)
<b>D</b> Double Acting	<b>L</b> 3/8" Thick Disc	<b>S</b> Single Acting

## P20 SERIES - ALUMINUM

### AVAILABLE STYLES

#### Double Acting

FIXED MOUNT - FIXED DISC



PICTURED: 0720-0000

#### Single Acting

FIXED MOUNT - FLOATING DISC



PICTURED: 0724-0000

#### Single Acting with Floating Bracket

FLOATING MOUNT - FIXED DISC



PICTURED:  
0724-0001

### P20 SPECIFICATIONS

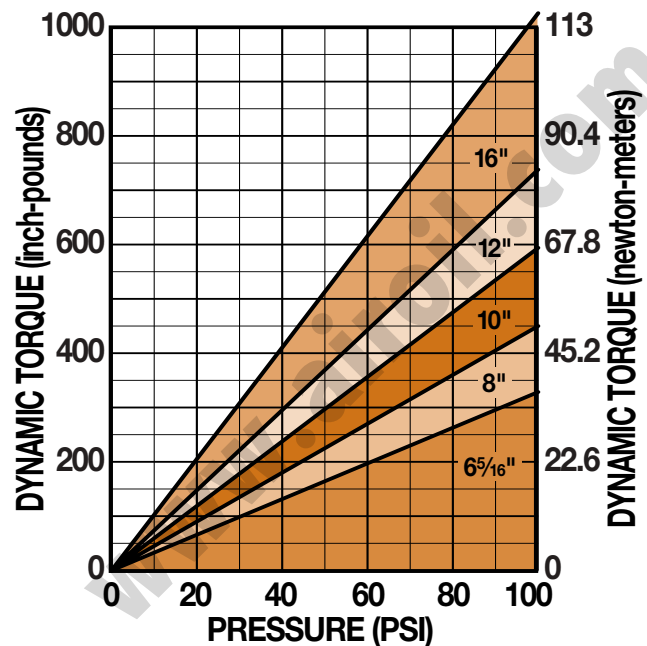
Maximum Pressure Rating:	100 PSI
Accommodates Tolomatic disc diameters:	6-5/16", 8", 10", 12", 16"
Maximum disc diameter:	none
Housing Material:	Extruded aluminum
Bolts:	Zinc plated grade 8
Seals:	Buna-N Standard
Wearable friction material:	0.83 cu. in.
Wearable friction material/retractable models:	0.48 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	4.00 sq. in.
Piston diameter:	1.625 in.
Fluid displacement, non-retractable:	Single acting = 0.062 cu. in. Double acting = 0.062 cu. in.

#### OPTIONS

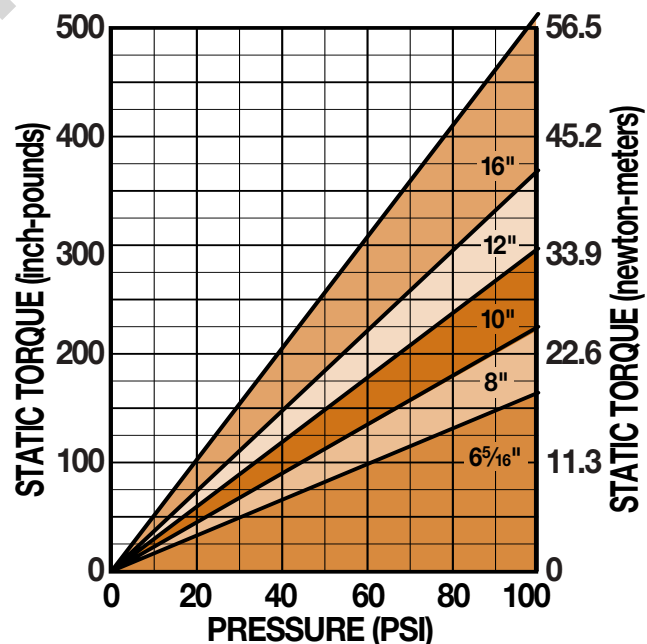
Seals:	EPR seals
Pistons:	Retractable piston(s)
Floating bracket:	Stamped steel construction

### PERFORMANCE DATA

#### Dynamic Torque vs Pressure



#### Static Torque vs Pressure



### DISC SIZING EQUATIONS

$DYNAMIC\ TORQUE\ (IN.-LBS.) = 1.44 \times BRAKING\ RADIUS\ (IN.) \times PRESSURE\ (PSI)$   
 $STATIC\ (PARKING)\ TORQUE\ (IN.-LBS.) = 0.72 \times BRAKING\ RADIUS\ (IN.) \times PRESSURE\ (PSI)$   
 $BRAKING\ RADIUS\ (IN.) = [DISC\ DIAMETER \div 2] - 0.875$

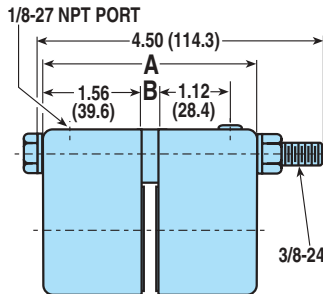


## P20 SERIES - ALUMINUM

### DOUBLE ACTING FIXED MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4" 3/8" 1/2"

Weight 2.0 lbs. .91 kgs.

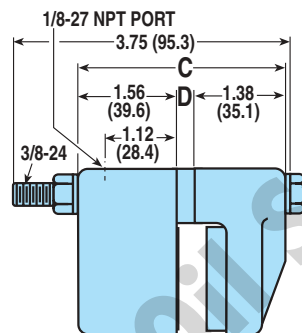


MODEL CODE	DISC THK.	A	B	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
P20DA	5/32"	3.41"	0.281"	Double Acting	0720-0000
P20DAR	5/32"	3.41"	0.281"	Double Acting, Retractable Pistons	0728-0000
P20DB	1/4"	3.50"	0.375"	Double Acting	0721-0000
P20DBR	1/4"	3.50"	0.375"	Double Acting, Retractable Pistons	0729-0000
P20DL	3/8"	3.62"	0.500"	Double Acting	0720-0013
P20DLR	3/8"	3.62"	0.500"	Double Acting, Retractable Pistons	0729-0001
P20DE	1/2"	3.75"	0.625"	Double Acting	0725-0000
P20DER	1/2"	3.75"	0.625"	Double Acting, Retractable Pistons	0719-0000

### SINGLE ACTING FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4" 3/8"

Weight 1.5 lbs. .68 kgs.

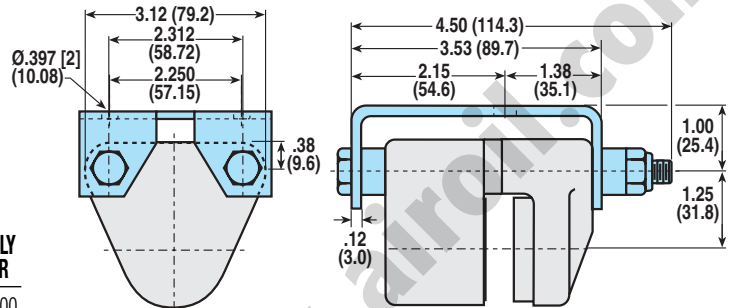


MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
P20SA	5/32"	2.94"	-	Single Acting	0724-0000
P20SB	1/4"	3.03"	0.093"	Single Acting	0722-0000
P20SL	3/8"	3.16"	0.219"	Single Acting	0722-0002

### SINGLE ACTING WITH FLOATING BRACKET FLOATING MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 2.0 lbs. .91 kgs.

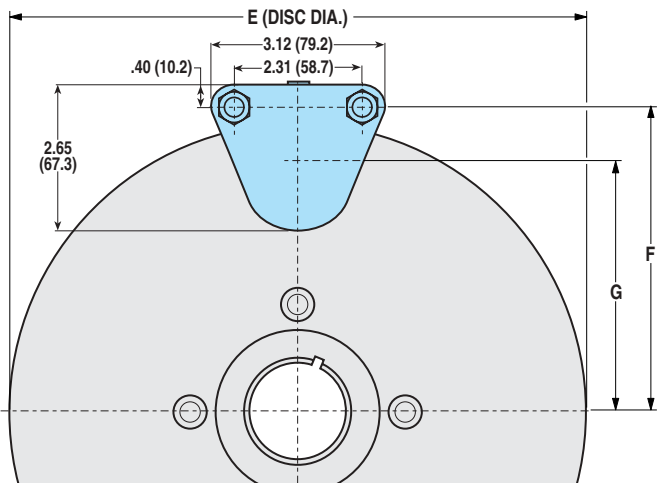


See SINGLE ACTING dimensional drawing for additional measurements

MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
P20SAF	5/32"	2.94"	-	Single Acting, Floating Bracket	0724-0001
P20SBF	1/4"	3.03"	0.093"	Single Acting, Floating Bracket	0722-0001

### MOUNTING DIMENSIONS

Disc Diameter	E	6.313"	8"	10"	12"	16"
	F	3.531"	4.375"	5.375"	6.375"	8.375"
Braking Radius	G	2.281"	3.125"	4.125"	5.125"	7.125"



### BRAKE MODEL LETTER CODES

<b>A</b> 5/32" Thick Disc	<b>E</b> 1/2" Thick Disc	<b>P</b> Pneumatic Brake
<b>B</b> 1/4" Thick Disc	<b>F</b> Floating Bracket Mount	<b>R</b> Retractable Piston(s)
<b>D</b> Double Acting	<b>L</b> 3/8" Thick Disc	<b>S</b> Single Acting

CALIPER  
DISC  
BRAKES

FEATURES

APPLICATIONS

SELECTION  
GRAPHS

PNEUMATIC  
BRAKES

P10

P20

P220

HYDRAULIC  
BRAKES

H10

H20

H220

H220I

H441

H960

HYDRAULIC/  
MECHANICAL  
BRAKE  
COMBOS

H/ME20

H/ME220

MECHANICAL  
BRAKES

ME10

ME20

ME220

MB3

SPRING  
APPLIED  
BRAKES

FS20

FS220

FS220I

FS595

DISCS  
HUBS &  
BUSHINGS

TENSION  
CONTROL  
COMBINATIONS

INTENSIFIER

SELECTION

WORKSHEET

## P220 SERIES - ALUMINUM

### AVAILABLE STYLES

#### Double Acting

FIXED MOUNT - FIXED DISC



PICTURED: 0735-0100

#### Single Acting

FIXED MOUNT - FLOATING DISC



PICTURED: 0733-0000

#### Single Acting with Floating Bracket

FLOATING MOUNT - FIXED DISC



PICTURED:  
0733-0022

### P220 SPECIFICATIONS

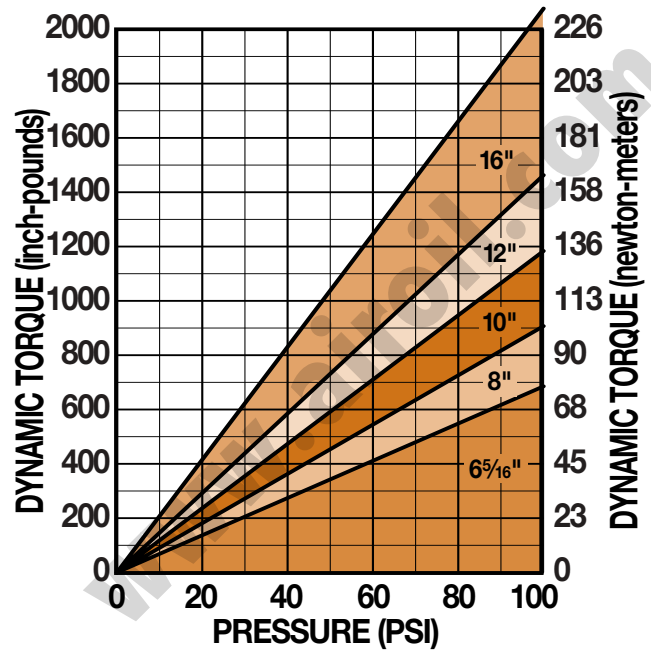
Maximum Pressure Rating:	100 PSI
Accommodates Tolomatic disc diameters:	6-5/16", 8", 10", 12", 16"
Maximum disc diameter:	16"
Housing Material:	Die cast aluminum
Bolts:	Zinc plated grade 8
Seals:	Buna-N Standard
Wearable friction material:	1.66 cu. in.
Wearable friction material/retractable models:	0.95 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	8.00 sq. in.
Piston diameter:	1.625 in.
Fluid displacement, non-retractable:	Single acting = 0.124 cu. in. Double acting = 0.124 cu. in.

#### OPTIONS

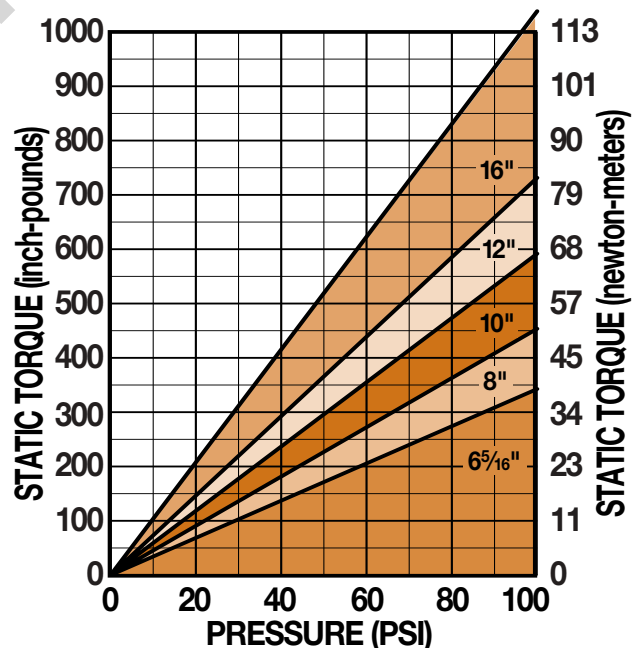
Seals:	EPR seals
Pistons:	Retractable piston(s)
Floating bracket:	Available

### PERFORMANCE DATA

#### Dynamic Torque vs Pressure



#### Static Torque vs Pressure



### DISC SIZING EQUATIONS

$$\text{DYNAMIC TORQUE (IN.-LBS.)} = 2.88 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

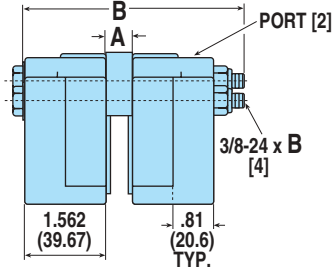
$$\text{STATIC (PARKING) TORQUE (IN.-LBS.)} = 1.44 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

## P220 SERIES - ALUMINUM

### DOUBLE ACTING FIXED MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4" 1/2"

Weight 4.0 lbs. 1.82 kgs.

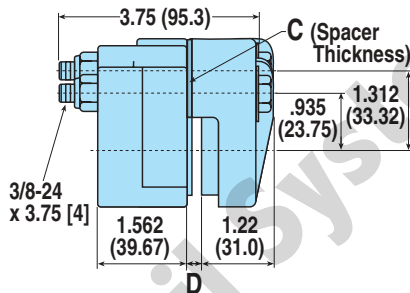


MODEL CODE	DISC THK.	A	B	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
P220DA	5/32"	0.28"	4.50"	Double Acting	0735-0100
P220DAR	5/32"	0.28"	4.50"	Double Acting, Retractable Pistons	0736-0110
P220DB	1/4"	0.38"	4.50"	Double Acting	0735-0200
P220DBR	1/4"	0.38"	4.50"	Double Acting, Retractable Pistons	0736-0210
P220DE	1/2"	0.62"	5.00"	Double Acting	0735-0300
P220DER	1/2"	0.62"	5.00"	Double Acting, Retractable Pistons	0736-0310

### SINGLE ACTING FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4" 1/2"

Weight 3.0 lbs. 1.36 kgs.



MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
P220SA	5/32"	-	0.25"	Single Acting	0733-0000
P220SB	1/4"	0.094"	0.34"	Single Acting	0733-0100
P220SE	1/2"	0.344"	0.59"	Single Acting	0733-0200

### BRAKE MODEL LETTER CODES

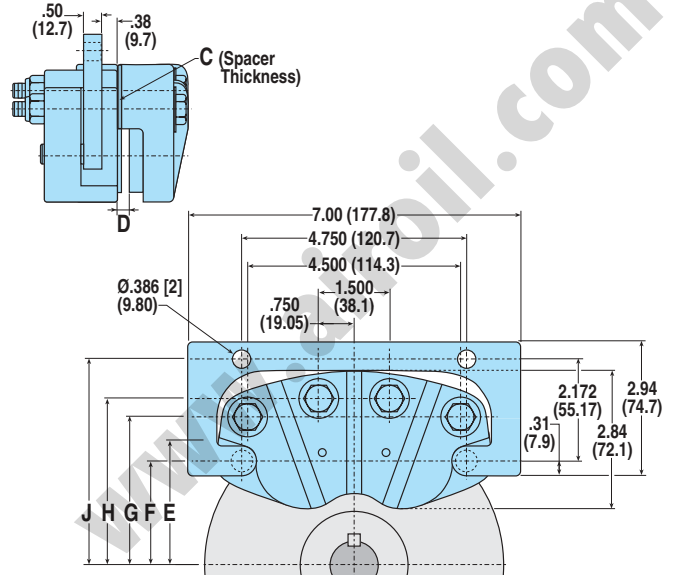
<b>A</b> 5/32" Thick Disc	<b>E</b> 1/2" Thick Disc	<b>R</b> Retractable Piston(s)
<b>B</b> 1/4" Thick Disc	<b>F</b> Floating Bracket Mount	<b>S</b> Single Acting
<b>D</b> Double Acting	<b>P</b> Pneumatic Brake	

### SINGLE ACTING WITH FLOATING BRACKET

#### FLOATING MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4" 1/2"

Weight 4.5 lbs. 2.04 kgs.

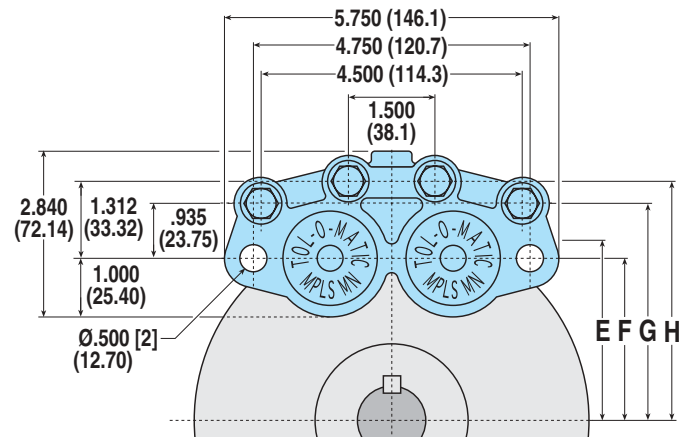


See SINGLE ACTING dimensional drawing for additional measurements

MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
P220SAF	5/32"	-	0.25"	Single Acting, Floating Bracket	0733-0020
P220SBF	1/4"	0.094"	0.34"	Single Acting, Floating Bracket	0733-0120
P220SEF	1/2"	0.344"	0.59"	Single Acting, Floating Bracket	0733-0220

### MOUNTING DIMENSIONS

Disc Diameter	6.313"	8"	10"	12"	16"
Braking Radius	<b>E</b> 2.38"	3.15"	4.11"	5.08"	7.21"
	<b>F</b> 2.13"	3.00"	4.00"	5.00"	7.09"
	<b>G</b> 3.07"	3.94"	4.94"	5.94"	8.03"
	<b>H</b> 3.45"	4.32"	5.32"	6.32"	8.41"
	<b>J</b> 4.30"	5.17"	6.17"	7.17"	9.26"



## H10 SERIES - ALUMINUM

### AVAILABLE STYLES

#### Double Acting

FIXED MOUNT - FIXED DISC



PICTURED: 0701-0010

#### Single Acting

FIXED MOUNT - FLOATING DISC



PICTURED: 0705-0010

#### Single Acting with Floating Bracket

FLOATING MOUNT - FIXED DISC



PICTURED:  
0705-0011

### H10 SPECIFICATIONS

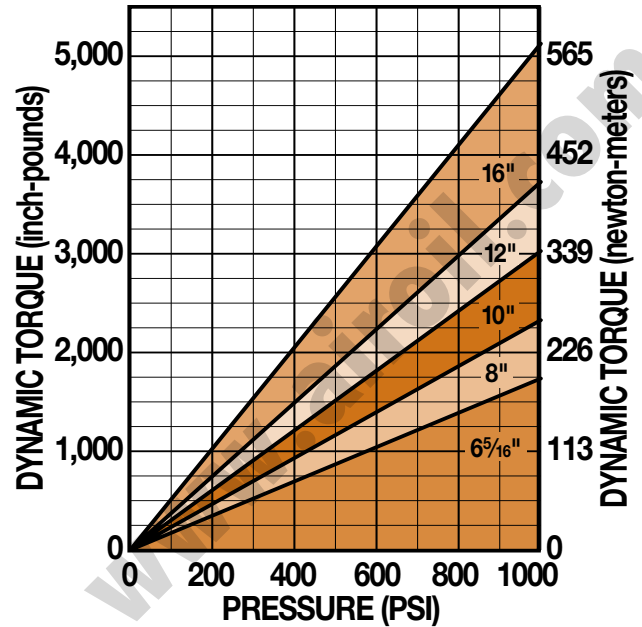
Maximum Pressure Rating:	1,000 PSI
Accommodates Tolomatic disc diameters:	6-5/16", 8", 10", 12", 16"
Maximum disc diameter:	none
Housing Material:	Extruded aluminum
Bolts:	Zinc plated grade 5
Seals:	Buna-N Standard
Wearable friction material:	0.46 cu. in.
Wearable friction material/retractable models:	0.11 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	2.00 sq. in.
Piston diameter:	1.125 in.
Fluid displacement, non-retractable:	Single acting = 0.029 cu. in. Double acting = 0.029 cu. in.

#### OPTIONS

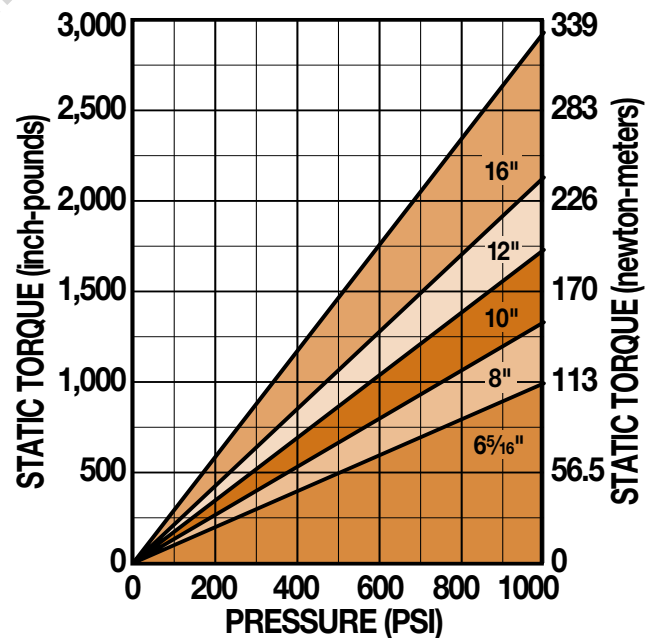
Seals:	EPR seals
Pistons:	Retractable piston(s)
Floating bracket:	Stamped steel construction

### PERFORMANCE DATA

#### Dynamic Torque vs Pressure



#### Static Torque vs Pressure



### DISC SIZING EQUATIONS

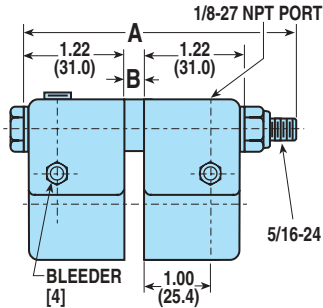
DYNAMIC TORQUE (IN.-LBS.) = 0.70 x BRAKING RADIUS (IN.) x PRESSURE (PSI)  
 STATIC (PARKING) TORQUE (IN.-LBS.) = 0.40 x BRAKING RADIUS (IN.) x PRESSURE (PSI)  
 BRAKING RADIUS (IN.) = [DISC DIAMETER ÷ 2] - 0.675

## H10 SERIES - ALUMINUM

### DOUBLE ACTING FIXED MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 1.0 lbs. .45 kgs.

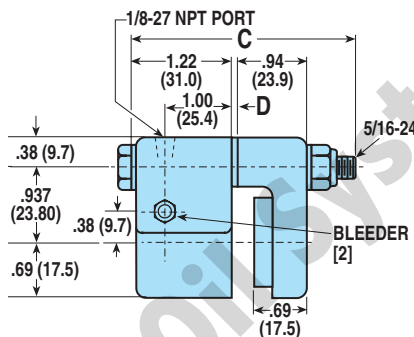


MODEL CODE	DISC THK.	A	B	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H10DAC	5/32"	3.50"	.281"	Double Acting	0701-0010
H10DACG	5/32"	3.50"	.281"	Double Acting, EPR Seals	0701-0011
H10DARC	5/32"	3.50"	.281"	Double Acting, Retractable Pistons	0708-0010
H10DARCG	5/32"	3.50"	.281"	Double Acting, Retr Pist, EPR Seals	0708-0011
H10DBC	1/4"	3.50"	.375"	Double Acting	0702-0010
H10DBCG	1/4"	3.50"	.375"	Double Acting, EPR Seals	0702-0011
H10DBRC	1/4"	3.50"	.375"	Double Acting, Retractable Pistons	0709-0010
H10DBRCG	1/4"	3.50"	.375"	Double Acting, Retr Pist, EPR Seals	0709-0011

### SINGLE ACTING FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4"

Weight .75 lbs. .34 kgs.

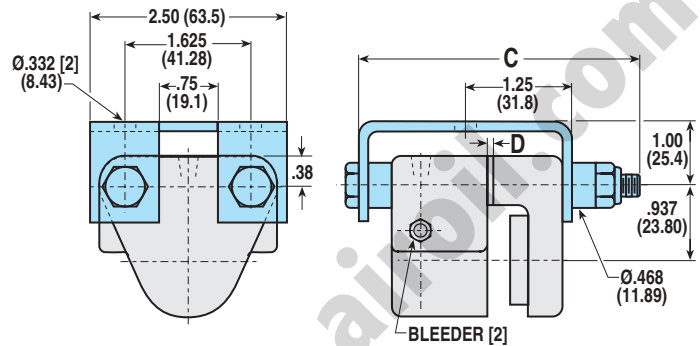


MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H10SAC	5/32"	3.00"	-	Single Acting	0705-0010
H10SACG	5/32"	3.00"	-	Single Acting, EPR Seals	0705-0008
H10SBC	1/4"	3.00"	.094"	Single Acting	0703-0010

### SINGLE ACTING WITH FLOATING BRACKET

Accommodates disc thickness: 5/32" 1/4"

Weight 1.5 lbs. .68 kgs.

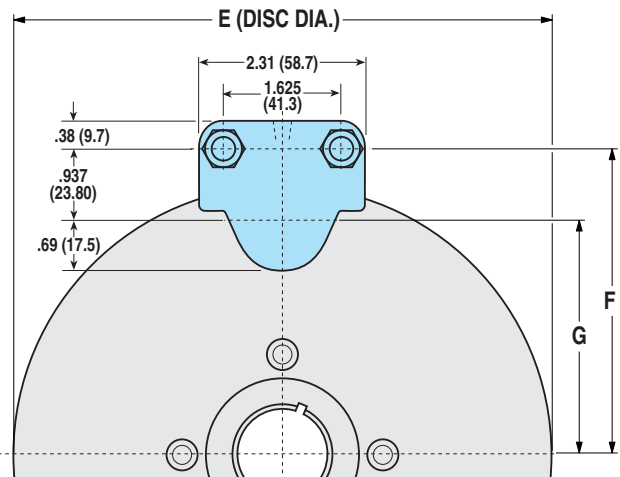


See SINGLE ACTING dimensional drawing for additional measurements

MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H10SAFC	5/32"	3.75"	-	Single Acting, Floating Bracket	0705-0011
H10SAFCG	5/32"	3.75"	-	Single Acting, FtgBrkt, EPR Seals	0705-0009
H10SBFC	1/4"	3.75"	.094"	Single Acting, Floating Bracket	0703-0013

### MOUNTING DIMENSIONS

Disc Diameter	E	6.313"	8"	10"	12"	16"
	F	3.469"	4.313"	5.313"	6.313"	8.313"
Braking Radius	G	2.482"	3.325"	4.325"	5.325"	7.325"



### BRAKE MODEL LETTER CODES

<b>A</b> 5/32" Thick Disc	<b>D</b> Double Acting	<b>R</b> Retractable Piston(s)
<b>B</b> 1/4" Thick Disc	<b>F</b> Floating Bracket Mount	<b>S</b> Single Acting
<b>C</b> With Bleeder Fitting	<b>G</b> EPR Seals	
	<b>H</b> Hydraulic Brake	

CALIPER  
DISC  
BRAKES

FEATURES

APPLICATIONS

SELECTION  
GRAPHS

PNEUMATIC  
BRAKES

P10

P20

P220

HYDRAULIC  
BRAKES

H10

H20

H220

H220I

H441

H960

HYDRAULIC/  
MECHANICAL  
BRAKE  
COMBOS

H/ME20

H/ME220

MECHANICAL  
BRAKES

ME10

ME20

ME220

MB3

SPRING  
APPLIED  
BRAKES

FS20

FS220

FS220I

FS595

DISCS  
HUBS &  
BUSHINGS

TENSION  
CONTROL  
COMBINATIONS

INTENSIFIER

SELECTION

WORKSHEET

## H20 SERIES - ALUMINUM

### AVAILABLE STYLES

#### Double Acting

FIXED MOUNT - FIXED DISC



PICTURED: 0720-0010

#### Single Acting

FIXED MOUNT - FLOATING DISC



PICTURED: 0724-0010

#### Single Acting with Floating Bracket

FLOATING MOUNT - FIXED DISC



PICTURED:  
0724-0011

### H20 SPECIFICATIONS

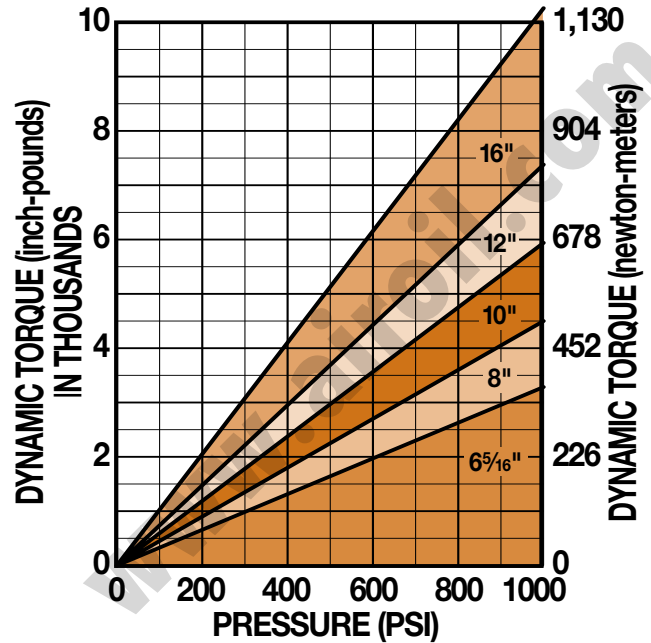
Maximum Pressure Rating:	1,000 PSI
Accommodates Tolomatic disc diameters:	6-5/16", 8", 10", 12", 16"
Maximum disc diameter:	none
Housing Material:	Extruded aluminum
Bolts:	Zinc plated grade 8
Seals:	Buna-N Standard
Wearable friction material:	0.83 cu. in.
Wearable friction material/retractable models:	0.48 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	4.00 sq. in.
Piston diameter:	1.625 in.
Fluid displacement, non-retractable:	Single acting = 0.062 cu. in. Double acting = 0.062 cu. in.

#### OPTIONS

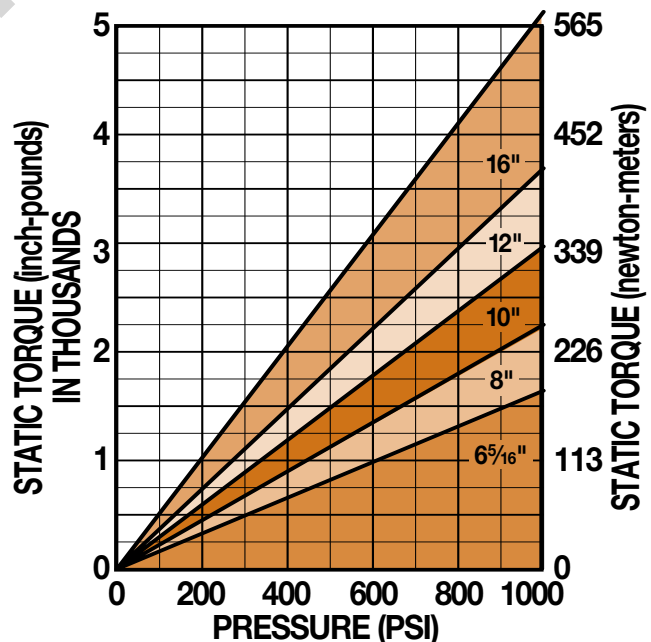
Seals:	EPR seals
Pistons:	Retractable piston(s)
Floating bracket:	Stamped steel construction

### PERFORMANCE DATA

#### Dynamic Torque vs Pressure



#### Static Torque vs Pressure



### DISC SIZING EQUATIONS

$$\text{DYNAMIC TORQUE (IN.-LBS.)} = 1.44 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

$$\text{STATIC (PARKING) TORQUE (IN.-LBS.)} = 0.72 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

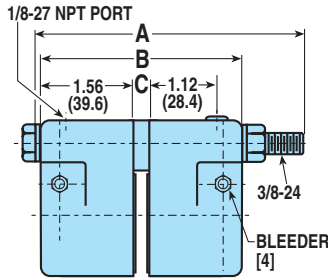
$$\text{BRAKING RADIUS (IN.)} = [\text{DISC DIAMETER} \div 2] - 0.875$$

## H20 SERIES - ALUMINUM

### DOUBLE ACTING FIXED MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4" 3/8" 1/2"

Weight 2.0 lbs. .91 kgs.

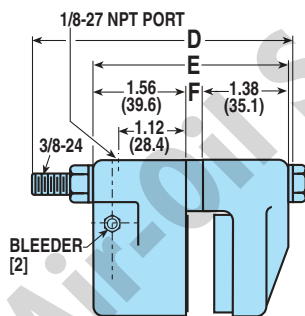


MODEL CODE	DISC THK.	A	B	C	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H20DAC	5/32"	4.50"	3.41"	0.281"	Double Acting	0720-0010
H20DACG	5/32"	4.50"	3.41"	0.281"	Double Acting, EPR Seals	0720-0011
H20DARC	5/32"	4.50"	3.41"	0.281"	Dbl. Acting, Retractable Pistons	0728-0010
H20DARCG	5/32"	4.50"	3.41"	0.281"	Dbl. Acting, Retr Pist, EPR Seals	0728-0011
H20DBC	1/4"	4.50"	3.50"	0.375"	Double Acting	0721-0010
H20DBC G	1/4"	4.50"	3.50"	0.375"	Double Acting, EPR Seals	0721-0011
H20DBRC	1/4"	4.50"	3.50"	0.375"	Dbl. Acting, Retractable Pistons	0729-0010
H20DBRC G	1/4"	4.50"	3.50"	0.375"	Dbl. Acting, Retr Pist, EPR Seals	0729-0011
H20DLRC	3/8"	4.50"	3.62"	0.500"	Dbl. Acting, Retractable Pistons	0729-0008
H20DEC	1/2"	5.00"	3.75"	0.625"	Double Acting	0725-0010
H20DEC G	1/2"	5.00"	3.75"	0.625"	Double Acting, EPR Seals	0725-0011
H20DERC	1/2"	5.00"	3.75"	0.625"	Dbl. Acting, Retractable Pistons	0719-0010
H20DERC G	1/2"	5.00"	3.75"	0.625"	Dbl. Acting, Retr Pist, EPR Seals	0719-0011

### SINGLE ACTING FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4" 3/8"

Weight 1.5 lbs. .68 kgs.

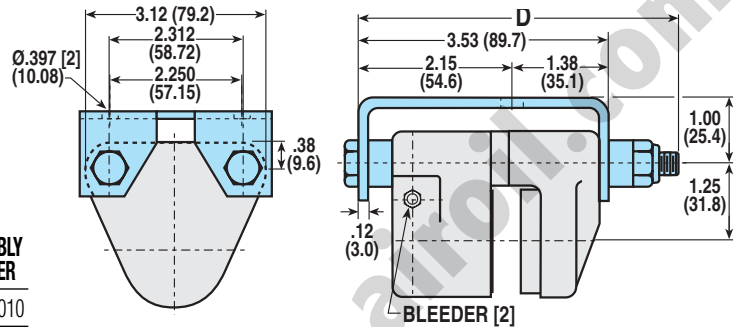


MODEL CODE	DISC THK.	D	E	F	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H20SAC	5/32"	3.75"	2.94"	-	Single Acting	0724-0010
H20SAC G	5/32"	3.75"	2.94"	-	Single Acting, EPR Seals	0724-0012
H20SBC	1/4"	3.75"	3.03"	0.093"	Single Acting	0722-0010
H20SBC G	1/4"	3.75"	3.03"	0.093"	Single Acting, EPR Seals	0722-0013
H20SLC	3/8"	4.00"	3.16"	0.219"	Single Acting	0724-0014
H20SLC G	3/8"	4.00"	3.16"	0.219"	Single Acting, EPR Seals	0724-0016

### SINGLE ACTING WITH FLOATING BRACKET FLOATING MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 2.0 lbs. .91 kgs.

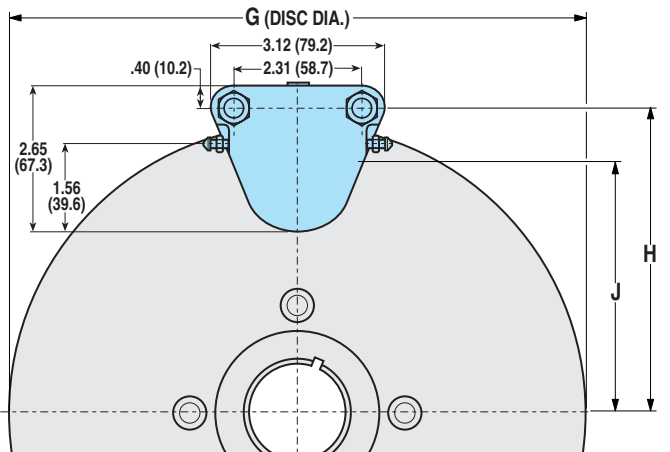


See SINGLE ACTING dimensional drawing for additional measurements

MODEL CODE	DISC THK.	D	E	F	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H20SAFC	5/32"	4.50"	2.94"	-	Sng Act, Floating Bracket	0724-0011
H20SAFC G	5/32"	4.50"	2.94"	-	Sng Act, Fltg Brkt, EPR Seals	0724-0013
H20SBFC	1/4"	4.50"	3.03"	0.093"	Sng Act, Floating Bracket	0722-0011
H20SBFC G	1/4"	4.50"	3.03"	0.093"	Sng Act, Fltg Brkt, EPR Seals	0722-0014

### MOUNTING DIMENSIONS

Disc Diameter	G	6.313"	8"	10"	12"	16"
H	3.531"	4.375"	5.375"	6.375"	8.375"	
Braking Radius	J	2.281"	3.125"	4.125"	5.125"	7.125"



### BRAKE MODEL LETTER CODES

<b>A</b> 5/32" Thick Disc	<b>E</b> 1/2" Thick Disc	<b>L</b> 3/8" Thick Disc
<b>B</b> 1/4" Thick Disc	<b>F</b> Floating Bracket Mount	<b>R</b> Retractable Piston(s)
<b>C</b> With Bleeder Fitting	<b>G</b> EPR Seals	<b>S</b> Single Acting
<b>D</b> Double Acting	<b>H</b> Hydraulic Brake	

CALIPER  
DISC  
BRAKES

FEATURES

APPLICATIONS

SELECTION  
GRAPHS

PNEUMATIC  
BRAKES

P10

P20

P220

HYDRAULIC  
BRAKES

H10

H20

H220

H220I

H441

H960

HYDRAULIC/  
MECHANICAL  
BRAKE  
COMBOS

H/ME20

H/ME220

MECHANICAL  
BRAKES

ME10

ME20

ME220

MB3

SPRING  
APPLIED  
BRAKES

FS20

FS220

FS220I

FS595

DISCS  
HUBS &  
BUSHINGS

TENSION  
CONTROL  
COMBINATIONS

INTENSIFIER

SELECTION  
WORKSHEET

## H220 SERIES - ALUMINUM

### AVAILABLE STYLES

#### Double Acting

FIXED MOUNT - FIXED DISC



PICTURED: 0735-0301

#### Single Acting

FIXED MOUNT - FLOATING DISC



PICTURED: 0733-0201

#### Single Acting with Floating Bracket

FLOATING MOUNT - FIXED DISC



PICTURED:  
0733-0222

### H220 SPECIFICATIONS

Maximum Pressure Rating:	1,500 PSI
Accommodates Tolomatic disc diameters:	6-5/16", 8", 10", 12", 16"
Maximum disc diameter:	16"
Housing Material:	Die cast aluminum
Bolts:	Zinc plated grade 8
Seals:	Buna-N Standard
Wearable friction material:	1.66 cu. in.
Wearable friction material/retractable models:	0.95 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	8.00 sq. in.
Piston diameter:	1.625 in.
Fluid displacement, non-retractable:	Single acting = 0.124 cu. in. Double acting = 0.124 cu. in.

#### OPTIONS

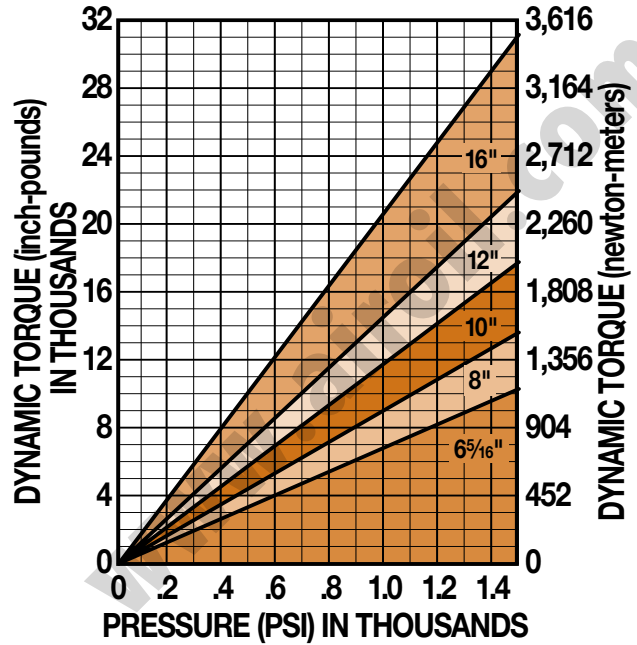
Seals:	EPR seals
Pistons:	Retractable piston(s)
Floating bracket:	Available

### DISC SIZING EQUATIONS

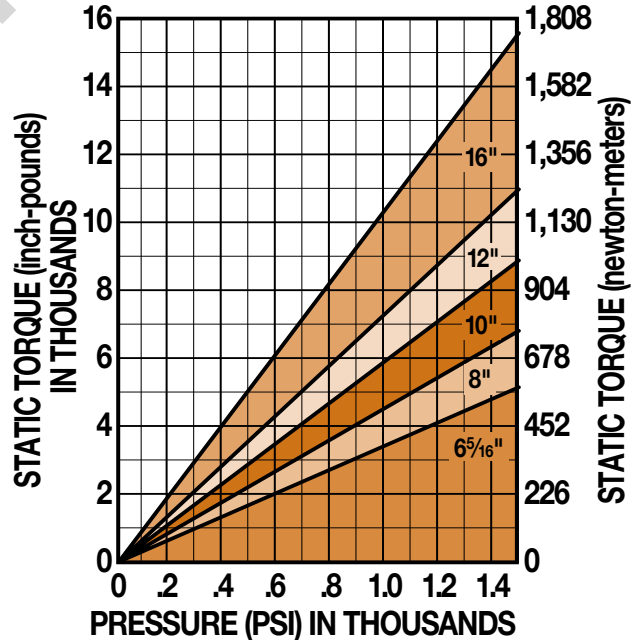
**DYNAMIC TORQUE (IN.-LBS.) = 2.88 x BRAKING RADIUS (IN.) x PRESSURE (PSI)**  
**STATIC (PARKING) TORQUE (IN.-LBS.) = 1.44 x BRAKING RADIUS (IN.) x PRESSURE (PSI)**

### PERFORMANCE DATA

#### Dynamic Torque vs Pressure



#### Static Torque vs Pressure



### BRAKE MODEL LETTER CODES

<b>A</b> 5/32" Thick Disc	<b>E</b> 1/2" Thick Disc	<b>R</b> Retractable Piston(s)
<b>B</b> 1/4" Thick Disc	<b>F</b> Floating Bracket Mount	<b>S</b> Single Acting
<b>C</b> With Bleeder Fitting	<b>G</b> EPR Seals	
<b>D</b> Double Acting	<b>H</b> Hydraulic Brake	



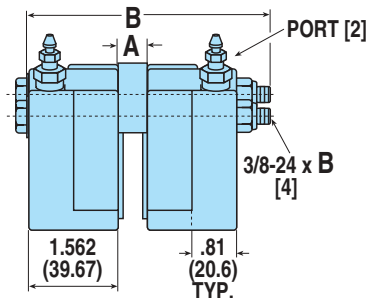
## H220 SERIES - ALUMINUM

### DOUBLE ACTING

FIXED MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4" 1/2"

Weight 4.0 lbs. 1.82 kgs.



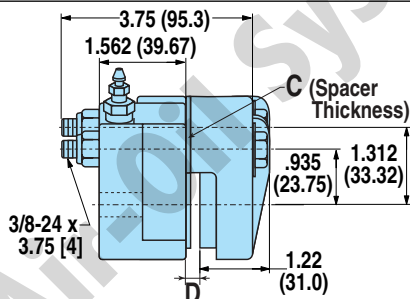
MODEL CODE	DISC THK.	A	B	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H220DAC	5/32"	0.28"	4.50"	Double Acting	0735-0101
H220DACG	5/32"	0.28"	4.50"	Double Acting, EPR Seals	0735-0103
H220DARC	5/32"	0.28"	4.50"	Dbl Act, Retractable Pistons	0736-0111
H220DARCG	5/32"	0.28"	4.50"	Dbl Act, Retractable Pistons, EPR Seals	0736-0112
H220DBC	1/4"	0.38"	4.50"	Double Acting	0735-0201
H220DBCg	1/4"	0.38"	4.50"	Double Acting, EPR Seals	0735-0202
H220DBRC	1/4"	0.38"	4.50"	Dbl Act, Retractable Pistons	0736-0211
H220DBRCg	1/4"	0.38"	4.50"	Dbl Act, Retractable Pistons, EPR Seals	0736-0212
H220DEC	1/2"	0.62"	5.00"	Double Acting	0735-0301
H220DECg	1/2"	0.62"	5.00"	Double Acting, EPR Seals	0735-0302
H220DERC	1/2"	0.62"	5.00"	Dbl Act, Retractable Pistons	0736-0311
H220DERCG	1/2"	0.62"	5.00"	Dbl Act, Retractable Pistons, EPR Seals	0736-0312

### SINGLE ACTING

FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4" 1/2"

Weight 3.0 lbs. 1.36 kgs.



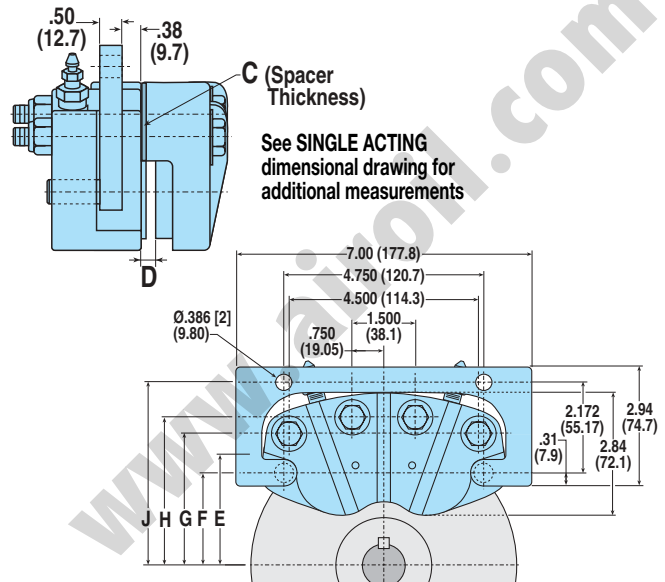
MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H220SAC	5/32"	-	0.25"	Single Acting	0733-0001
H220SACG	5/32"	-	0.25"	Single Acting, EPR Seals	0733-0006
H220SBC	1/4"	0.094"	0.34"	Single Acting	0733-0101
H220SBCG	1/4"	0.094"	0.34"	Single Acting, EPR Seals	0733-0102
H220SEC	1/2"	0.344"	0.59"	Single Acting	0733-0201
H220SECG	1/2"	0.344"	0.59"	Single Acting, EPR Seals	0733-0202

### SINGLE ACTING WITH FLOATING BRACKET

FLOATING MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4" 1/2"

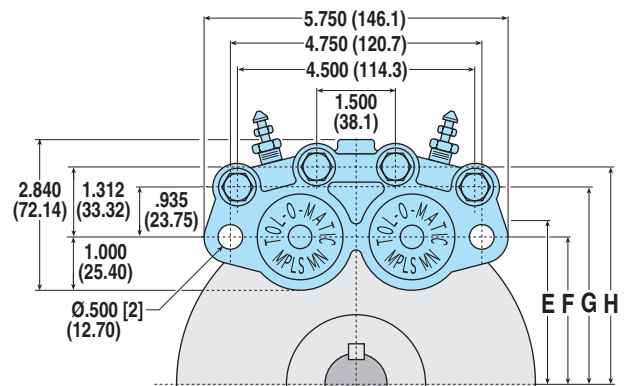
Weight 4.5 lbs. 2.04 kgs.



MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H220SAFC	5/32"	-	0.25"	Single Acting, Floating Bracket	0733-0021
H220SAFCG	5/32"	-	0.25"	Sgl Act, Floating Bracket, EPR Seals	0733-0022
H220SBFC	1/4"	0.094"	0.34"	Sgl Act, Floating Bracket	0733-0121
H220SBFCG	1/4"	0.094"	0.34"	Sgl Act, Floating Bracket, EPR Seals	0733-0122
H220SEFC	1/2"	0.344"	0.59"	Sgl Act, Floating Bracket	0733-0221
H220SEFCG	1/2"	0.344"	0.59"	SglAct, Floating Bracket, EPR Seals	0733-0222

### MOUNTING DIMENSIONS

Disc Diameter	6.313"	8"	10"	12"	16"
Braking Radius	<b>E</b> 2.38"	3.15"	4.11"	5.08"	7.21"
	<b>F</b> 2.13"	3.00"	4.00"	5.00"	7.09"
	<b>G</b> 3.07"	3.94"	4.94"	5.94"	8.03"
	<b>H</b> 3.45"	4.32"	5.32"	6.32"	8.41"
	<b>J</b> 4.30"	5.17"	6.17"	7.17"	9.26"



CALIPER DISC BRAKES

FEATURES

APPLICATIONS

SELECTION GRAPHS

PNEUMATIC BRAKES

P10

P20

P220

HYDRAULIC BRAKES

H10

H20

H220

H220I

H441

H960

HYDRAULIC/MECHANICAL BRAKE COMBOS

H/ME20

H/ME220

MECHANICAL BRAKES

ME10

ME20

ME220

MB3

SPRING APPLIED BRAKES

FS20

FS220

FS220I

FS595

DISCS HUBS & BUSHINGS

TENSION CONTROL COMBINATIONS

INTENSIFIER

SELECTION

WORKSHEET

## H220I SERIES - CAST IRON

### AVAILABLE STYLES

#### Double Acting

FIXED MOUNT - FIXED DISC



PICTURED: 0735-0403

#### Single Acting

FIXED MOUNT - FLOATING DISC



PICTURED: 0733-0402

#### Single Acting with Floating Bracket

FLOATING MOUNT - FIXED DISC



PICTURED:  
0733-0422

### H220I SPECIFICATIONS

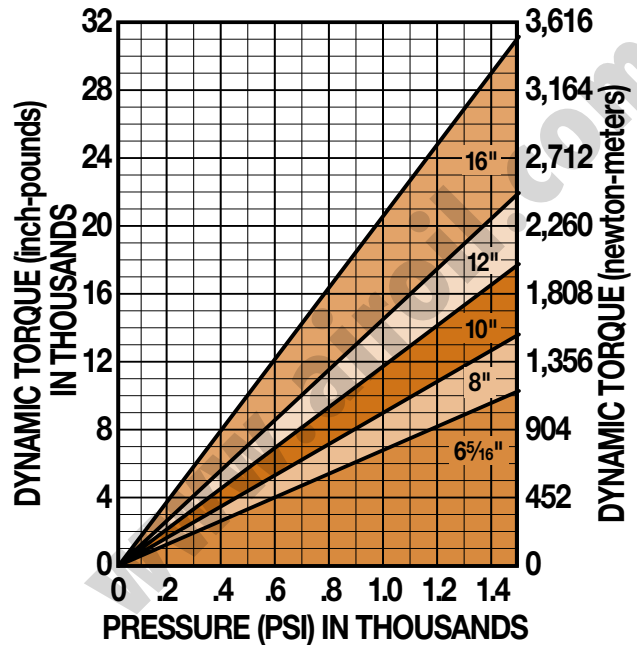
Maximum Pressure Rating:	1,500 PSI
Accommodates Tolomatic disc diameters:	6-5/16", 8", 10", 12", 16"
Maximum disc diameter:	16"
Housing Material:	Cast ductile iron
Bolts:	Zinc plated grade 8
Seals:	Buna-N Standard
Wearable friction material:	2.35 cu. in.
Wearable friction material/retractable models:	0.95 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	9.4 sq. in.
Piston diameter:	1.625 in.
Fluid displacement:	Single acting = 0.124 cu. in. Double acting = 0.124 cu. in.

#### OPTIONS

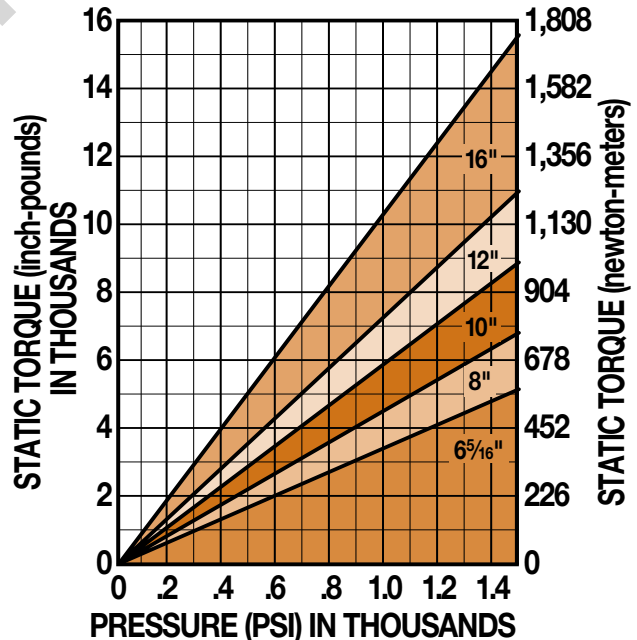
Seals:	EPR seals
Floating bracket:	Available

### PERFORMANCE DATA

#### Dynamic Torque vs Pressure



#### Static Torque vs Pressure



### DISC SIZING EQUATIONS

**DYNAMIC TORQUE (IN.-LBS.) = 2.88 x BRAKING RADIUS (IN.) x PRESSURE (PSI)**  
**STATIC (PARKING) TORQUE (IN.-LBS.) = 1.44 x BRAKING RADIUS (IN.) x PRESSURE (PSI)**

### BRAKE MODEL LETTER CODES

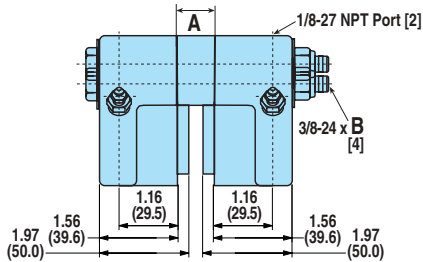
<b>A</b> 5/32" Thick Disc	<b>E</b> 1/2" Thick Disc	<b>L</b> 3/8" Thick Disc
<b>B</b> 1/4" Thick Disc	<b>F</b> Floating Bracket Mount	<b>I</b> Iron
<b>C</b> With Bleeder Fitting	<b>G</b> EPR Seals	<b>S</b> Single Acting
<b>D</b> Double Acting	<b>H</b> Hydraulic Brake	

## H220I SERIES - CAST IRON

### DOUBLE ACTING FIXED MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4" 3/8" 1/2"

Weight 12.0 lbs. 5.40 kgs.

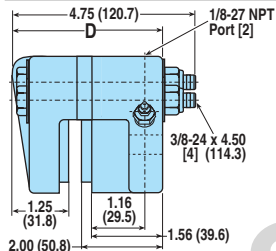


MODEL CODE	DISC THK.	A	B	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H220DACI	5/32"	1.03"	5.00"	Double Acting, Cast Iron	0735-0403
H220DACIG	5/32"	1.03"	5.00"	Double Acting, Cast Iron, EPR Seals	0735-0407
H220DBC I	1/4"	1.12"	5.00"	Double Acting, Cast Iron	0735-0404
H220DBCIG	1/4"	1.12"	5.00"	Double Acting, Cast Iron, EPR Seals	0735-0408
H220DLCI	3/8"	1.25"	5.50"	Double Acting, Cast Iron	0735-0405
H220DLCIG	3/8"	1.25"	5.50"	Double Acting, Cast Iron, EPR Seals	0735-0409
H220DECI	1/2"	1.38"	6.00"	Double Acting, Cast Iron	0735-0406
H220DECIG	1/2"	1.38"	6.00"	Double Acting, Cast Iron, EPR Seals	0735-0410

### SINGLE ACTING FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4" 1/2"

Weight 9.0 lbs. 4.08 kgs.



MODEL CODE	DISC THK.	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H220SACI	5/32"	3.45"	Single Acting, Cast Iron	0733-0402
H220SACIG	5/32"	3.45"	Single Acting, Cast Iron, EPR Seals	0733-0406
H220SBCI	1/4"	3.54"	Single Acting, Cast Iron	0733-0403
H220SBCIG	1/4"	3.54"	Single Acting, Cast Iron, EPR Seals	0733-0407
H220SLCI	3/8"	3.67"	Single Acting, Cast Iron	0733-0404
H220SLCIG	3/8"	3.67"	Single Acting, Cast Iron, EPR Seals	0733-0408
H220SECI	1/2"	3.79"	Single Acting, Cast Iron	0733-0405
H220SECIG	1/2"	3.79"	Single Acting, Cast Iron, EPR Seals	0733-0409

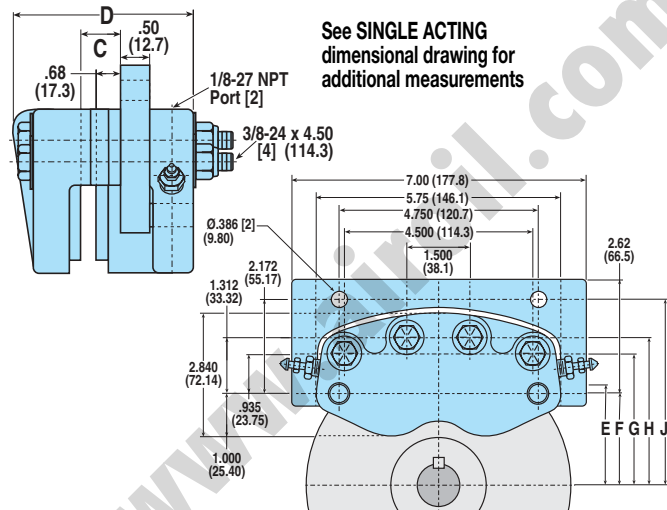
Call **FACTORY** for dimensions for the following models:

H220SEIC	1/2"	Single Acting, Cast Iron	0733-0225
H220SEICG	1/2"	Single Acting, Cast Iron, EPR Seals	0733-0228
H220SOIC	1-1/4"	Single Acting, Cast Iron	0733-0226
H220SOICG	1-1/4"	Single Acting, Cast Iron, EPR Seals	0733-0227

### SINGLE ACTING WITH FLOATING BRACKET FLOATING MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4" 1/2"

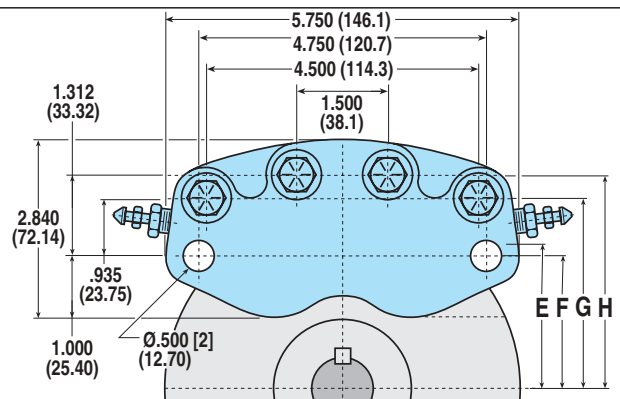
Weight 10.5 lbs. 4.76 kgs.



MODEL CODE	DISC THK.	C	D	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H220SAFCI	5/32"	.83"	3.45"	Sgl Act, Floating Bracket, Cast Iron	0733-0422
H220SAFCIG	5/32"	.83"	3.45"	SglAct, Ftg Bkt, Iron, EPR Seals	0733-0426
H220SBFCI	1/4"	.92"	3.54"	Sgl Act, Floating Bracket, Cast Iron	0733-0423
H220SBFCIG	1/4"	.92"	3.54"	SglAct, Ftg Bkt, Iron, EPR Seals	0733-0427
H220SLFCI	3/8"	1.05"	3.67"	Sgl Act, Floating Bracket, Cast Iron	0733-0424
H220SLFCIG	3/8"	1.05"	3.67"	Sgl Act, Ftg Bkt, Iron, EPR Seals	0733-0428
H220SEFCI	1/2"	1.17"	3.79"	Sgl Act, Floating Bracket, Cast Iron	0733-0425
H220SEFCIG	1/2"	1.17"	3.79"	Sgl Act, Ftg Bkt, Iron, EPR Seals	0733-0429

### MOUNTING DIMENSIONS

Disc Diameter	6.313"	8"	10"	12"	16"
Braking Radius	<b>E</b> 2.38"	3.15"	4.11"	5.08"	7.21"
	<b>F</b> 2.13"	3.00"	4.00"	5.00"	7.09"
	<b>G</b> 3.07"	3.94"	4.94"	5.94"	8.03"
	<b>H</b> 3.45"	4.32"	5.32"	6.32"	8.41"
	<b>J</b> 4.30"	5.17"	6.17"	7.17"	9.26"



## H441 SERIES - DUCTILE IRON

### AVAILABLE STYLES

#### Double Acting

FIXED MOUNT - FIXED DISC



PICTURED: 0774-0000

### H441 SPECIFICATIONS

Maximum Pressure Rating:	1,500 PSI
Accommodates Tolomatic disc diameters:	10", 12", 16"
Maximum disc diameter:	none
Housing Material:	Cast ductile iron
Bolts:	Zinc plated grade 5
Seals:	Buna-N Standard
Wearable friction material:	3.71 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	9.14 sq. in.
Piston diameter:	2.50 in.
Fluid displacement:	Double acting = 0.147 cu. in. for .03 inch clearance
Maximum combined allowable wear:	0.812 in.

#### OPTIONS

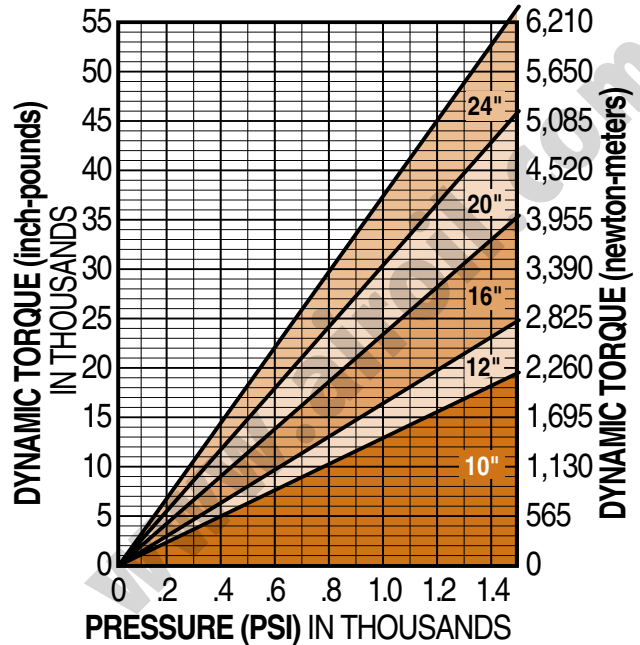
Seals:	EPR seals
Friction material:	Sintered metallic

### BRAKE MODEL LETTER CODES

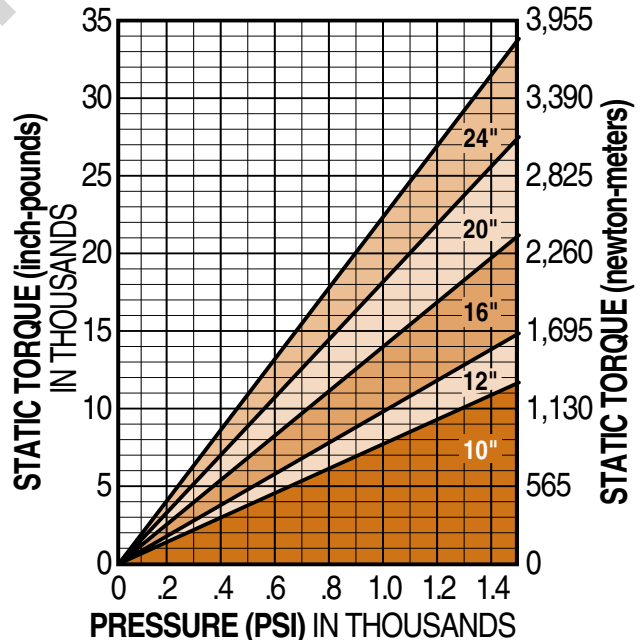
<b>D</b> Double Acting	<b>G</b> EPR Seals	<b>H</b> Hydraulic Brake
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### PERFORMANCE DATA

#### Dynamic Torque vs Pressure



#### Static Torque vs Pressure



### DISC SIZING EQUATIONS

**DYNAMIC TORQUE (IN.-LBS.) = 3.53 x BRAKING RADIUS (IN.) x PRESSURE (PSI)**  
**STATIC (PARKING) TORQUE (IN.-LBS.) = 2.11 x BRAKING RADIUS (IN.) x PRESSURE (PSI)**  
**BRAKING RADIUS (IN.) = [DISC DIAMETER ÷ 2] - 1.31**

## H441 SERIES - DUCTILE IRON

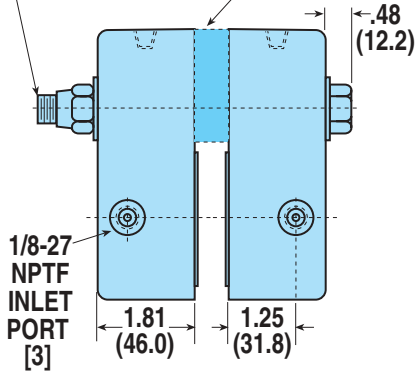
### DOUBLE ACTING FIXED MOUNT - FIXED DISC

Accommodates disc thickness: N/A

Weight 17.0 lbs. 7.71 kgs.

5/8-18 x 5.50 LONG [FOR DISC THICKNESSES UP TO 1/2", LONGER BOLTS ARE AVAILABLE]

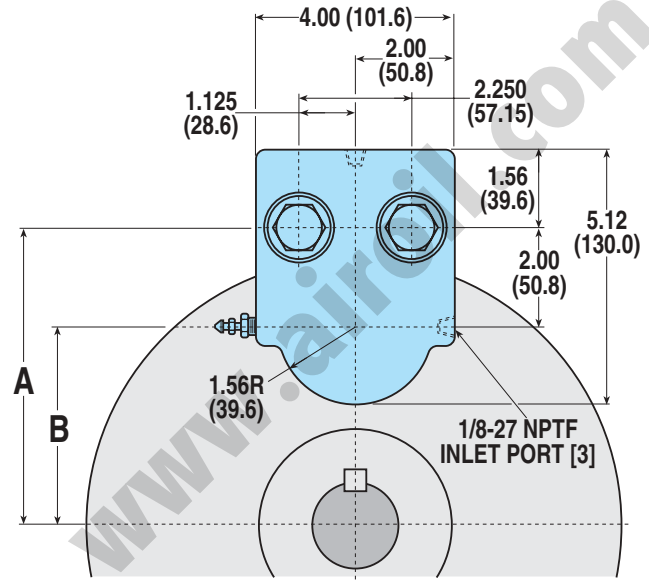
SPACER BY CUSTOMER TO BE 3/8" THICKER THAN DISC



MODEL CODE	DISC THK.	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H441D	N/A	Double Acting	0774-0000
H441DG	N/A	Double Acting, EPR Seals	0774-0001
SH441D	N/A	Double Acting, w/Sintered Metal Pads	0774-0002
SH441DG	N/A	Double Acting, EPR Seals, w/Sintered Metal Pads	0774-0003

### MOUNTING DIMENSIONS

Disc Diameter	10"	12"	16"	20"	24"	
A	5.69"	6.69"	8.69"	10.69"	12.69"	
Braking Radius	B	3.69"	4.69"	6.69"	8.69"	10.69"



CALIPER  
DISC  
BRAKES

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GRAPHS

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BRAKES

P10

P20

P220

HYDRAULIC  
BRAKES

H10

H20

H220

H220I

H441

H960

HYDRAULIC/  
MECHANICAL  
BRAKE  
COMBOS

H/ME20

H/ME220

MECHANICAL  
BRAKES

ME10

ME20

ME220

MB3

SPRING  
APPLIED  
BRAKES

FS20

FS220

FS220I

FS595

DISCS  
HUBS &  
BUSHINGS

TENSION  
CONTROL  
COMBINATIONS

INTENSIFIER

SELECTION

WORKSHEET

## H960 SERIES - DUCTILE IRON

### AVAILABLE STYLES

#### Double Acting

FIXED MOUNT - FIXED DISC



PICTURED: 0778-0003

### H960 SPECIFICATIONS

Maximum Pressure Rating:	1,500 PSI (intermittent duty) 1,000 PSI (continuous duty)
Accommodates Tolomatic disc diameters:	12", 16"
Maximum disc diameter:	18"
Housing Material:	Cast ductile iron
Bolts:	Parkerized grade 5
Seals:	Buna-N Standard
Wearable friction material:	8.00 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	32.0 sq. in.
Piston diameter:	3.50 in.
Fluid displacement:	Double acting = 0.576 cu. in.
Maximum combined allowable wear:	0.50 in.

#### OPTIONS

Seals:	EPR seals
Seals:	Viton® seals

### BRAKE MODEL LETTER CODES

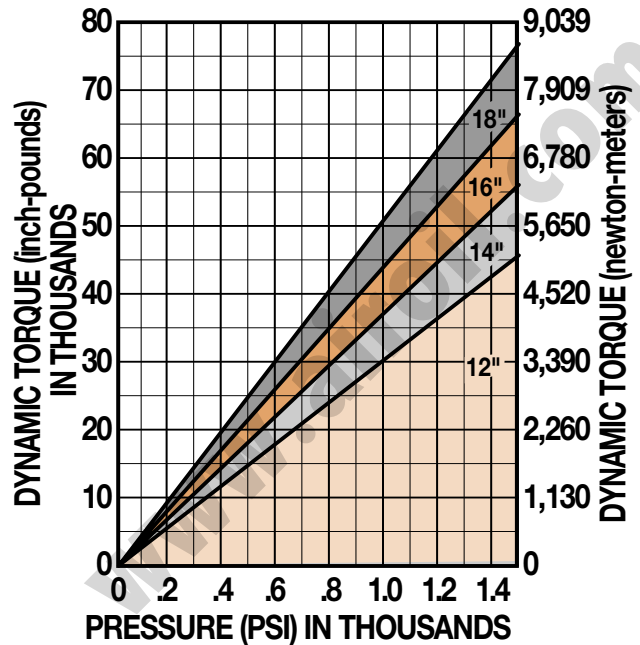
<b>C</b> With Bleeder Fitting	<b>H</b> Hydraulic Brake	<b>V</b> Viton® Seals
<b>D</b> Double Acting	<b>I</b> Iron	<b>X</b> Non-standard Disc Thickness
<b>E</b> 1/2" Thick Disc	<b>N</b> 1" Thick Disc	
<b>G</b> EPR Seals		

### DISC SIZING EQUATIONS

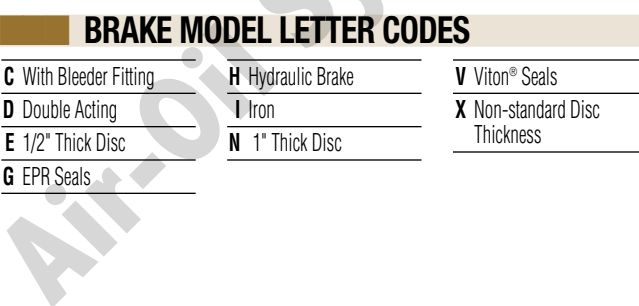
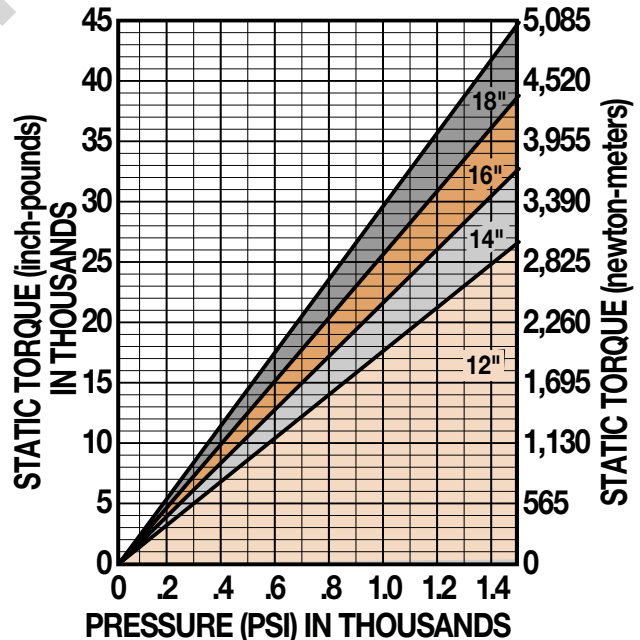
DYNAMIC TORQUE (IN.-LBS.) = 6.92 x BRAKING RADIUS (IN.) x PRESSURE (PSI)  
 STATIC (PARKING) TORQUE (IN.-LBS.) = 4.04 x BRAKING RADIUS (IN.) x PRESSURE (PSI)  
 BRAKING RADIUS (IN.) = [DISC DIAMETER ÷ 2] - 1.60

### PERFORMANCE DATA

#### Dynamic Torque vs Pressure



#### Static Torque vs Pressure



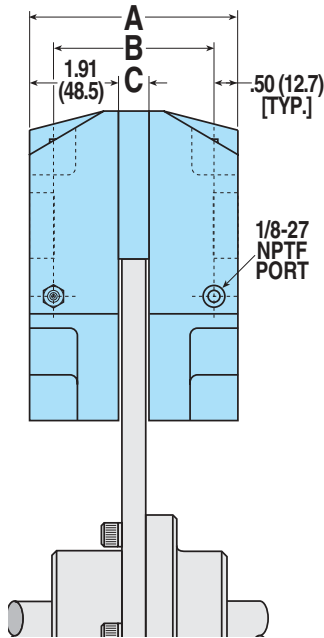
## H960 SERIES - DUCTILE IRON

### DOUBLE ACTING

#### FIXED MOUNT - FIXED DISC

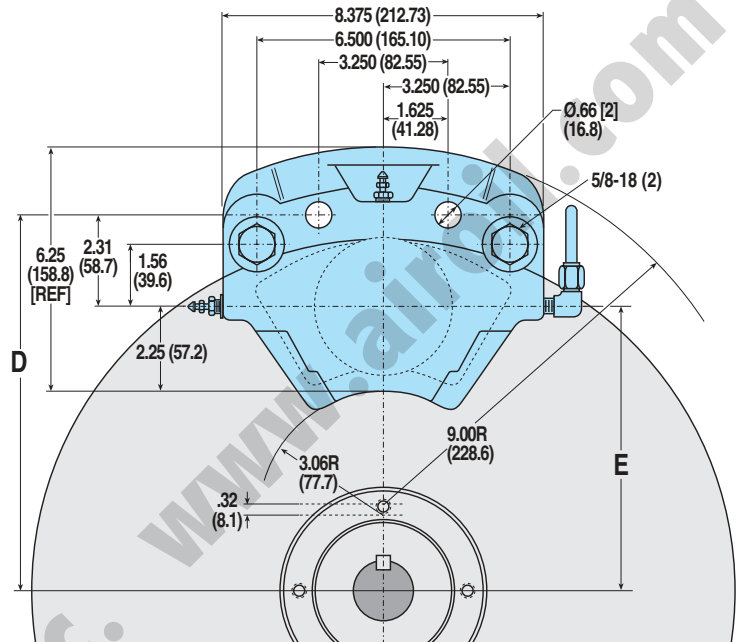
Accommodates disc thickness: 3/16" 1/2" 1" 1-1/8"

Weight 35.0 lbs. 15.88 kgs.



### MOUNTING DIMENSIONS

Disc Diameter	12"	14"	16"	18"
<b>D</b>	6.712"	7.712"	8.712"	9.712"
<b>E</b>	4.40"	5.40"	6.40"	7.40"



MODEL CODE	DISC THK.	A	B	C	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H960DXCI	3/16"	4.13"	3.13"	.31"	Double Acting, Iron	0778-0012
H960DECI	1/2"	4.44"	3.44"	.63"	Double Acting, Iron	0778-0003
H960DECIG	1/2"	4.44"	3.44"	.63"	Double Acting, Iron, EPR Seals	0778-0004
H960DEVI	1/2"	4.44"	3.44"	.63"	Double Acting, Iron, Viton® Seals	0778-0005
H960DNCI	1"	4.94"	3.94"	1.13"	Double Acting, Iron	0778-0011
H960DXI	1-1/8"	5.07"	4.07"	1.26"	Double Acting, Iron	0778-0000

CALIPER  
DISC  
BRAKES

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BRAKES

P10

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HYDRAULIC  
BRAKES

H10

H20

H220

H220I

H441

H960

HYDRAULIC/  
MECHANICAL  
BRAKE  
COMBOS

H/ME20

H/ME220

MECHANICAL  
BRAKES

ME10

ME20

ME220

MB3

SPRING  
APPLIED  
BRAKES

FS20

FS220

FS220I

FS595

DISCS  
HUBS &  
BUSHINGS

TENSION  
CONTROL  
COMBINATIONS

INTENSIFIER

SELECTION

WORKSHEET

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## H/ME20 SERIES - ALUMINUM

### AVAILABLE STYLES

**"L" Long Lever (3.50")**  
**Single Acting**  
FIXED MOUNT - FLOATING DISC



PICTURED: 0755-0360

**"L" Long Lever (3.50")**  
**Single Acting with Floating Bracket**  
FLOATING MOUNT - FIXED DISC



PICTURED: 0755-0260

**"M" Machined Cam Lever (1.75")**  
**Single Acting**  
FIXED MOUNT - FLOATING DISC



PICTURED: 0755-0300

**"M" Machined Cam Lever (1.75")**  
**Single Acting with Floating Bracket**  
FLOATING MOUNT - FIXED DISC



PICTURED: 0755-0200

**"S" Short Lever (1.75")**  
**Single Acting**  
FIXED MOUNT - FLOATING DISC



PICTURED: 0755-0330

**"S" Short Lever (1.75")**  
**Single Acting with Floating Bracket**  
FLOATING MOUNT - FIXED DISC



PICTURED: 0755-0230

### H/ME20 SPECIFICATIONS

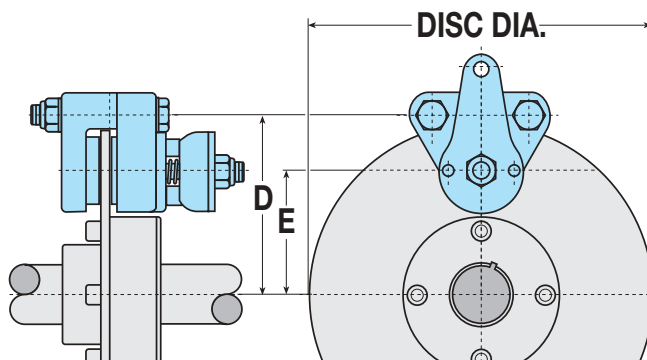
Maximum Hydraulic Pressure Rating:	1,000 PSI
Maximum lever force "L" Long Lever:	225 Lbs.
Maximum lever force "M" & "S" Levers:	450 Lbs.
Accommodates Tolomatic disc diameters:	6-5/16", 8", 10", 12", 16"
Maximum disc diameter:	none
Housing Material:	Cast aluminum
Bolts:	Zinc plated grade 5
Seals:	EPR seals Standard
Wearable friction material:	0.83 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	4.00 sq. in.
Piston diameter:	1.625 in.
Fluid displacement, non-retractable:	Single acting = 0.062 cu. in.

### OPTIONS

Seals:	Buna-N seals
Floating bracket:	Stamped steel construction

### MOUNTING DIMENSIONS

Disc Diameter	6.313"	8"	10"	12"	16"
<b>D</b>	3.531"	4.375"	5.375"	6.375"	8.375"
<b>E</b>	2.281"	3.125"	4.125"	5.125"	7.125"



### DISC SIZING EQUATIONS

#### HYDRAULIC:

$$\text{DYNAMIC TORQUE (IN.-LBS.)} = 1.44 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

$$\text{STATIC (PARKING) TORQUE (IN.-LBS.)} = 0.72 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

#### "L" LONG LEVER (3.50"):

$$\text{DYNAMIC TORQUE (IN.-LBS.)} = 5.38 \times \text{BRAKING RADIUS (IN.)} \times \text{LEVER FORCE (LBS.)}$$

$$\text{STATIC (PARKING) TORQUE (IN.-LBS.)} = 2.69 \times \text{BRAKING RADIUS (IN.)} \times \text{LEVER FORCE (LBS.)}$$

#### "M" MACHINED CAM (1.75") & "S" SHORT LEVER (1.75"):

$$\text{DYNAMIC TORQUE (IN.-LBS.)} = 2.69 \times \text{BRAKING RADIUS (IN.)} \times \text{LEVER FORCE (LBS.)}$$

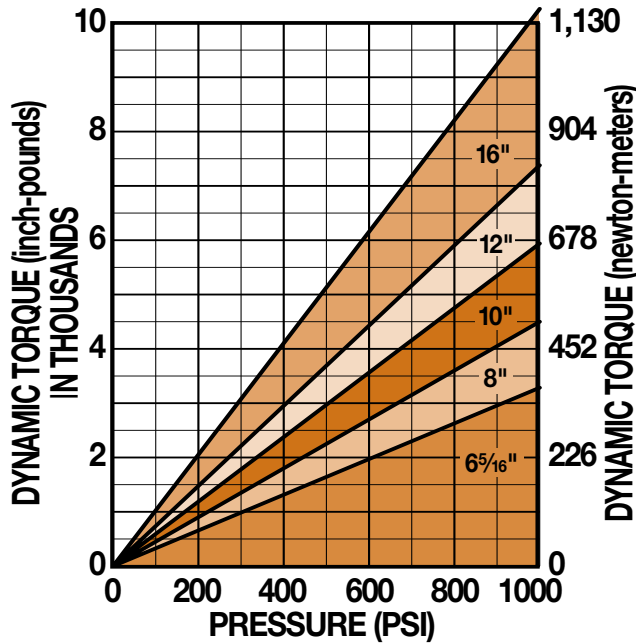
$$\text{STATIC (PARKING) TORQUE (IN.-LBS.)} = 1.345 \times \text{BRAKING RADIUS (IN.)} \times \text{LEVER FORCE (LBS.)}$$

$$\text{BRAKING RADIUS (IN.)} = [\text{DISC DIAMETER} \div 2] - 0.875$$

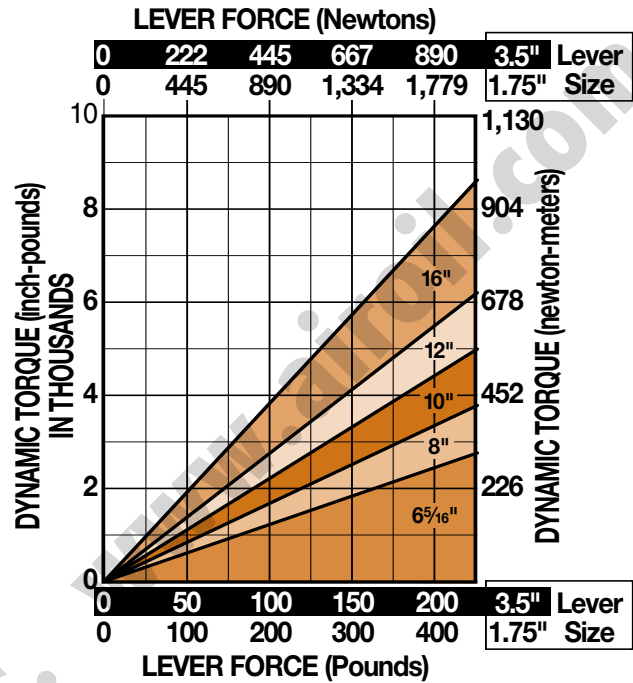


### PERFORMANCE DATA

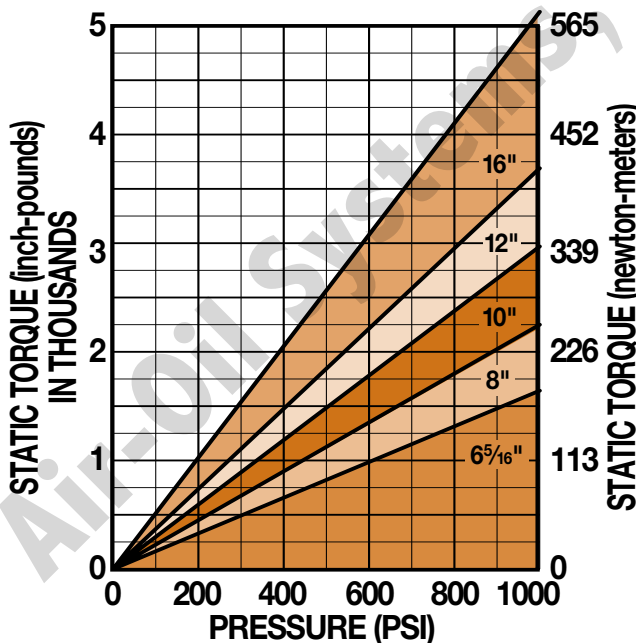
Hydraulic - Dynamic Torque vs Pressure



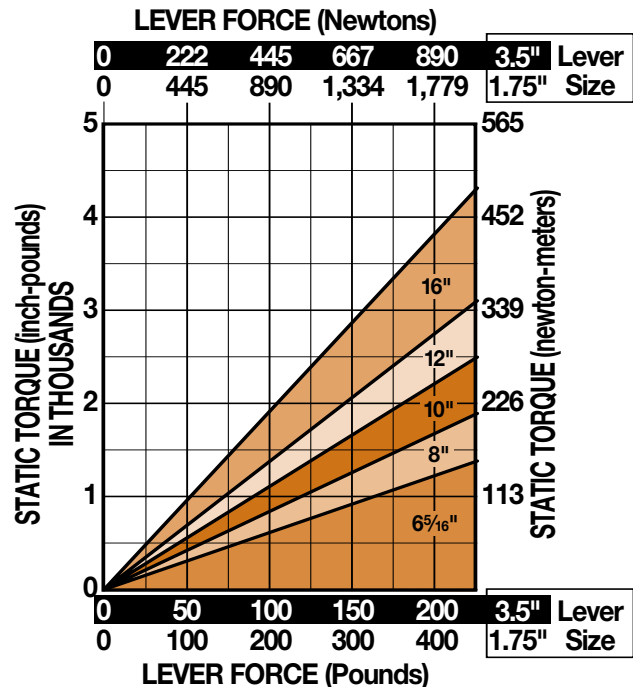
Mechanical - Dynamic Torque vs Lever Force



Hydraulic - Static Torque vs Pressure



Mechanical - Static Torque vs Lever Force

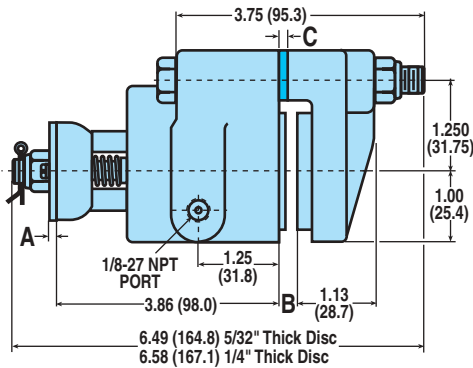
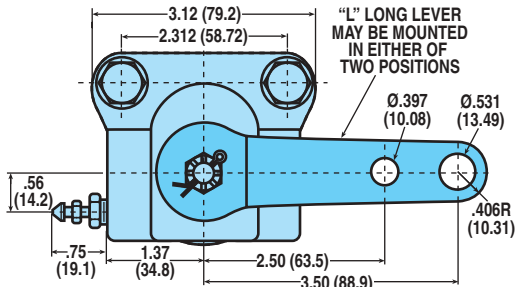


## H/ME20 SERIES - ALUMINUM

### "L" LONG LEVER - SINGLE ACTING FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 1.5 lbs. .68 kgs.

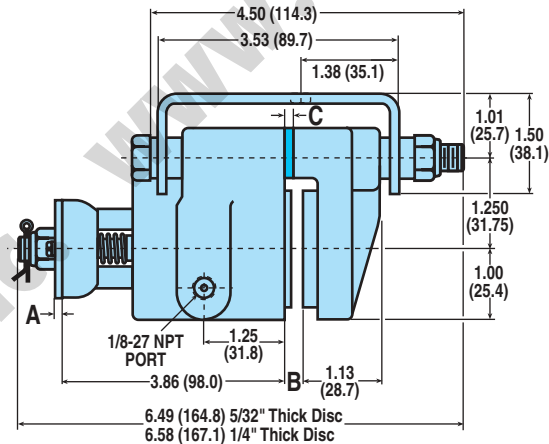
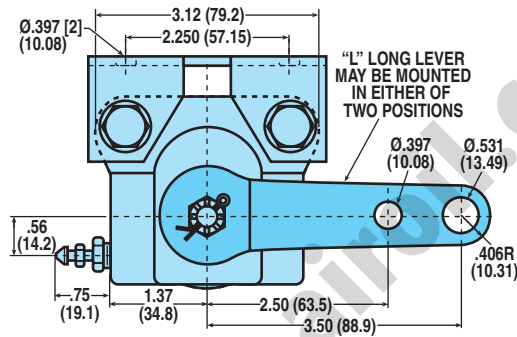


MODEL CODE	DISC THK.	A	B	C	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H/ME20LAC	5/32"	.164"	.25"	-	Long Cam, Buna N Seals	0755-0360
H/ME20LACG	5/32"	.164"	.25"	-	Long Cam	0755-0660
H/ME20LBC	1/4"	.164"	.34"	.094"	Long Cam, Buna N Seals	0755-0370
H/ME20LBCG	1/4"	.164"	.34"	.094"	Long Cam	0755-0670

### "L" LONG LEVER - SINGLE ACTING WITH FLOATING MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 2.25 lbs. 1.02 kgs.



MODEL CODE	DISC THK.	A	B	C	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H/ME20L AFC	5/32"	.164"	.25"	-	Long Cam, Fltng Brkt, Buna N	0755-0260
H/ME20L AFCG	5/32"	.164"	.25"	-	Long Cam, Fltng Brkt	0755-0560
H/ME20L BFC	1/4"	.164"	.34"	.094"	Long Cam, Fltng Brkt, Buna N	0755-0270
H/ME20L BFCG	1/4"	.164"	.34"	.094"	Long Cam, Fltng Brkt,	0755-0570

### CAM TRAVEL DATA

- 15° maximum travel when linings are new and with 1/32" gap each side of disc.
- Periodic tightening of lock nut will reduce travel of lever and will allow 1/4" wear on each lining.
- 90° maximum travel after 3/16" wear on each lining without intermediate tightening of lock nut.

### BRAKE MODEL LETTER CODES

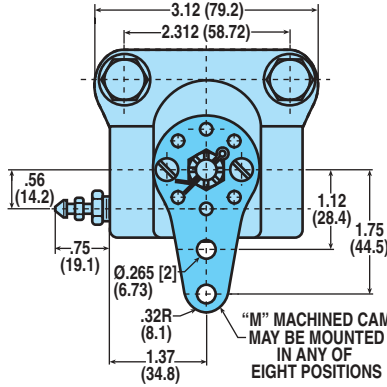
<b>A</b> 5/32" Thick Disc	<b>G</b> EPR Seals	<b>ME</b> Mechanical Brake
<b>B</b> 1/4" Thick Disc	<b>H</b> Hydraulic Brake	<b>S</b> Short Cam (ME Brakes)
<b>C</b> With Bleeder Fitting	<b>L</b> Long Cam (ME Brakes)	
<b>F</b> Floating Bracket Mount	<b>M</b> Machined Cam (ME Brakes)	

## H/ME20 SERIES - ALUMINUM

### "M" MACHINED CAM - SINGLE ACTING FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 1.5 lbs. .68 kgs.



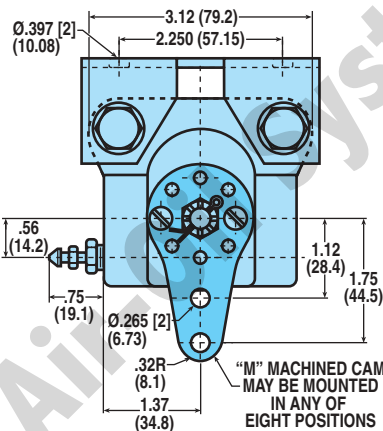
See "L" LONG LEVER  
SINGLE ACTING  
dimensional drawing for  
additional measurements

MODEL CODE	DISC THK.	A	B	C	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H/ME20MAC	5/32"	.105"	.25"	—	Machined Cam, Buna N Seals	0755-0300
H/ME20MACG	5/32"	.105"	.25"	—	Machined Cam	0755-0600
H/ME20MBC	1/4"	.105"	.34"	.094"	Machined Cam, Buna N Seals	0755-0310
H/ME20MBCG	1/4"	.105"	.34"	.094"	Machined Cam	0755-0610

### "M" MACHINED CAM - SINGLE ACTING WITH FLOATING BRACKET FLOATING MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 2.25 lbs. 1.02 kgs.



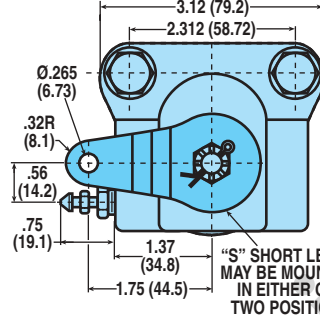
See "L" LONG LEVER  
SINGLE ACTING WITH  
FLOATING BRACKET  
dimensional drawing for  
additional measurements

MODEL CODE	DISC THK.	A	B	C	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H/ME20MAFC	5/32"	.105"	.25"	—	Mach Cam, Fltng Brkt, Buna N	0755-0200
H/ME20MAFCG	5/32"	.105"	.25"	—	Mach Cam, Fltng Brkt	0755-0500
H/ME20MBFC	1/4"	.105"	.34"	.094"	Mach Cam, Fltng Brkt, Buna N	0755-0210
H/ME20MBFCG	1/4"	.105"	.34"	.094"	Mach Cam, Fltng Brkt	0755-0510

### "S" SHORT LEVER - SINGLE ACTING FIXED MOUNT - FLOATING DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 1.5 lbs. .68 kgs.



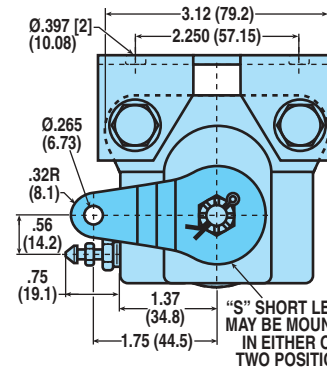
See "L" LONG LEVER  
SINGLE ACTING  
dimensional drawing for  
additional measurements

MODEL CODE	DISC THK.	A	B	C	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H/ME20SAC	5/32"	.164"	.25"	—	Short Cam, Buna N Seals	0755-0330
H/ME20SACG	5/32"	.164"	.25"	—	Short Cam	0755-0630
H/ME20SBC	1/4"	.164"	.34"	.094"	Short Cam, Buna N Seals	0755-0340
H/ME20SBCG	1/4"	.164"	.34"	.094"	Short Cam	0755-0640

### "S" SHORT LEVER - SINGLE ACTING WITH FLOATING BRACKET FLOATING MOUNT - FIXED DISC

Accommodates disc thickness: 5/32" 1/4"

Weight 2.25 lbs. 1.02 kgs.



See "L" LONG LEVER  
SINGLE ACTING WITH  
FLOATING BRACKET  
dimensional drawing for  
additional measurements

MODEL CODE	DISC THK.	A	B	C	OPTIONS / DESCRIPTION	ASSEMBLY NUMBER
H/ME20SAFC	5/32"	.164"	.25"	—	Short Cam, Fltng Brkt, Buna N	0755-0230
H/ME20SAFCG	5/32"	.164"	.25"	—	Short Cam, Fltng Brkt	0755-0530
H/ME20SBFC	1/4"	.164"	.34"	.094"	Short Cam, Fltng Brkt, Buna N	0755-0240
H/ME20SBFCG	1/4"	.164"	.34"	.094"	Short Cam, Fltng Brkt	0755-0540

## H/ME220 SERIES - ALUMINUM

### AVAILABLE STYLES

#### Single Acting with Float Pin Holes

FIXED MOUNT - FLOATING DISC or FLOATING MOUNT - FIXED DISC



PICTURED: 0744-0630

### H/ME220 SPECIFICATIONS

Maximum Hydraulic Pressure Rating:	1,500 PSI
Maximum lever force:	580 Lbs.
Accommodates Tolomatic disc diameters:	6-5/16", 8", 10", 12", 16"
Maximum disc diameter:	16"
Housing Material:	Cast aluminum
Bolts:	Zinc plated grade 8
Seals:	EPR Standard
Wearable friction material:	1.66 cu. in.
Friction material:	Replaceable, high-grade
Total lining area:	8.00 sq. in.
Piston diameter:	1.625 in.
Fluid displacement:	Single acting = 0.124 cu. in.

### OPTIONS

Seals: Buna-N seals

### CAM TRAVEL DATA

1. Gap between lining faces and disc when new = .048" total.
2. Angular movement required to actuate brake when new = 7° 30".
3. Maximum axial movement without intermediate adjustment = .387".
4. Wear allowed before adjustment .104" each side.

### DISC SIZING EQUATIONS

#### HYDRAULIC:

$$\text{DYNAMIC TORQUE (IN.-LBS.)} = 2.88 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

$$\text{STATIC (PARKING) TORQUE (IN.-LBS.)} = 1.44 \times \text{BRAKING RADIUS (IN.)} \times \text{PRESSURE (PSI)}$$

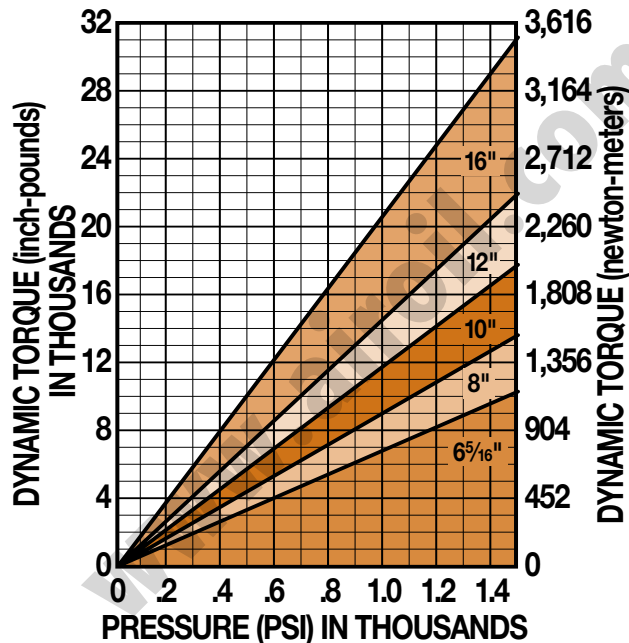
#### MECHANICAL:

$$\text{DYNAMIC TORQUE (IN.-LBS.)} = 7.45 \times \text{BRAKING RADIUS (IN.)} \times \text{LEVER FORCE (LBS.)}$$

$$\text{STATIC (PARKING) TORQUE (IN.-LBS.)} = 3.725 \times \text{BRAKING RADIUS (IN.)} \times \text{LEVER FORCE (LBS.)}$$

### PERFORMANCE DATA

#### Hydraulic - Dynamic Torque vs Pressure



#### Hydraulic - Static Torque vs Pressure

