

# CooperTools



Buckeye® • Dotco® • Gardner-Denver®

**POWER MOTORS**

**COOPER** Tools

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CooperTools Division has attained ISO 9001 Quality System Certification for eight of our facilities. The driving force behind the implementation of the Quality System is the commitment “to provide our customers with the **best value delivered** by offering only products and services **that meet or exceed their expectations**”.



Lexington, South Carolina



Dayton, Ohio



Hicksville, Ohio



Springfield, Ohio



Westhausen, Germany



Ozoir-la-Ferrière, France



Houston, Texas

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## Warranty

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Cooper warrants products and parts sold by it, insofar as they are of its own manufacture, against defects of material and workmanship, under normal use and service in accordance with its written instructions, recommendations, and ratings for installation, operation, maintenance, and service of products, for a period of **ONE YEAR FROM THE DATE OF INITIAL USE, BUT IN NO EVENT SHALL THE WARRANTY EXCEED 24 MONTHS FROM DATE OF DELIVERY TO DISTRIBUTOR.**

Proof of Purchase with shipment date must be furnished by the user to validate the warranty. This warranty applies only to products manufactured by Cooper and specifically excludes products manufactured by others. Products not manufactured by Cooper are warranted only to the extent and in the manner warranted to Cooper by the manufacturer

and then only to the extent Cooper is able to enforce such warranty. Cooper's warranty with respect to products manufactured by it is limited to the repair or replacement, as Cooper may elect, of any defective part regarding which the Distributor has given 5 days written notice from the discovery of such defect. Installation and transportation costs are not included. Cooper shall have the option of requiring the return to it of the defective material, transportation prepaid, for inspection. No allowance will be made for repairs without Cooper's approval. **COOPER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, AND HEREBY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

## Lubrication Products

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CooperTools' products are classified as non-hazardous manufactured items, defined in the OSHA 1910.1200 Hazard Communication Standard as "Articles". These products, under conditions of normal use, do not release or cause exposure to a hazardous chemical.

Under normal conditions of use, lubrication products sold separately for or used within these tools should not cause an exposure hazard. Refer to the Material Safety Data Sheet (M.S.D.S.) for Safety and Disposal Information. M.S.D.S. sheets are available at our website or upon request from CooperTools.

Cooper is also aware of, and complies with, the

provisions of section 611 amendments to the Clean Air Act of 1990. No ozone depleting chemicals have been used in the manufacture of our products.

If you resell or distribute these products, you have the responsibility for ensuring that the Material Safety Data Sheets are provided to the purchaser.

Proper lubrication is essential to the economical operation of pneumatic and electric tools. CooperTools perform better and their life is extended by using the recommended lubricants. All lubricants that are listed in the accessory section of this catalog have undergone extensive testing and are recommended for use with CooperTools products.

## Tool Calibration

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We now offer in-house calibration service for all of our assembly tools. Standard turnaround time is five (5) days from receipt

of tool. Let our trained technicians re-calibrate your tools. All calibrations include an NIST-traceable certificate. Contact your local Cleco representative.

# Mountable Power Motors

## Choose the right Air Motor to fit your application

CooperTools' air motors are engineered for great flexibility, convenience, and reliability. Dotco, Buckeye, and Gardner-Denver air motors cover a wide range of uses where compressed air is advantageous: powering air driven machinery, raising foundry copes and drags, rotating a turntable, mixing paint, powering cranes, steering fishing boats, valve actuation, or power source for mechanical hands.

### Rotary Vane Air Motors

CooperTools offers two types of rotary vane air motors, the large Gardner-Denver MR series (1.0 to 7.5 hp) and small to medium sizes (.14 to 2.3 hp) in the Dotco, Buckeye, and Gardner-Denver product lines. All motors feature durable construction with precision heavy-duty bearings throughout, and multiple blade rotors for smooth power. There is a wide range of speeds and torques as well as a choice of foot, face, or flange mounting. These motors require only air line lubrication for long, trouble-free service. Mount the lubricator as close to the motor as possible. These motors perform satisfactorily in high temperature areas up to 200°F (93° C).

### Axial Piston

These small, lightweight Gardner-Denver motors are ideal for installation in close quarters. The rugged construction and precision manufacturing of these motors allows long life with minimum maintenance. Generous size spindle bearings permit overhung weight on spindle with no external support.

High torque is an inherent characteristic of piston type air motors, making them especially desirable for applications involving heavy starting loads. The overlap of power impulses in axial piston air motors provides even torque and full power in either direction of rotation. These motors should be operated under load and horizontally. Axial piston motors are ideal for start stop operations. It is not recommended that they be operated at speeds greater than 75% of free speed.

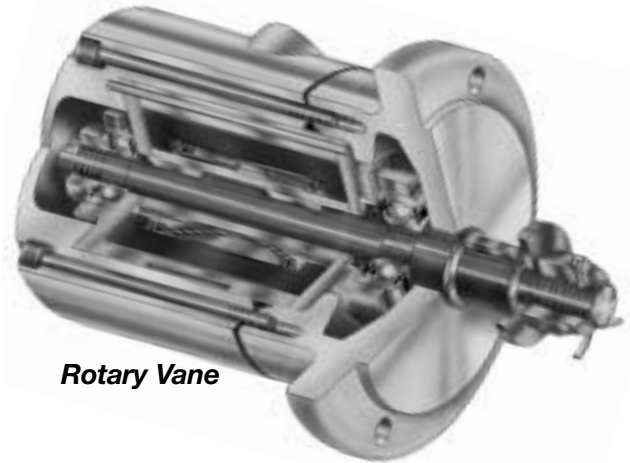
Their enclosed type construction allows operation in corrosive or dusty atmospheres. These motors perform satisfactorily in high temperature areas up to 200° (93° C). Grease fittings are provided for lubrication. It is recommended that air lines be equipped with filters and lubricators. Mount the lubricator as close to the motor as possible.

### Radial Piston

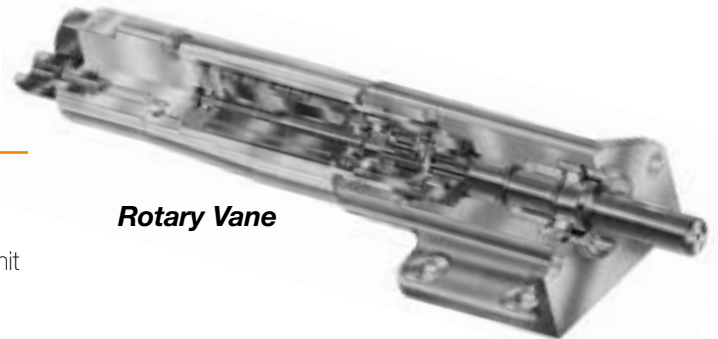
Heavy-duty construction make these motors suitable for continuous operation. The counterbalanced crankshaft is supported by anti-friction bearings. A slinger distributes oil to all moving parts of the motor. Oil level and drain plugs are easily accessible.

High torque is an inherent characteristic of piston type air motors, making them especially desirable for applications involving heavy starting loads. The overlap of power impulses in radial piston air motors provides even torque and full power in either direction of rotation. At least two pistons are always on a power stroke. These motors should be operated under load and in a horizontal position. It is not recommended that they be operated at speeds greater than 75% of free speed.

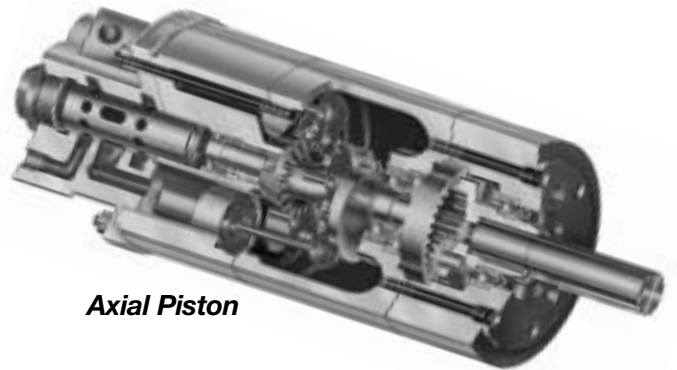
These motors perform satisfactorily in high temperature areas up to 200° (93° C). It is recommended that air lines be equipped with lubricators. Mount the lubricator as close to the motor as possible.



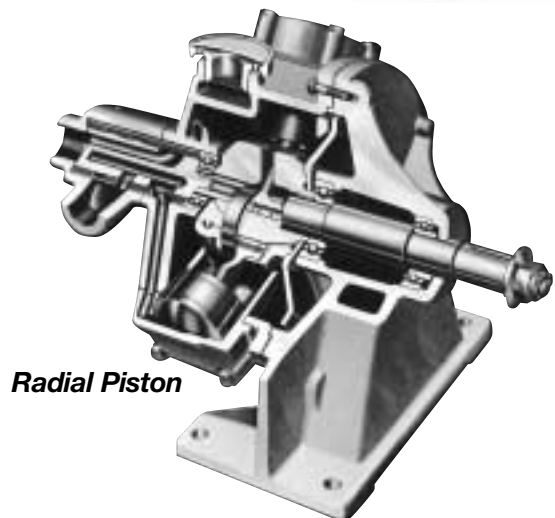
**Rotary Vane**



**Rotary Vane**



**Axial Piston**



**Radial Piston**

## Air Motor Selection

To assist in the selection of an air motor, we need any two of the following three items of information:

1. Horsepower required.
2. Speed (RPM) required against load.
3. Work load expressed in foot pounds or inch pounds of dynamic torque (moving torque load).

As air motors are dependent upon input air pressure for performance, these factors must also be considered:

1. Air pressure (psig or bars) at motor location.
2. Pipe size of air supply system to assure adequate volume (cfm or m<sup>3</sup>/min) so as to minimize line loss (air pressure drop during motor operation).
3. Plant air system pressure may vary during the day due to use by other equipment; therefore, base the selection of the air motor on the lowest psig or bars that can be expected. Then, by using a pressure regulator in the line at the motor, a uniform air supply is assured.

In applications of intermittent short service, CooperTools' air motors can be operated over the complete range indicated for each without harm or significant wear. In applications involving sustained continuous operation for long periods, however, some guidelines are suggested. **Do not operate piston and MR motors at more than 75% of free speed.** Consult the factory for applications requiring continuous operation of rotary vane motors at maximum HP or for any applications requiring vertical operation of these motors. Review service manuals carefully.

For two known and one unknown, the following formulas can be used:

$$\text{Ft. lbs. Torque} = \frac{1000 \times \text{HP}}{0.19 \times \text{RPM}}$$

$$\text{Horsepower (HP)} = \frac{0.19 \times \text{Torque (ft. lbs.)} \times \text{RPM}}{1000}$$

$$\text{Speed (RPM)} = \frac{1000 \times \text{HP}}{0.19 \times \text{Torque (ft. lbs.)}}$$

When working with Newton meters (Nm), substitute .0258 in place of 0.19 in the formula.

Use the performance charts provided for each motor size and type for obtaining this same data procedure:

1. Select operating pressure.
2. Select torque required from the left hand scale.
3. Extend that point position across chart until it intersects with torque performance curve of the selected pressure.
4. Draw a vertical line from the above mentioned intersection to the corresponding motor scale at the bottom of the chart to determine the operating speed at the required torque and psig pressure.
4. Extend the vertical line until it intersects the horsepower curve of selected operating pressure and read horsepower from the motor scale on the right side of the chart.

Torque and horsepower curves may be interpreted for approximate performance at other psi pressure.

## Piston and air motor application data

For all reversible air motors, a four-way control valve is recommended for forward and reverse operations. One

direction rotation only, an on-off valve may be used.

When air is admitted to one port on reversible tools, the other port becomes an exhaust port; if it is plugged, it will produce a severe "back pressure" and greatly reduce speed and power of the motor.

*Do not plug exhaust ports of motor or control valve, use mufflers.*

## Computing overhung shaft loads

When planning to equip a motor with a pinion gear, sprocket, drive wheel, etc., the amount of radial load or overhung load must be considered before making a selection.

Two formulas are available to establish application load limit requirements. The first one deals with the effect of the drive wheel or pinion on the shaft. The second, with torque effect on radial or overhung load.

$$\frac{A}{B} = \frac{C}{D} \text{ Where}$$

- A. Rated load point dimension from catalog.
- B. Dimension of desired point of load from motor face.
- C. Load to be found.
- D. Rated overhung load from catalog.

Example: Find maximum overhung load 3" from mounting face of 73308AA8 (A6 series motor). Refer to catalog. Apply formula.

$$\frac{2.25}{3} = \frac{C}{1000} \quad C = \frac{2.25 \times 1000}{3}$$

C = 750 lbs. (**new overhung load rating**)

To establish the amount of the overhung load for a given torque performance of any motor:

1. Establish known static air pressure.
2. Determine starting torque load from application, or stall torque from catalog and known air pressure.

To convert units of stall torque to actual pounds of load at surface of output shaft, use the following formula:

$$\text{Load} = \frac{\text{Torque (inch pounds)}}{\text{Radius of output shaft in millimeters}} \text{ or}$$

$$\text{Load} = \frac{\text{Torque (Newton meters)} \times 1000}{\text{Radius of output shaft in millimeters}}$$

**EXAMPLE:** Using the same example, we determine from the catalog that 73308AA8 has a stall torque of 11 ft. lbs. at 90 psig air pressure. To find shaft load:

$$\text{Load} = \frac{(11) \text{ ft. lbs.} \times (12) \text{ in. lbs. per ft. lb.}}{9/16" \text{ pr } (.562) \text{ radius of output shaft}}$$

$$\text{Load} = \frac{132 \text{ in. lbs.}}{.562"}$$

$$\text{Load} = 235 \text{ lbs. (overhung shaft load)}$$

By applying this formula to some of the geared motors, you will note that the output performance of the motor will frequently exceed the maximum overhung load rating established for the motor. If the amount is minimal, consider mounting the drive wheel or pinion gear closer to the motor face. This will increase the overhung load rating. If this is not adequate, consider larger motor or outboard bearing support of shaft. Consult factory.

If overhung load and torque act in opposite directions, their difference applies.

# Rotary Vane

## DOTCO®

### 21 Series

- **Maximum Motor Power**  
0.3 hp  
0.22 kW
- **Torque Range**  
0.2 – 15.2 ft. lbs.  
0.27 – 20.6 Nm
- **Non-Reversible**
- **Rear Exhaust**

### Spindle Rotation

All models are right-hand rotation. To order left-hand rotation models (*not reversible*) substitute "D" for the first "-" in the model number for round housing motors and "V" for the "M" in the model number for motors with flange and base mounting.

**IMPORTANT: Threaded spindles have right-hand threads; therefore use keyed shaft models only (-49) for left-hand rotation.**



Model Number*	RPM		Stall Torque		Weight		Gear Ratio	Length (page 7)		
	at Max. hp	Free Speed	ft lbs.	Nm	lbs.	kg		Overall (A) in.	Pilot (B) in.	
<b>Round Housing – 3/8" Diameter Keyed Spindle</b>										
21-1040-49	190	380	15.2	20.60	2.1	.95	68.9:1	5.66	.25	
21-1041-49	300	600	9.9	13.41	2.1	.95	44.82:1	5.66	.25	
21-1042-49	450	900	6.4	8.67	2.1	.95	29.1:1	5.66	.25	
21-1340-49	1600	3200	1.8	2.44	1.6	.73	8.3:1	4.34	.25	
21-1540-49	2500	5000	1.2	1.63	1.6	.73	5.4:1	4.34	.25	
21-1940-49	15000	30000	0.2	0.27	1.2	.54	—	3.00	.69	
<b>Flange and Base Mounting – 3/8" Diameter Keyed Spindle</b>										
21M1040-49	190	380	15.2	20.60	3.0	1.36	68.9:1	5.66	.25	
21M1041-49	300	600	9.9	13.41	3.0	1.36	44.82:1	5.66	.25	
21M1042-49	450	900	6.4	8.67	3.0	1.36	29.1:1	5.66	.25	
21M1340-49	1600	3200	1.8	2.44	2.5	1.13	8.3:1	4.34	.25	
21M1540-49	2500	5000	1.2	1.63	2.5	1.13	5.4:1	4.34	.25	
21M1940-49	15000	30000	0.2	0.27	2.1	.95	—	3.00	.69	

#### GENERAL:

Air Inlet: 1/4" NPT – Side and rear  
Air consumption: 12 cfm (.34 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### \*OPTIONAL TERMINATIONS:

Replace -49 in model number with the desired termination when ordering.

- 38 0"-1/4" Capacity Drill Chuck (5000 RPM or less)
- 51 1/16"-3/8" Capacity Drill Chuck (5000 RPM or less)
- 40 3/8"-24 Threaded Spindle
- 01 Series 200 Collet Chuck (for milling and routing)
- 36 Series 300 Collet Chuck (for milling and routing)

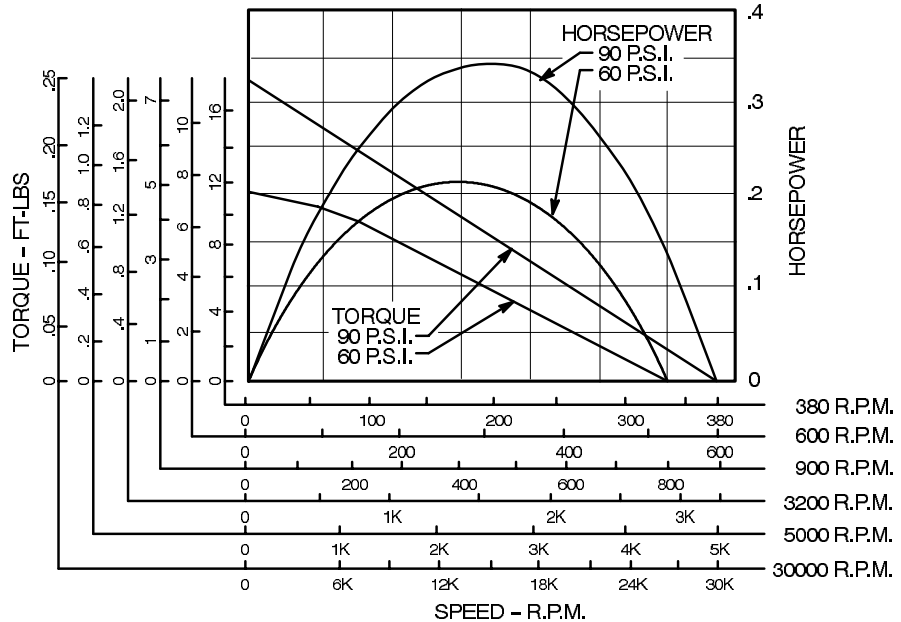
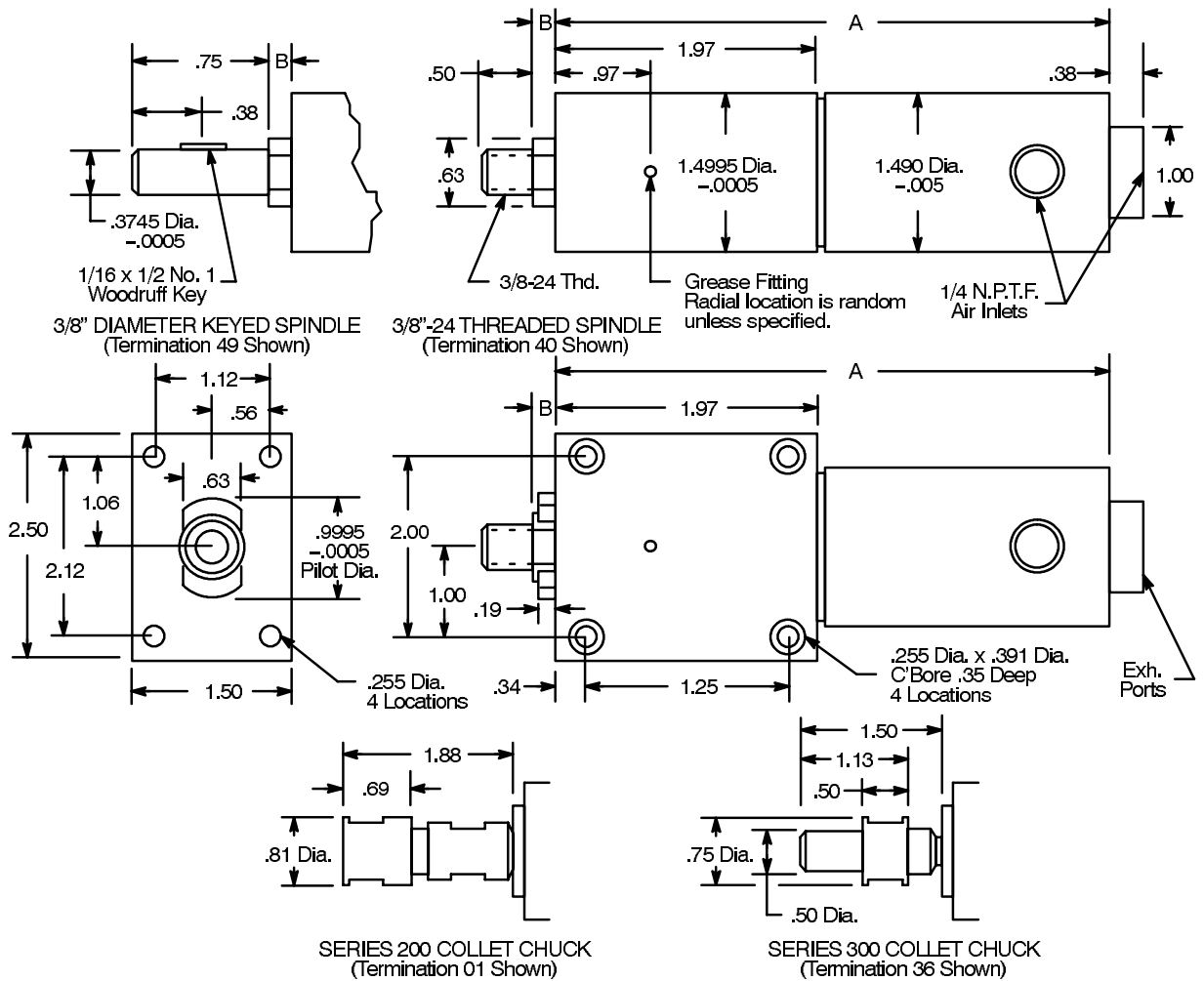
#### STANDARD EQUIPMENT:

Hex socket screw provided for closure of unused inlet. Flush fitting for lubrication of gears. Wrench for threaded spindle and collet chuck models. 1/4" collet included with series 200 & 300 collet chuck.

#### OPTIONAL EQUIPMENT:

Exhaust mufflers, remote-exhaust hoses, air intake hoses, spindle adapters and filter-lubricator-regulators available at extra cost. Any series 200 collet may be substituted at no additional cost. On series 300 collet chuck, collets 301, 302, and 303 are available at extra cost. Any other series 300 collet may be substituted at no additional cost.





**IMPORTANT:**

A 5/16" I.D. air inlet hose may be used for runs up to 10'. For longer runs, use 3/8" I.D. hoses. When remote-exhaust hose is used, the portion of air inlet hose inserted into the exhaust hose should not exceed 3/8" I.D. (approx. .650" O.D.). Planetary gears should be greased after every 250 hours with gear grease

#45-0983, or equivalent. For Filters, Regulators and Lubricators refer to page 68. If air line connector is used, install at end of hose away from the tool.

**CONCENTRICITY:**

On motors with round housings, concentricity of spindle to O.D. of housing is .003 TIR.

# Rotary Vane

## DOTCO®

### 21 Series

- **Maximum Motor Power**  
0.3 hp  
0.22 kW
- **Torque Range**  
0.2 – 15.2 ft. lbs.  
0.27 – 20.6 Nm
- **Non-Reversible**
- **Side Exhaust**

### Spindle Rotation

All models are right-hand rotation. To order left-hand rotation models (*not reversible*) substitute "D" for the first "-" in the model number for round housing motors and "V" for the "M" in the model number for motors with flange and base mounting.

**IMPORTANT: Threaded spindles have right-hand threads; therefore use keyed shaft models only (-49) for left-hand rotation.**



Model Number*	RPM		Stall Torque		Weight		Gear Ratio	Length (page 9)	
	at Max. hp	Free Speed	ft lbs.	Nm	lbs.	kg		Overall (A) in.	Pilot (B) in.

#### Round Housing – 3/8" Diameter Keyed Spindle

21-1000-49	190	380	15.2	20.60	2.3	1.04	68.9:1	5.66	.25
21-1001-49	300	600	9.9	13.41	2.3	1.04	44.82:1	5.66	.25
21-1002-49	450	900	6.4	8.67	2.3	1.04	29.1:1	5.66	.25
21-1300-49	1600	3200	1.8	2.44	1.7	.77	8.3:1	4.34	.25
21-1500-49	2500	5000	1.2	1.63	1.7	.77	5.4:1	4.34	.25
21-1900-49	15000	30000	0.2	0.27	1.3	.59	—	3.00	.69

#### Flange and Base Mounting – 3/8" Diameter Keyed Spindle

21M1000-49	190	380	15.2	20.60	3.1	1.41	68.9:1	5.66	.25
21M1001-49	300	600	9.9	13.41	3.1	1.41	44.82:1	5.66	.25
21M1002-49	450	900	6.4	8.67	3.1	1.41	29.1:1	5.66	.25
21M1300-49	1600	3200	1.8	2.44	2.6	1.18	8.3:1	4.34	.25
21M1500-49	2500	5000	1.2	1.63	2.6	1.18	5.4:1	4.34	.25

#### GENERAL:

Air Inlet: 1/4" NPT – Side and rear  
Air consumption: 12 cfm (.34 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### \*OPTIONAL TERMINATIONS:

Replace -49 in model number with the desired termination when ordering.

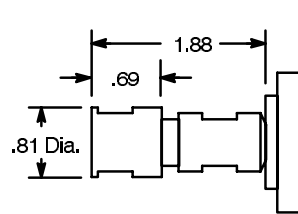
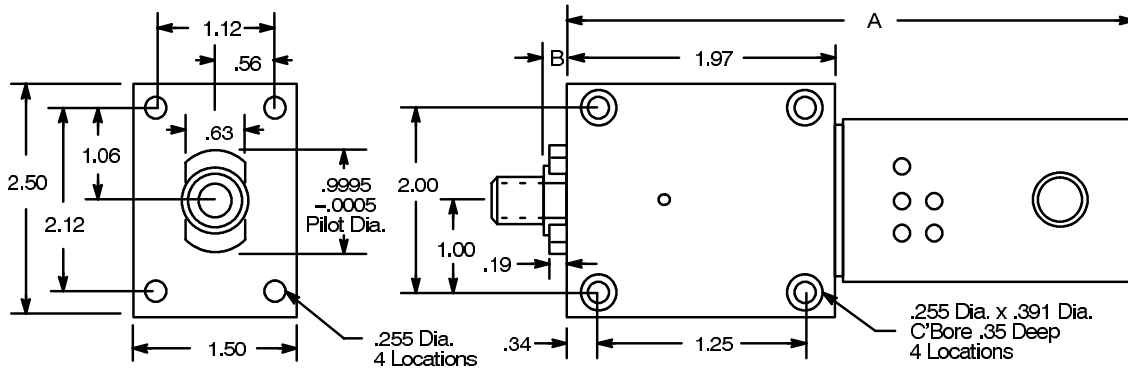
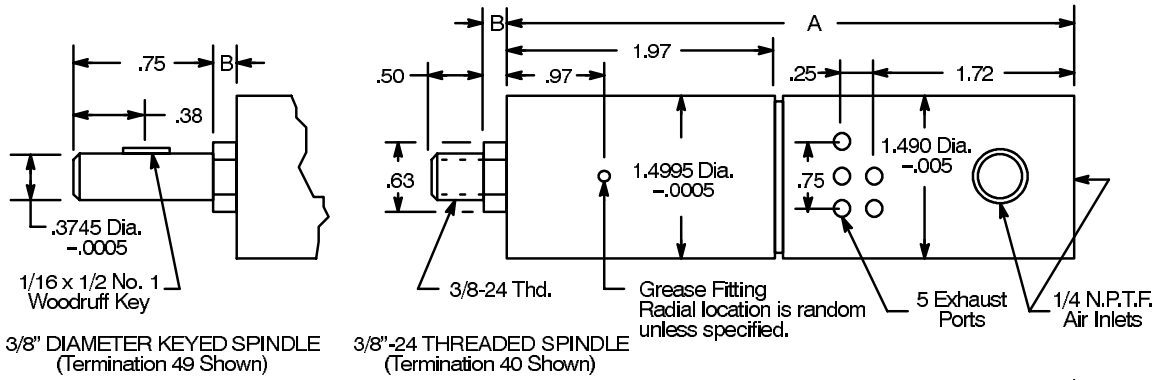
- 38 0"-1/4" Capacity Drill Chuck (5000 RPM or less)
- 51 1/16"-3/8" Capacity Drill Chuck (5000 RPM or less)
- 40 3/8"-24 Threaded Spindle
- 01 Series 200 Collet Chuck (for milling and routing)
- 36 Series 300 Collet Chuck (for milling and routing)

#### STANDARD EQUIPMENT:

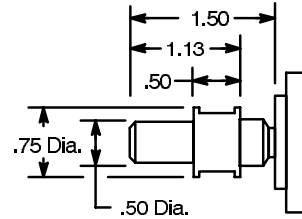
Hex socket screw provided for closure of unused inlet. Flush fitting for lubrication of gears. Wrench for threaded spindle and collet chuck models. 1/4" collet included with series 200 & 300 collet chuck.

#### OPTIONAL EQUIPMENT:

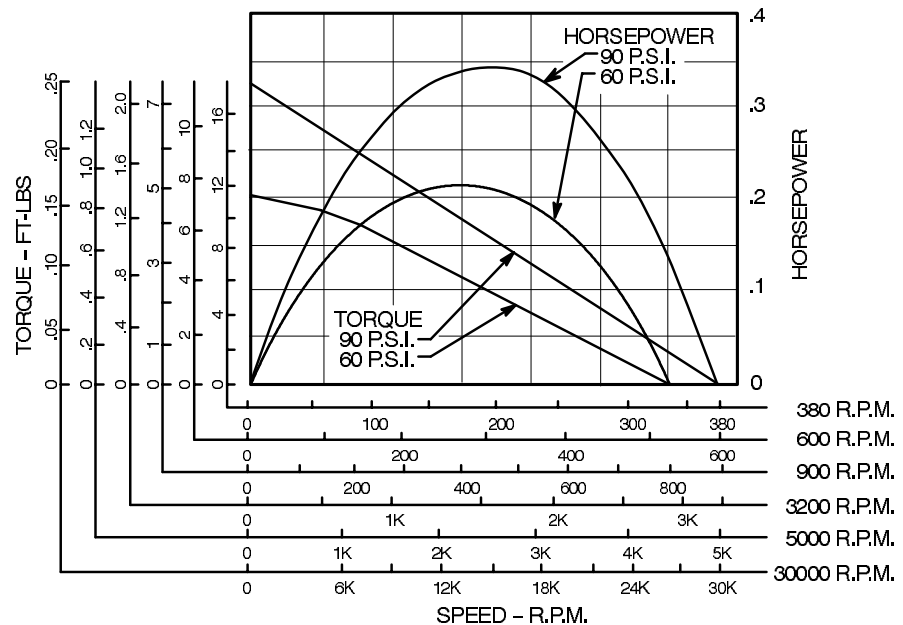
Exhaust mufflers, remote-exhaust hoses, air intake hoses, spindle adapters and filter-lubricator-regulators available at extra cost. Any series 200 collet may be substituted at no additional cost. On series 300 collet chuck, collets 301, 302, and 303 are available at extra cost. Any other series 300 collet may be substituted at no additional cost.



**SERIES 200 COLLET CHUCK**  
(Termination 01 Shown)



**SERIES 300 COLLET CHUCK**  
(Termination 36 Shown)



**IMPORTANT:**

A 5/16" I.D. air inlet hose may be used for runs up to 10'. For longer runs, use 3/8" I.D. hoses. Planetary gears should be greased after every 250 hours with gear grease # 45-0983, or equivalent. For Filters, Regulators and Lubricators refer to page

68. If air line connector is used, install at end of hose away from the tool.

**CONCENTRICITY:**

On motors with round housings, concentricity of spindle to O.D. of housing is .003 TIR.

# Rotary Vane

## DOTCO®

### 22 Series

■ **Maximum Motor Power**

0.9 hp  
0.67 kW

■ **Torque Range**

0.8 – 41.2 ft. lbs.  
1.08 – 55.83 Nm

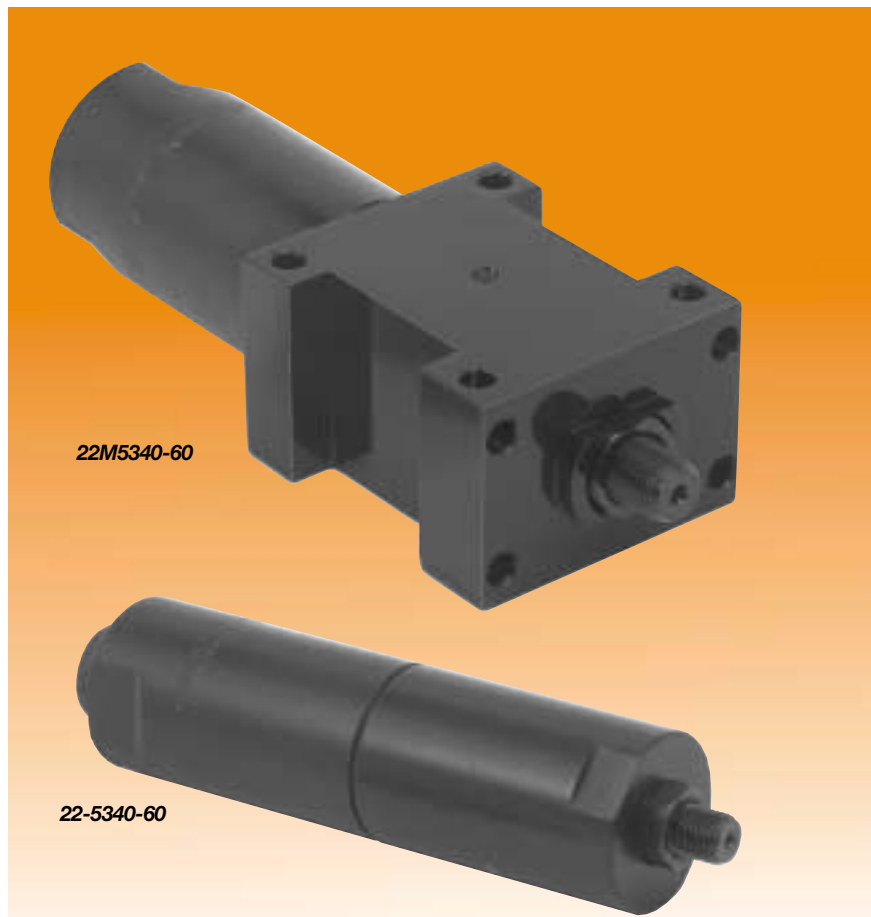
■ **Non-Reversible**

■ **Rear Exhaust**

### Spindle Rotation

All models are right-hand rotation. To order left-hand rotation models (*not reversible*) substitute “D” for the first “-” in the model number for round housing motors and “V” for the “M” in the model number for motors with flange and base mounting.

**IMPORTANT: Threaded spindles have right-hand threads; therefore use keyed shaft models only (-50) for left-hand rotation.**



Model Number*	RPM		Stall Torque		Weight		Gear Ratio	Length (page 11)	
	at Max. hp	Free Speed	ft lbs.	Nm	lbs.	kg		Overall (A) in.	Pilot (B) in.

#### Round Housing – 1/2" Diameter Keyed Spindle

22-5040-50	215	430	41.2	55.83	4.1	1.86	50.4:1	7.94	.25
22-5041-50	320	640	28.4	38.48	4.1	1.86	34.8:1	7.94	.25
22-5042-50	470	940	19.6	26.56	4.1	1.86	24:1	7.94	.25
22-5340-50	1600	3200	5.8	7.86	3.1	1.41	7.1:1	6.19	.25
22-5440-50	2350	4700	4.0	5.42	3.1	1.41	4.9:1	6.19	.25
22-5940-50	11500	23000	0.8	1.08	2.5	1.13	—	4.38	.63

#### Flange and Base Mounting – 1/2" Diameter Keyed Spindle

22M5040-50	215	430	41.2	55.83	5.0	2.27	50.4:1	7.94	.25
22M5041-50	320	640	28.4	38.48	5.0	2.27	34.8:1	7.94	.25
22M5042-50	470	940	19.6	26.56	5.0	2.27	24:1	7.94	.25
22M5340-50	1600	3200	5.8	7.86	4.0	1.81	7.1:1	6.19	.25
22M5440-50	2350	4700	4.0	5.42	4.0	1.81	4.9:1	6.19	.25
22M5940-50	11500	23000	.8	1.08	3.4	1.54	—	4.38	.63

#### GENERAL:

Air Inlet: 1/4" NPT – Side and rear  
Air consumption: 29 cfm (.82 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### \*OPTIONAL TERMINATIONS:

Replace -50 in model number with the desired termination when ordering.

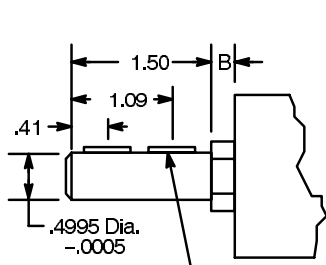
- 38 0"-1/4" Capacity Drill Chuck (5000 RPM or less)
- 51 1/16"-3/8" Capacity Drill Chuck (5000 RPM or less)
- 53 5/64"-1/2" Capacity Drill Chuck (5000 RPM or less)
- 60 1/2"-20 Threaded Spindle
- 01 Series 200 Collet Chuck (for milling and routing)
- 62 Series "K" Collet Chuck (for milling and routing)

#### STANDARD EQUIPMENT:

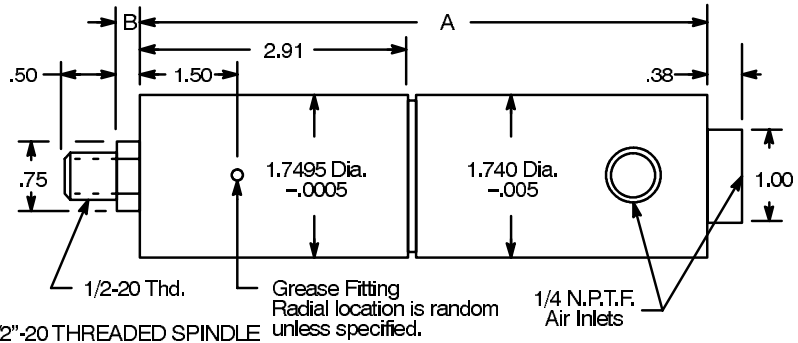
Hex socket screw provided for closure of unused inlet. Flush fitting for lubrication of gears. Wrench for threaded spindle and collet chuck models. 1/4" collet included with series 200 & "K" collet chuck.

#### OPTIONAL EQUIPMENT:

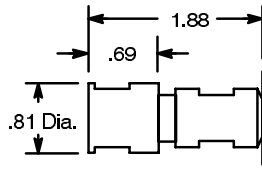
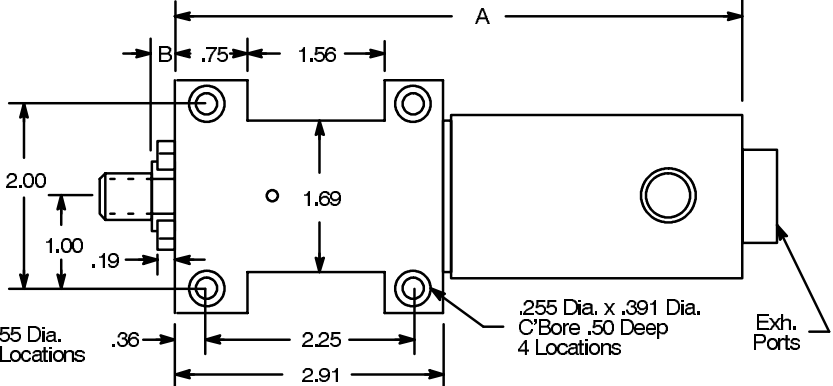
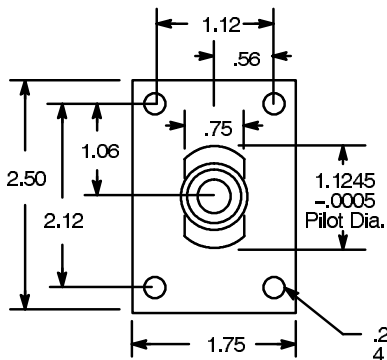
Exhaust mufflers, remote-exhaust hoses, air intake hoses, spindle adapters and filter-lubricator-regulators available at extra cost. Any series 200 and "K" collet may be substituted at no additional cost.



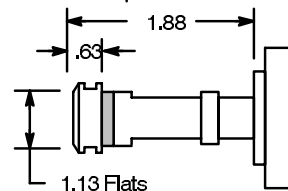
1/2" DIAMETER KEYED SPINDLE  
(Termination 50 Shown)



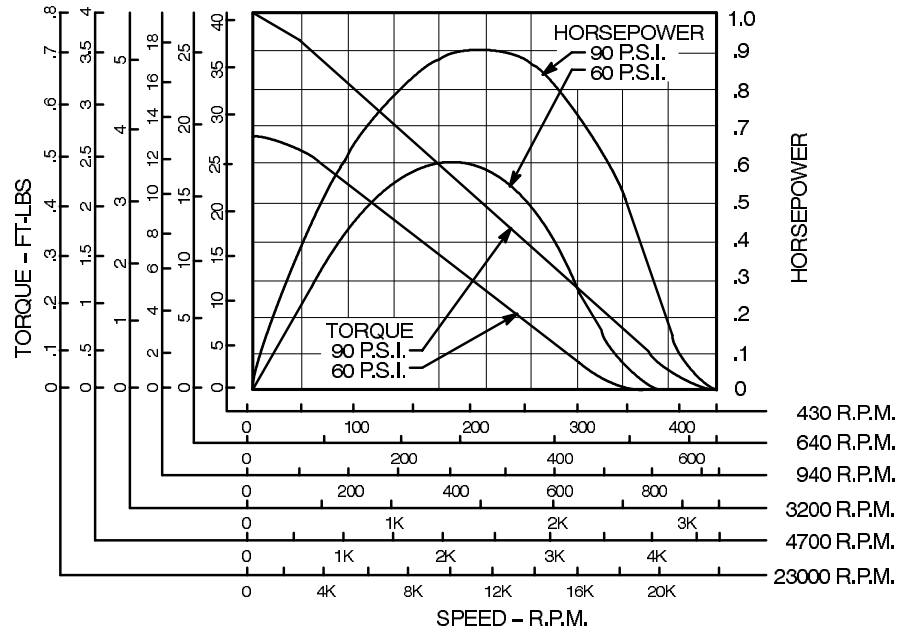
1/2"-20 THREADED SPINDLE  
(Termination 60 Shown)



SERIES 200 COLLET CHUCK  
(Termination 01 Shown)



SERIES K COLLET CHUCK  
(Termination 62 Shown)



**IMPORTANT:**

A 3/8" I.D. air inlet hose may be used for runs up to 10'. For longer runs, use 1/2" I.D. hoses. When remote-exhaust hose is used, the portion of air inlet hose inserted into the exhaust hose should not exceed 3/8" I.D. (approx. .650" O.D.). Planetary gears should be greased after every 250 hours with gear grease # 45-0983, or equivalent. For Filters, Regulators and Lubricators refer to

page 68. If air line connector is used, install at end of hose away from the tool.

**CONCENTRICITY:**

On motors with round housings, concentricity of spindle to O.D. of housing is .003 TIR.

# Rotary Vane

## DOTCO®

### 22 Series

■ **Maximum Motor Power**

0.9 hp  
0.67 kW

■ **Torque Range**

0.8 – 41.2 ft. lbs.  
1.08 – 55.83 Nm

■ **Non-Reversible**

■ **Side Exhaust**

### Spindle Rotation

All models are right-hand rotation. To order left-hand rotation models (*not reversible*) substitute “D” for the first “-” in the model number for round housing motors and “V” for the “M” in the model number for motors with flange and base mounting.

**IMPORTANT: Threaded spindles have right-hand threads; therefore use keyed shaft models only (-50) for left-hand rotation.**



Model Number*	RPM		Stall Torque		Weight		Gear Ratio	Length (page 13)	
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg		Overall (A) in.	Pilot (B) in.

#### Round Housing – 1/2" Diameter Keyed Spindle

22-5000-50	215	430	41.2	55.83	4.2	1.91	50.4:1	7.94	.25
22-5001-50	320	640	28.4	38.48	4.2	1.91	34.8:1	7.94	.25
22-5002-50	470	940	19.6	26.56	4.2	1.91	24:1	7.94	.25
22-5300-50	1600	3200	5.8	7.86	3.2	1.45	7.1:1	6.19	.25
22-5400-50	2350	4700	4.0	5.42	3.2	1.45	4.9:1	6.19	.25
22-5900-50	11500	23000	0.8	1.08	2.6	1.18	—	4.38	.63

#### Flange and Base Mounting – 1/2" Diameter Keyed Spindle

22M5000-50	215	430	41.2	55.83	5.1	2.31	50.4:1	7.94	.25
22M5001-50	320	640	28.4	38.48	5.1	2.31	3.48:1	7.94	.25
22M5002-50	470	940	19.6	26.56	5.1	2.31	24:1	7.94	.25
22M5300-50	1600	3200	5.8	7.86	4.1	1.86	7.1:1	6.19	.25
22M5400-50	2350	4700	4.0	5.42	4.1	1.86	4.9:1	6.19	.25

#### GENERAL:

Air Inlet: 1/4" NPT – Side and rear  
Air consumption: 29 cfm (.82 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### \*OPTIONAL TERMINATIONS:

Replace -50 in model number with the desired termination when ordering.

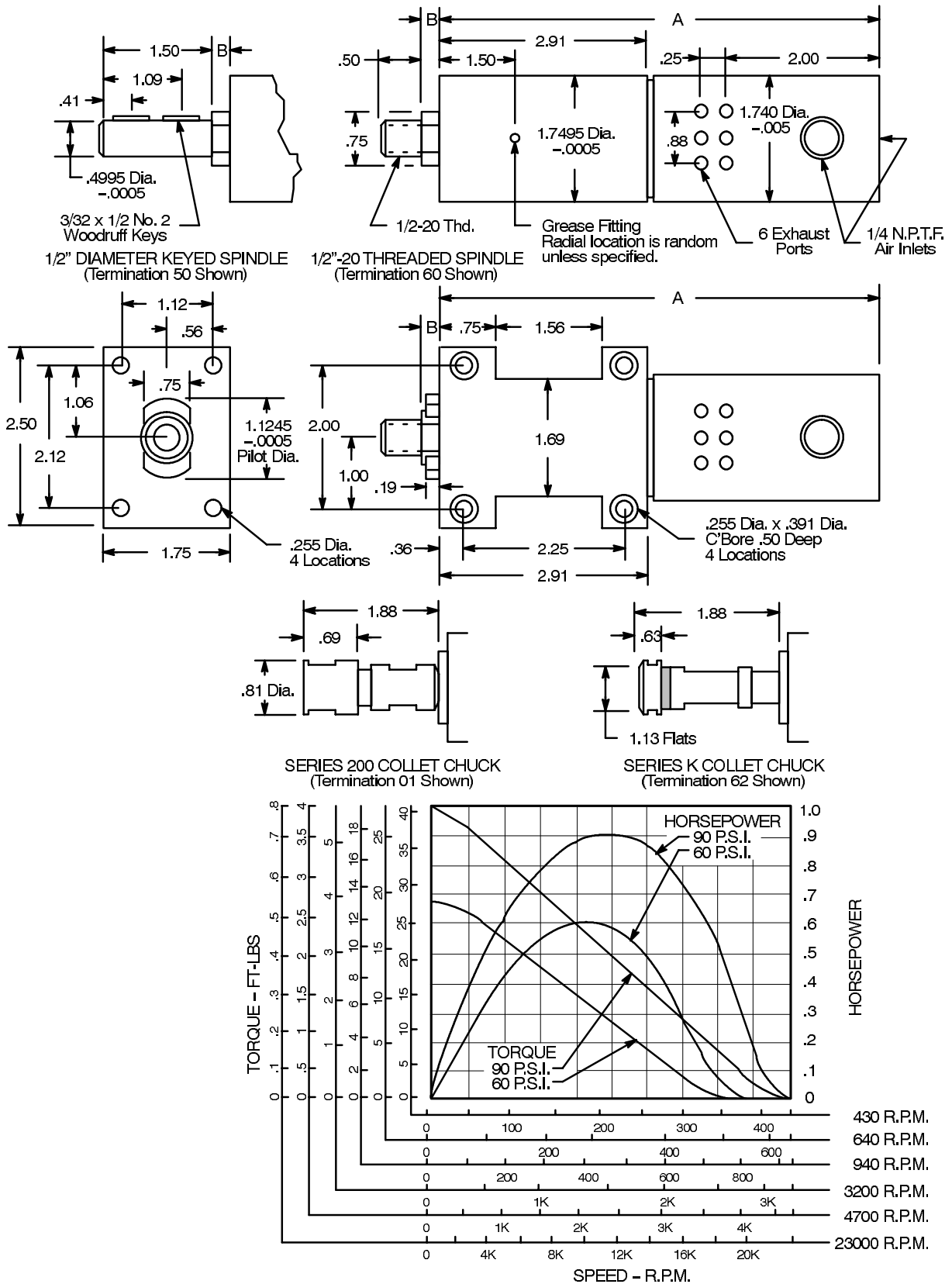
- 38 0"-1/4" Capacity Drill Chuck (5000 RPM or less)
- 51 1/16"-3/8" Capacity Drill Chuck (5000 RPM or less)
- 53 5/64"-1/2" Capacity Drill Chuck (5000 RPM or less)
- 60 1/2"-20 Threaded Spindle
- 01 Series 200 Collet Chuck (for milling and routing)
- 62 Series "K" Collet Chuck (for milling and routing)

#### STANDARD EQUIPMENT:

Hex socket screw provided for closure of unused inlet. Flush fitting for lubrication of gears. Wrench for threaded spindle and collet chuck models. 1/4" collet included with series 200 & "K" collet chuck.

#### OPTIONAL EQUIPMENT:

Exhaust mufflers, remote-exhaust hoses, air intake hoses, spindle adapters and filter-lubricator-regulators available at extra cost. Any series 200 and "K" collet may be substituted at no additional cost.



**IMPORTANT:**

A 3/8" I.D. air inlet hose may be used for runs up to 10'. For longer runs, use 1/2" I.D. hoses. Planetary gears should be greased after every 250 hours with gear grease # 45-0983, or equivalent. For Filters, Regulators and Lubricators refer to page

68. If air line connector is used, install at end of hose away from the tool.

**CONCENTRICITY:**

On motors with round housings, concentricity of spindle to O.D. of housing is .003 TIR.

# Rotary Vane

## DOTCO®

### 22 Series

- **Maximum Motor Power**  
0.7 hp  
0.52 kW
- **Torque Range**  
0.6 – 28.4 ft. lbs.  
0.81 – 38.48 Nm
- **Reversible**
- **Side Exhaust**



Model Number*	RPM		Stall Torque		Weight		Gear Ratio	Length (page 15)	
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg		Overall (A) in.	Pilot (B) in.

#### Round Housing – 1/2" Diameter Keyed Spindle

22-5070-50	165	330	28.4	38.48	2.75	1.25	50.4:1	7.88	.25
22-5071-50	250	500	19.6	26.56	2.75	1.25	34.8:1	7.88	.25
22-5072-50	350	700	13.5	18.29	2.75	1.25	24:1	7.88	.25
22-5270-50	1200	2400	4.0	5.42	2.06	0.93	7.1:1	6.16	.25
22-5370-50	1750	3500	2.8	3.79	2.06	0.93	4.9:1	6.16	.25
22-5970-50	9000	18000	0.6	0.81	2.00	0.91	—	4.38	.63

#### Flange and Base Mounting – 1/2" Diameter Keyed Spindle

22M5070-50	165	330	28.4	38.48	3.06	1.39	50.4:1	7.88	.25
22M5071-50	250	500	19.6	26.56	3.06	1.39	3.48:1	7.88	.25
22M5072-50	350	700	13.5	18.29	3.06	1.39	24:1	7.88	.25
22M5270-50	1200	2400	4.0	5.42	2.38	1.08	7.1:1	6.16	.25
22M5370-50	1750	3500	2.8	3.79	2.38	1.08	4.9:1	6.16	.25

#### GENERAL:

Air Inlet: 1/4" NPT – Side and rear  
Air consumption: 29 cfm (.82 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### \*OPTIONAL TERMINATIONS:

Replace -50 in model number with the desired termination when ordering.

- 38 0"-1/4" Capacity Drill Chuck (5000 RPM or less)
- 51 1/16"-3/8" Capacity Drill Chuck (5000 RPM or less)
- 53 5/64"-1/2" Capacity Drill Chuck (5000 RPM or less)
- 60 1/2"-20 Threaded Spindle
- 01 Series 200 Collet Chuck (for milling and routing)
- 62 Series "K" Collet Chuck (for milling and routing)

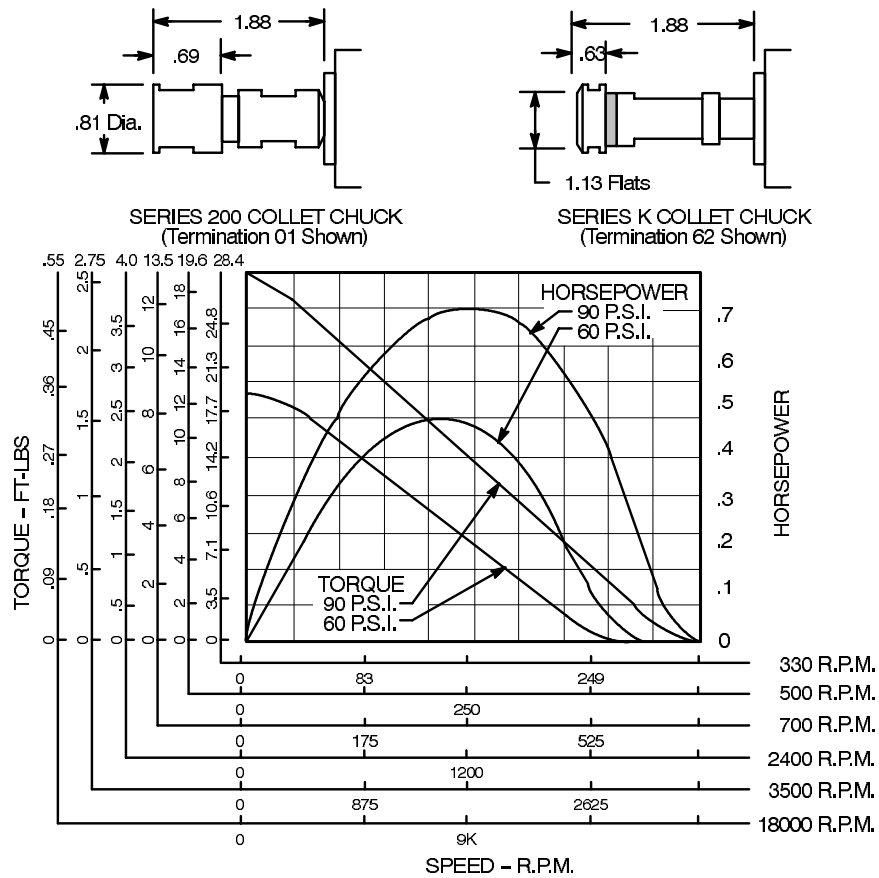
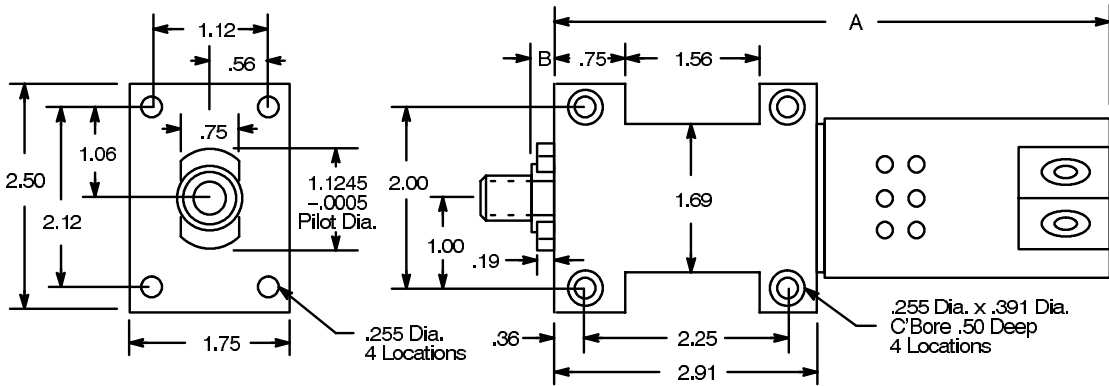
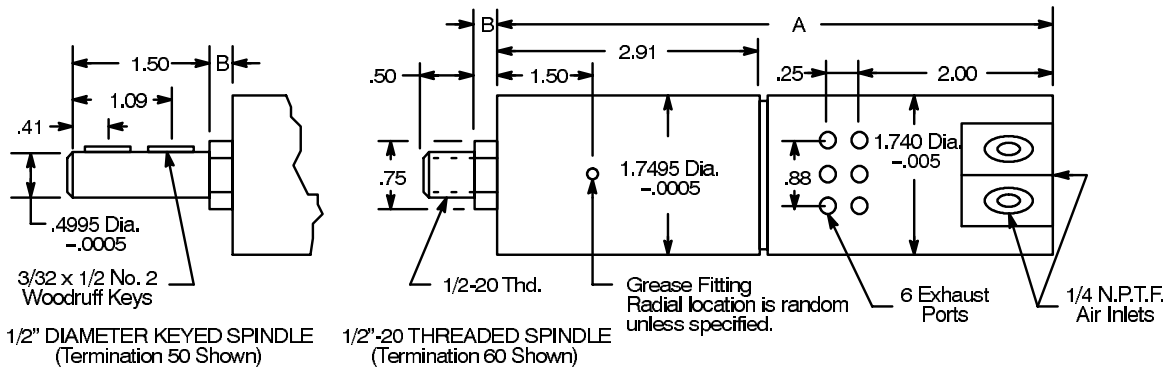
#### STANDARD EQUIPMENT:

Hex socket screw provided for closure of unused inlet. Flush fitting for lubrication of gears. Wrench for threaded spindle and collet chuck models. 1/4" collet included with series 200 & "K" collet chuck.

#### OPTIONAL EQUIPMENT:

Exhaust mufflers, remote-exhaust hoses, air intake hoses, spindle adapters and filter-lubricator-regulators available at extra cost. Any series 200 and "K" collet may be substituted at no additional cost.





### IMPORTANT:

A 3/8" I.D. air inlet hose may be used for runs up to 10'. For longer runs, use 1/2" I.D. hoses. Planetary gears should be greased after every 250 hours with gear grease # 45-0983, or equivalent. For Filters, Regulators and Lubricators refer to page 68. If air line connector is used, install at end of hose away from the tool.

### CONCENTRICITY:

On motors with round housings, concentricity of spindle to O.D. of housing is .003 TIR.

### NOTE:

Spindles with 1/2-20 thread are equipped with 1/4-28 internal threaded jam screw. This will prevent sprockets or pulleys from unthreading in reverse direction.

# Optional Equipment for Dotco Motors

## Exhaust Muffler

With this Exhaust Muffler, the noise level is approximately 85 dBA. It is recommended that a motor always be used with this muffler, unless provision is made in the mounting structure, by the user, for an exhaust cavity to provide noise attenuation.

Use Exhaust Muffler 14-1117 on 21 Series side exhaust motors and 14-2110 on 22 series side exhaust motors.



14-1117



14-2110

## Muffler with Remote-Exhaust Hose

Remote-exhaust Hose 45-2000 (specify length desired) can be attached to the muffler with Hose Clamp 45-2126 to provide remote exhaust and additional quieting. (4' length reduces noise level to 80 dBA)

## Remote-Exhaust Hose (Rear Exhaust Models)

Standard Hose Lengths	
Part Number	Length (ft.)
45-2003	3
45-2004	4
45-2005	5
45-2006	6
45-2008	8
45-2010	10
45-2012	12
45-2016	16
45-2020	20
45-2025	25



45-2000

## Dual Hose Adapter

Adapters for rear exhaust non-reversible models for separate inlet and exhaust hoses. Provides piped exhaust for clean of white room applications, power plants, etc.

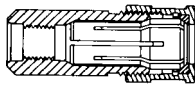
Part Number: 14-2263  
 Motor Series: 21 & 22  
 Inlet Size: 1/4" NPT  
 Exhaust Size: 3/8" NPT



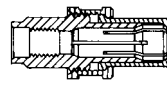
14-2263



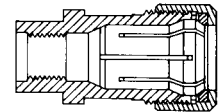
204



304



120



Part Number	Size	Capacity	
		min.	max.
<b>Termination 01 – Series 200 Collets</b>			
204	1/8"	3/32"	1/8"
205	5/32"	1/8"	5/32"
206	3/16"	5/32"	3/16"
207	7/32"	3/16"	7/32"
208	1/4"	7/32"	1/4"
209	9/32"	1/4"	9/32"
210	5/16"	9/32"	5/16"
211	11/32"	5/16"	11/32"
212	3/8"	11/32"	3/8"
213	6mm	—	—
216	6mm	—	—

Part Number	Size	Capacity	
		min.	max.
<b>Termination 36 – Series 300 Collets</b>			
301	3/64"	1/64"	3/64"
302	5/64"	3/64"	5/64"
303	3/32"	1/16"	3/32"
304	1/8"	3/32"	1/8"
305	5/32"	1/8"	5/32"
306	3/16"	5/32"	3/16"
307	7/32"	3/16"	7/32"
308	1/4"	7/32"	1/4"
310	6mm	—	—
311	3mm	—	—

Part Number	Size	Capacity	
		min.	max.
<b>Termination 62 – Series K Collets</b>			
120	1/8"	3/32"	1/8"
121	3/16"	5/32"	3/16"
122	1/4"	7/32"	1/4"
123	5/16"	9/32"	5/16"
124	3/8"	11/32"	3/8"
125	7/16"	13/32"	7/16"
126	1/2"	15/32"	1/2"
127	9/16"	17/32"	9/16"
133	6mm	—	—
134	8mm	—	—
135	10mm	—	—
136	12mm	—	—



45-021

## Hose Line Lubricator

**45-0201 – 1/4" NPTF**

**45-0301 – 3/8" NPTF**

Mounts in Hose Line. One ounce reservoir good for average 8-hour shift. Use in locations where it is inconvenient to use a standard air line lubricator.



## Push Pull Sleeve Valve

**14-2209**

Air inlet 1/4" female NPT; outlet is 1/4" male NPTF; stainless steel sleeve body; oil resistant O-rings.

## Air Pressure Needle Gauge

**14-0612**

Used for checking air pressure in the air hose close to tool, while tool is running. Furnished with metal guard and carrying case.



## Push Type Grease Gun

**45-0982**

For gear lubrication, for small flush type fittings. Can be operated with one hand. **45-0983 GEAR GREASE** for lubrication of planetary gearing.



## Hose line filter

**45-0211**

Contains a replaceable filter cartridge. Will not remove water. To be used where it is inconvenient to use standard air line filter. Filter complete with cartridge No. 45-0211. Replacement cartridge only, No. 45-0212.

## Flexible air hose

No.	Hose I.D.	Length	Fittings
45-1307	3/16	7	1/4 x 1/8
45-1408	1/4	8	1/4 x 1/4
45-1508	5/16	8	1/4 x 1/4
45-1610	3/8	10	3/8 x 3/8
45-1620	3/8	20	3/8 x 3/8
45-1630	3/8	30	3/8 x 3/8
45-1812	1/2	12	1/2 x 1/2
45-1825	1/2	25	1/2 x 1/2
45-1850	1/2	50	1/2 x 1/2



45-1408

## Lubricating oil

**45-0918 - Qt.**

**45-0919 - Gal.**

An excellent lubricant for pneumatic tools, non-tacky, non-gumming. Use full strength in automatic lubricators.



45-0918



## Gear grease

**45-0992**

**14-1/2 oz. cartridge**

Excellent grease for hi-speed gears after every 8 hours of operation.

Quick Disconnect Fittings				
Type of Fitting	Thd	Nominal Size		
		1/4	3/8	1/2

### Male Pipe Threads

Coupler	1/8	45-0710	—	—
Coupler	1/4	45-0711	45-0713	—
Coupler	3/8	45-0712	45-0714	45-0716
Coupler	1/2	—	45-0715	45-0717

### Female Pipe Threads

Coupler	1/8	45-0730	—	—
Coupler	1/4	45-0731	45-0733	—
Coupler	3/8	45-0732	45-0734	45-0736
Coupler	1/2	—	45-0735	45-0737

### Male Pipe Threads

Nipple	1/8	45-0720	45-0723	—
Nipple	1/4	45-0721	45-0724	—
Nipple	3/8	45-0722	45-0725	45-0726
Nipple	1/2	—	—	45-0727

### Female Pipe Threads

Nipple	1/8	45-0740	45-0743	—
Nipple	1/4	45-0741	45-0744	—
Nipple	3/8	45-0742	45-0745	45-0746
Nipple	1/2	—	—	45-0747

### With Hose Barbs

Nipple	1/4	45-0748	45-0750	—
Nipple	3/8	45-0749	45-0751	45-0752
Nipple	1/2	—	—	45-0753

# Rotary Vane

## BUCKEYE®

### 21MF-900/910 Series

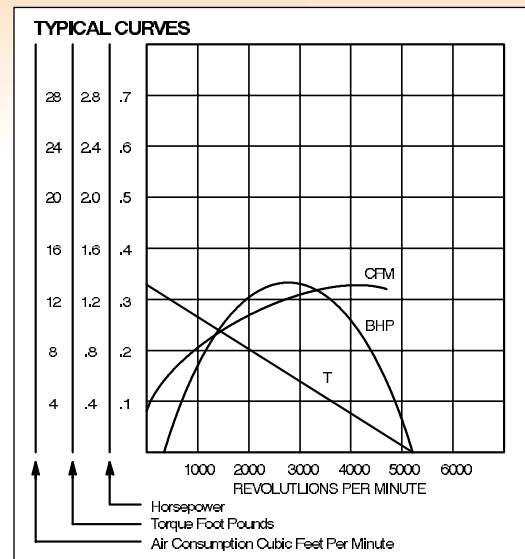
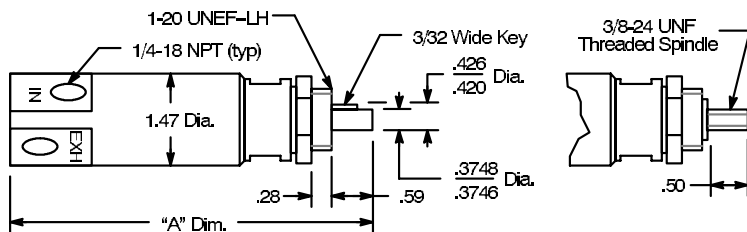
- **Maximum Motor Power**  
0.3 hp  
0.22 kW
- **Torque Range**  
0.24 – 11.3 ft. lbs.  
0.3 – 15.3 Nm
- **Non-Reversible**
- **Side Exhaust**
- **Threaded or Keyed Spindle**



21MF-900

Speed Code	"A" Dim.
Code 0, 1, 2 & 3	5.69
Code 4	6.06
Code 5, 6 & 7	6.75

Speed code refers to last digit in model number.



Model Number		RPM		Stall Torque		Weight		Gear Ratio
3/8" Threaded	3/8" Keyed	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg	
<b>Spindle – RH Rotation</b>								
21MF-900	21MF-910	12000	24000	.24	.3	1.7	.771	—
21MF-901	21MF-911	2375	4750	1.30	1.8	1.7	.771	5.0:1
21MF-902	21MF-912	1750	3500	1.70	2.3	1.7	.771	6.8:1
21MF-903	21MF-913	1400	2800	2.10	2.8	1.7	.771	8.6:1
21MF-904	21MF-914	1050	2100	2.80	3.8	1.8	.816	11.4:1
21MF-905	21MF-915	450	900	6.90	9.4	2.0	.907	26.6:1
21MF-906	21MF-916	325	650	9.30	12.6	2.0	.907	36.9:1
21MF-907	21MF-917	250	500	11.30	15.3	2.0	.907	48.0:1

#### GENERAL:

Air Inlet: 1/4" NPT  
Air consumption: 12 cfm (.34 m<sup>3</sup>/min)  
Offset (Side-to-Center) – 47/64"  
Achieves full speed within a half revolution

All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

1015869 Muffler

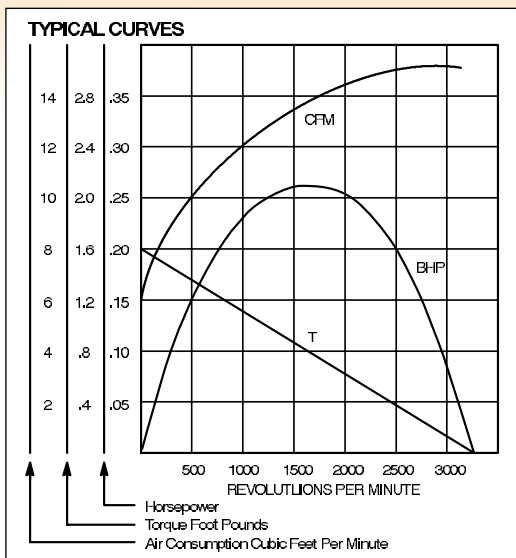
## BUCKEYE®

### 21MR-910 Series

- **Maximum Motor Power**  
0.25 hp  
0.19 kW
- **Torque Range**  
1.2 – 10.0 ft. lbs.  
1.6 – 13.6 Nm
- **Reversible**
- **Side Exhaust**
- **Keyed Spindle**

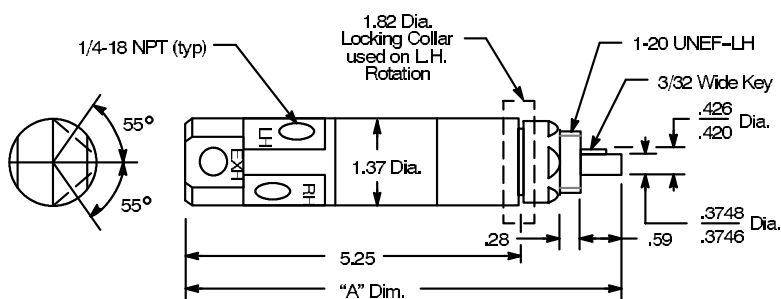


21MR-911



Speed Code	"A" Dim.
Code 1, 2 & 3	6.50
Code 4	6.75
Code 5, 6 & 7	7.56

Speed code refers to last digit in model number.



Model Number	RPM		Stall Torque		Weight		Gear Ratio
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg	
<b>3/8" Keyed Spindle</b>							
21MR-911	2000	4000	1.20	1.6	1.9	.862	5.0:1
21MR-912	1500	3000	1.60	2.2	1.9	.862	6.8:1
21MR-913	1225	2450	1.90	2.6	1.9	.862	8.6:1
21MR-914	900	1800	2.50	3.4	2.0	.907	11.4:1
21MR-915	375	750	6.20	8.4	2.2	.998	26.6:1
21MR-916	275	550	8.30	11.3	2.2	.998	36.9:1
21MR-917	200	400	10.00	13.6	2.2	.998	48.0:1

**GENERAL:**

Air Inlet: 1/4" NPT  
 Air consumption: 14 cfm (.40 m<sup>3</sup>/min)  
 Offset (side-to-center) – 15/16"

Can be reversed instantaneously and continuously.  
 All tools performance rated @ 90psi (620 kPa) air pressure.

**STANDARD EQUIPMENT:**

1015748 Muffler

# Rotary Vane

## BUCKEYE®

### 31MF-900/910 Series

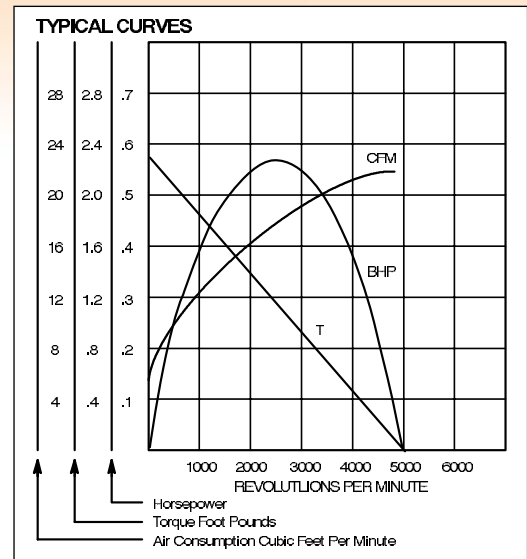
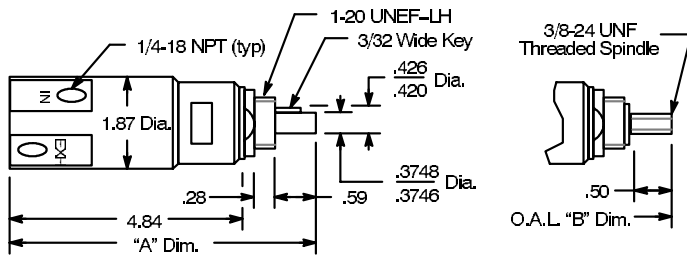
- **Maximum Motor Power**  
0.5 hp  
0.37 kW
- **Torque Range**  
0.5 – 23.6 ft. lbs.  
0.68 – 32 Nm
- **Non-Reversible**
- **Side Exhaust**
- **Threaded or Keyed Spindle**



31MF-900

Speed Code	"A" Dim.	"B" Dim.
Code 0, 1, 2 & 3	6.18	6.06
Code 4	6.87	6.75
Code 5, 6 & 7	7.56	7.44

Speed code refers to last digit in model number.



Model Number		RPM		Stall Torque		Weight		Gear Ratio
3/8" Threaded	3/8" Keyed	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg	

#### Spindle – RH Rotation

31MF-900	31MF-910	10000	20000	0.5	0.68	2.7	1.225	—
31MF-901	31MF-911	2500	5000	2.2	3.00	2.7	1.225	4.0:1
31MF-902	31MF-912	1500	3000	3.5	4.70	2.7	1.225	6.44:1
31MF-903	31MF-913	925	1850	5.9	8.00	2.7	1.225	10.8:1
31MF-904	31MF-914	700	1400	7.1	9.60	2.8	1.270	14.28:1
31MF-905	31MF-915	550	1100	8.8	11.90	3.1	1.406	16.0:1
31MF-906	31MF-916	375	750	14.1	19.10	3.1	1.406	25.73:1
31MF-907	31MF-917	225	450	23.6	32.00	3.1	1.406	43.06:1

#### GENERAL:

Air Inlet: 1/4" NPT  
Air consumption: 18 cfm (.51 m<sup>3</sup>/min)  
Offset (Side-to-Center) – 15/16"

Archives full speed within a half revolution  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

1015869 Muffler

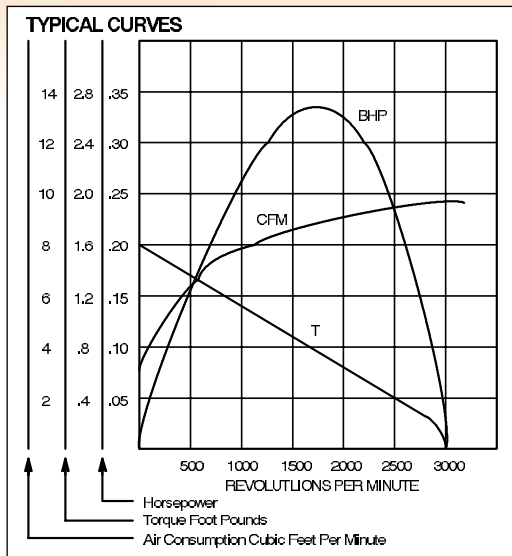
## BUCKEYE®

### 31MR-910 Series

- **Maximum Motor Power**  
0.3 hp  
0.22kW
- **Torque Range**  
2 – 21.6 ft. lbs.  
2.7 – 29.3 Nm
- **Reversible**
- **Side Exhaust**
- **Keyed Spindle**

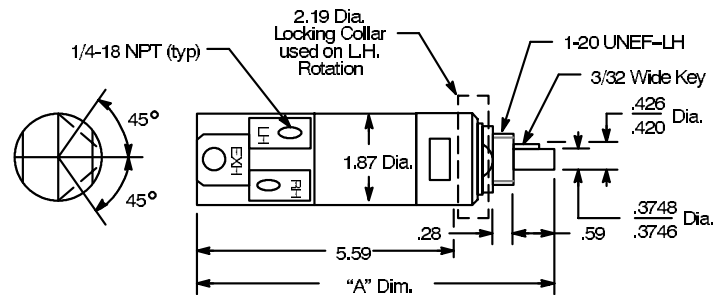


31MR-911



Speed Code	"A" Dim.
Code 1, 2 & 3	6.93
Code 4	7.62
Code 5, 6 & 7	8.31

Speed code refers to last digit in model number.



Model Number	RPM		Stall Torque		Weight		Gear Ratio
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg	
<b>3/8" Keyed Spindle</b>							
31MR-911	1750	3500	2.0	2.7	3.5	1.588	4.0:1
31MR-912	1075	2150	3.2	4.3	3.5	1.588	6.44:1
31MR-913	650	1300	5.4	7.3	3.5	1.588	10.8:1
31MR-914	500	1000	6.5	8.8	3.6	1.633	14.28:1
31MR-915	425	850	8.0	10.8	3.8	1.723	16.0:1
31MR-916	250	500	12.8	17.4	3.8	1.723	25.73:1
31MR-917	150	300	21.6	29.3	3.8	1.723	43.06:1

**GENERAL:**

Air Inlet: 1/4" NPT  
Air consumption: 21 cfm (.59 m<sup>3</sup>/min)  
Offset (side-to-center) – 1-1/8"

Can be reversed instantaneously and continuously.  
All tools performance rated @ 90psi (620 kPa) air pressure.

**STANDARD EQUIPMENT:**

1015869 Muffler

# Rotary Vane

## BUCKEYE®

### 41MF-900/910 Series

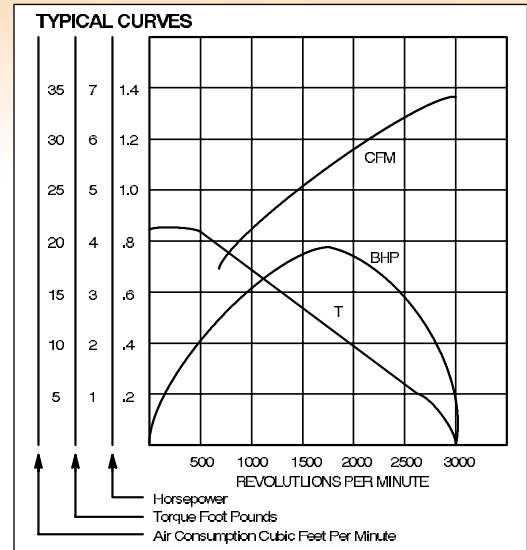
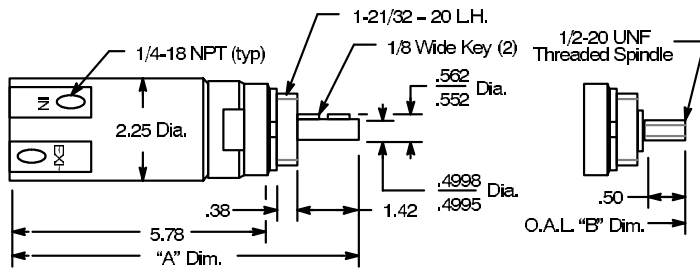
- **Maximum Motor Power**  
0.75 hp  
0.56 kW
- **Torque Range**  
0.7 – 37.8 ft. lbs.  
0.95 – 51.3 Nm
- **Non-Reversible**
- **Side Exhaust**
- **Threaded or Keyed spindle**



41MF-900

Speed Code	"A" Dim.	"B" Dim.
Code 0, 1, 2 & 3	7.73	6.98
Code 4	8.23	7.48
Code 5, 6, 7 & 8	9.23	8.48

Speed code refers to last digit in model number.



Model Number		RPM		Stall Torque		Weight		Gear Ratio
1/2" Threaded	1/2" Keyed	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg	
<b>Spindle – RH Rotation</b>								
41MF-900	41MF-910	9000	18000	0.7	0.95	4.9	2.222	—
41MF-901	41MF-911	2250	4500	2.8	3.80	4.9	2.222	4.0:1
41MF-902	41MF-912	1500	3000	4.2	5.70	4.9	2.222	6.0:1
41MF-903	41MF-913	1000	2000	6.3	8.50	4.9	2.222	9.0:1
41MF-904	41MF-914	750	1500	8.7	11.80	4.9	2.222	12.37:1
41MF-905	41MF-915	500	1000	11.2	15.20	5.4	2.450	16.0:1
41MF-906	41MF-916	363	725	16.8	22.80	5.4	2.450	24.7:1
41MF-907	41MF-917	250	500	25.2	34.20	5.4	2.450	36.0:1
41MF-908	41MF-918	165	330	37.8	51.30	5.4	2.450	54.5:1

#### GENERAL:

Air Inlet: 1/4" NPT  
Air consumption: 27 cfm (.76 m<sup>3</sup>/min)  
Offset (side-to-center) – 1-7/32"

Archives full speed within a half revolution  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

1015869 Muffler



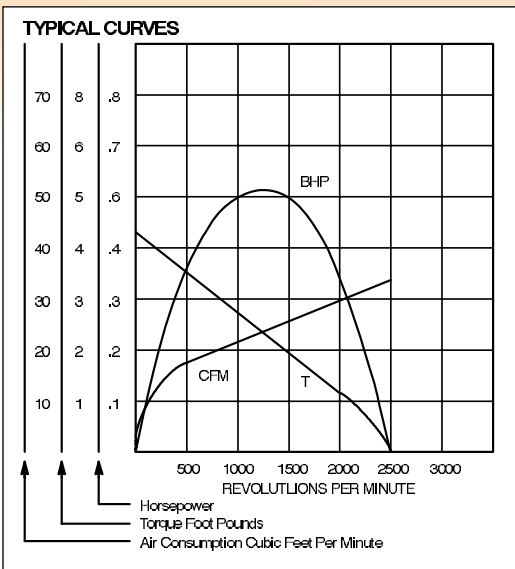
## BUCKEYE®

### 41MR-910 Series

- **Maximum Motor Power**  
0.6 hp  
0.45 kW
- **Torque Range**  
2.9 – 39.6 ft. lbs.  
3.9 – 53.7 Nm
- **Reversible**
- **Side Exhaust**
- **Keyed Spindle**

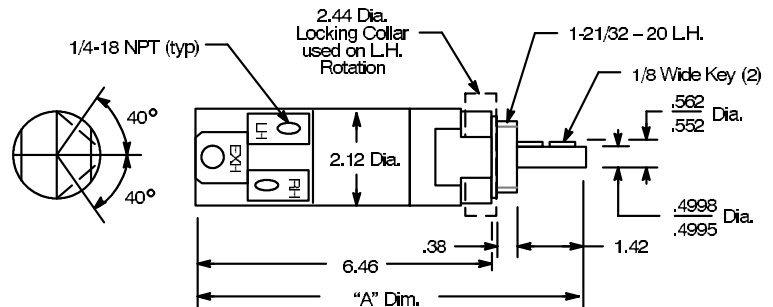


41MR-911



Speed Code	"A" Dim.
Code 1, 2 & 3	8.42
Code 4	8.92
Code 5, 6 & 7	9.92

Speed code refers to last digit in model number.



Model Number	RPM		Stall Torque		Weight		Gear Ratio
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg	
<b>1/2" Keyed Spindle</b>							
41MR-911	1875	3750	2.9	3.9	4.9	2.222	4.0:1
41MR-912	1250	2500	4.4	6.0	4.9	2.222	6.0:1
41MR-913	825	1650	6.6	8.9	4.9	2.222	9.0:1
41MR-914	600	1200	9.1	12.3	4.9	2.222	12.37:1
41MR-915	450	900	11.7	15.9	5.4	2.450	16.0:1
41MR-916	313	625	17.6	23.9	5.4	2.450	24.7:1
41MR-917	200	400	26.4	35.8	5.4	2.450	36.0:1
41MR-918	138	275	39.6	53.7	5.4	2.450	54.5:1

**GENERAL:**

Air Inlet: 1/4" NPT  
 Air consumption: 25 cfm (.71 m<sup>3</sup>/min)  
 Offset (Side-to-Center) – 1-7/32"

Can be reversed instantaneously and continuously.  
 All tools performance rated @ 90psi (620 kPa) air pressure

**STANDARD EQUIPMENT:**

1024078 Muffler

# Rotary Vane

## BUCKEYE®

### 61MF-910 Series

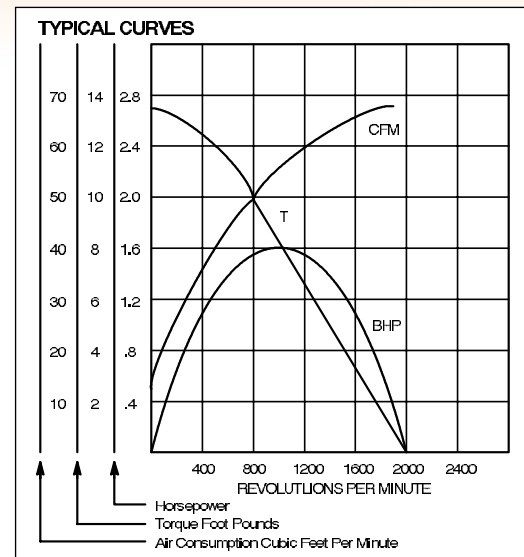
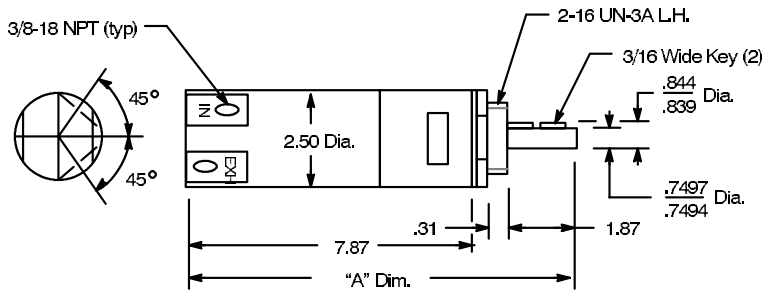
- **Maximum Motor Power**  
1.5 hp  
1.12 kW
- **Torque Range**  
6.9 – 110 ft. lbs.  
9.4 – 149.2 Nm
- **Non-Reversible**
- **Side Exhaust**
- **Keyed Spindle**



61MF-911

Speed Code	"A" Dim.
Code 1 & 2	10.41
Code 3, 4 & 5	12.28

Speed code refers to last digit in model number.



Model Number	RPM		Stall Torque		Weight		Gear Ratio
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg	
<b>3/4" Keyed Spindle – RH Rotation</b>							
61MF-911	1875	3700	6.9	9.4	8.0	3.629	4.0:1
61MF-912	925	1850	13.6	18.4	8.0	3.629	8.14:1
61MF-913	438	875	28.5	38.6	10.0	4.536	16.0:1
61MF-914	225	450	56.0	75.9	10.0	4.536	32.57:1
61MF-915	113	225	110.0	149.2	10.0	4.536	66.3:1

**GENERAL:**

Air Inlet: 3/8" NPT  
Air consumption: 55 cfm (1.56 m<sup>3</sup>/min)  
Offset (side-to-center) – 1-1/4"

Archives full speed within a half revolution  
All tools performance rated @ 90psi (620 kPa) air pressure.

**STANDARD EQUIPMENT:**

1015870 Muffler

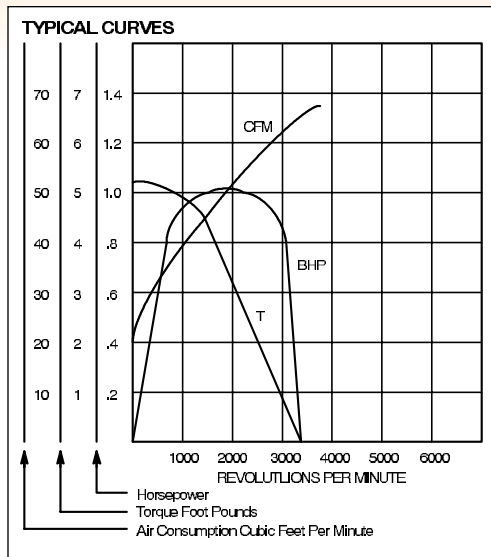
## BUCKEYE®

### 61MR-910 Series

- **Maximum Motor Power**  
1.0 hp  
0.75 kW
- **Torque Range**  
5.2 – 83 ft. lbs.  
7.1 – 112.5 Nm
- **Reversible**
- **Side Exhaust**
- **Keyed Spindle**

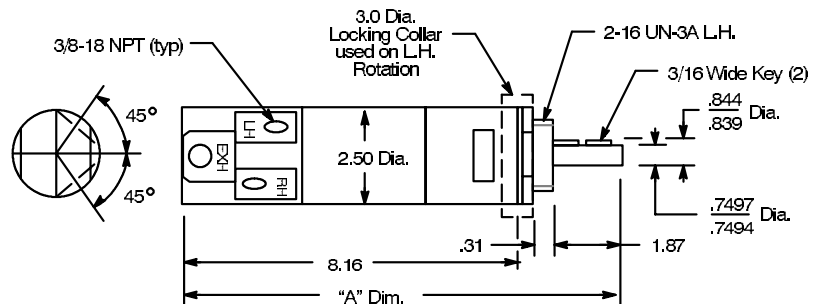


61MR-911



Speed Code	"A" Dim.
Code 1 & 2	10.70
Code 3, 4 & 5	12.59

Speed code refers to last digit in model number.



Model Number	RPM		Stall Torque		Weight		Gear Ratio
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg	
61MR-911	1700	3400	5.2	7.1	8.5	3.856	4.0:1
61MR-912	850	1700	10.2	13.8	8.5	3.856	8.14:1
61MR-913	413	825	21.5	29.2	10.5	4.763	16.0:1
61MR-914	200	400	42.4	57.5	10.5	4.763	32.57:1
61MR-915	100	200	83.0	112.5	10.5	4.763	66.3:1

#### GENERAL:

Air Inlet: 3/8" NPT  
 Air consumption: 50 cfm (1.42 m<sup>3</sup>/min)  
 Offset (Side-to-Center) – 1-1/2"

Can be reversed instantaneously and continuously.  
 All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

1015869 Muffler

# Accessories for Buckeye® Motors

Each air motor is supplied with its appropriate muffler. Choice of foot mount brackets or flange mount is provided as no-cost option with purchase of motor...if specified.

## Muffler Identification

A muffler is furnished for the common exhaust outlet on all reversible motors. If a 4-way valve is preferred to facilitate reversing, a muffler will be needed on the exhaust outlet of the valve. Flow restriction through the valve and muffler must be minimized in order to maintain maximum power output. If a valve is not used, another muffler will be required on the inlet port not being utilized for optional inlet flow.



Part Number	Motor Series
-------------	--------------

### Mufflers

1015869	21MF
1015748	21MR
1015869	31MF
1015869	31MR
1015869	41MF
1024078	41MR
1015870	61MF
1015869	61MR

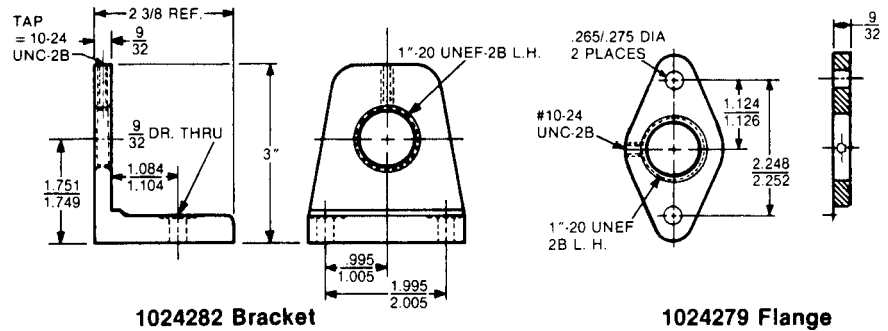
### Foot Mounts

1024282	21MF & 21MR
1024282	31MF & 31MR
1024283	41MF & 41MR
1024284	61MF & 61MR

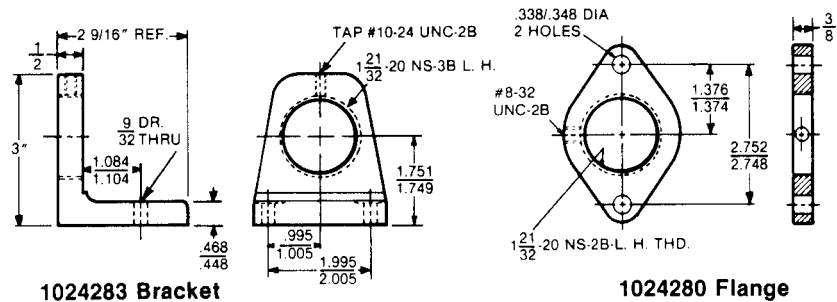
### Flange Mounts

1024279	21MF & 21MR
1024279	31MF & 31MR
1024280	41MF & 41MR
1024281	61MF & 61MR

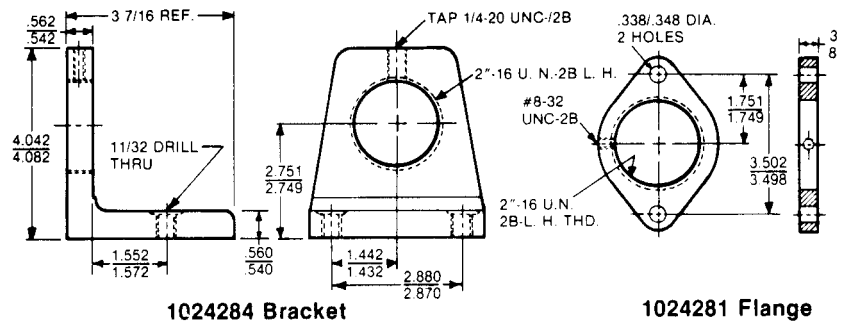
## 21 and 31 Series Foot Mount/Flange Mount Brackets



## 41 Series Foot Mount/Flange Mount Brackets



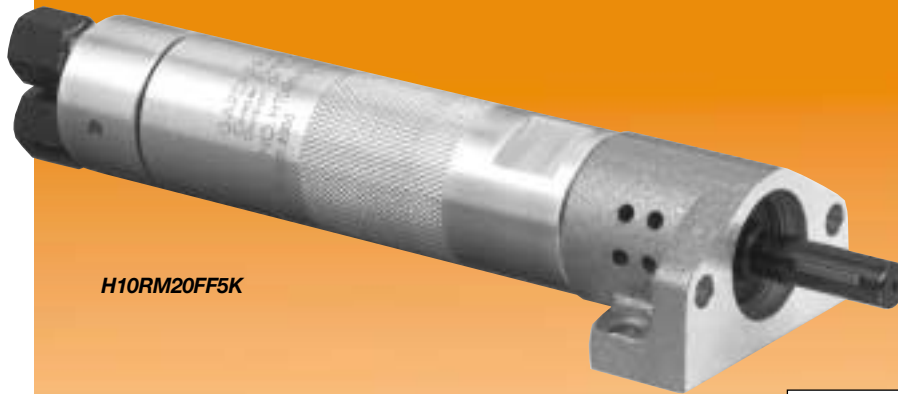
## 61 Series Foot Mount/Flange Mount Brackets



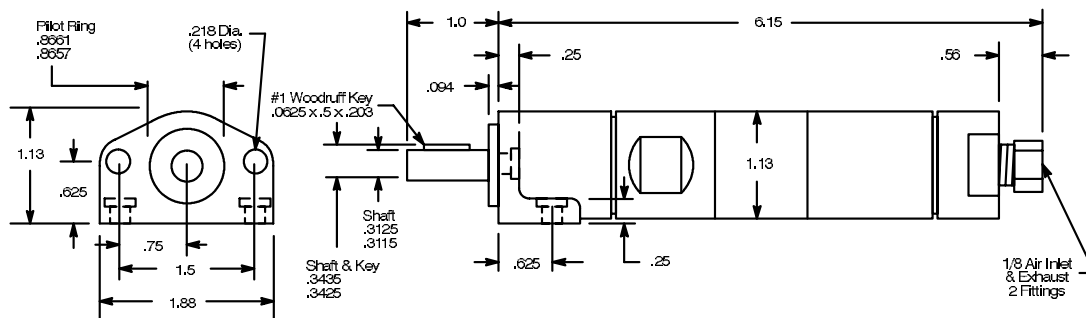
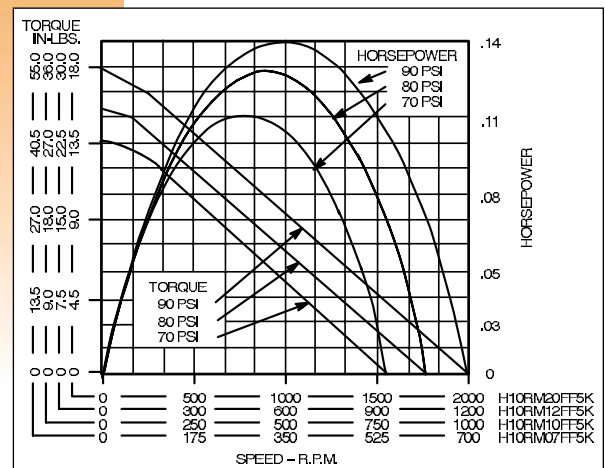
## GARDNER-DENVER®

### H10 Series

- **Maximum Motor Power**  
0.14 hp  
0.10 kW
- **Torque Range**  
18 – 55 ft. lbs.  
2.0 – 6.21 Nm
- **Reversible**
- **Rear Exhaust**



H10RM20FF5K



Model Number	RPM		Stall Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	in. lbs.	Nm	lbs.	kg		lbs.	kg
H10RM20FF5K	1000	2000	18	2.00	.94	.43	10.56:1	170	77
H10RM12FF5K	600	1200	30	3.39	.94	.43	17.875:1	170	77
H10RM10FF5K	500	1000	36	4.07	.94	.43	21.12:1	170	77
H10RM07FF5K	350	700	55	6.21	.94	.43	32.2:1	170	77

#### Foot and Flange Mounting – 5/16" Diameter Keyed Spindle

\* All models assume overhung load located at .56" (14.29mm) from face of motor.

#### GENERAL:

Air Inlet: 1/8" NPT  
Air consumption: 11 cfm (.31 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

Air strainer intake fitting. Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

Speed Regulator – Part A20150  
Pilot Ring – Part 29836  
Lubricating Oil – Part 533485 (1 gallon)

Additional Accessories: pages 67-68

# Rotary Vane

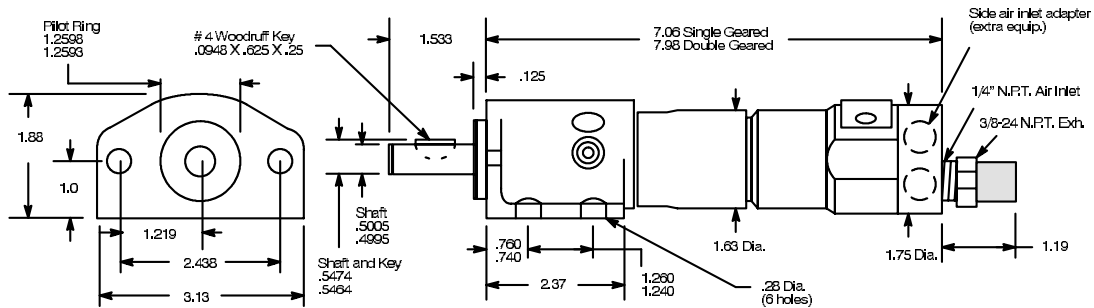
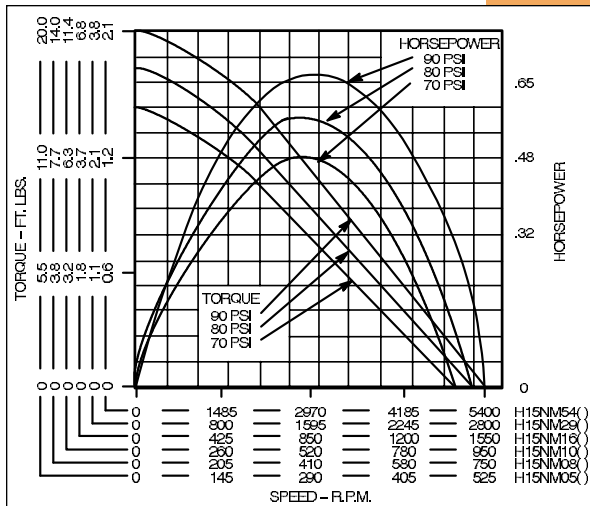
## GARDNER-DENVER®

### H15 Series

- **Maximum Motor Power**  
0.65 hp  
0.48 kW
- **Torque Range**  
2.1 – 20 ft. lbs.  
2.8 – 27 Nm
- **Non-Reversible**
- **Rear Exhaust**



H15NM54AFF8K



Model Number	RPM		Stall Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg		lbs.	kg

#### Foot and Flange Mounting – 1/2" Diameter Keyed Spindle

H15NM54AFF8K	2700	5400	2.1	2.8	2.54	1.15	3.88:1	345	156
H15NM29AFF8K	1450	2900	3.8	5.1	2.54	1.15	7.12:1	345	156
H15NM16AFF8K	775	1550	6.8	9.2	2.93	1.33	13.39:1	345	156
H15NM10AFF8K	475	950	11.4	15.4	2.93	1.33	22.3:1	345	156
H15NM08AFF8K	375	750	14.0	18.9	2.93	1.33	27.66:1	345	156
H15NM05AFF8K	263	525	20.0	27.0	2.93	1.33	38.87:1	345	156

\* All models assume overhung load located at .82" (21.04mm) from face of motor.

#### GENERAL:

Air Inlet: 1/4" NPT  
Air consumption: 29 cfm (.82 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

Air strainer intake fitting. Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

Speed Regulator – Part 504938  
Pilot Ring – Part 29864  
Lubricating Oil – Part 533485 (1 gallon)  
Side Air Inlet Adapter – Part 537451  
Additional Accessories: pages 67-68

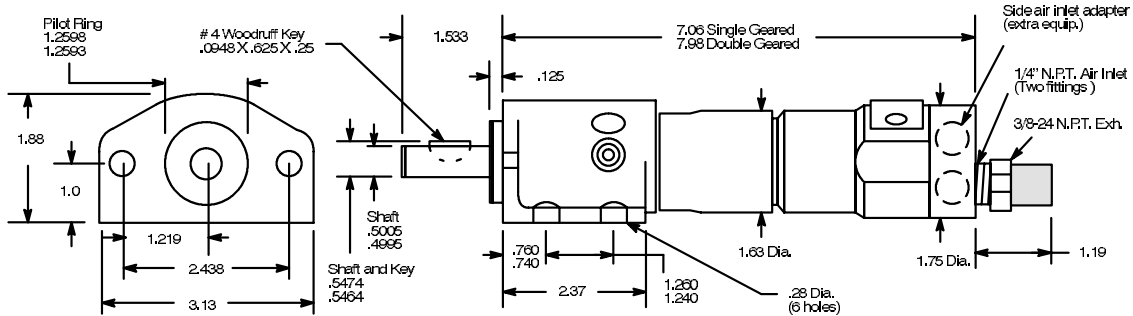
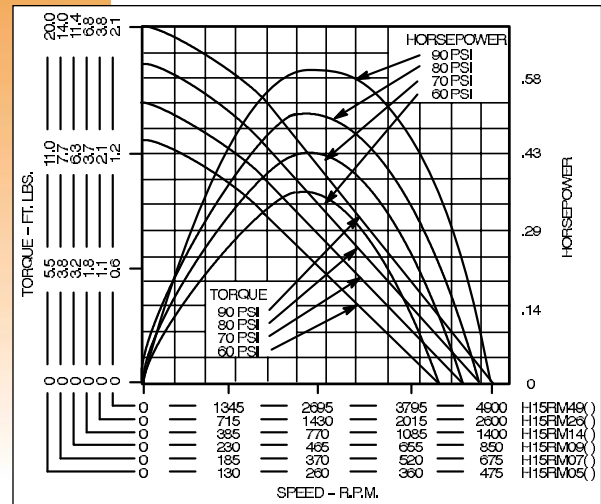
## GARDNER-DENVER®

### H15 Series

- Maximum Motor Power  
0.58 hp  
0.43 kW
- Torque Range  
2.1 – 20 ft. lbs.  
2.8 – 27 Nm
- Reversible
- Rear Exhaust



H15RM49AFF8K



Model Number	RPM		Stall Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg		lbs.	kg

#### Foot and Flange Mounting – 1/2" Diameter Keyed Spindle

H15RM49AFF8K	2450	4900	2.1	2.8	2.54	1.15	3.88:1	345	156
H15RM26AFF8K	1300	2600	3.8	5.1	2.54	1.15	7.12:1	345	156
H15RM14AFF8K	700	1400	6.8	9.2	2.93	1.33	13.39:1	345	156
H15RM09AFF8K	425	850	11.4	15.4	2.93	1.33	22.3:1	345	156
H15RM07AFF8K	338	675	14.0	18.9	2.93	1.33	27.66:1	345	156
H15RM05AFF8K	238	475	20.0	27.0	2.93	1.33	38.87:1	345	156

\* All models assume overhung load located at .82" (21.04mm) from face of motor.

#### GENERAL:

Air Inlet: 1/4" NPT  
Air consumption: 27 cfm (.76 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

Air strainer intake fitting. Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

Speed Regulator – Part 504938  
Pilot Ring – Part 29864  
Lubricating Oil – Part 533485 (1 gallon)  
Side Air Inlet Adapter – Part 537451

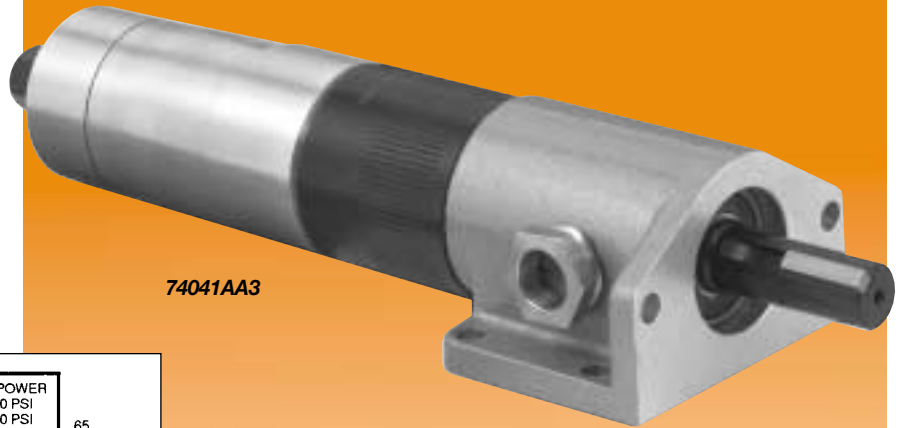
Additional Accessories: pages 67-68

# Rotary Vane

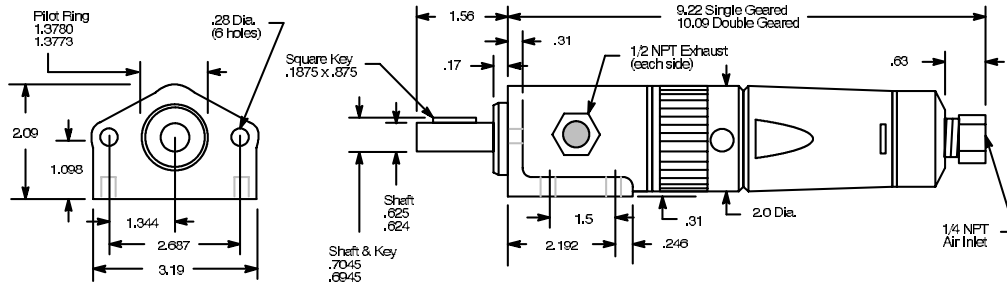
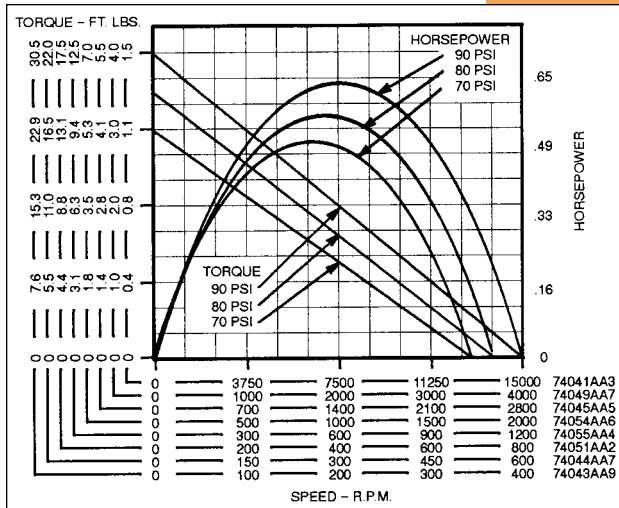
## GARDNER-DENVER®

### C3 Series

- **Maximum Motor Power**  
0.65 hp  
0.48 kW
- **Torque Range**  
1.5 – 30.5 ft. lbs.  
2.0 – 42 Nm
- **Non-Reversible**
- **Side Exhaust**



74041AA3



Model Number	RPM		Stall Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg		lbs.	kg

#### Foot and Flange Mounting – 5/8" Diameter Keyed Spindle

74041AA3	7500	15000	1.5	2.0	4.00	1.8	—	470	213
74049AA7	2000	4000	4.0	5.4	4.00	1.8	3.55:1	470	213
74045AA5	1400	2800	5.5	7.5	4.00	1.8	5:1	470	213
74054AA6	1000	2000	7.0	9.5	4.00	1.8	6.6:1	470	213
74055AA4	600	1200	12.5	17.0	4.50	2.0	12.56:1	470	213
74051AA2	400	800	17.5	24.0	4.50	2.0	17.74:1	470	213
74044AA7	300	600	22.0	30.0	4.50	2.0	23.47:1	470	213
74043AA9	200	400	30.5	42.0	4.50	2.0	33:1	470	213

\* All models assume overhung load located at .94" (23.81mm) from face of motor.

#### GENERAL:

Air Inlet: 1/4" NPT  
Air consumption: 28 cfm (.79 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

Air strainer intake fitting. Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

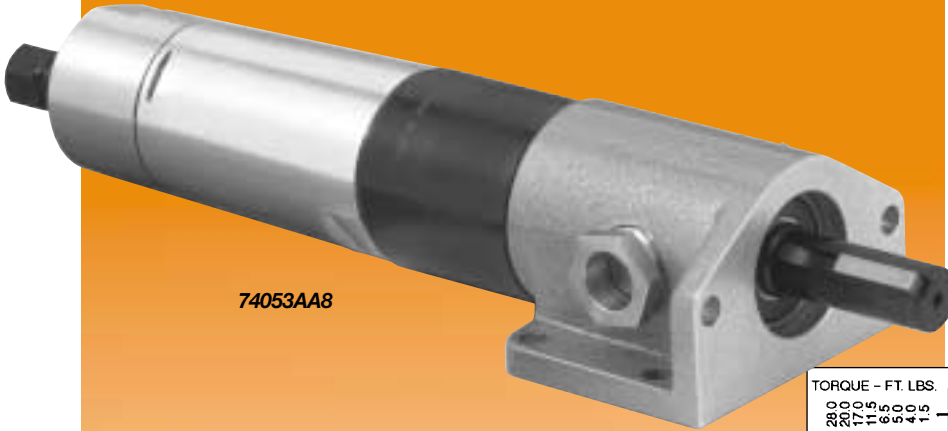
Speed Regulator – Part 504938  
Pilot Ring – Part 30262  
Lubricating Oil – Part 533485 (1 gallon)  
Additional Accessories: pages 67-68



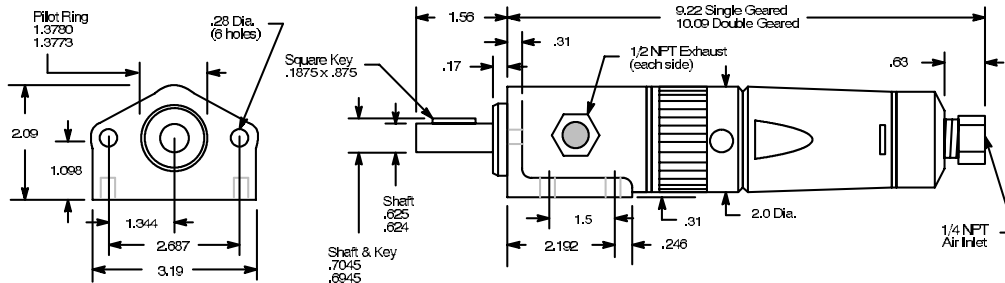
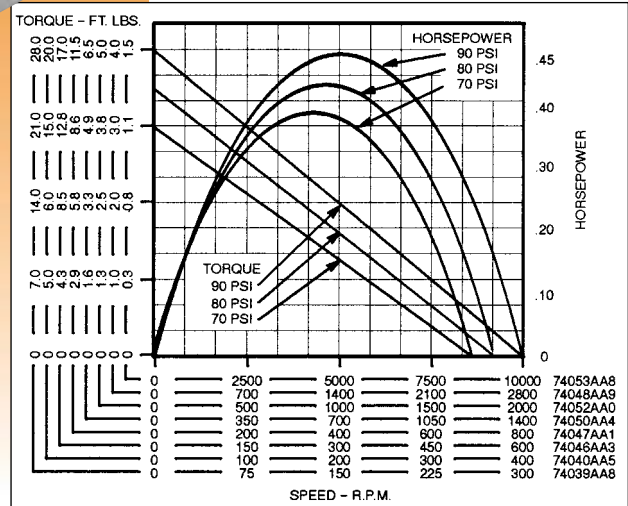
## GARDNER-DENVER®

### C3 Series

- Maximum Motor Power  
0.45 hp  
0.34 kW
- Torque Range  
1.5 – 28 ft. lbs.  
2.0 – 38 Nm
- Reversible
- Side Exhaust



74053AA8



Model Number	RPM		Stall Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg		lbs.	kg
74053AA8	5000	10000	1.5	2.0	4.13	1.9	—	470	213
74048AA9	1400	2800	4.0	5.4	4.13	1.9	3.55:1	470	213
74052AA0	1000	2000	5.5	6.8	4.13	1.9	5:1	470	213
74050AA4	700	1400	6.5	8.8	4.13	1.9	6.6:1	470	213
74047AA1	400	800	11.5	15.6	4.63	2.1	12.56:1	470	213
74046AA3	300	600	17.0	23.0	4.63	2.1	17.74:1	470	213
74040AA5	200	400	20.0	27.0	4.63	2.1	23.47:1	470	213
74039AA8	150	300	28.0	38.0	4.63	2.1	33:1	470	213

#### Foot and Flange Mounting – 5/8" Diameter Keyed Spindle

74053AA8	5000	10000	1.5	2.0	4.13	1.9	—	470	213
74048AA9	1400	2800	4.0	5.4	4.13	1.9	3.55:1	470	213
74052AA0	1000	2000	5.5	6.8	4.13	1.9	5:1	470	213
74050AA4	700	1400	6.5	8.8	4.13	1.9	6.6:1	470	213
74047AA1	400	800	11.5	15.6	4.63	2.1	12.56:1	470	213
74046AA3	300	600	17.0	23.0	4.63	2.1	17.74:1	470	213
74040AA5	200	400	20.0	27.0	4.63	2.1	23.47:1	470	213
74039AA8	150	300	28.0	38.0	4.63	2.1	33:1	470	213

\* All models assume overhung load located at .94" (23.81mm) from face of motor.

#### GENERAL:

Air Inlet: 1/4" NPT  
Air consumption: 28 cfm (.79 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

Air strainer intake fitting. Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

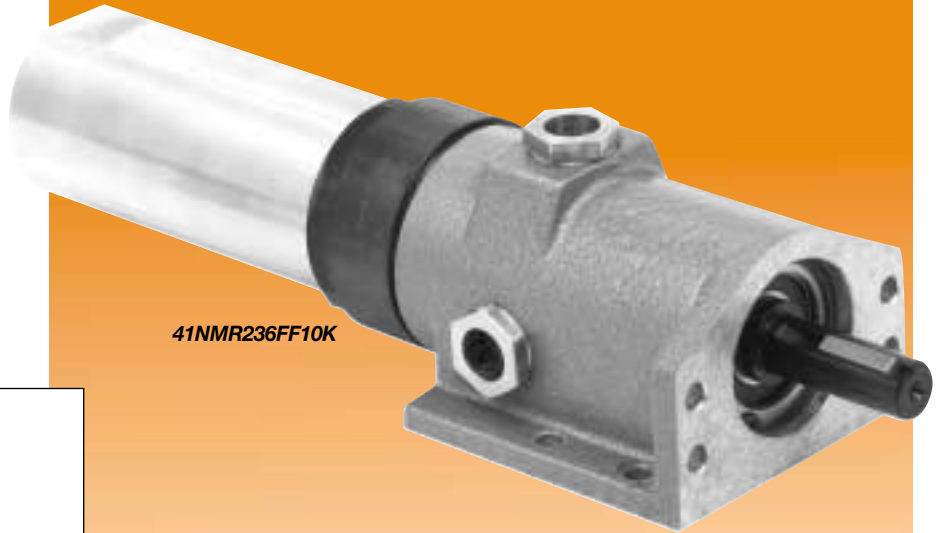
Speed Regulator – Part 504938  
Pilot Ring – Part 30262  
Lubricating Oil – Part 533485 (1 gallon)  
Additional Accessories: pages 67-68

# Rotary Vane

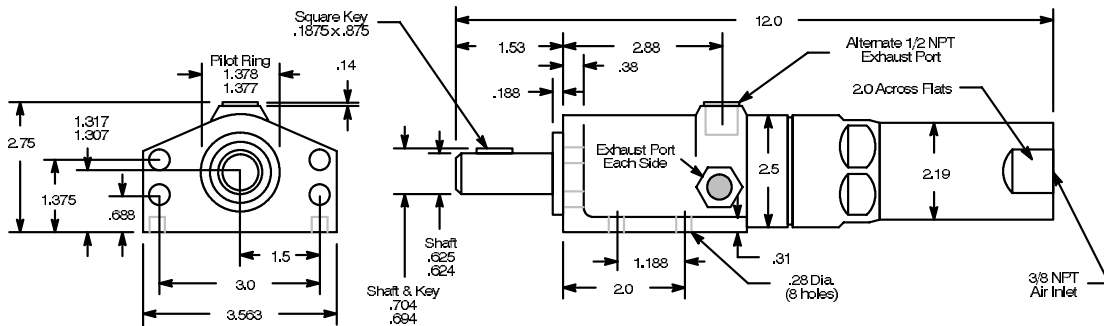
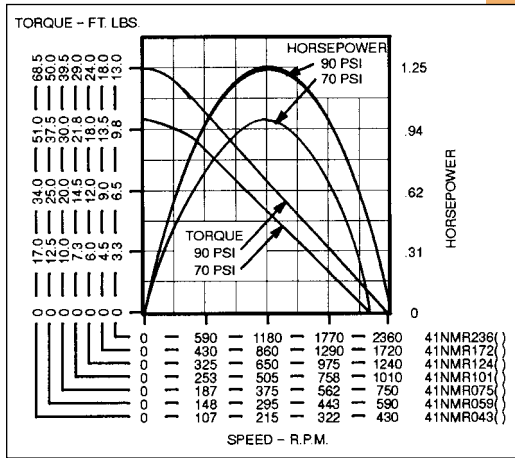
## GARDNER-DENVER®

### 41 Series

- **Maximum Motor Power**  
1.25 hp  
0.93 kW
- **Torque Range**  
13 – 68.5 ft. lbs.  
17.6 – 92.8 Nm
- **Non-Reversible**
- **Side Exhaust**



41NMR236FF10K



Model Number	RPM		Stall Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg		lbs.	kg

#### Foot and Flange Mounting – 5/8" Diameter Keyed Spindle

41NMR236FF10K	1180	2360	13.0	17.6	6.25	2.84	7.2:1	600	272
41NMR172FF10K	860	1720	18.0	24.4	6.25	2.84	9.86:1	600	272
41NMR124FF10K	650	1240	24.0	32.5	6.25	2.84	13.7:1	600	272
41NMR101FF10K	505	1010	29.0	39.3	6.50	2.95	16.8:1	600	272
41NMR075FF10K	375	750	39.5	53.6	6.50	2.95	22.6:1	600	272
41NMR059FF10K	295	590	50.0	67.8	6.50	2.95	28.4:1	600	272
41NMR043FF10K	215	430	68.5	92.8	6.50	2.95	39:1	600	272

\* All models assume overhung load located at .94" (23.81mm) from face of motor.

#### GENERAL:

Air Inlet: 3/8" NPT  
Air consumption: 40 cfm (1.13 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

Air strainer intake fitting. Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

Pilot Ring – Part 520886  
Lubricating Oil – Part 533485 (1 gallon)

Additional Accessories: pages 67-68

## GARDNER-DENVER®

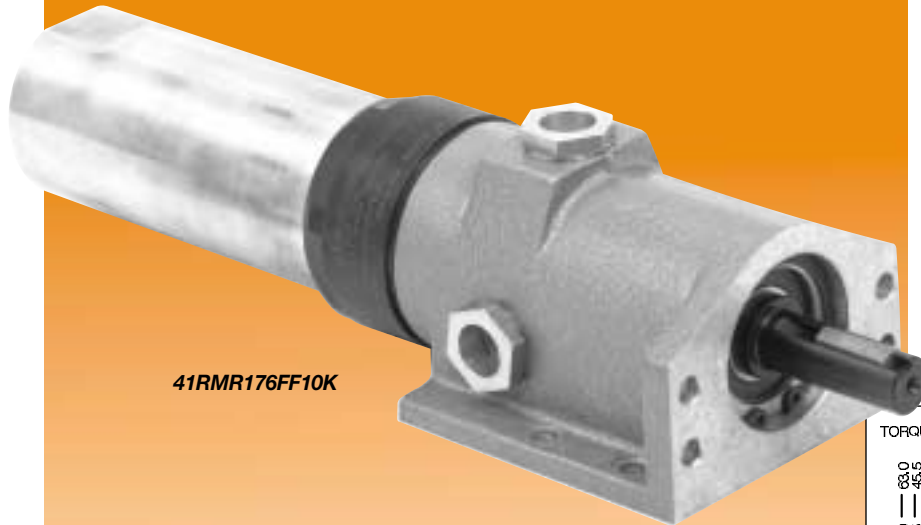
### 41 Series

■ **Maximum Motor Power**  
1.0 hp  
0.75 kW

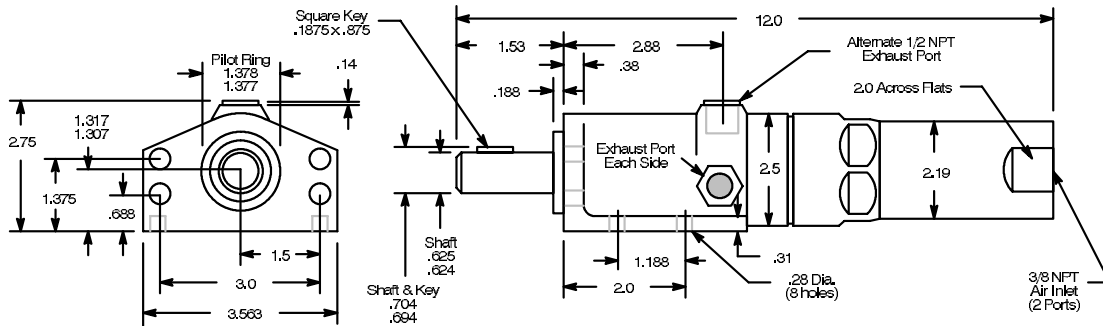
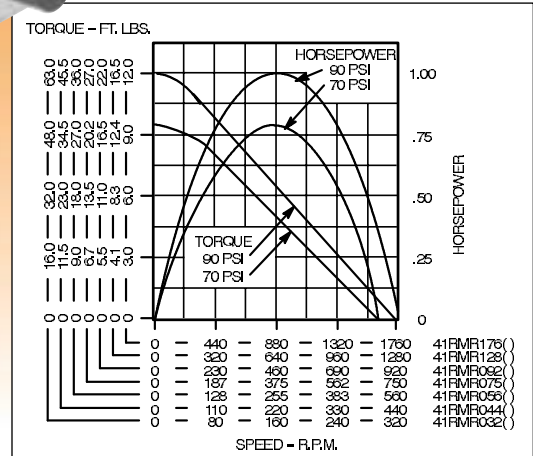
■ **Torque Range**  
12 – 63 ft. lbs.  
16.3 – 85.4 Nm

■ **Reversible**

■ **Side Exhaust**



41RMR176FF10K



Model Number	RPM		Stall Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	in. lbs.	Nm	lbs.	kg		lbs.	kg

#### Foot and Flange Mounting – 5/8" Diameter Keyed Spindle

41RMR176FF10K	880	1760	12.0	16.3	6.25	2.84	7.2:1	600	272
41RMR128FF10K	640	1280	16.5	22.4	6.25	2.84	9.86:1	600	272
41RMR092FF10K	460	920	22.0	30.0	6.25	2.84	13.7:1	600	272
41RMR075FF10K	375	750	27.0	36.6	6.50	2.95	16.8:1	600	272
41RMR056FF10K	255	560	36.0	48.8	6.50	2.95	22.6:1	600	272
41RMR044FF10K	220	440	45.5	61.7	6.50	2.95	28.4:1	600	272
41RMR032FF10K	160	320	63.0	85.4	6.50	2.95	39:1	600	272

\* All models assume overhung load located at 1.0" (25.40mm) from face of motor.

#### GENERAL:

Air Inlet: 3/8" NPTF  
Air consumption: 33 cfm (.93 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

Air strainer intake fitting. Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

Pilot Ring – Part 520886  
Lubricating Oil – Part 533485 (1 gallon)

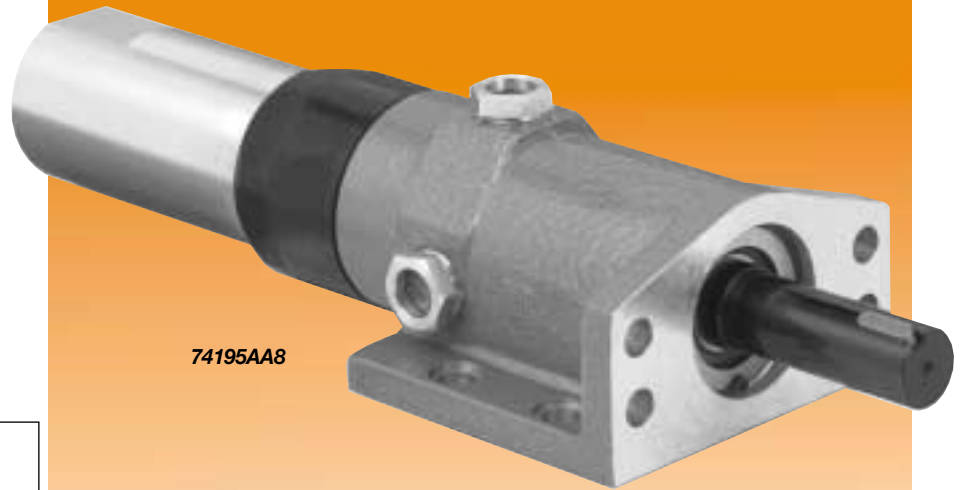
**Additional Accessories:** pages 67-68

# Rotary Vane

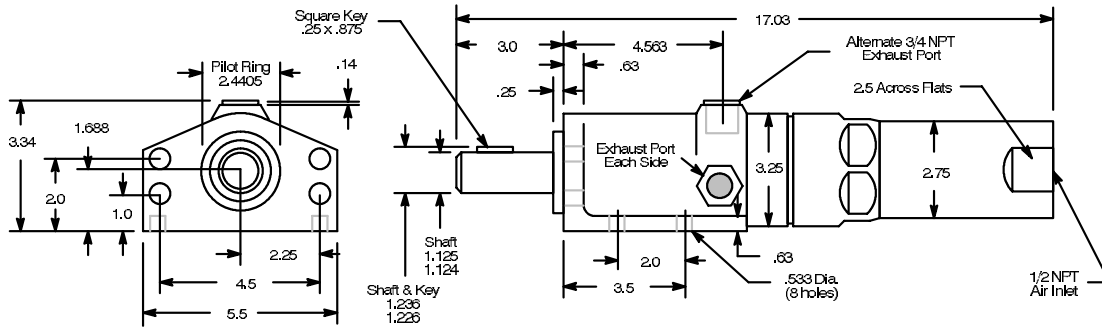
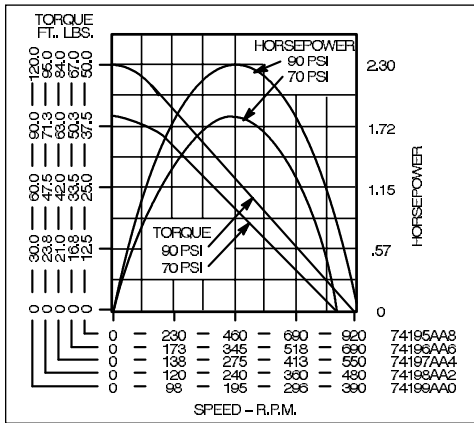
## GARDNER-DENVER®

### 60 Series

- **Maximum Motor Power**  
2.3 hp  
1.72 kW
- **Torque Range**  
50 – 120 ft. lbs.  
68 – 163 Nm
- **Non-Reversible**
- **Side Exhaust**



74195AA8



Model Number	RPM		Stall Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg		lbs.	kg
74195AA8	460	920	50	68	15	6.8	14.2:1	1000	454
74196AA6	345	690	67	91	15	6.8	19:1	1000	454
74197AA4	275	550	84	114	15	6.8	23.7:1	1000	454
74198AA2	240	480	95	129	15	6.8	27:1	1000	454
74199AA0	195	390	120	163	15	6.8	33.7:1	1000	454

#### Foot and Flange Mounting – 1-1/8" Diameter Keyed Spindle

\* All models assume overhung load located at 2.0" (50.80mm) from face of motor.

#### GENERAL:

Air Inlet: 1/2" NPTF  
Air consumption: 70 cfm (1.98 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

Air strainer intake fitting. Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

Lubricating Oil – Part 533485 (1 gallon)

**Additional Accessories:** pages 67-68

## GARDNER-DENVER®

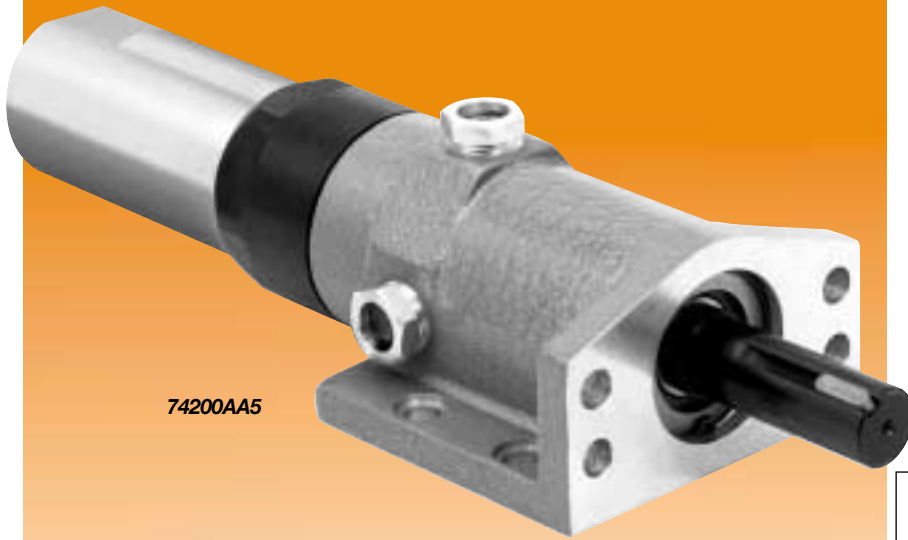
### 60 Series

■ **Maximum Motor Power**  
**1.9 hp**  
**1.42 kW**

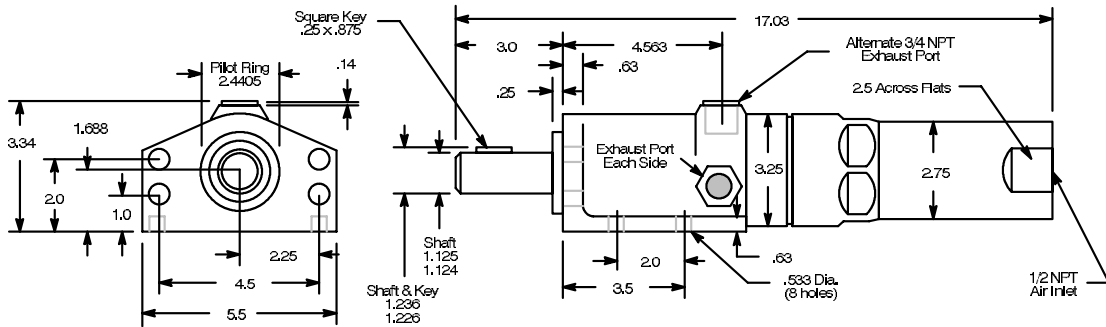
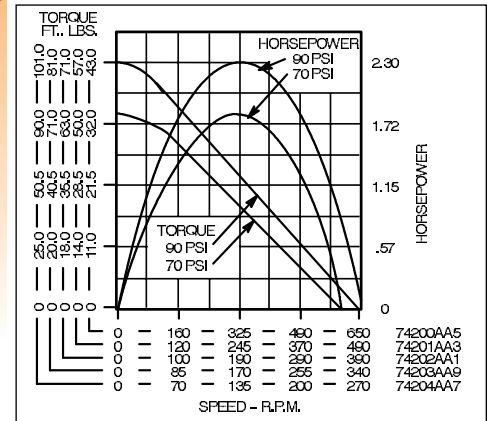
■ **Torque Range**  
**43 – 101 ft. lbs.**  
**58 – 137 Nm**

■ **Reversible**

■ **Side Exhaust**



74200AA5



Model Number	RPM		Stall Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	lbs.	kg		lbs.	kg
74200AA5	325	650	43	58	15	6.8	14.2:1	1000	454
74201AA3	245	490	57	77	15	6.8	19:1	1000	454
74202AA1	195	390	71	96	15	6.8	23.7:1	1000	454
74203AA9	170	340	81	110	15	6.8	27:1	1000	454
74204AA7	135	270	101	137	15	6.8	33.7:1	1000	454

#### Foot and Flange Mounting – 1 1/8" Diameter Keyed Spindle

74200AA5	325	650	43	58	15	6.8	14.2:1	1000	454
74201AA3	245	490	57	77	15	6.8	19:1	1000	454
74202AA1	195	390	71	96	15	6.8	23.7:1	1000	454
74203AA9	170	340	81	110	15	6.8	27:1	1000	454
74204AA7	135	270	101	137	15	6.8	33.7:1	1000	454

\* All models assume overhung load located at 2.0" (50.80mm) from face of motor.

#### GENERAL:

Air Inlet: 1/2" NPTF  
 Air consumption: 70 cfm (1.98 m<sup>3</sup>/min)  
 All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

Air strainer intake fitting. Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

Lubricating Oil – Part 533485 (1 gallon)

**Additional Accessories:** pages 67-68

# Rotary Vane

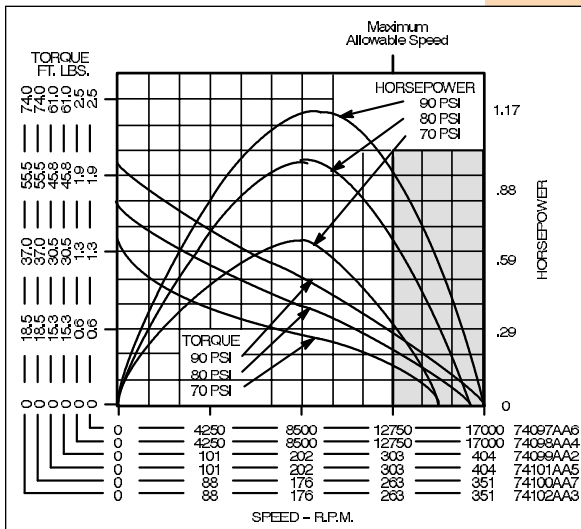
## GARDNER-DENVER®

### MR10 Series

- **Maximum Motor Power**  
1.0 hp  
0.75 kW
- **Torque Range**  
2.5 – 74 ft. lbs.  
3.4 – 100 Nm
- **Reversible**
- **Side Exhaust**



74097AA6



Model Number	RPM		Stall Torque		Starting Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg		lbs.	kg
<b>Foot Mounting – 5/8" (Non-geared) or 7/8" (Geared) Diameter Keyed Spindle</b>											
74097AA6	8500	17000	2.5	3.4	1.8	2.4	7	3.2	—	680	308
74099AA2	210	400	61.0	83.0	35.0	47.0	23	10.4	29.7:1	1055	478
74100AA7	183	350	74.0	100.0	46.0	62.0	23	10.4	34.2:1	1055	478
<b>Flange Mounting – 5/8" (Non-geared) or 7/8" (Geared) Diameter Keyed Spindle</b>											
74098AA4	8500	17000	2.5	3.4	1.8	2.4	7	3.2	—	680	308
74101AA5	210	400	61.0	83.0	35.0	47.0	23	10.4	29.7:1	1055	478
74102AA3	183	350	74.0	100.0	46.0	62.0	23	10.4	34.2:1	1055	478

\* Non-geared models assume overhung load located at 0.5" (12.70mm) from face of motor.  
Geared models assume overhung load located at 0.75" (19.05mm) from face of motor.

**GENERAL:**

Air Inlet: 3/8" NPTF  
Air consumption: 54 cfm (1.53 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

**STANDARD EQUIPMENT:**

Air strainer intake fitting. Foot and flange type mount.

**OPTIONAL EQUIPMENT:**

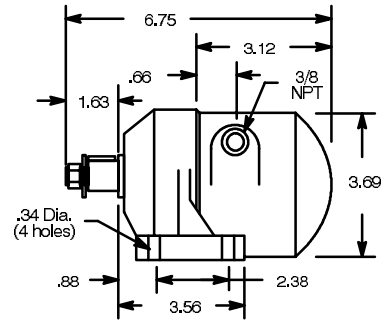
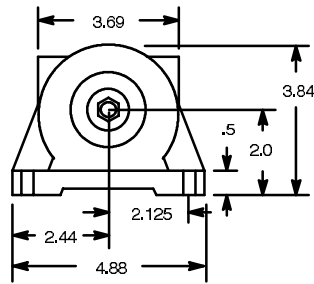
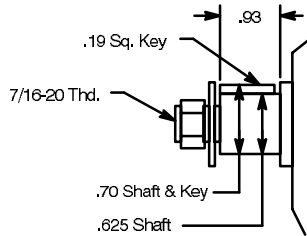
Exhaust Muffler – Part A27137  
Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

**Additional Accessories:** pages 67-68

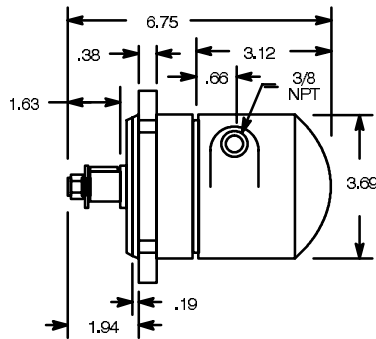
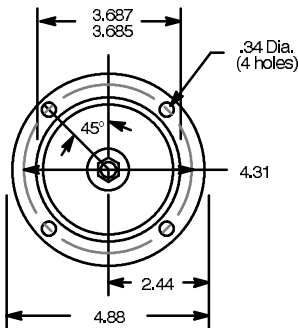
## MR10 Series Dimensional Data

### Non-Geared

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FOOT MOUNTED**

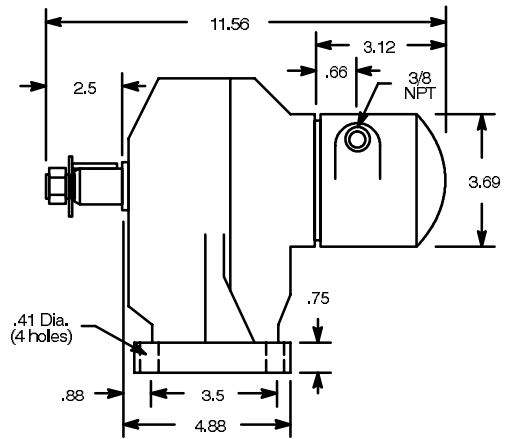
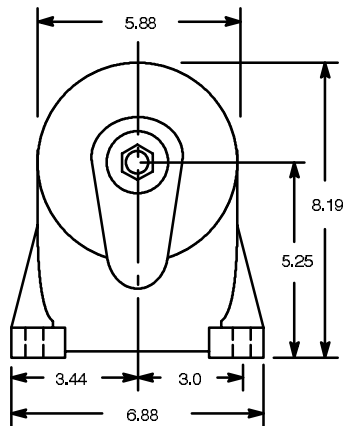
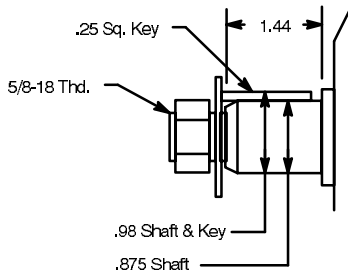


**74098AA4  
FLANGE MOUNTED**

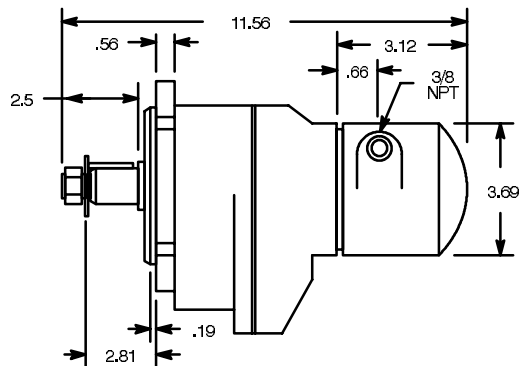
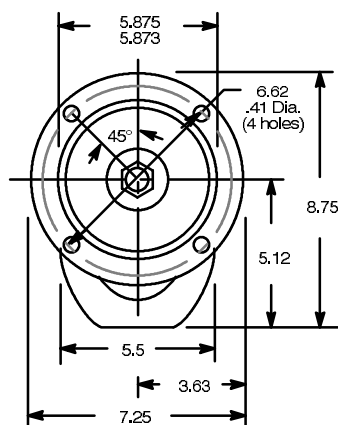


### Geared

**74099AA2  
74100AA7  
FOOT MOUNTED**



**74101AA5  
74102AA3  
FLANGE MOUNTED**

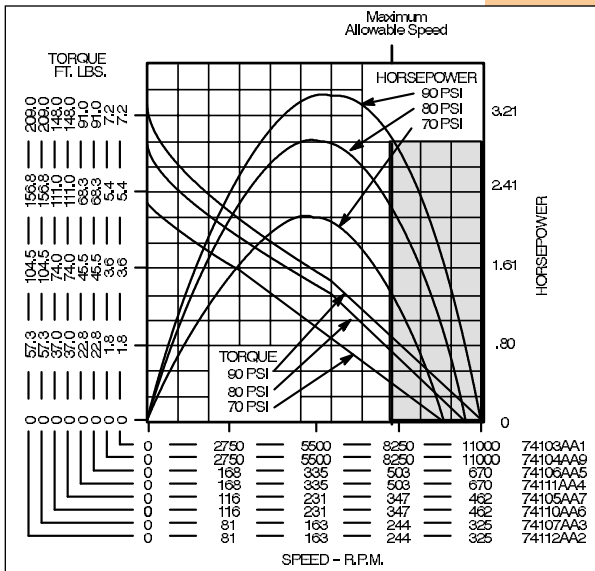
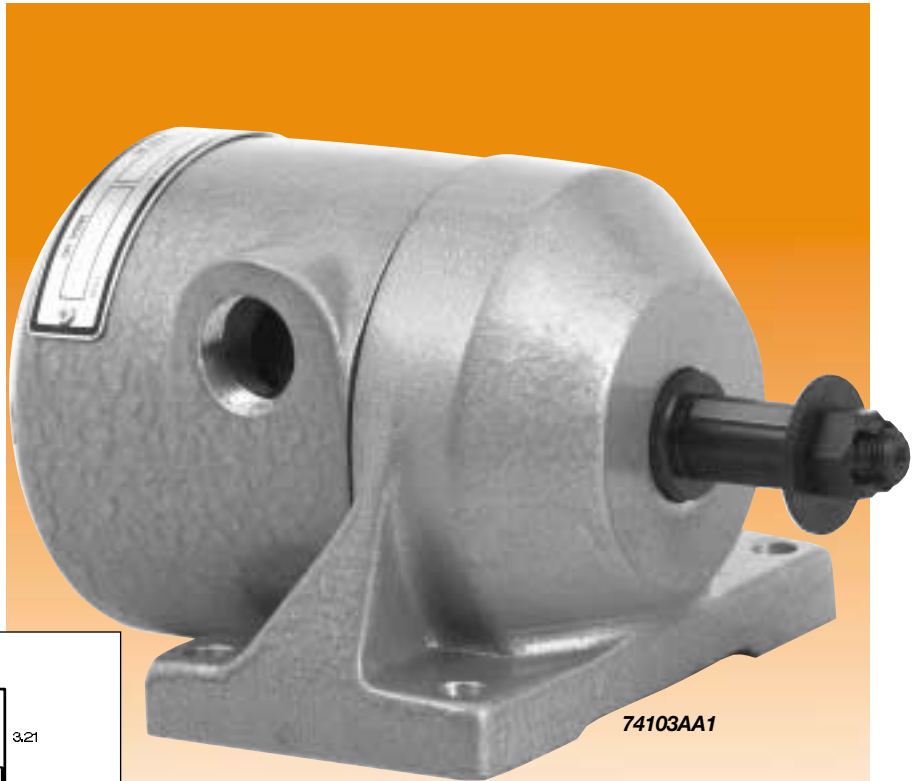


# Rotary Vane

## GARDNER-DENVER®

### MR30 Series

- **Maximum Motor Power**  
3.0 hp  
2.24 kW
- **Torque Range**  
7.2 – 209 ft. lbs.  
10 – 283 Nm
- **Reversible**
- **Side Exhaust**



Model Number	RPM		Stall Torque		Starting Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg		lbs.	kg
<b>Foot Mounting – 3/4" (Non-geared) or 1-1/8" (Geared) Diameter Keyed Spindle</b>											
74103AA1	6000	11000	7.2	10	4.6	6	12.5	5.7	—	1220	553
74106AA5	366	670	91.0	123	45.0	61	33.0	15.0	16.4:1	1550	703
74105AA7	252	460	148.0	201	87.0	118	33.0	15.0	23.8:1	1550	703
74107AA3	177	325	209.0	283	122.0	165	33.0	15.0	23.8:1	1550	703
<b>Flange Mounting – 3/4" (Non-geared) or 1-1/8" (Geared) Diameter Keyed Spindle</b>											
74104AA9	6000	11000	7.2	10	4.6	6	12.5	5.7	—	1220	553
74111AA4	366	670	91.0	123	45.0	61	33.0	15.0	16.4:1	1550	703
74110AA6	252	460	148.0	201	87.0	118	33.0	15.0	23.8:1	1550	703
74112AA2	177	325	209.0	283	122.0	165	33.0	15.0	23.8:1	1550	703

\* Non-geared models assume overhung load located at 0.625" (15.88mm) from face of motor.  
Geared models assume overhung load located at 0.875" (22.023mm) from face of motor.

**GENERAL:**

Air Inlet: 3/4" NPTF  
Air consumption: 124 cfm (3.51 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

**STANDARD EQUIPMENT:**

Foot and flange type mount.

**OPTIONAL EQUIPMENT:**

Exhaust Muffler – Part 524301  
Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

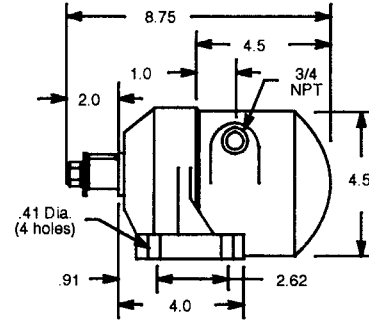
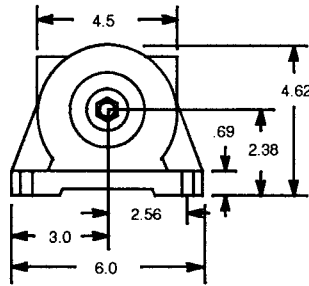
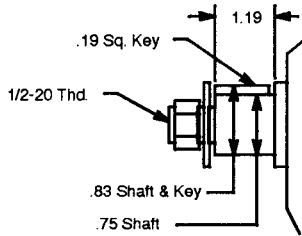
**Additional Accessories:** pages 67-68



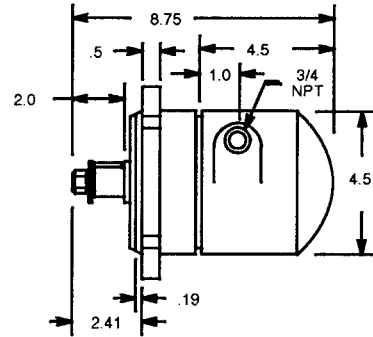
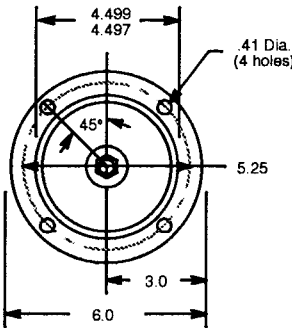
## MR30 Series Dimensional Data

### Non-Geared

74103AA1  
FOOT MOUNTED

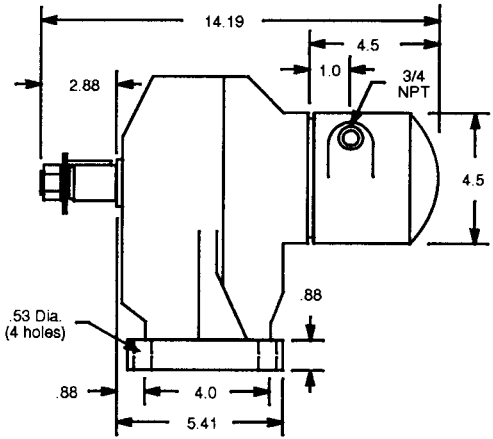
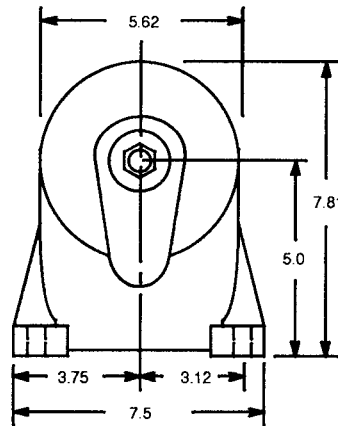
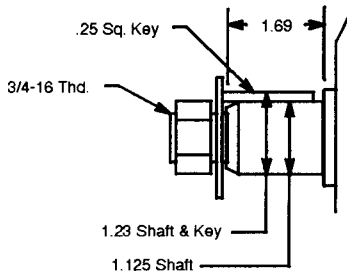


74104AA9  
FLANGE MOUNTED

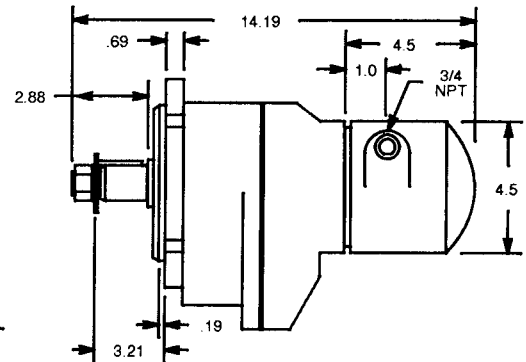
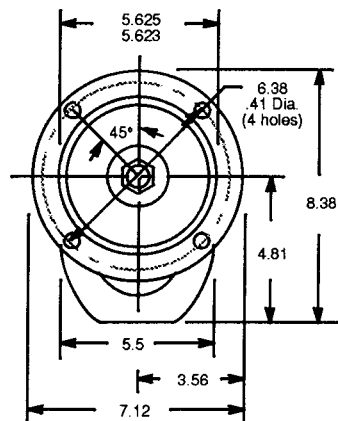


### Geared

74106AA5  
74105AA7  
74107AA3  
FOOT MOUNTED



74111AA4  
74110AA6  
74112AA2  
FLANGE MOUNTED

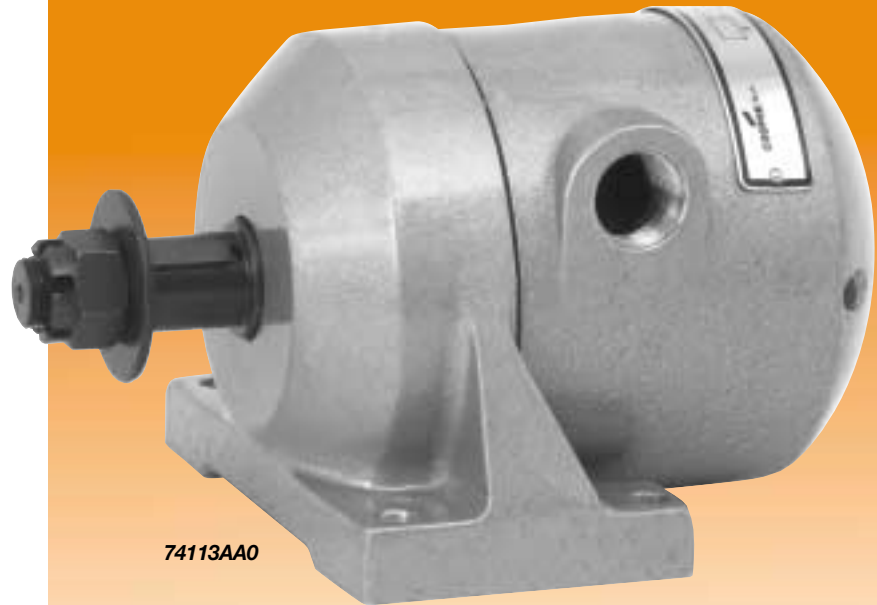


# Rotary Vane

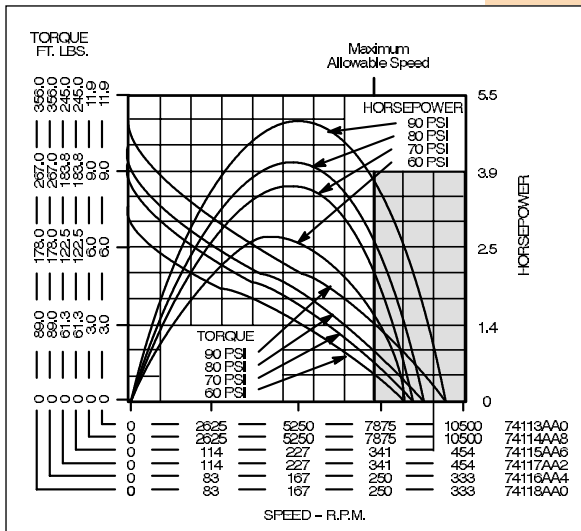
## GARDNER-DENVER®

### MR50 Series

- **Maximum Motor Power**  
5.5 hp  
4.10 kW
- **Torque Range**  
11.9 – 356 ft. lbs.  
16 – 483 Nm
- **Reversible**
- **Side Exhaust**



74113AA0



Model Number	RPM		Stall Torque		Starting Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg		lbs.	kg
<b>Foot Mounting – 1" (Non-geared) or 1-1/8" (Geared) Diameter Keyed Spindle</b>											
74113AA0	5700	10500	11.9	16	8.7	12	18.5	8.4	—	1510	685
74115AA6	247	450	245.0	332	173.0	235	46.0	21.0	23.1:1	2110	957
74116AA4	181	330	356.0	483	260.0	353	46.0	21.0	31.58:1	2110	957
<b>Flange Mounting – 1" (Non-geared) or 1-1/8" (Geared) Diameter Keyed Spindle</b>											
74114AA8	5700	10500	11.9	16	8.7	12	18.5	8.4	—	1510	685
74117AA2	247	450	245.0	332	173.0	235	46.0	21.0	23.1:1	2110	957
74118AA0	181	330	356.0	483	260.0	353	46.0	21.0	31.58:1	2110	957

\* Non-geared models assume overhung load located at 0.625" (15.88mm) from face of motor.  
Geared models assume overhung load located at 0.875" (22.23mm) from face of motor.

**GENERAL:**

Air Inlet: 3/4" NPTF  
Air consumption: 172 cfm (4.87 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

**STANDARD EQUIPMENT:**

Foot and flange type mount.

**OPTIONAL EQUIPMENT:**

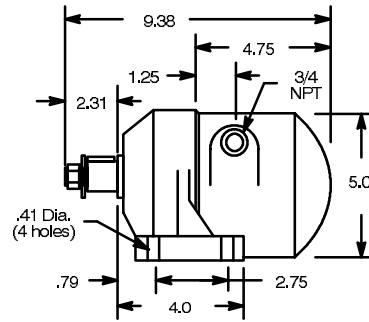
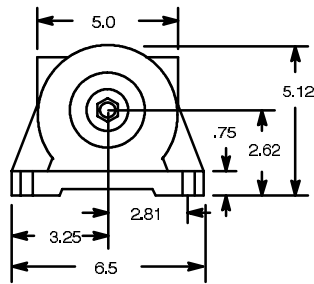
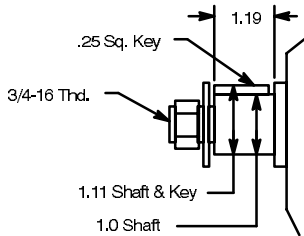
Exhaust Muffler – Part 524301  
Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

**Additional Accessories:** pages 67-68

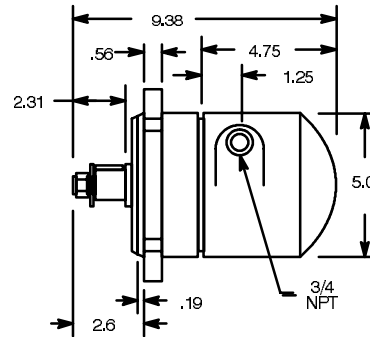
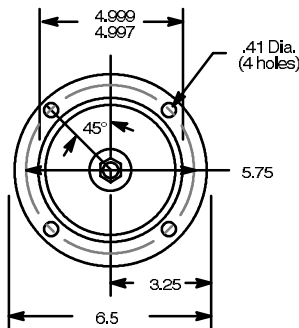
## MR50 Series Dimensional Data

### Non-Geared

**74113AA0**  
FOOT MOUNTED

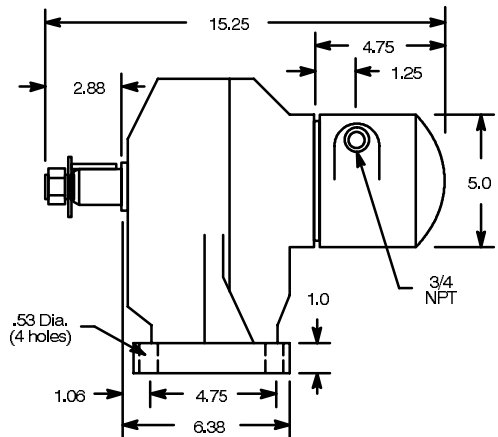
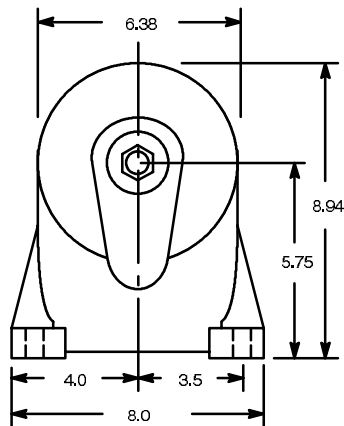
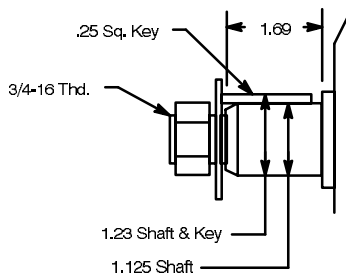


**74114AA8**  
FLANGE MOUNTED

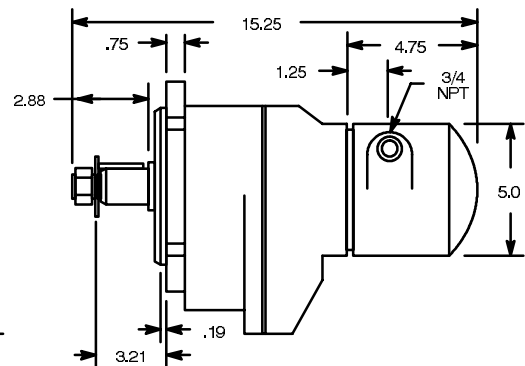
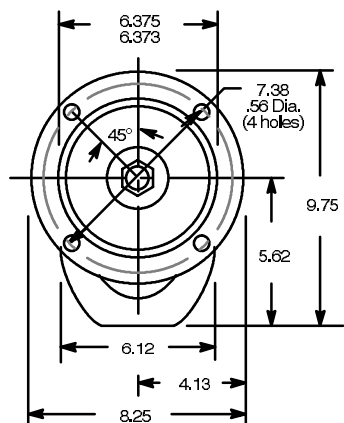


### Geared

**74115AA6**  
**74116AA4**  
FOOT MOUNTED



**74117AA2**  
**74118AA0**  
FLANGE MOUNTED

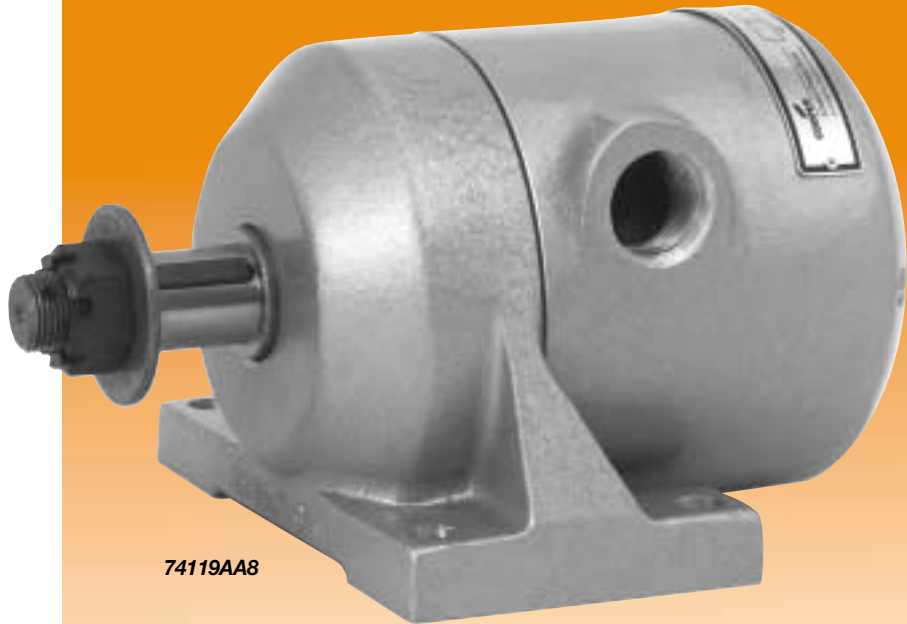


# Rotary Vane

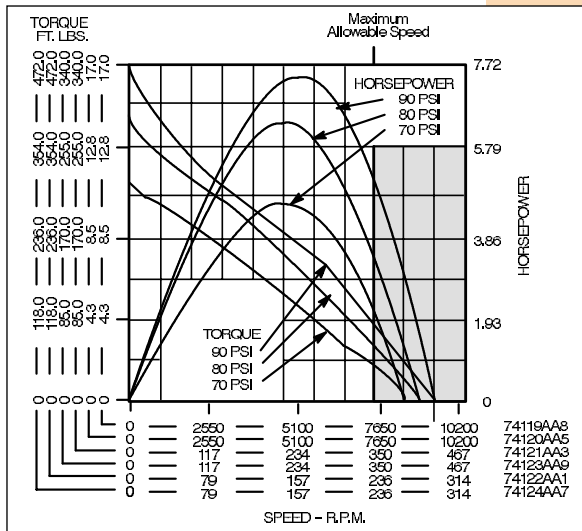
## GARDNER-DENVER®

### MR70 Series

- **Maximum Motor Power**  
7.5 hp  
5.59 kW
- **Torque Range**  
17 – 472 ft. lbs.  
23 – 640 Nm
- **Reversible**
- **Side Exhaust**



74119AA8



Model Number	RPM		Stall Torque		Starting Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg		lbs.	kg
<b>Foot Mounting – 1-1/8" (Non-geared) or 1-1/4" (Geared) Diameter Keyed Spindle</b>											
74119AA8	5500	10200	17	23	12	16	27.5	12.5	—	2080	943
74121AA3	257	465	340	461	227	308	65.0	29.0	21.8:1	2560	1161
74122AA1	169	310	472	640	336	456	65.0	29.0	32.5:1	2560	1161
<b>Flange Mounting – 1-1/8" (Non-geared) or 1-1/4" (Geared) Diameter Keyed Spindle</b>											
74120AA5	5500	10200	17	23	12	16	27.5	12.5	—	2080	943
74123AA9	257	465	340	461	227	308	65.0	29.0	21.8:1	2560	1161
74124AA7	169	310	472	640	336	456	65.0	29.0	32.5:1	2560	1161

\* Non-geared models assume overhung load located at 0.75" (19.05mm) from face of motor.  
Geared models assume overhung load located at 1" (25.40mm) from face of motor.

**GENERAL:**

Air Inlet: 1" NPTF  
Air consumption: 212 cfm (6.00 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

**STANDARD EQUIPMENT:**

Foot and flange type mount.

**OPTIONAL EQUIPMENT:**

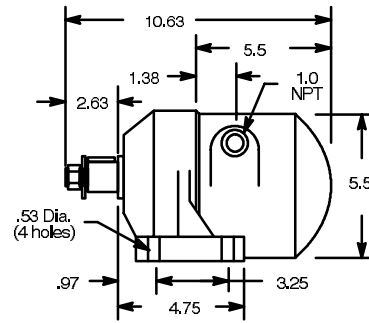
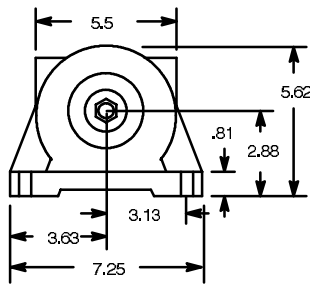
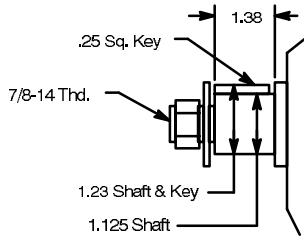
Exhaust Muffler – Part 524302  
Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

**Additional Accessories:** pages 67-68

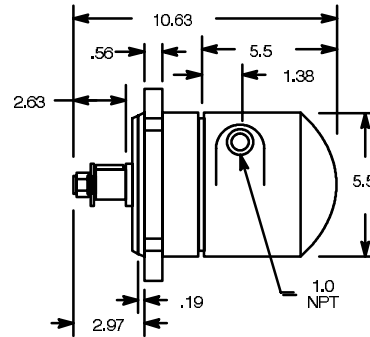
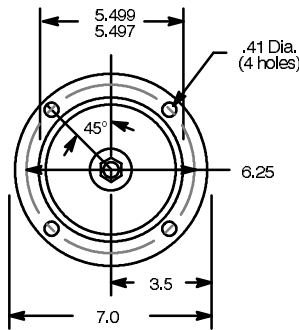
## MR70 Series Dimensional Data

### Non-Geared

**74119AA8**  
FOOT MOUNTED

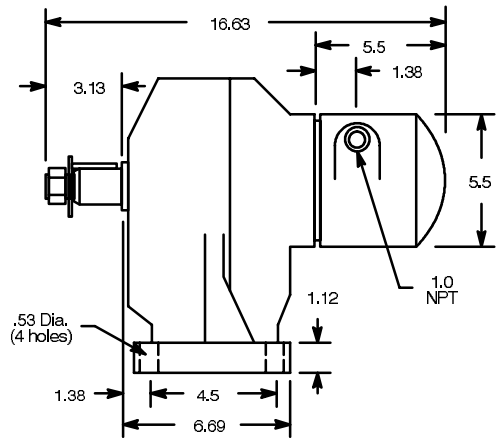
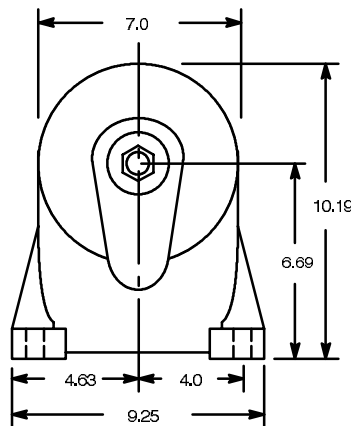
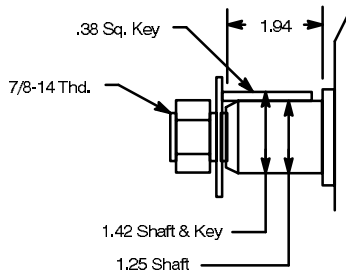


**74120AA5**  
FLANGE MOUNTED

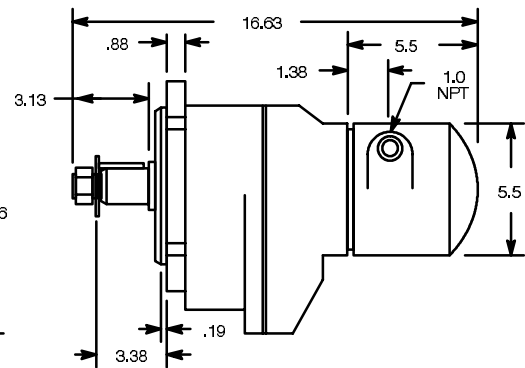
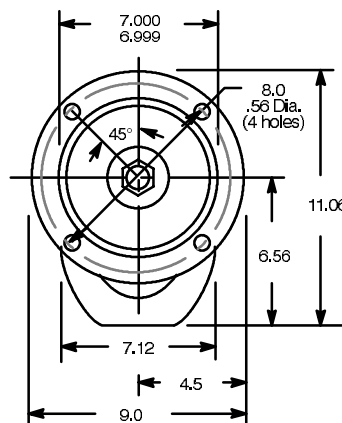


### Geared

**74121AA3**  
**74122AA1**  
FOOT MOUNTED



**74123AA9**  
**74124AA7**  
FLANGE MOUNTED

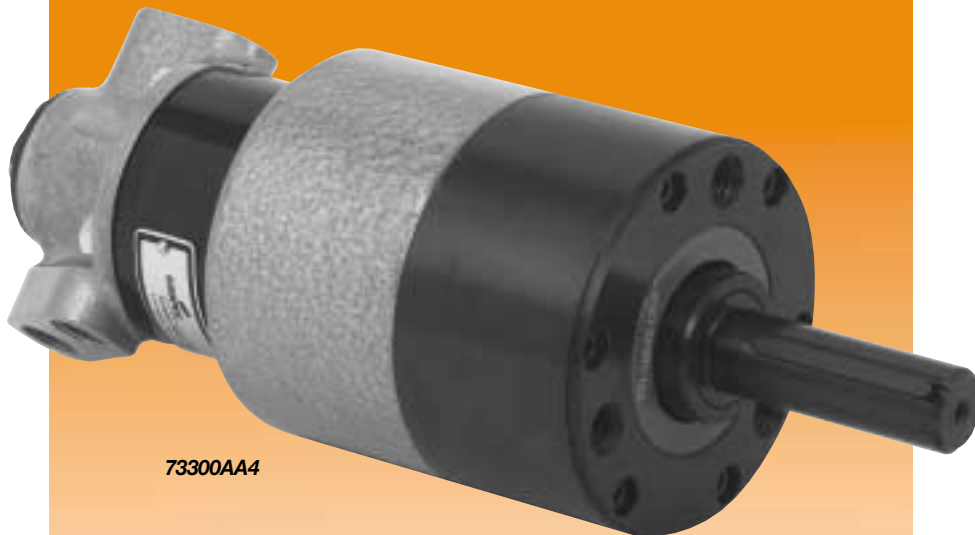


# Axial Piston

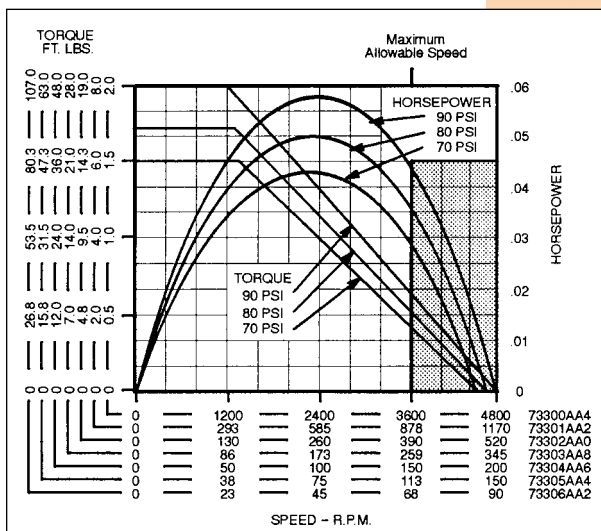
## GARDNER-DENVER®

### A2 Series

- **Maximum Motor Power**  
0.6 hp  
0.45 kW
- **Torque Range**  
2 – 107 ft. lbs.  
2.7 – 145 Nm
- **Reversible**
- **Rear Exhaust**



73300AA4



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg		lbs.	kg
73300AA4	2360	4800	2	2.7	1.5	2	14	6.35	—	800	363
73301AA2	575	1170	8	11.0	6.0	8	14	6.35	4.1:1	800	363
73302AA0	255	520	19	26.0	13.0	18	14	6.35	9.25:1	800	363
73303AA8	169	345	28	38.0	21.0	28	22	9.98	13.9:1	800	363
73304AA6	99	200	48	65.0	36.0	49	22	9.98	23.8:1	800	363
73305AA4	75	150	63	85.0	47.0	64	22	9.98	31.4:1	800	363
73306AA2	44	90	107	145.0	80.0	108	22	9.98	53.6:1	800	363

\* All models assume overhung load located at 1.75" (44.45mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

#### GENERAL:

Air Inlet: 1" NPTF  
Air consumption: 212 cfm (6.00 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### STANDARD EQUIPMENT:

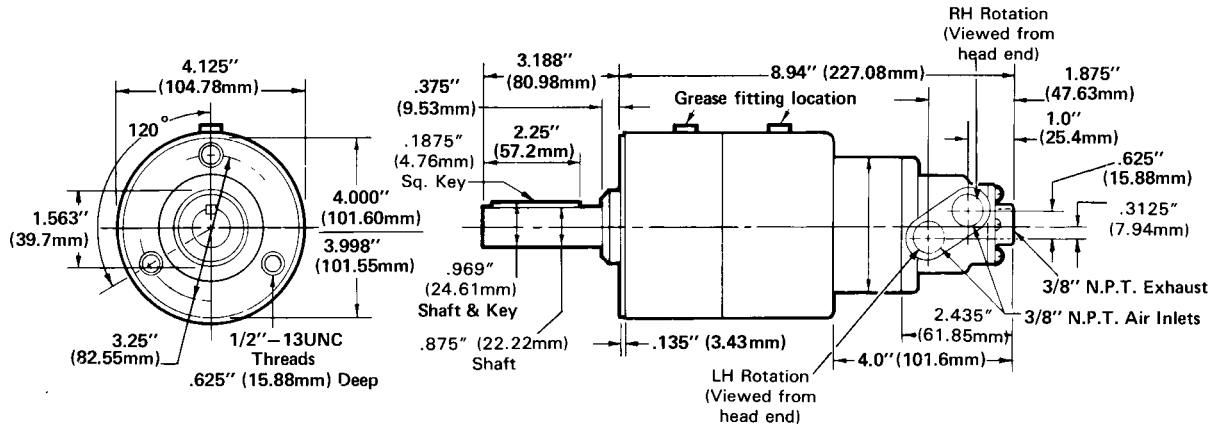
Foot and flange type mount.

#### OPTIONAL EQUIPMENT:

Exhaust Muffler – Part 524302  
Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

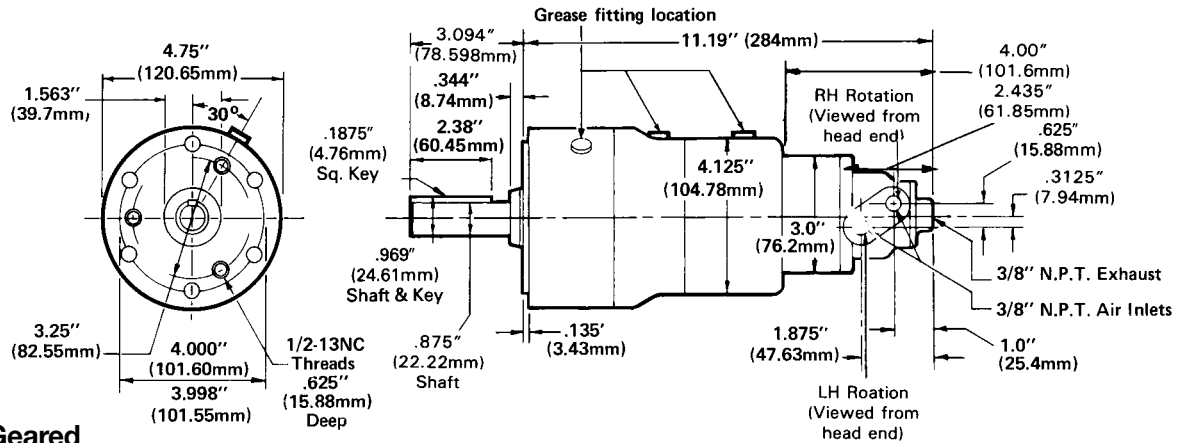
**Additional Accessories:** pages 67-68

## A2 Series Dimensional Data



### Single Geared

73300AA4  
73301AA2  
73302AA0



### Double Geared

73303AA8  
73304AA6  
73305AA4  
73306AA2

# Axial Piston

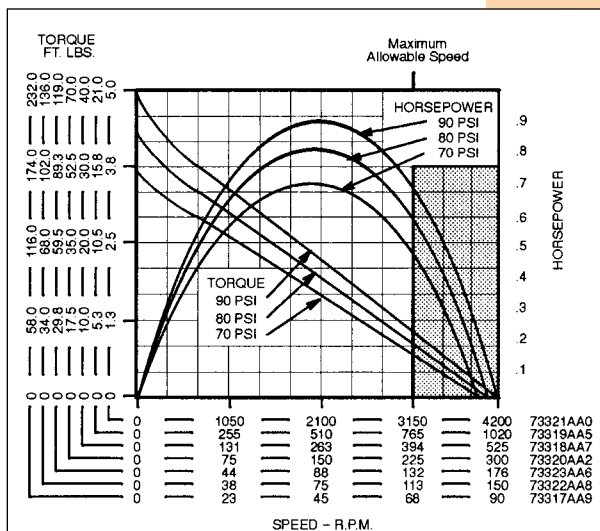
## GARDNER-DENVER®

### B4 Series

- **Maximum Motor Power**  
0.9 hp  
0.67 kW
- **Torque Range**  
4 – 232 ft. lbs.  
6.8 – 315 Nm
- **Reversible**
- **Rear Exhaust**



73321AA0



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg		lbs.	kg
73321AA0	2150	4200	5	6.8	3.7	5	14.5	6.57	—	800	363
73319AA5	525	1020	21	28.0	15.0	20	14.5	6.57	4.1:1	800	363
73318AA7	270	525	40	54.0	30.0	41	14.5	6.57	8:1	800	363
73320AA2	154	300	70	95.0	52.0	71	22.5	10.21	13.9:1	800	363
73323AA6	90	175	119	161.0	88.0	119	22.5	10.21	23.8:1	800	363
73322AA8	79	150	136	184.0	101.0	137	22.5	10.21	27.2:1	800	363
73317AA9	46	90	232	315.0	172.0	233	22.5	10.21	46.4:1	800	363

\* All models assume overhung load located at 1.75" (44.45mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

#### GENERAL:

Air Inlet: 3/8" NPTF  
Air consumption: 40 cfm (1.13 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

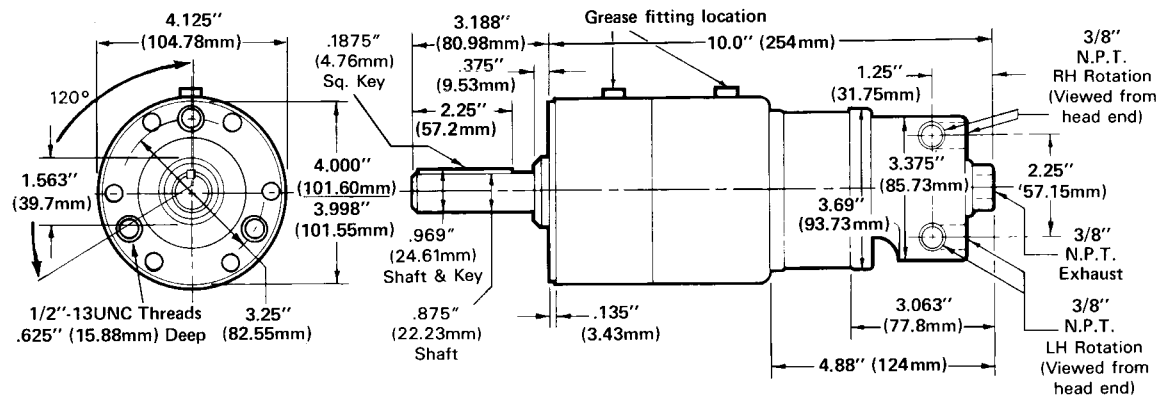
#### OPTIONAL EQUIPMENT:

Exhaust Muffler – Part 813485  
Pendent Control Kits – See page 53  
Lubricating Oil – Part 533485 (1 gallon)  
Motor and Gear Lube – Part A123771 (1 pound)

**Additional Accessories:** pages 67-68

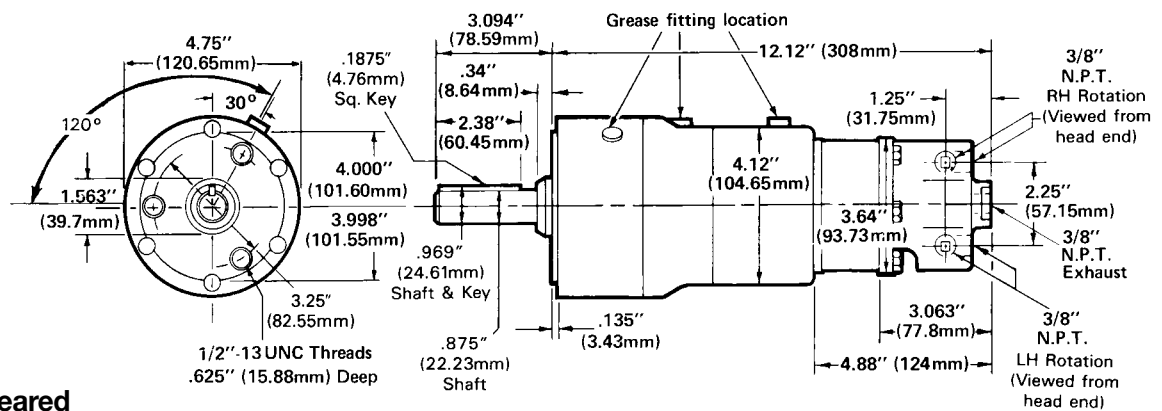


## B4 Series Dimensional Data



### Single Geared

73321AA0  
73319AA5  
73318AA7



### Double Geared

73317AA9  
73320AA2  
73322AA8  
73323AA6

# Axial Piston

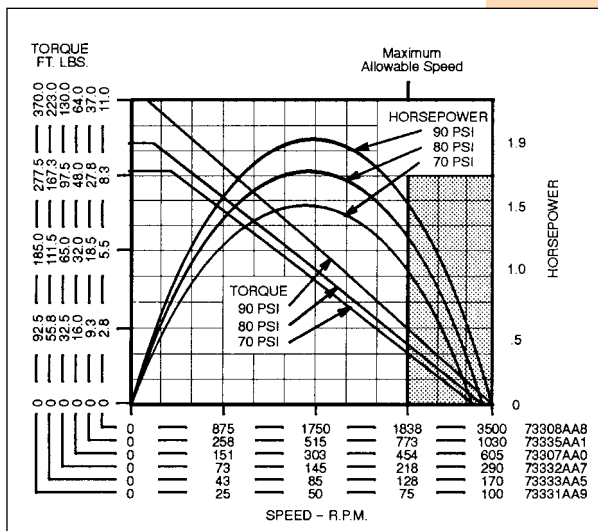
## GARDNER-DENVER®

### A6 Series

- **Maximum Motor Power**  
1.9 hp  
1.42 kW
- **Torque Range**  
11 – 370 ft. lbs.  
15 – 502 Nm
- **Reversible**
- **Rear Exhaust**



73308AA8



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg		lbs.	kg
<b>Face Mounting – 1 1/8" Diameter Keyed Spindle</b>											
73308AA8	1820	3500	1	15	8	11	27	12.2	—	1000	454
73335AA1	535	1030	37	50	27	37	27	12.2	3.4:1	1000	454
73307AA0	315	605	64	87	48	65	27	12.2	5.8:1	1000	454
73332AA7	152	290	130	176	96	130	43	19.5	11.9:1	1000	454
73333AA5	89	170	223	302	163	221	43	19.5	20.3:1	1000	454
73331AA9	54	100	370	502	269	365	43	19.5	33.6:1	1000	454

\* All models assume overhung load located at 2.25" (57.15mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

#### GENERAL:

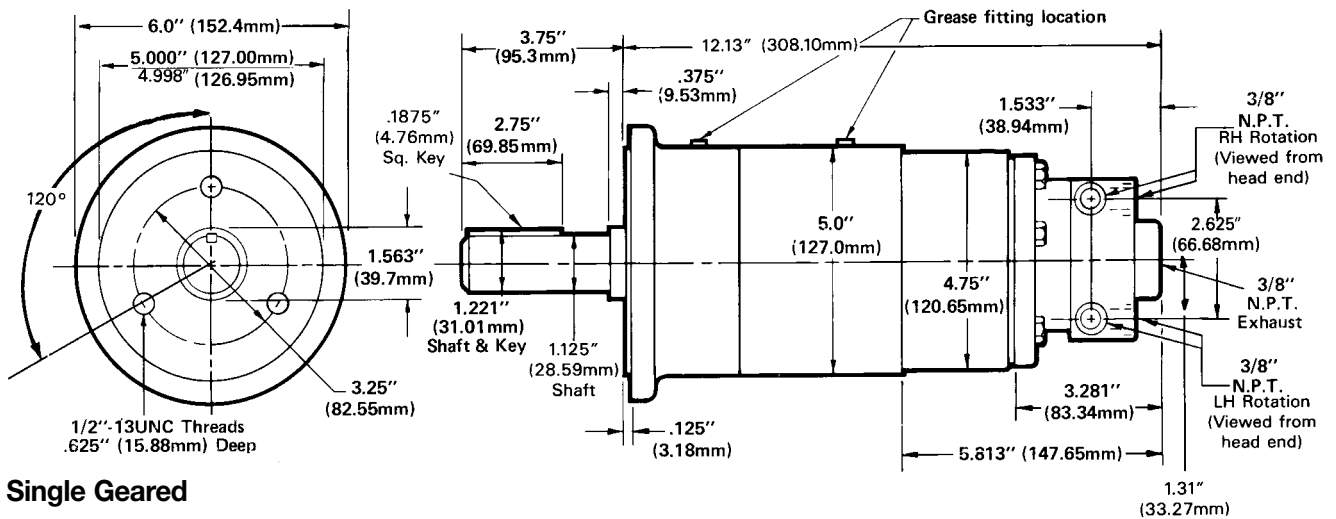
Air Inlet: 3/8" NPTF  
Air consumption: 62 cfm (1.76 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### OPTIONAL EQUIPMENT:

Exhaust Muffler – Part 813485  
Pendent Control Kits – See page 53  
Lubricating Oil – Part 533485 (1 gallon)  
Motor and Gear Lube – Part A123771 (1 pound)

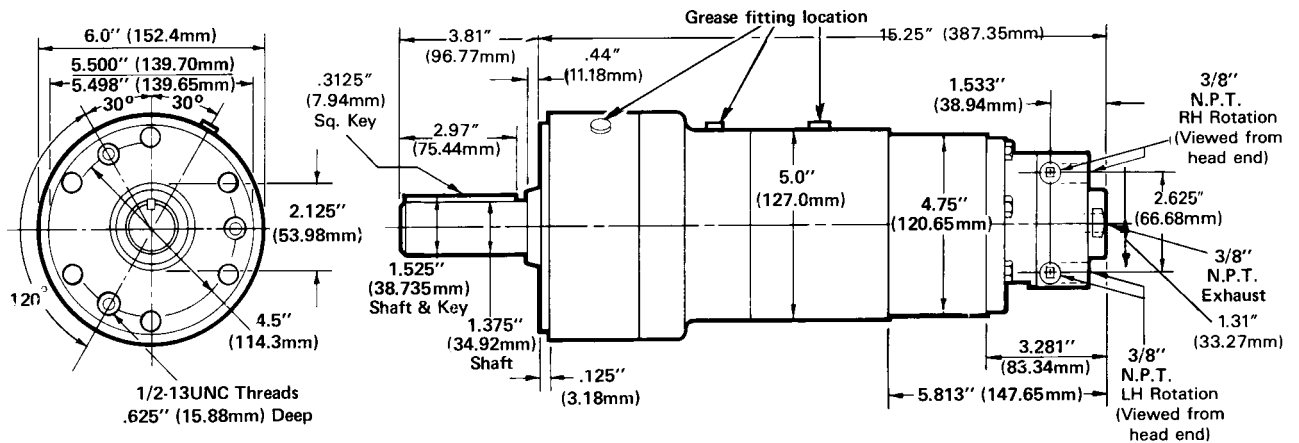
**Additional Accessories:** pages 67-68

## A6 Series Dimensional Data



### Single Geared

73307AA0  
73308AA8  
73335AA1



### Double Geared

73331AA9  
73332AA7  
73333AA5

# Axial Piston

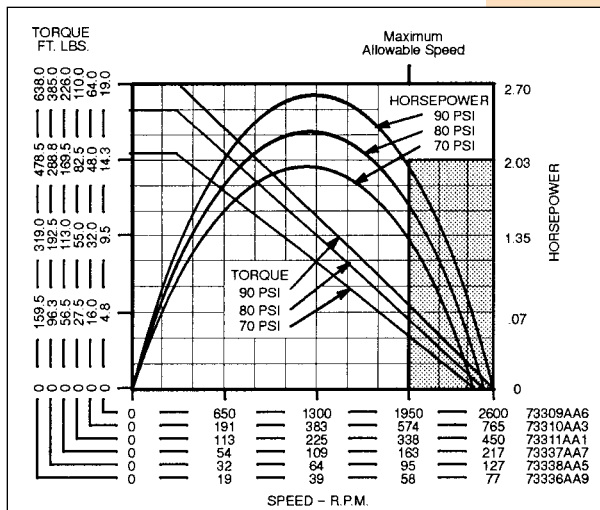
## GARDNER-DENVER®

### A8 Series

- **Maximum Motor Power**  
2.7 hp  
2.01 kW
- **Torque Range**  
19 – 638 ft. lbs.  
26 – 865 Nm
- **Reversible**
- **Rear Exhaust**



73309AA6



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg		lbs.	kg
<b>Face Mounting – 1 1/8" Diameter Keyed Spindle</b>											
73309AA6	1300	2600	19	26	14	19	38	17.2	—	1000	454
73310AA3	375	765	64	87	48	65	38	17.2	3.4:1	1000	454
73311AA1	225	450	110	149	82	111	38	17.2	5.8:1	1000	454
73337AA7	109	215	226	306	167	226	51	23.1	11.9:1	1000	454
73338AA5	64	125	385	522	285	386	51	23.1	20.3:1	1000	454
73336AA9	38	75	638	865	471	639	51	23.1	33.6:1	1000	454

\* All models assume overhung load located at 2.25" (57.15mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

#### GENERAL:

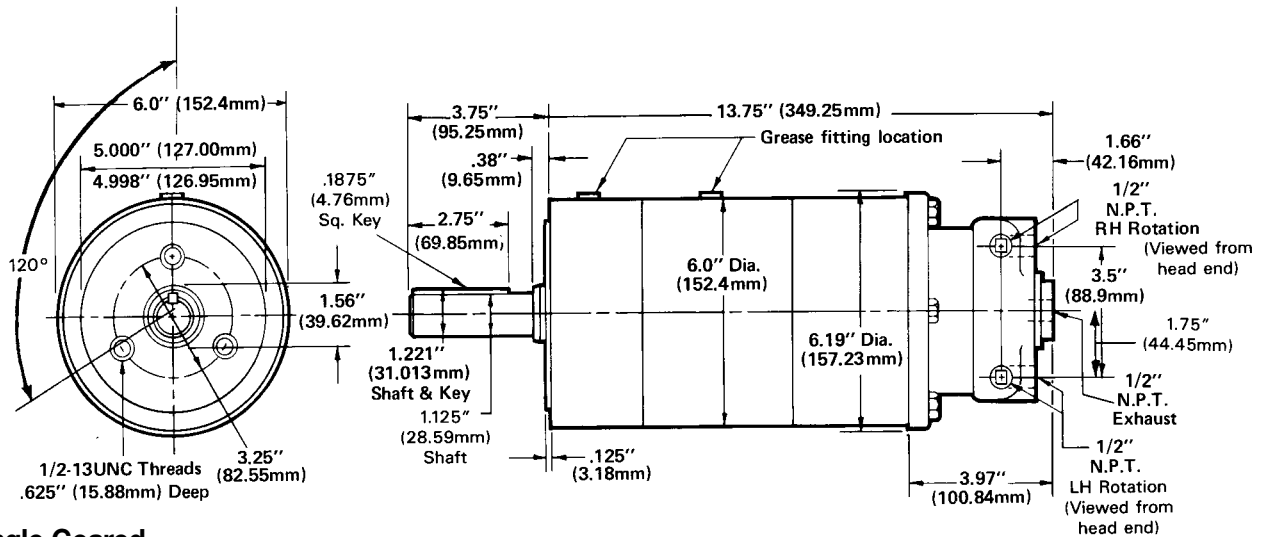
Air Inlet: 1/2" NPTF  
Air consumption: 83 cfm (3.18 m<sup>3</sup>/min)  
All tools performance rated @ 90psi (620 kPa) air pressure.

#### OPTIONAL EQUIPMENT:

Exhaust Muffler – Part A19509  
Pendent Control Kits – See page 53  
Lubricating Oil – Part 533485 (1 gallon)  
Motor and Gear Lube – Part A123771 (1 pound)

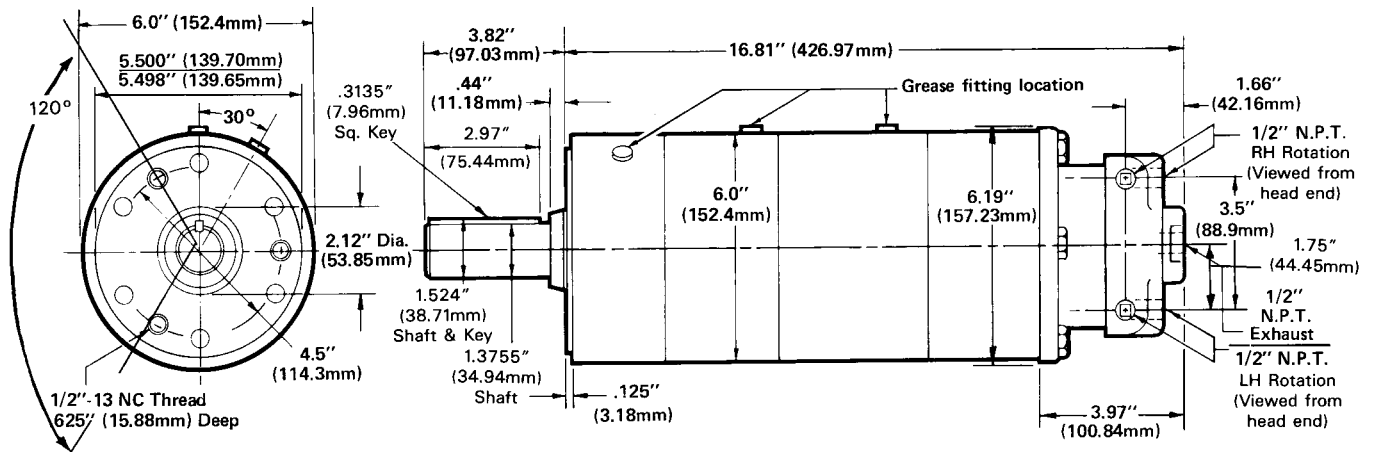
**Additional Accessories:** pages 67-68

## A8 Series Dimensional Data



### Single Geared

73309AA6  
73310AA3  
73311AA1



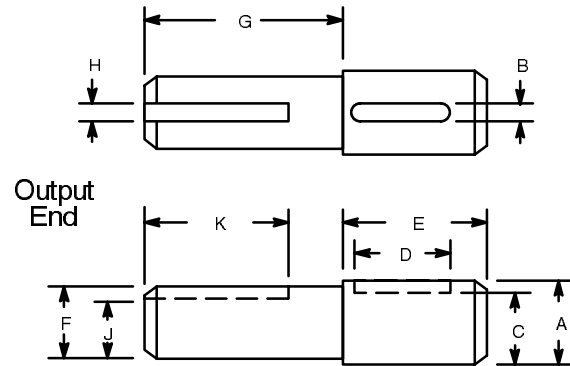
### Double Geared

73336AA9  
73337AA7  
73338AA5

# Spindle Information for Axial Piston Motors

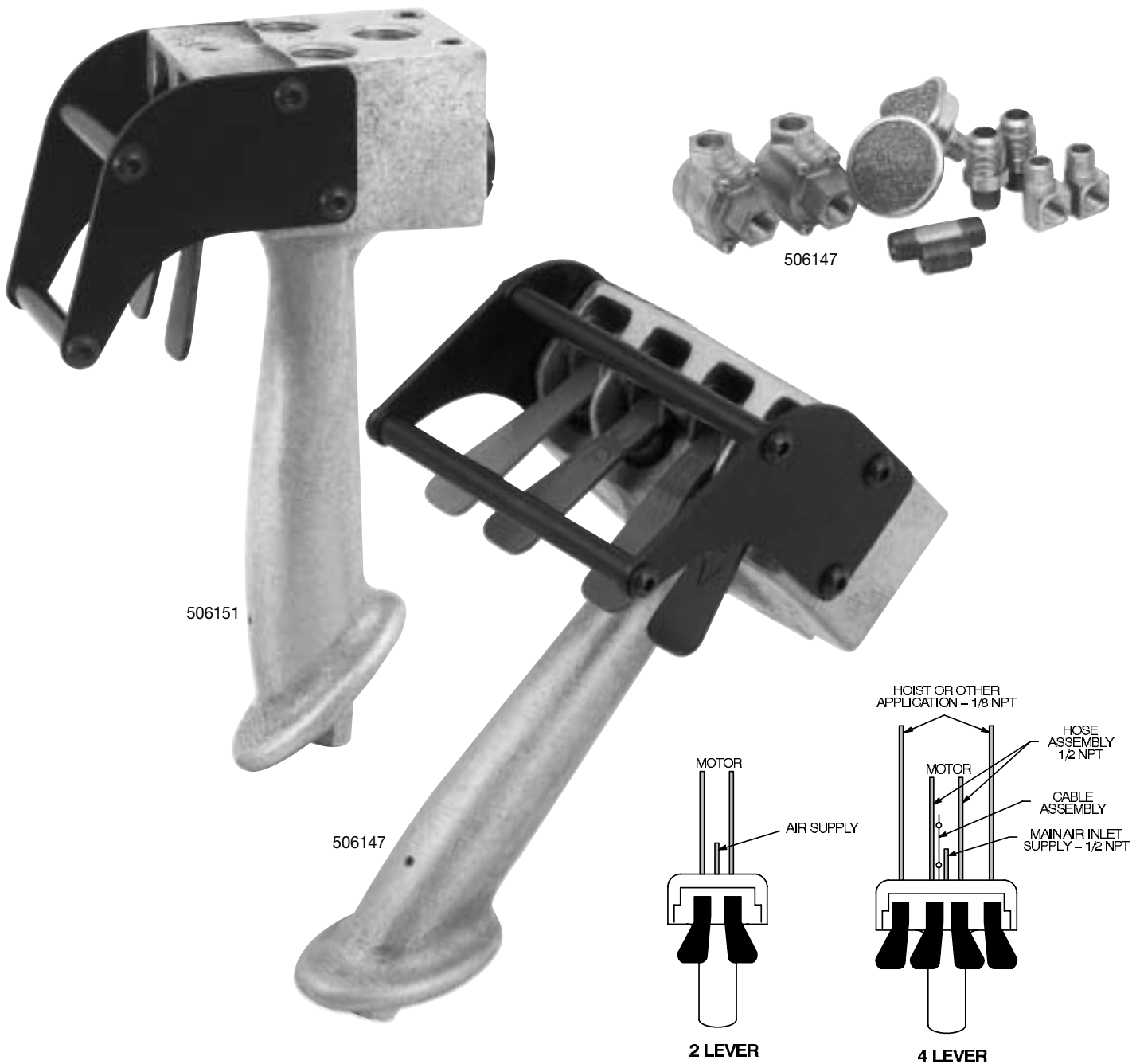
The axial piston air motors are equipped with standard spindles, *unless otherwise specified*. If a special spindle is required, the motor is shipped without a spindle; using the dimensions of the shank end of the spindle shown in the dimensional drawing, the customer can make a spindle to fit the requirements of the job.

If other than a standard spindle is required, specify shipment of motor *without spindle* – or provide detailed dimensional information of the spindle required.



Model Number	Std. Spindle	Dia. "A"	Key Width "B"	Key Depth "C"	Key Slot "D"	"E"	Dia. "F"	"G"	Key Width "H"	Key Depth "J"	Key Slot "K"				
<b>Single Geared</b>															
73300AA4	18299				1.125"		.8750"	2.75		.7715"	2.25				
73301AA2							.8744"			.7665"		or			
73302AA0							or			or			69.88mm		
73321AA0							or			or				57.15mm	
73319AA5							1.1585"			.187					1.0565"
73318AA7	1.1569"	.189	1.0515"	47.62mm											
73308AA8	or	or	or		Sq. Key										
73335AA1	29.43mm	4.75mm	26.83mm			1.500"									
73307AA0	29.39mm	4.80mm	26.71mm				38.10mm								
73309AA6	or	or	or					85.73mm							
73310AA3	or	or	or	25.88mm											
73311AA1	or	or	or		26.00mm										
<b>Double Geared</b>															
73303AA8	29717						1.125"		1.875"	.8750"	2.75"	.1875"	.771"	2.375"	
73304AA6								1.0008"		.249"		.859"	.8744"		.1855"
73305AA4				1.0002"				.251"		.849"		or	or		or
73306AA2				or	or			or		or		or	or		
73320AA2				25.42mm	6.32mm			21.82mm		28.57mm		47.62"	22.22mm		69.85mm
73323AA6	25.41mm	6.38mm	21.56mm	1.500"	2.000"	1.3755"	3.375"	.3125"	1.201"	3.125"					
73322AA8	or	or	or								50.80mm				
73317AA9	or	or	or									34.94mm			
73332AA7	or	or	or										34.91mm		
73333AA5	1.4398"	.374"	1.225"											7.94mm	
73331AA9	1.4392"	.376"	1.215"	7.96mm											
73337AA7	or	or	or		30.50mm										
73338AA5	36.57mm	9.50mm	31.12mm			30.25mm									
73337AA9	36.56mm	9.55mm	30.86mm				Sq. Key								

# Pendent Controls for Axial Piston Motors



Motor Size	A2	B4	A6	A8
Motor Port Size	3/8 NPT	3/8 NPT	3/8 NPT	1/2 NPT
2 Lever P.C. Kit*	506151	506152	506153	506154
5' Hose Assembly	506136	506136	506496	506496
10' Hose Assembly	506138	506138	506498	506498
15' Hose Assembly	506140	506140	506500	506500
4 Lever P.C. Kit*	506147	506148	506149	506150
5' Hose Assembly	513549	513549	513549	513549
10' Hose Assembly	513550	513550	513550	513550
15' Hose Assembly	513551	513551	513551	513551

\* Kits include handle assembly, (2) quick exhaust valves, and all necessary fittings.

For part numbers of individual components and positioning the quick exhaust valves, refer to the appropriate motor service manual.

## ORDERING PROCEDURE:

Specify Pendent Control Kit No., Hose Assembly number and length. On 4 lever hose assemblies, cable assembly is provided as part of a standard hose assembly. Contact the factory for additional hose lengths.

# Radial Piston

## GARDNER-DENVER®

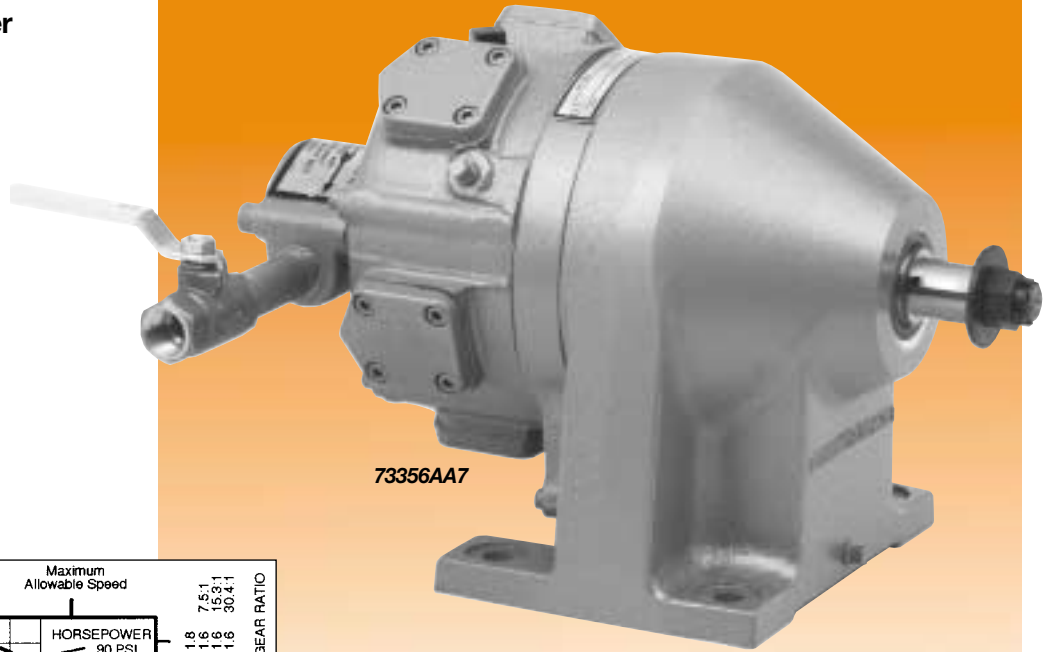
### MA2 Series

■ **Maximum Motor Power**

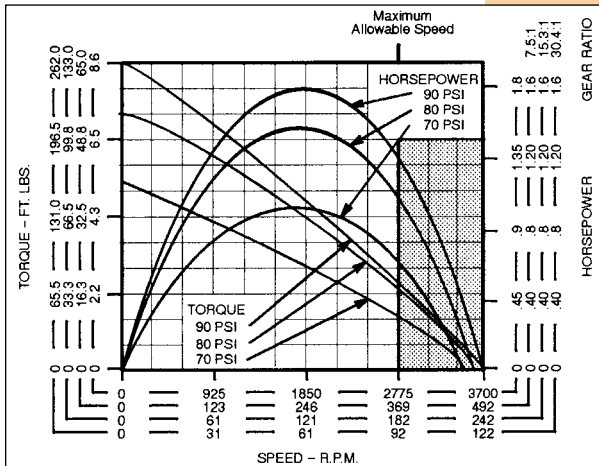
1.5 hp  
1.12 kW

■ **Torque Range**

8.6 – 262 ft. lbs.  
12 – 355 Nm



73356AA7



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Air Consumption		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg	cfm	m <sup>3</sup> /min		lbs.	kg
<b>with Single-Direction Valving</b>													
73356AA7	246	490	65.0	88	30	41.0	40	18.1	65	1.84	7.5:1	1700	771
73354AA1	121	240	133.0	180	61	83.0	40	18.1	59	1.67	15.3:1	1700	771
73352AA5	61	120	262.0	355	122	165.0	40	18.1	62	1.76	30.4:1	1700	771
<b>with Reversible Valving</b>													
73357AA5	244	490	65.0	88	30	41.0	43	19.5	55	1.56	7.5:1	1700	771
73355AA9	119	240	133.0	180	61	83.0	43	19.5	54	1.53	15.3:1	1700	771
73353AA3	60	120	262.0	355	122	165.0	43	19.5	58	1.64	30.4:1	1700	771
<b>without Valving</b>													
73405AA2	244	490	65.0	88	430	41.0	43	19.5	55	1.56	7.5:1	1700	771
73404AA4	119	240	133.0	180	61	83.0	43	19.5	54	1.53	15.3:1	1700	771
73403AA6	60	120	262.0	355	122	165.0	43	19.5	58	1.64	30.4:1	1700	771

\* All models assume overhung load located at 0.625" (15.88mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

**GENERAL:**

Air Inlet: 1/2" NPTF  
All tools performance rated @ 90psi (620 kPa) air pressure.

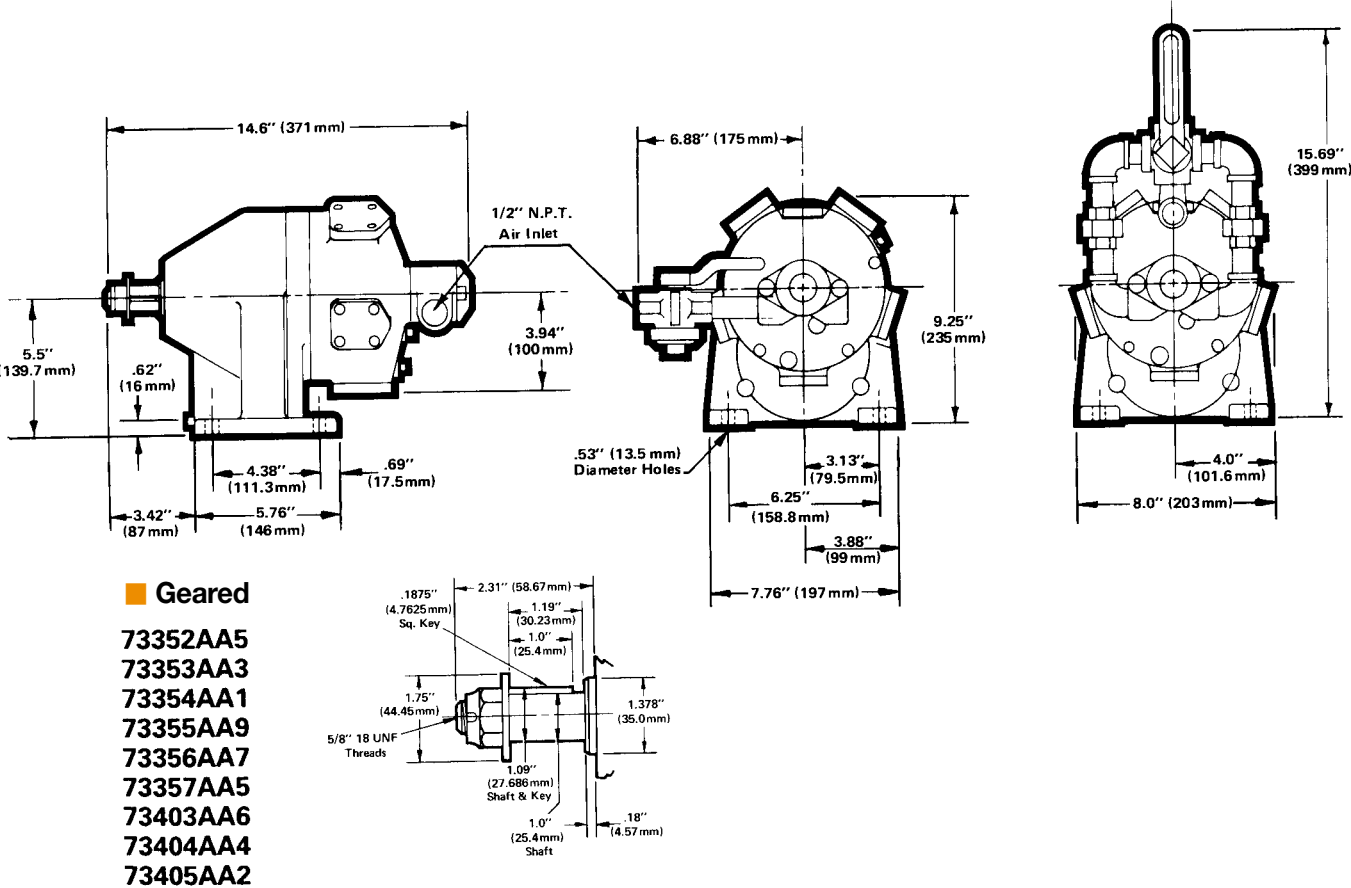
**OPTIONAL EQUIPMENT:**

Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

**Additional Accessories:** pages 67-68



MA2 Series Dimensional Data



# Radial Piston

## GARDNER-DENVER®

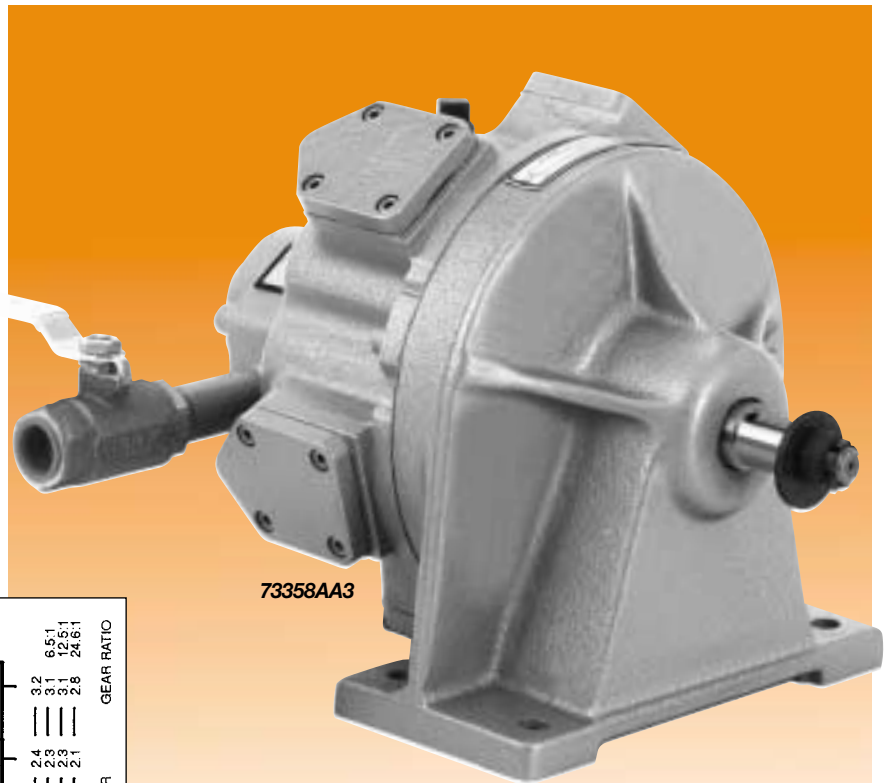
### MA3 Series

■ **Maximum Motor Power**

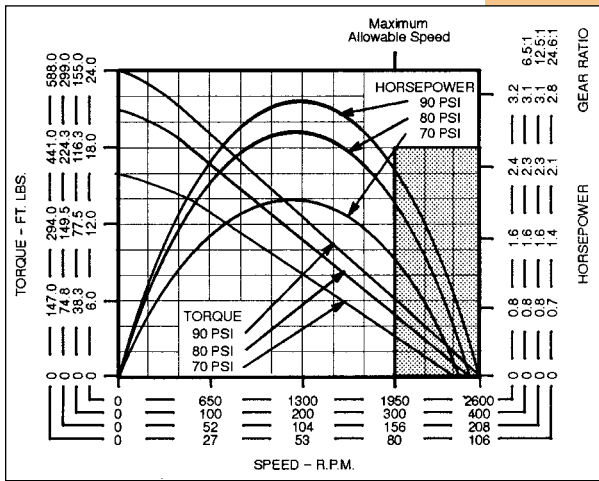
**3.0 hp**  
**2.24 kW**

■ **Torque Range**

**24 – 588 ft. lbs.**  
**33 – 797 Nm**



73358AA3



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Air Consumption		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg	cfm	m <sup>3</sup> /min		lbs.	kg
<b>with Single-Direction Valving</b>													
73358AA3	1300	2600	24	33	13	18	49	22.2	90	2.55	—	750	340
73372AA3	200	400	155	210	84	114	65	29.5	90	2.55	6.5:1	2560	1161
73370AA7	104	200	299	405	161	218	65	29.5	88	2.49	12.5:1	2560	1161
73360AA8	53	100	588	797	317	430	65	29.5	97	2.74	24.6:1	2560	1161
<b>with Reversible Valving</b>													
73359AA1	1190	2600	24	33	13	18	51	23.1	80	2.27	—	750	340
73373AA1	183	400	155	210	84	114	67	30.1	87	2.46	6.5:1	2560	1161
73371AA5	95	200	299	405	161	218	67	30.1	90	2.55	12.5:1	2560	1161
73361AA6	48	100	588	797	317	430	67	30.1	95	2.69	24.6:1	2560	1161
<b>without Valving</b>													
73406AA0	1190	2600	24	33	13	18	51	23.1	80	2.27	—	750	340
73409AA4	183	400	155	210	84	114	67	30.1	87	2.46	6.5:1	2560	1161
73408AA6	95	200	299	405	161	218	67	30.1	90	2.55	12.5:1	2560	1161
73407AA8	48	100	588	797	317	430	67	30.1	95	2.69	24.6:1	2560	1161

\* Non-g geared models assume overhung load located at 0.625" (15.88mm) from face of motor.  
Geared models assume overhung load located at 1" (25.40mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

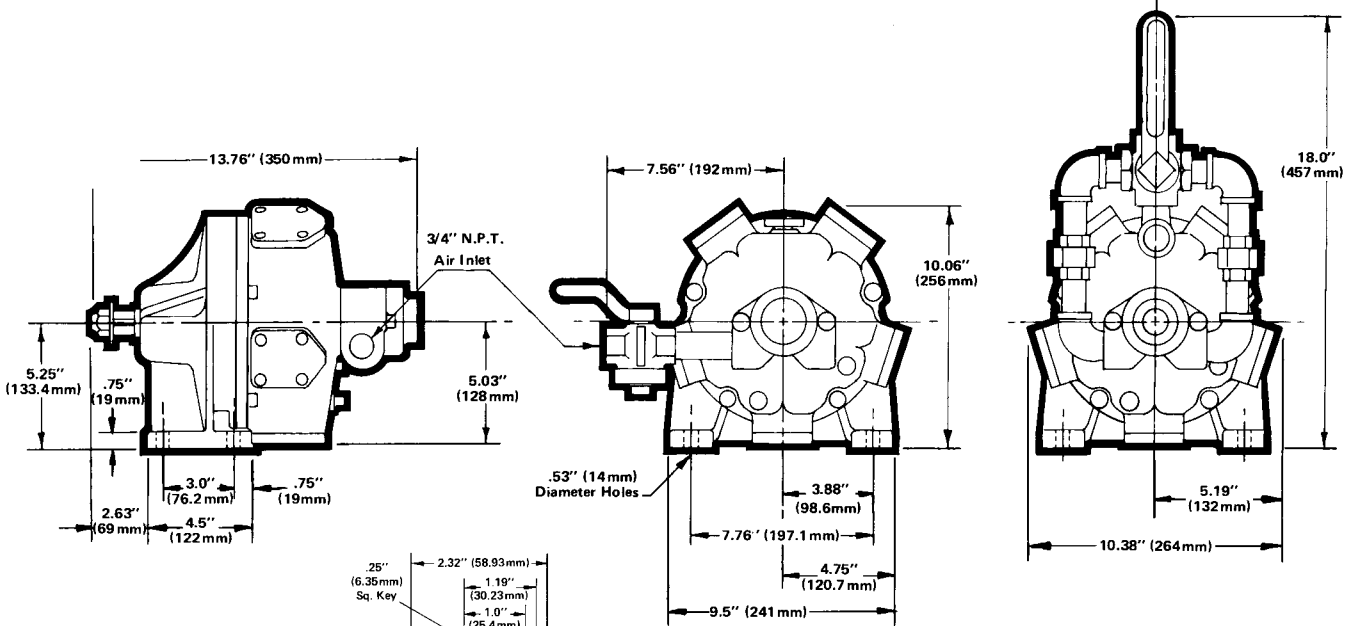
**GENERAL:**

Air Inlet: 3/4" NPTF  
All tools performance rated @ 90psi (620 kPa) air pressure.

**OPTIONAL EQUIPMENT:**

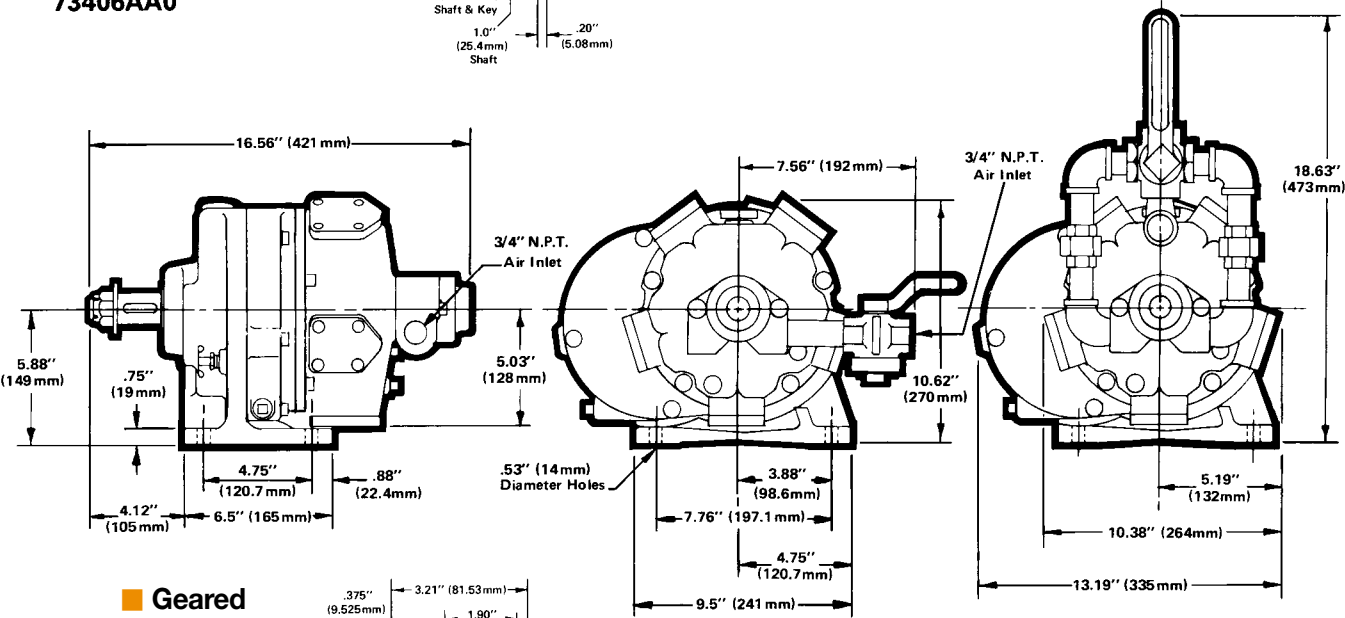
Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

## MA3 Series Dimensional Data



**Direct Drive**

- 73358AA3**
- 73359AA1**
- 73406AA0**



**Geared**

- 73360AA8**
- 73361AA6**
- 73370AA7**
- 73372AA3**
- 73373AA1**
- 73407AA8**
- 73408AA6**
- 73409AA4**

# Radial Piston

## GARDNER-DENVER®

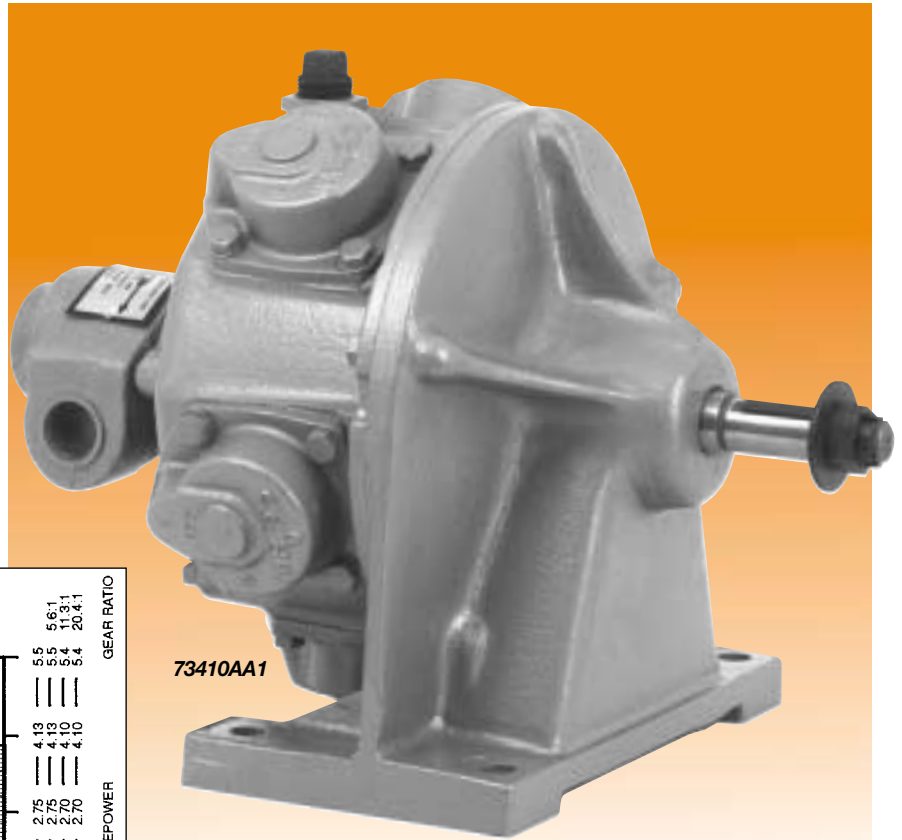
### MB Series

■ **Maximum Motor Power**

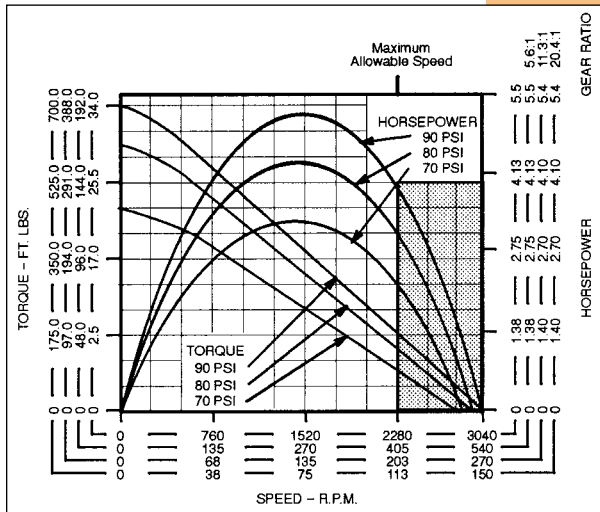
5.5 hp  
4.10 kW

■ **Torque Range**

34 – 700 ft. lbs.  
46 – 949 Nm



73410AA1



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Air Consumption		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg	cfm	m <sup>3</sup> /min		lbs.	kg
<b>with Single-Direction Valving</b>													
73374AA9	1520	3000	34	46	15	20	100	45.4	166	4.70	—	1310	594
73380AA6	270	540	192	260	81	110	145	65.8	144	4.08	5.6:1	2200	998
73378AA1	135	270	388	526	164	222	145	65.8	152	4.30	11.3:1	2200	998
73376AA5	75	150	700	949	296	401	145	65.8	167	4.73	20.4:1	2200	998
<b>with Reversible Valving</b>													
73375AA7	1500	3000	34	46	15	20	103	46.7	152	4.30	—	1310	594
73381AA4	268	540	192	260	81	110	148	67.1	140	3.96	5.6:1	2200	998
73379AA9	133	270	388	526	164	222	148	67.1	148	4.19	11.3:1	2200	998
73377AA3	74	150	700	949	296	401	148	67.1	154	4.36	20.4:1	2200	998
<b>without Valving</b>													
73410AA1	1500	3000	34	46	15	20	103	46.7	152	4.30	—	1310	594
73413AA5	268	540	192	260	81	110	148	67.1	140	3.96	6.5:1	2200	998
73412AA7	133	270	388	526	164	222	148	67.1	148	4.19	11.3:1	2200	998
73411AA9	74	150	700	949	296	401	148	67.1	154	4.36	20.4:1	2200	998

\* All models assume overhung load located at 1" (25.40mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

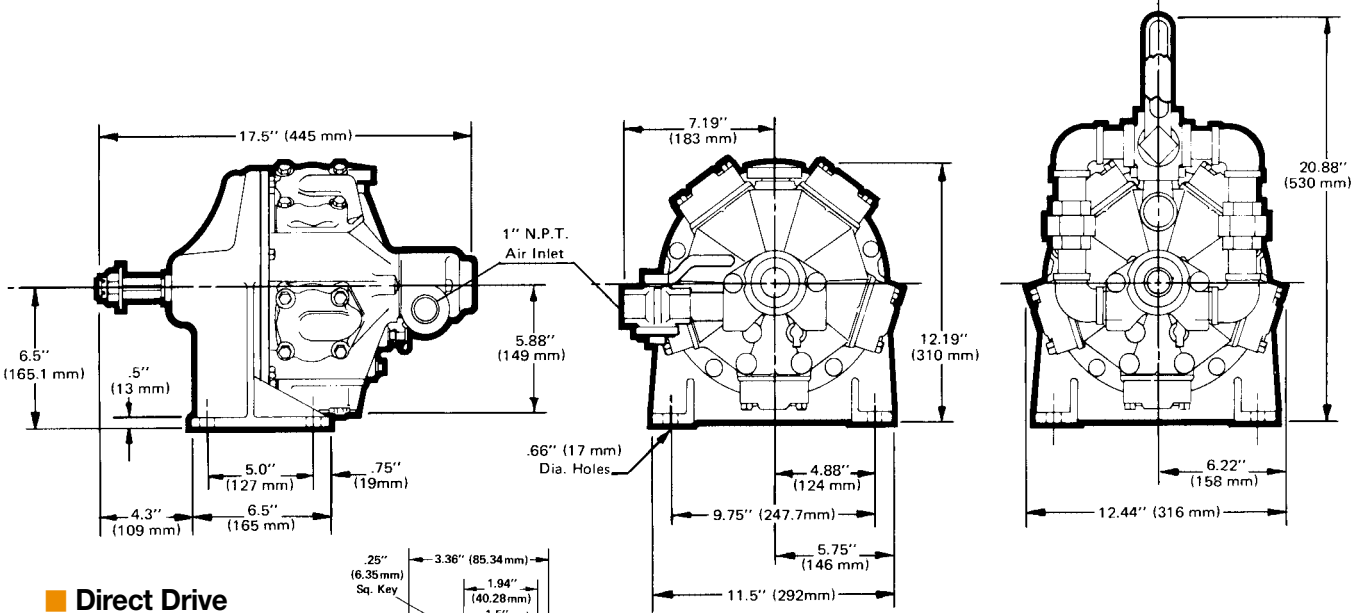
**GENERAL:**

Air Inlet: 1" NPTF  
All tools performance rated @ 90psi (620 kPa) air pressure.

**OPTIONAL EQUIPMENT:**

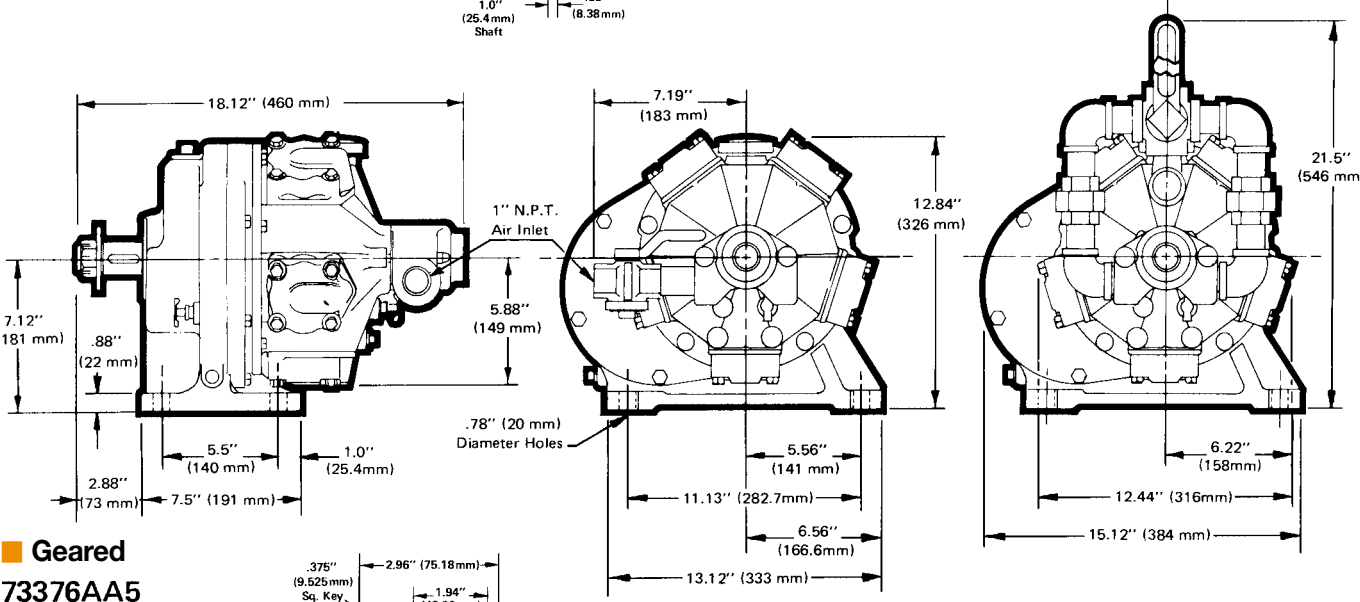
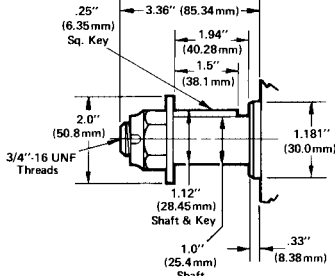
Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

## MB Series Dimensional Data



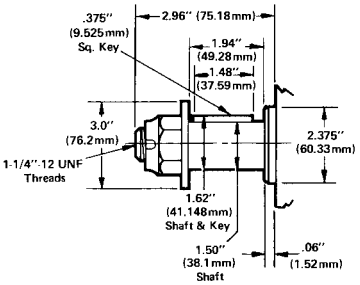
**Direct Drive**

- 73374AA9
- 73375AA7
- 73410AA1



**Geared**

- 73376AA5
- 73377AA3
- 73378AA1
- 73379AA9
- 73380AA6
- 73381AA4
- 73411AA9
- 73412AA7
- 73413AA5



# Radial Piston

## GARDNER-DENVER®

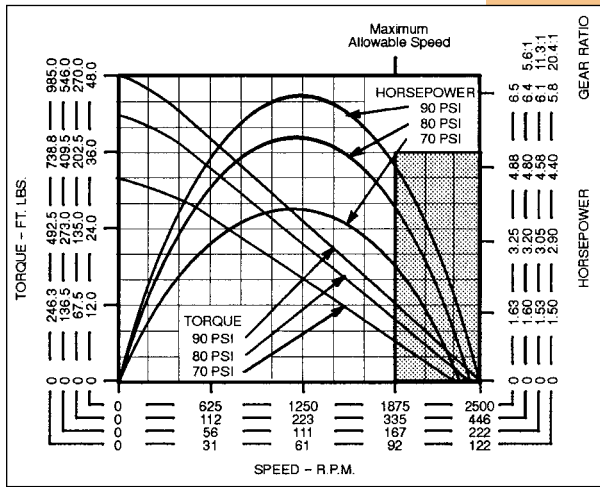
### ME Series

■ **Maximum Motor Power**

6.5 hp  
4.85 kW

■ **Torque Range**

48 – 985 ft. lbs.  
65 – 1336 Nm



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Air Consumption		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg	cfm	m³/min		lbs.	kg
<b>with Single-Direction Valving</b>													
73382AA2	1250	2500	48	65	19	26	101	45.8	167	4.73	—	1310	594
73388AA0	223	440	270	366	104	141	153	69.4	165	4.67	5.6:1	2200	998
73386AA4	111	220	546	740	209	283	153	69.4	169	4.79	11.3:1	2200	998
73384AA8	61	120	985	1336	377	511	153	69.4	168	4.76	20.4:1	2200	998
<b>with Reversible Valving</b>													
73383AA0	1225	2500	48	65	19	26	104	47.2	161	4.56	—	1310	594
73389AA8	219	440	270	366	104	141	157	71.2	152	4.30	5.6:1	2200	998
73387AA2	108	220	546	740	209	283	157	71.2	171	4.84	11.3:1	2200	998
73385AA6	60	120	985	1336	377	511	157	71.2	167	4.73	20.4:1	2200	998
<b>without Valving</b>													
73414AA3	1225	2500	48	65	19	26	104	47.2	161	4.56	—	1310	594
73417AA7	219	440	270	366	104	141	157	71.2	152	4.30	6.5:1	2200	998
73416AA9	108	220	546	740	209	283	157	71.2	171	4.84	11.3:1	2200	998
73415AA1	60	120	985	1336	377	511	157	71.2	167	4.73	20.4:1	2200	998

\* All models assume overhung load located at 1" (25.40mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

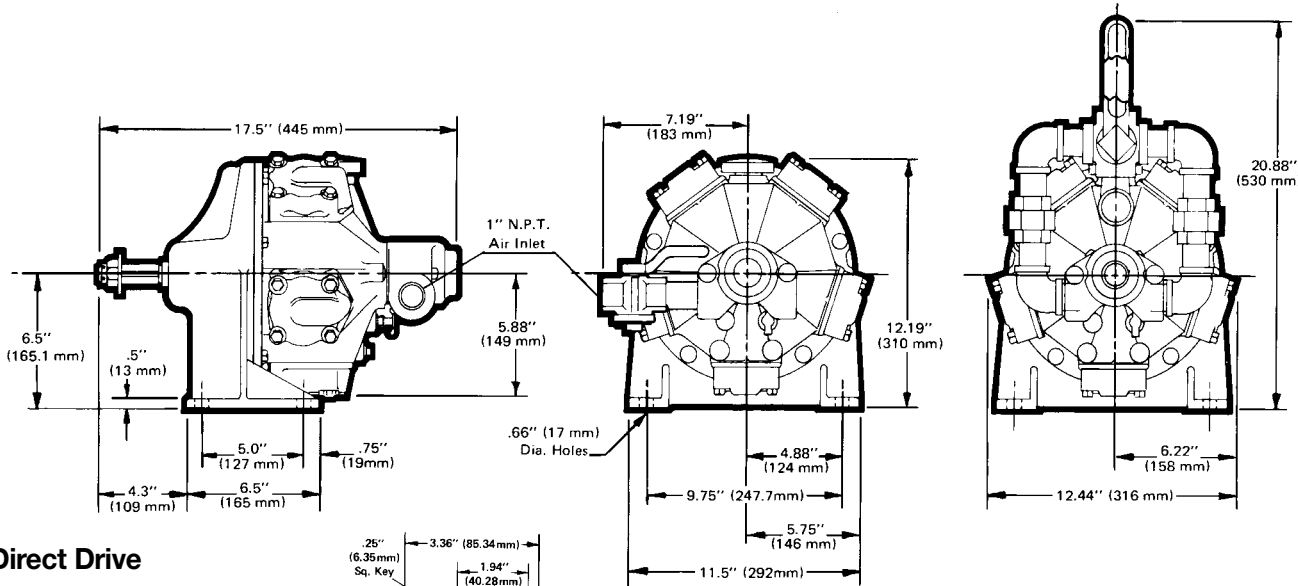
**GENERAL:**

Air Inlet: 1" NPTF  
All tools performance rated @ 90psi (620 kPa) air pressure.

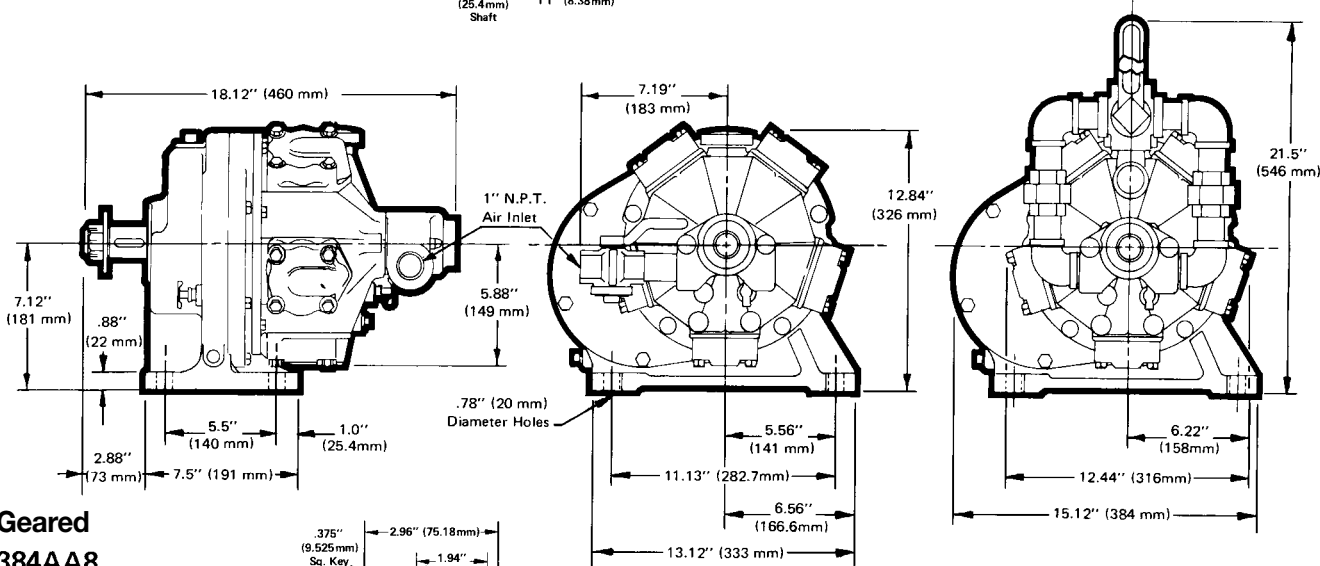
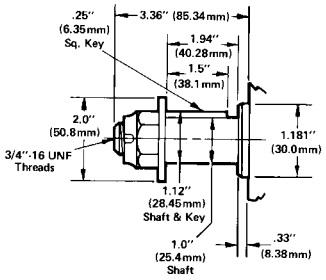
**OPTIONAL EQUIPMENT:**

Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

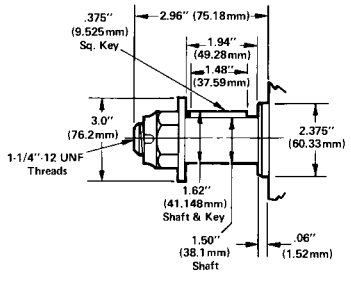
## ME Series Dimensional Data



- Direct Drive
- 73382AA2
- 73383AA0
- 73414AA3



- Geared
- 73384AA8
- 73385AA6
- 73386AA4
- 73387AA2
- 73388AA0
- 73389AA8
- 73415AA1
- 73416AA9
- 73417AA7



# Radial Piston

## GARDNER-DENVER®

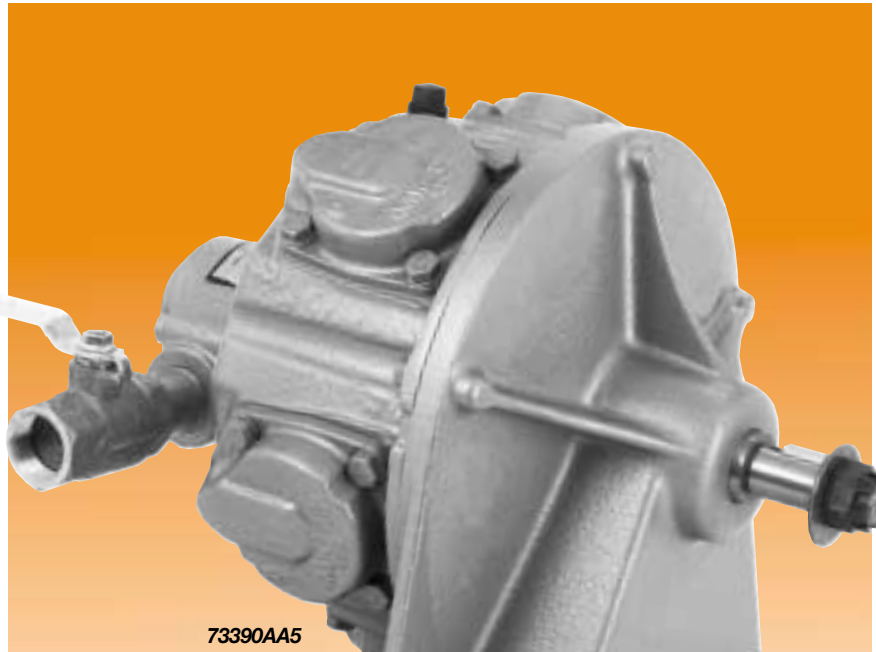
### MK Series

■ **Maximum Motor Power**

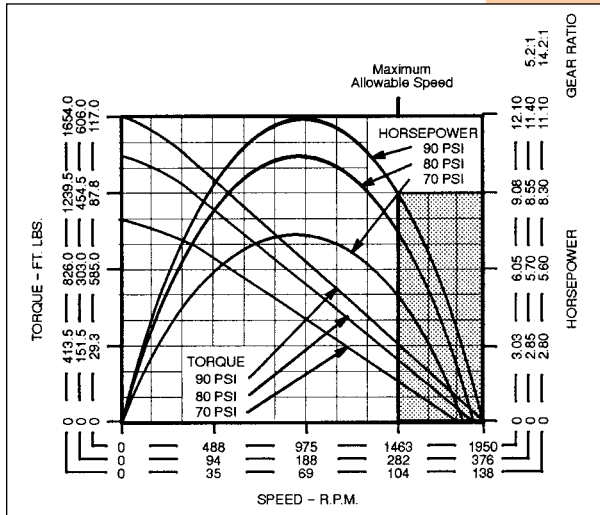
11 hp  
8.20 kW

■ **Torque Range**

117 – 1654 ft. lbs.  
159 – 2243 Nm



73390AA5



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Air Consumption		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg	cfm	m <sup>3</sup> /min		lbs.	kg
<b>with Single-Direction Valving</b>													
73390AA5	975	1900	117	159	72	98	195	88.5	302	8.55	—	2500	1134
73394AA7	188	375	606	822	374	507	225	102.1	295	8.35	5.2:1	2800	1270
73392AA1	69	135	1654	2243	1021	1384	225	102.1	293	8.30	14.2:1	2800	1270
<b>with Reversible Valving</b>													
73391AA3	975	1900	117	159	72	98	202	91.6	311	8.81	—	2500	1134
73395AA5	183	375	606	822	374	507	230	104.3	299	8.47	5.2:1	2800	1270
73393AA9	67	135	1654	2243	1021	1384	230	104.3	288	8.16	14.2:1	2800	1270
<b>without Valving</b>													
73418AA5	975	1900	117	159	72	98	104	91.6	311	8.81	—	2500	1134
73420AA0	183	375	606	822	374	507	230	104.3	299	8.47	5.2:1	2800	1270
73419AA3	67	135	1654	2243	1021	1384	230	104.3	288	8.16	14.2:1	2800	1270

\* All models assume overhung load located at 1" (25.40mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

**GENERAL:**

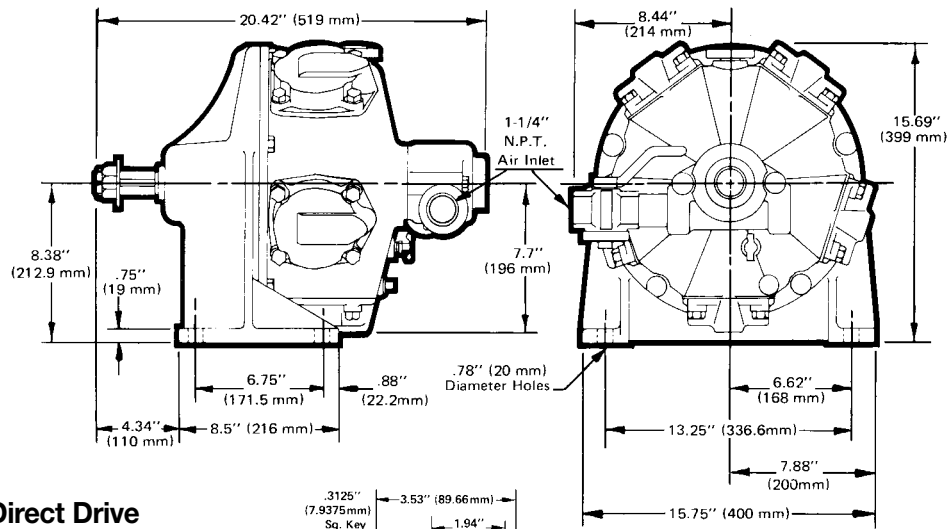
Air Inlet: 1-1/4" NPTF  
All tools performance rated @ 90psi (620 kPa) air pressure.

**OPTIONAL EQUIPMENT:**

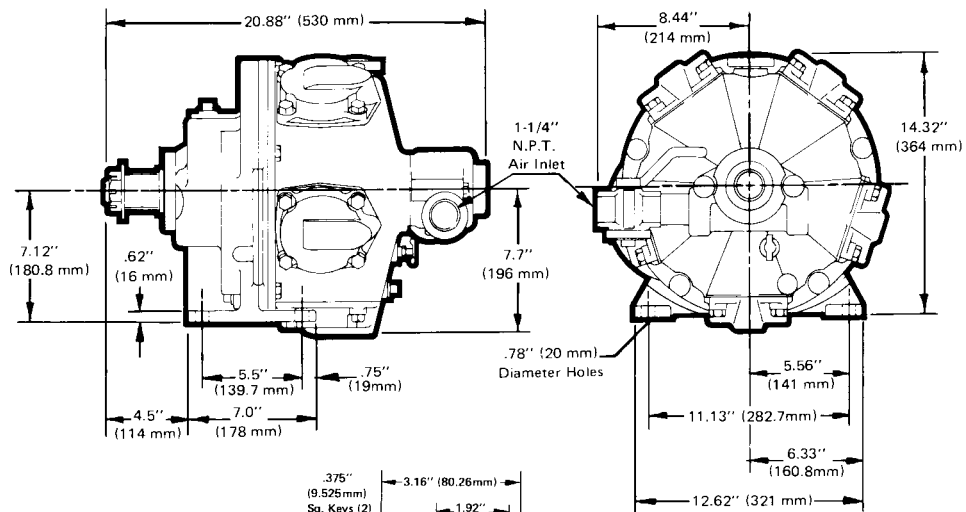
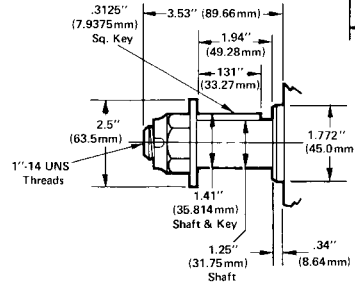
Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)



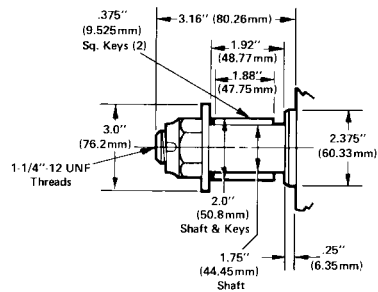
## MK Series Dimensional Data



■ **Direct Drive**  
**73390AA5**  
**73418AA5**



■ **Geared**  
**73392AA1**  
**73394AA7**  
**73419AA3**  
**73420AA0**



# Radial Piston

## GARDNER-DENVER®

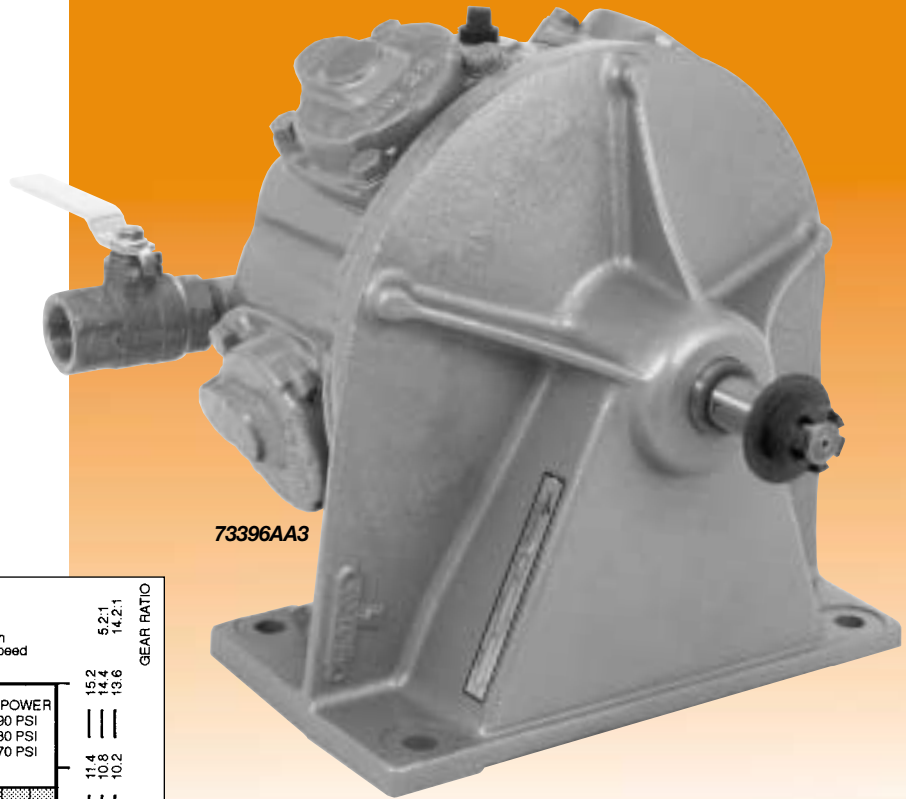
### MM Series

■ **Maximum Motor Power**

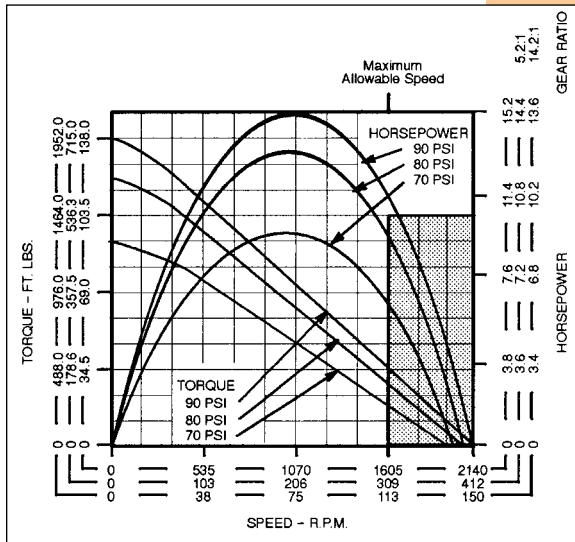
15 hp  
11.19 kW

■ **Torque Range**

138 – 1952 ft. lbs.  
187 – 2647 Nm



73396AA3



Model Number	RPM**		Stall Torque		Starting Torque		Weight		Air Consumption		Gear Ratio	Max. Overhung Load @ Stall*	
	at Max. hp	Free Speed	ft. lbs.	Nm	ft. lbs.	Nm	lbs.	kg	cfm	m <sup>3</sup> /min		lbs.	kg
<b>with Single-Direction Valving</b>													
73396AA3	1070	2100	138	187	82	111	210	95.3	348	9.86	—	2500	1134
73400AA2	206	400	715	970	424	575	226	102.5	336	9.52	5.2:1	2800	1270
73398AA9	75	150	1952	2647	1157	1569	226	102.5	352	9.97	14.2:1	2800	1270
<b>with Reversible Valving</b>													
73397AA1	1010	2100	138	187	82	111	214	97.1	352	9.97	—	2500	1134
73401AA0	194	400	715	970	424	575	231	104.8	332	9.40	5.2:1	2800	1270
73399AA7	71	150	1952	2647	1157	1569	231	104.8	345	9.77	14.2:1	2800	1270
<b>without Valving</b>													
73421AA8	1010	2100	138	187	82	111	214	97.1	352	9.97	—	2500	1134
73423AA4	194	400	715	970	424	575	231	104.8	332	9.40	5.2:1	2800	1270
73422AA6	71	150	1952	2647	1157	1569	231	104.8	345	9.77	14.2:1	2800	1270

\* All models assume overhung load located at 1" (25.40mm) from face of motor.

\*\*These motors must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

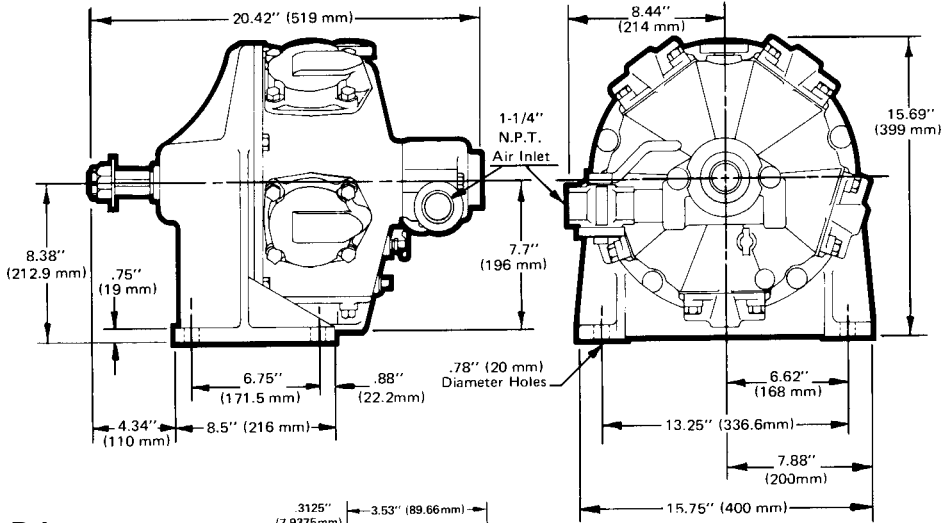
**GENERAL:**

Air Inlet: 1-1/4" NPTF  
All tools performance rated @ 90psi (620 kPa) air pressure.

**OPTIONAL EQUIPMENT:**

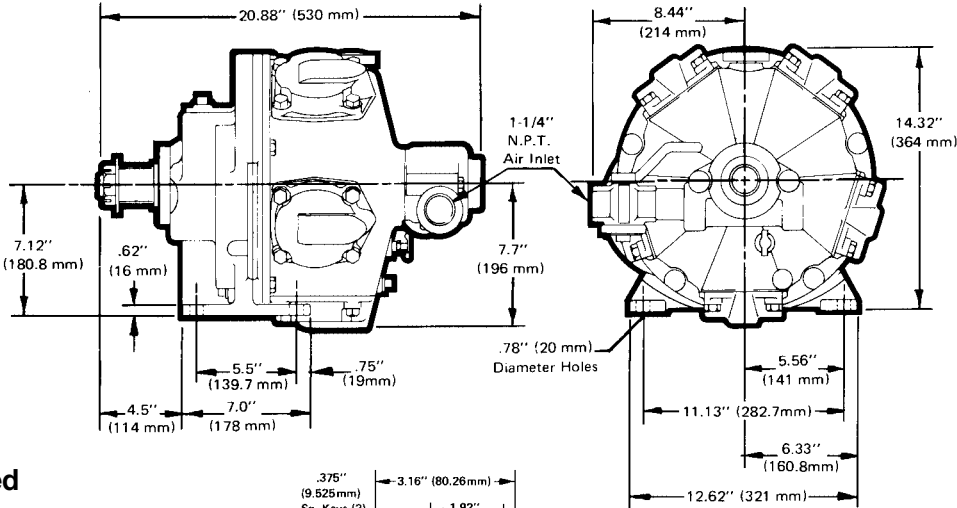
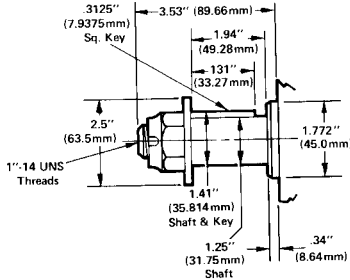
Lubricating Oil – Part 533485 (1 gallon)  
Gear Oil – Part 535090 (1 gallon)

## MM Series Dimensional Data



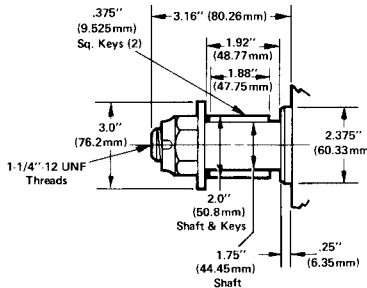
■ Direct Drive

73396AA3  
73421AA8



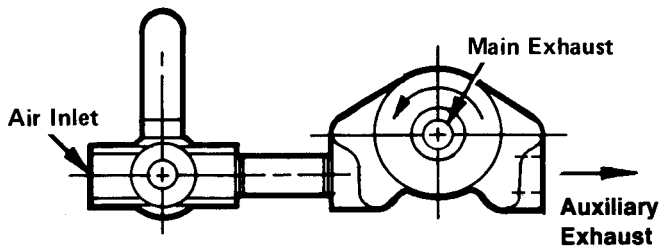
■ Geared

73398AA9  
73400AA2  
73422AA6  
73423AA4

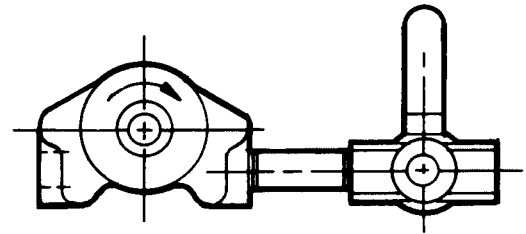


# Throttle Combinations for Radial Piston Motors

## SINGLE DIRECTION VALVING

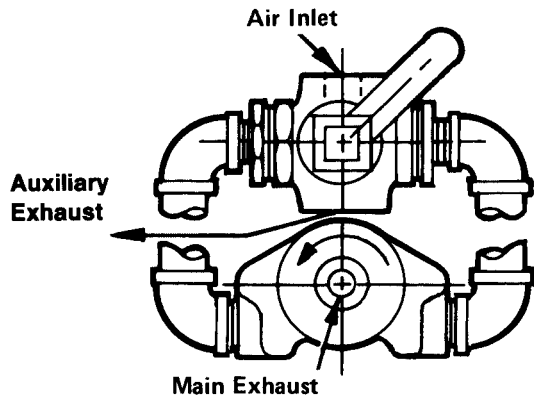


Left Hand Rotation

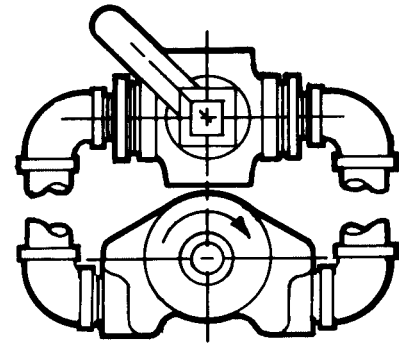


Right Hand Rotation

## REVERSIBLE VALVING



Left Hand Rotation

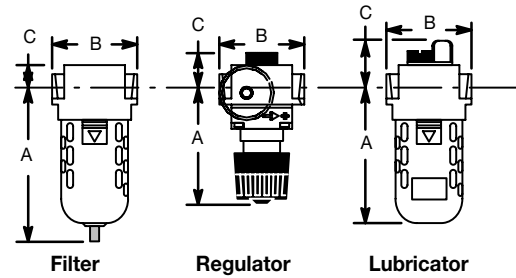


Right Hand Rotation



## Filters, Regulators, Lubricators

### Modular Construction



Model Number	NPT	Air Flow		Bowl Capacity		"A"		"B"		"C"	
	in.	SCFM	m <sup>3</sup> /min	oz.	liter	in.	mm	in.	mm	in.	mm

### Filters

F02-M	1/4	35	9.9	5.0	0.15	5.6	142	3.0	76	0.9	23
F03-M	3/8	44	12.9	5.0	0.15	5.6	142	3.0	76	0.9	23
F04-M	1/2	138	39.1	10	0.30	6.4	163	3.4	86	1.0	25

### Lubricators – Economist (Standard Mist)

L02-EP	1/4	28	3.7	5.0	0.15	4.8	122	3.0	76	1.6	41
L03-EP	3/8	48	6.2	5.0	0.15	4.8	122	3.0	76	1.6	41
L04-EP	1/2	102	13.6	10	0.30	5.4	137	3.4	86	1.6	41

### Lubricators – Atomist (Fine Mist)

L02-AP	1/4	28	3.7	5.0	0.15	4.8	122	3.0	76	1.6	41
L03-AP	3/8	48	6.2	5.0	0.15	4.8	122	3.0	76	1.6	41
L04-AP	1/2	102	13.6	10	0.30	5.4	137	3.4	86	1.6	41

Model Number	NPT	Air Flow		Maximum Pressure		"A"		"B"		"C"	
	in.	SCFM	m <sup>3</sup> /min	psig	bar	in.	mm	in.	mm	in.	mm

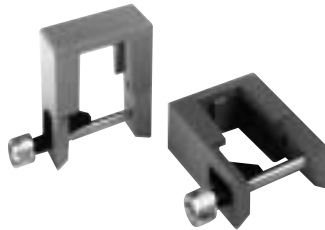
### Regulators

R02-G	1/4	80	10.8	125	8.5	3.9	99	3.0	76	1.3	33
R03-G	3/8	80	10.8	125	8.5	3.9	99	3.0	76	1.3	33
R04-G	1/2	195	26.1	125	8.5	5.6	142	3.4	86	1.4	36

### Modular Sleeve (with O-Ring)

#### Model: MS101

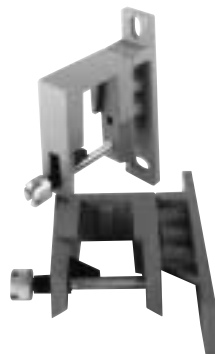
Unique modular sleeve design easily and quickly connects one or more units and accessories together without pipe nipples. Hand tightening the threaded pin provides a tight seal between the units. Modular sleeves do not add length to combination assemblies, and make a more compact installation.



### Modular Sleeve & Bracket (with O-Ring)

#### Model: MS102

Combination sleeve/wall mounting bracket as shown. Designed for mounting a single unit or combination of units directly to the wall. The sleeve and mounting bracket can be ordered assembled at the factory, or just the mounting bracket alone to be used on existing modular sleeves.



### Modular End Blocks (sold in pairs)

Models: EB-102 (1/4"); EB-103 (3/8"); EB-104 (1/2"); EB-106 (3/4")

The threaded End Blocks, together with the modular sleeve, allow a single unit or a combination of units to be piped into the air system in the modular mode. This feature allows ease of unit servicing or replacement without disturbing the airline connections. End blocks add 1.19" (30 mm) to each end of the unit where used.

NOTE: The 3/4" end blocks are designed only to adapt to 3/4" piping systems and do not increase flow ratings listed for any unit.



### Automatic Drain

#### Model: AD-101

Automatic Mechanical Drain is a float-type mechanism with a 1/8" NPT threaded drain port completely enclosed in the filter bowl. The float is constructed of rigid cellular rubber. The drain will operate automatically under air pressure ranging from 20 to 175 psig (1.5 to 12 bar).



# General Accessories

## Airline Filter and Lubricator



Filter



Lubricator

Part Number	Description	NPT	Air Flow		Max. Pressure	
		in.	SCFM	m <sup>3</sup> /min	psig	bar
45-211	Filter w/cartridge*	1/4	17	8.0	100	6.9
45-0212	Filter cartridge	-	-	-	-	-
45-0201	Lubricator**	1/4	22	10	100	6.9
45-0301	Lubricator**	3/8	22	10	100	6.9

GENERAL: Use where inconvenient for standard filter or lubricator.

\* NOTE: Filter will not remove water.

\*\* NOTE: One ounce reservoir good for an average eight hour shift.



## Air Hoses

Part Number	Hose I.D.		Fittings (NPT)		Length	
	in.	mm	in.	mm	ft.	m
A110026	3/16	4.7	1/8	3/8-24*	6.0	1.8
A139856	3/16	4.7	1/8	1/8	6.0	1.8
45-1307	3/16	4.7	1/8	1/4	7.0	2.1
45-1408	1/4	6.4	1/4	1/4	8.0	2.4
45-1409	1/4	6.4	1/8	1/4	8.0	2.4
45-1508	5/16	7.9	1/4	1/4	8.0	2.4
45-1610	3/8	9.5	3/8	3/8	10	3.0
45-1620	3/8	9.5	3/8	3/8	20	6.1
45-1630	3/8	9.5	3/8	3/8	30	9.1
45-1810	1/2	12.7	3/8	1/2	10	3.0
45-1812	1/2	12.7	1/2	1/2	12	3.7
45-1825	1/2	12.7	1/2	1/2	25	7.6
45-1850	1/2	12.7	1/2	1/2	50	15.2

GENERAL: 3/16" & 1/4" hoses have braided covers, all others have neoprene covers.

\* NOTE: 3/8"-24 is a straight thread

## Lubricants (do not substitute)

### Oil -

#### Air Tool Oil #500021:

Available in: 1 gal. can - part #533485

#### High Film Strength oil (for severe use):

Available in: 1 gal. can - part #536333

NOTE: Cannot be used in AtoMist Lubricators. Use only with EconoMist or Servoil type lubricators.

#### MR Series Motors - Gearing Oil:

Available in: 1 gal. can - part #535090

### Grease -

#### Gear Lube:

Available in: 1 lb. can - part #A123771

1 gal. can - part #533485

NOTE: Same as Shell Oil Co. Alvania #EP RIO 71039 Grade "00" or Sun Petroleum Products Prestige 740 AEP Grade "00".

## Swivel Hose Couplings

Part Number	NPT in.
A20744	1/4
A20741	3/8
A20764	1/2



## Air Pressure Gage Kit

Part Number	Description
A13157	Gage, needle, cap & case
13158	Hypodermic needle (1)



## Quick Disconnect Fittings

Fitting Type*	NPT in.	Nominal Size		
		1/4"	3/8"	1/2"

### Coupler (male NPT)

	1/8	45-0710	-	-
	1/4	45-0711	45-0713	-
	3/8	45-0712	45-0714	45-0716
	1/2	-	45-0715	45-0717

### Coupler (female NPT)

	1/8	45-0730	-	-
	1/4	45-0731	45-0733	-
	3/8	45-0732	45-0734	45-0736
	1/2	-	45-0735	45-0737

### Nipple (male NPT)

	1/8	45-0720	45-0723	-
	1/4	45-0721	45-0724	-
	3/8	45-0722	45-0725	45-0726
	1/2	-	-	45-0727

### Nipple (female NPT)

	1/8	45-0740	-	-
	1/4	45-0741	45-0744	-
	3/8	45-0742	45-0745	45-0746
	1/2	-	-	45-0747

### Nipple (with hose barbs)

	1/4**	45-0748	45-0750	-
	3/8**	45-0749	45-0751	45-0752
	1/2**	-	-	45-0753

\* NOTE: Nipples of one size will not fit couplers of another size.

\*\* NOTE: Indicates inside diameter of hose.

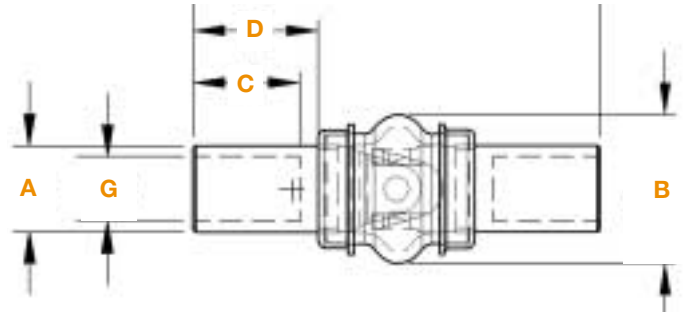
NOTE: 1/4" nominal will pass 49 cfm free air @ 90 psi, but pressure drop exceeds 10 psi with air flow over 30 cfm.

3/8" nominal will pass 90 cfm free air @ 90 psi, but pressure drop exceeds 10 psi with air flow over 53 cfm.

1/2" nominal will pass 168 cfm free air @ 90 psi, but pressure drop exceeds 10 psi with air flow over 109 cfm.

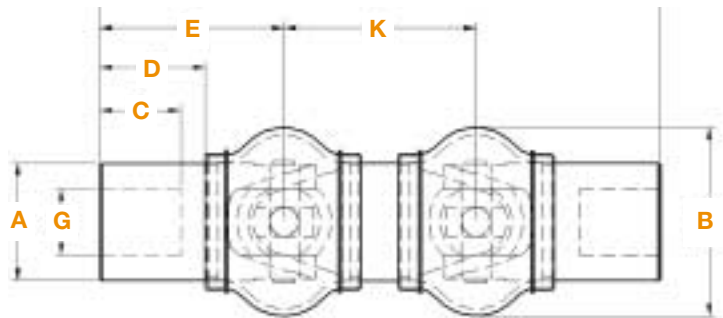
### Single Universal Joints

300 Series



Part Number	C +/- .031 Bore Depth		G +.003, -.000 Bore Diameter		Keyway Size				A +.001, -.006 Outside Diameter		D <sup>(REF)</sup> Exposed Hub Length		B Maximum Cover Diameter	
	in	mm	in	mm	Width		Depth		in	mm	in	mm	in	mm
					in	mm	in	mm						
300-12-8-4-C	0.750	19.0	0.500	12.7	0.125	3.2	0.063	1.6	0.750	19.0	0.688	17.5	1.438	36.5
300-20-10-6-C	1.000	25.4	0.625	15.9	0.188	4.8	0.094	2.4	1.250	31.8	1.031	26.2	2.188	55.6
300-24-14-6-C	1.125	28.6	0.875	22.2	0.188	4.8	0.094	2.4	1.500	38.1	1.219	31.0	2.750	69.9
300-32-18-10-C	1.375	34.9	1.125	28.6	0.313	8.0	0.156	4.0	2.000	50.8	1.438	36.5	3.313	84.2

### Double Universal Joints



Part Number	C +/- .031 Bore Depth		G +.003, -.000 Bore Diameter		Keyway Size				A +.001, -.006 Outside Diameter		D <sup>(REF)</sup> Exposed Hub Length		B Maximum Cover Diameter	
	in	mm	in	mm	Width		Depth		in	mm	in	mm	in	mm
					in	mm	in	mm						
300-D-24-14-6-C	1.125	28.6	0.875	22.2	0.188	4.8	0.094	2.4	0.750	19.1	0.688	17.5	1.438	36.5
300-D-32-18-10-C	1.375	34.9	1.125	28.6	0.313	8.0	0.156	4.0	1.250	31.8	1.031	26.2	2.188	55.6
300-D-12-8-4-C	.750	19.1	.500	12.7	0.125	3.2	0.063	1.6	1.500	38.1	1.219	31.0	2.750	69.9
300-D-20-10-6-C	1.000	25.4	.625	15.9	0.188	4.8	0.094	2.4	2.000	50.8	1.438	36.5	3.313	84.2

# TRAINING

### ***Our Commitment To Your Success***

Our complete line of tools are carefully designed and built from the finest materials available in order to provide years of trouble free service. But, as with any piece of equipment, service problems can occur. All tools are designed to be easy to service...that is, of course, if you know what you're doing.

To facilitate quick repairs, and limit downtime...CooperTools conducts training seminars covering all aspects of every tool we make.

Introductory training seminars are designed to fully acquaint students with the entire line of tools and their fundamental operation. The emphasis is on thoroughly understanding each tool...its features, uses, and the best way to demonstrate the tool to a potential buyer.

Advanced training seminars, which are often tailored to individual needs, are designed to hone the skills of the experienced student. Hands-on experience, with an emphasis on troubleshooting and repairing, are the focus of this training.

For additional information on our training seminars, please call your local CooperTools Distributor.







## **Factory Certified Tool Service**

You can depend on Factory Certified Service Centers to provide the service your tools need.

CooperTools has strategically located Certified Service Centers throughout the U.S. These Centers are staffed with professional Tool Repair Technicians who provide complete and comprehensive repairs for **all** air tools, regardless of manufacture. And to be sure all repairs are done right the first time, the latest in testing equipment and inspection instruments are used.

Each tool repaired in one of the Factory Certified Service Centers is calibrated and tested to new tool standards, and carries the New Tool Warranty of Performance.



## **Free Repair Estimates**

The cost to repair your air tool is provided before any work is started. We think you should know in advance what to expect. Naturally, the repair estimates are free... with no obligation.



## **Tool Inspection Service**

Representatives from the Certified Service Center can help you improve your air tool utilization by providing a free, no-obligation survey of your present tooling. By identifying air tools in your plant that are worn and inefficient, the Factory Trained

Servicemen can recommend appropriate repairs to help you reduce costly down-time and improve your man-hour productivity.



## **New Tool Warranty**

Because every Certified Service Center has all equipment necessary to repair and calibrate your tools, each tool that leaves our centers has a New Tool Warranty. You have our assurance that this tool will perform just like it did when it was new.

## CooperTools Is On The Web!

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