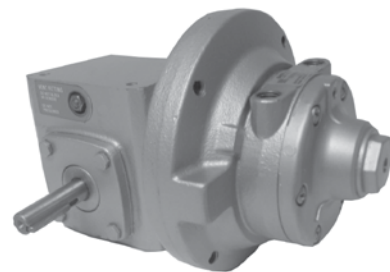
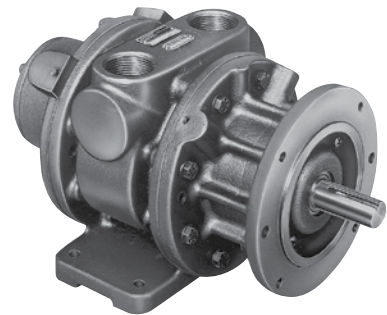
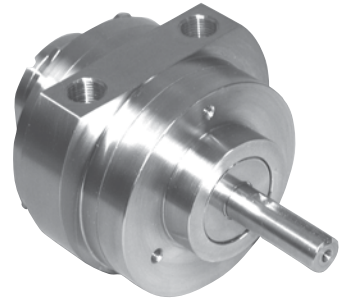


## Air Motors / Gear Motors

Lubricated and Non-lubricated



# The Gast Group Difference

For over 90 years, Gast Manufacturing has been providing innovative air solutions to a broad breadth of customers. With the relatively recent addition of JUN-AIR, we have expanded our capabilities and formed, “The Gast Group.” Together, our diverse engineering background and pneumatic experience allow us to provide both component and system solutions to meet all of your pneumatic needs...all backed by our strong commitment to quality and customer support.

## Products for Almost Any Application – Worldwide

We offer an extensive and versatile line of air-moving products, including vacuum pumps, compressors, air motors, gear motors, vacuum generators, and regenerative blowers. We design and build these components for original equipment manufacturers worldwide, but we also develop complete pneumatic solutions to solve tough customer challenges.

To ensure fast, efficient delivery of products, Gast has a vast network of sales representatives/distributors throughout the United States and the world. Plus, we maintain direct sales and service facilities in Europe, Hong Kong, and Shanghai, China.

## Unparalleled Design Expertise

Unlike other manufacturers, who might expect you to modify your pneumatic system to fit their available product(s), Gast is committed to finding the right product to meet your specific needs. If we don't have a high-quality, off-the-shelf product to fit your existing application or meet your anticipated needs, we'll propose customized cost-effective design options that will serve your special requirements. We can even develop and produce your complete pneumatic system for you.

Our experienced Research and Development engineers and Product engineers work together to analyze customer needs and use computer-aided design to generate timely solutions for air-handling problems. The design team has one goal: to create problem-solving solutions that capitalize on the latest available technology, meet all application requirements, and benefit from cost-effective production methods. The end result: products and solutions that are the best value in the marketplace for our customers.

## A Lasting Commitment to Quality

We invest heavily in both equipment and people to maintain the consistent quality for which our products are known worldwide, and we have done so since day one. As early as 1983, we implemented a total quality process designed to ensure the quality of our products. In keeping with that tradition, Gast has achieved ISO 9001 certification, making us a member of the elite group of manufacturing companies in the world to receive that certification.

## European Community Directives €€

With extensive sales outside the United States, Gast has pledged to conform to the European Community Directives. These directives contain essential requirements concerning health, safety, environment, and consumer protection for all products targeted for the European Community market. Currently, all Gast products available for sale in the European Community are in compliance with the Machinery, Low Voltage, and Electromagnetic Compatibility Directives.

Pictorial and dimensional data is subject to change without notice. The information presented is based on technical data and test results of nominal units. It is believed to be accurate and is offered as an aid in the selection of Gast products. It is the user's responsibility to determine suitability of the product for intended use and the user assumes all risk and liability whatsoever in connection therewith. Environmental and application conditions may affect advertised life.

# Why use a Gast Air Motor?

## Variable Speed

You can vary air motor speed between 300 and 10,000 rpm (depending on model selection) with a simple valve put in between the air source and air motor.

## Non-electrical Sparking

As a non-electrical device, the possibility of explosion from igniting flammable gases is greatly reduced.

## Instantly Reversible

A four-way valve in the air line enables a Gast Air Motor to be instantly reversed. A turn of the valve causes a complete reversal of rotation, even when the motor is running at full speed.

## Cool Running

As the air motor turns, expanded air cools the motor. Units can be used in ambient temperatures up to 250 °F (120 °C) in a non-hazardous atmosphere.

## Compact and Portable

Get maximum horsepower with minimum size and weight.

## Minimum Maintenance

You can put a Gast Air Motor in places where they will not get much service, because there's virtually nothing to service on a Gast Air Motor, providing it is operated on a clean, dry, and lubricated air supply\*.

## Will Not Burn Out

Gast Air Motors can be stalled or overloaded for long periods without damage.

## Low Price

Cost is less than other motors of equal horsepower and capabilities.

## Operate in All Positions

Mount them sideways, upside-down, or in any position so long as adequate lubrication\* is provided and end thrust is kept to design limits. Gear Motors will operate in almost any position, see model data.

## Low-shock Starts

Because Gast Air Motors go to work with air-cushioned smoothness, they cut stress on your equipment.

## Self-sealing Vanes

Vaness are self-sealing and automatically take up their own wear, thus ensuring constant output for thousands of hours of use.

## Mounting Flexibility

Foot, hub, face, NEMA-C, or metric flange motor mountings are standard equipment for most air motor sizes.

## Four-vane or Eight-vane

Four-vane units meet most requirements, but for more precise inching control and minimum blowby in applications where motor is operating in a stalled condition, specify eight-vane models.

## Long-life Accessories

To ensure long life, Gast offers accessories designed to extend unit life including air filters that remove water and particles down to 5 microns, and air line lubricators that supply a constant flow of lubrication automatically\*. We can supply a pressure regulator that provides precise control of power and operating speed. Options like these help you get smooth performance with minimum maintenance.

\*Non-lubricated series does not require a lubricator

## How to Select an Air Motor



Air motors differ in many ways from other power sources. These unique operating characteristics must be considered when selecting an air motor for a particular job. It is easy to change horsepower and speed of an air motor by throttling the air inlet. Therefore, the best rule of thumb for selecting an air motor is to choose

one that will provide the horsepower and torque needed using only two-thirds ( $\frac{2}{3}$ ) of the line pressure available. The full air line pressure will then be available for overloads and starting.

## Output Power vs. Speed

The output power of an air motor is relative to speed and to air line pressure.

## Torque vs. Speed

1. An air motor slows down when load increases... at the same time its torque increases to a point where it matches the load. It will continue to provide increased torque all the way to the stalled condition, and it can maintain the stalled condition without any harm to the motor.
2. As the load is reduced, an air motor will increase speed and the torque will decrease to match the reduced load.
3. When the load on an air motor is either increased or decreased, speed can be controlled by increasing or decreasing air pressure.
4. Starting torque of an air motor is lower than running torque. While this provides smooth, low-shock starting, it is necessary to have additional air line pressure for starting under heavy loads.

## Air Consumption vs. Speed

Air consumption increases as speed and air pressure is increased.

# Air Motor/Gear Motor Performance Overview

Whatever your rotary air motor power requirements, chances are we have what you're looking for.

## Stainless Steel and Standard Air Motors Specifications

| MODEL                             | OPERATING DATA |              |      |         |       |                      |       | MAXIMUM TORQUE |         |       |
|-----------------------------------|----------------|--------------|------|---------|-------|----------------------|-------|----------------|---------|-------|
|                                   | MAX. SPEED     | OUTPUT POWER |      | TORQUE  |       | MAX. AIR CONSUMPTION |       | MAX. SPEED     |         |       |
|                                   | rpm            | HP           | kW   | lb. in. | Nm    | cfm                  | m³/h  | rpm            | lb. in. | Nm    |
| <b>STAINLESS STEEL AIR MOTORS</b> |                |              |      |         |       |                      |       |                |         |       |
| 1AM                               | 10,000         | 0.45         | 0.33 | 2.75    | 0.31  | 20.5                 | 35.1  | 650            | 5.6     | 0.65  |
| 4AM                               | 3,000          | 1.70         | 1.30 | 36.00   | 4.1   | 78                   | 132.5 | 300            | 56.00   | 6.3   |
| 6AM                               | 3,000          | 4.00         | 3.00 | 84.00   | 10.00 | 128                  | 228   | 300            | 115.00  | 13.00 |
| <b>STANDARD AIR MOTORS</b>        |                |              |      |         |       |                      |       |                |         |       |
| 1AM (A)                           | 10,000         | 0.45         | 0.33 | 2.75    | 0.31  | 20.5                 | 35.1  | 650            | 5.6     | 0.65  |
| 1UP (B)                           | 6,000          | 0.45         | 0.33 | 5.25    | 0.58  | 27                   | 47    | 500            | 6.00    | 0.68  |
| 2AM (A)                           | 3,000          | 0.93         | 0.68 | 19.50   | 2.20  | 30                   | 49.5  | 350            | 26.10   | 3.05  |
| 4AM (A)                           | 3,000          | 1.70         | 1.30 | 36.00   | 4.1   | 78                   | 132.5 | 300            | 56.00   | 6.3   |
| 6AM (A)                           | 3,000          | 4.00         | 3.00 | 84.00   | 10.00 | 128                  | 228   | 300            | 115.00  | 13.00 |
| 8AM (A)                           | 2,500          | 5.25         | 3.90 | 132.00  | 14.40 | 175                  | 293   | 300            | 185.00  | 21.00 |
| 16AM (A)                          | 2,000          | 9.50         | 7.10 | 290.00  | 34.00 | 275                  | 475   | 300            | 372.00  | 43.0  |

## Gear Motors Specifications

| MODEL       | GEAR RATIO | OPERATING DATA    |            |              |      |         |       |                      |      | MAXIMUM TORQUE    |         |       |
|-------------|------------|-------------------|------------|--------------|------|---------|-------|----------------------|------|-------------------|---------|-------|
|             |            | MAX. SPEED<br>rpm | LINE PRES. | OUTPUT POWER |      | TORQUE  |       | MAX. AIR CONSUMPTION |      | MAX. SPEED<br>rpm |         |       |
|             |            |                   |            | HP           | kW   | lb. in. | Nm    | cfm                  | m³/h |                   | lb. in. | Nm    |
| Gear MotorS |            |                   |            |              |      |         |       |                      |      |                   |         |       |
| 1AM-NRV     | 15:1       | 350               | A          | 0.34         | 0.26 | 62      | 7,1   | 21.0                 | 36   | 30                | 72      | 8,1   |
| 1UP-NRV     | 15:1       | 400               | C          | 0.32         | 0.23 | 49      | 5,5   | 2                    | 36   | 30                | 71      | 8,0   |
| 2AM-43A     | 20:1       | 150               | C          | 0.26         | 0.39 | 110     | 12,4  | 18                   | 30,6 | 60                | 145     | 16,4  |
| 2AM-43A     | 20:1       | 150               | A          | 0.58         | 0.43 | 240     | 27,1  | 42                   | 71,4 | 60                | 270     | 30,5  |
| 4AM-RV      | 10:1       | 300               | B          | 1.26         | 0.94 | 274     | 31,0  | 57.5                 | 98   | 30                | 425     | 48,0  |
| 4AM-RV      | 15:1       | 200               | B          | 1.25         | 0.90 | 400     | 45,2  | 60.0                 | 102  | 20                | 640     | 72,0  |
| 4AM-70C     | 20:1       | 150               | A          | 1.17         | 0.87 | 487     | 55,0  | 71.0                 | 120  | 15                | 740     | 83,6  |
| 4AM-70C     | 40:1       | 75                | A          | 0.95         | 0.71 | 800     | 90,4  | 71.0                 | 120  | 7                 | 1255    | 141,8 |
| 4AM-70C     | 60:1       | 50                | A          | 0.82         | 0.61 | 1040    | 117,5 | 71.0                 | 120  | 5                 | 1640    | 185,3 |
| 6AM-22A     | 10:1       | 300               | A          | 3.40         | 2.54 | 720     | 81,4  | 130.0                | 221  | 30                | 950     | 107,4 |
| 6AM-22A     | 20:1       | 150               | A          | 2.65         | 1.98 | 1100    | 124,3 | 130.0                | 221  | 15                | 1550    | 175,6 |
| 6AM-22A     | 40:1       | 75                | A          | 2.10         | 1.57 | 1725    | 194,9 | 135.0                | 230  | 8                 | 2500    | 282,5 |
| 8AM-32A     | 20:1       | 125               | A          | 3.70         | 2.76 | 1850    | 209,1 | 177.0                | 301  | 15                | 2550    | 288,2 |
| 16AM-13     | 20:1       | 100               | A          | 6.50         | 4.85 | 4175    | 471,8 | 275.0                | 468  | 15                | 5175    | 584,8 |

A – 100 psig and 7.0 bar line pressure for imperial and metric data, respectively.

B – 80 psig and 5.5 bar line pressure for imperial and metric data, respectively.

C – 60 psig and 4.1 bar line pressure for imperial and metric data, respectively.

## Catalog Performance Specifications

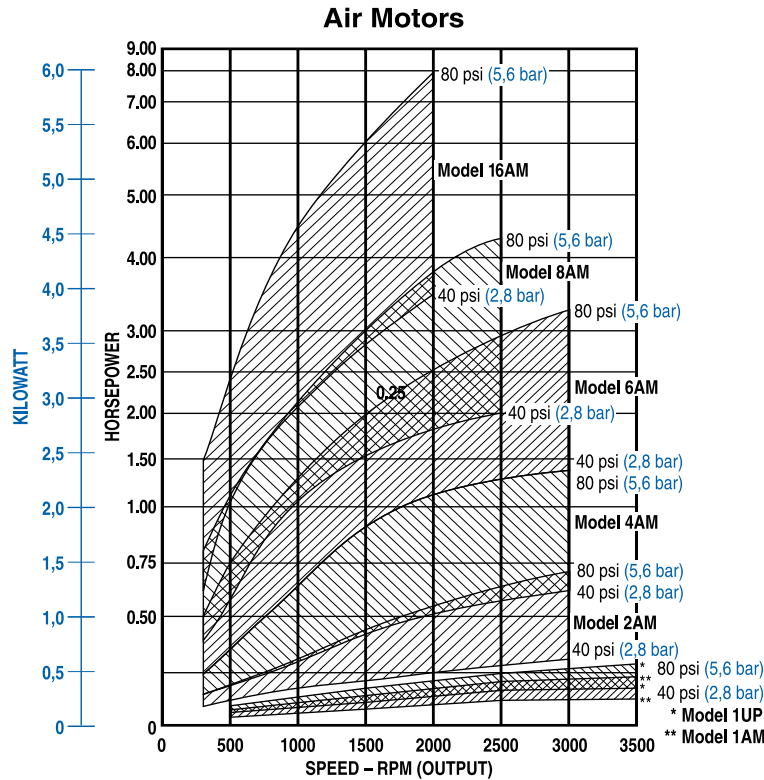
The specifications listed are that of a unit at sea level with an ambient temperature of 70 °F (21 °C), operating with normal electrical current conditions. The figures stated in this catalog are nominal approximations for models without accessories. Intake filters and exhaust mufflers, and the accumulation of contaminants in them during operation, will decrease the flow of air as well as the achievable pressure.

The units that we list in this catalog are a small portion of what we actually make. Those listed are considered “standard units” and are normally available from stock in small quantities. Variations are produced for many customers and by providing to us the application specifications we might find an existing unit that fits your requirement. If we don’t and the quantity is sufficient, we will design a “special unit” for the application.

Pictorial and dimensional data is subject to change without notice.

The information presented in this catalog is based on technical data and test results of nominal units. It is believed to be accurate and is offered as an aid in the selection of Gast products. It is the user’s responsibility to determine suitability of the product for intended use and the user assumes all risk and liability whatsoever in connection therewith.

The chart below shows general performance ranges of our lubricated Air Motors. See if we have the right offering for your application.



## Use of Air Motors in Hazardous Atmospheres

Most of the Gast Air Motors and some of the Gast Gear Motors in this catalog meet the requirements of the EC directive 94/9EC (ATEX 100a). They may be used in zones 1 and 2 where explosive atmospheres of gas or dust are likely to occur. These are marked with  II 2 G D c T4 in the catalogue and on the product. This indicates the air motor is Group II, Category 2, Gas and Dust Atmospheres, and a maximum surface temperature of 275 °F/135 °C. Check that the product driven by the air motor meets ATEX directive.

There are several points regarding the safety of air motors. Our air motors are not a source of electric sparks. However, it is possible that an article which is not part of the air motor (e.g., wrenches, hammers, etc.) could create a spark by sharply impacting a cast iron or aluminum case or the steel shaft of the air motor. [Note that electric motor enclosures for both class I and II hazardous locations can be made of "...iron, steel, copper, bronze, or aluminum..." (UL 674, Electric Motors and Generators - Hazardous Locations, June 23, 1989; paragraph 4.2, page 6)].

Gast Air Motors are designed to be operated by compressed air, the expansion of which creates a cooling effect. As a result, the outside surface temperature of the air motor will not reach ignition temperature and a maximum surface temperature of 275 °F/135 °C. Operation of the air motor with compressed air purges a flammable mixture from the inside of the air motor.

**To prevent static electricity from being an ignition source electrically ground the metal air motor.**

We do not guarantee the safety of any application, but to ensure the safe operation of an air motor in your application, always follow the product operation manual, follow ATEX 100a when operating in a hazardous atmosphere and consult with a qualified engineer.



# Performance, Features and Typical Applications



## Performance

Up to 9.5 HP (7,1 kW)  
Variable speeds to 10,000 rpm  
Gear motor maximum torque to 5200 lb. in. (587 Nm)



## Features

Variable speed  
Non-electrical sparking  
Cool running  
Compact and portable  
Operate in all positions  
Mounting flexibility



## Typical Applications

Mixing equipment  
Conveyor drives  
Pump drives  
Food packaging  
Pharmaceutical packaging  
Hoists and winches  
Hose reels  
Fiberglass choppers  
Tension devices  
Turntables  
Tire/wheel balancers



### Model

#### 1AM-NRV-39SS Hub Mount

(4 Vanes, Reversible) **Net wt.** 2.7 lbs (1.2 kg)

#### 1AM-NRV-105SS NEMA 42C Mount

(4 Vanes, Reversible) **Net wt.** 4.3 lbs (2.0 kg)

#### 1AM-NRV-7SS Face Mount

(4 Vanes, Reversible) **Net wt.** 2.7 lbs (1.2 kg)

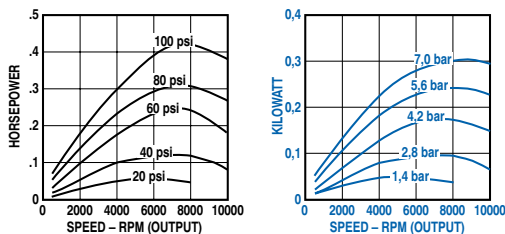
### FEATURES

- Sanitary design
- 304 stainless steel housing, rotor, and output shaft
- Hub, face, or flange mounting
- Any plane operation
- Fully sealed
-  2 GD c T4

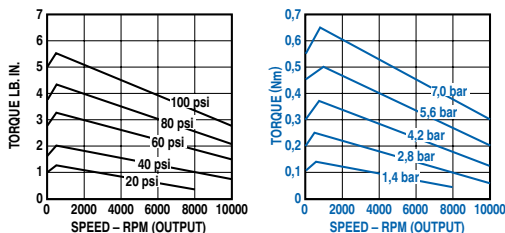
### RECOMMENDED

- Filter AH100F
- Regulator AH101R
- Gauge AA807
- Lubricator AH102L
- Food Grade Oil AS117

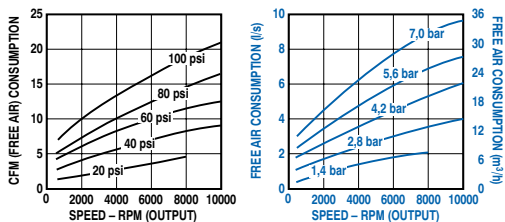
Output Power vs. Speed



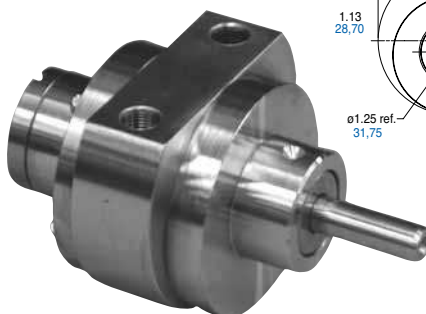
Torque vs. Speed



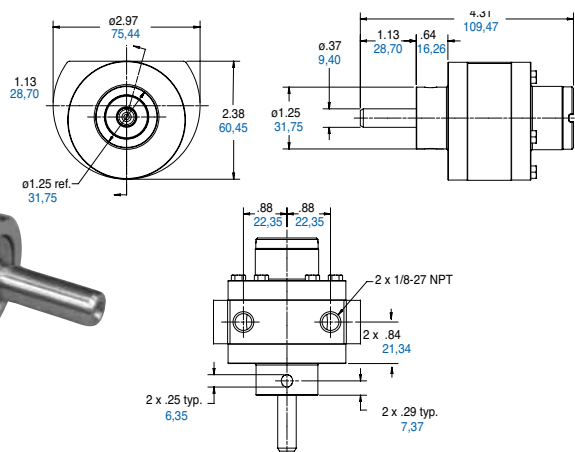
Air Consumption vs. Speed



1AM-NRV-39SS



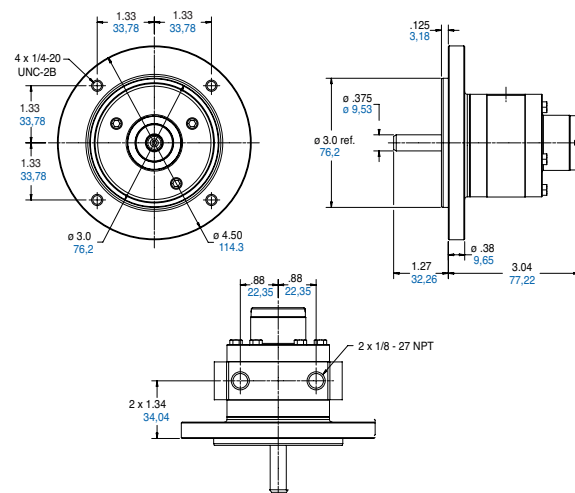
Product Dimensions (inches, mm)



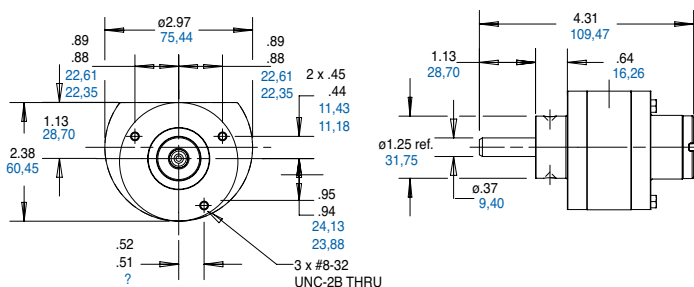
1AM-NRV-105SS



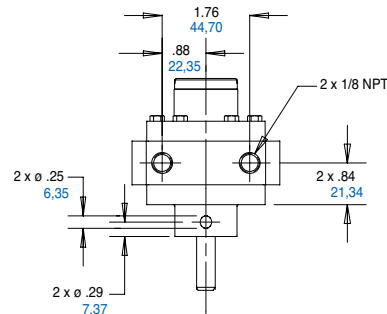
Product Dimensions (inches, mm)



Product Dimensions (inches, mm)



1AM-NRV-7SS



### Model

### Product Dimensions (inches, mm)

#### 4AM-NRV-200SS Face Mount

(4 Vanes, Reversible) 11.5 lbs (5.2 kg)

#### 4AM-NRV-201SS NEMA 56C

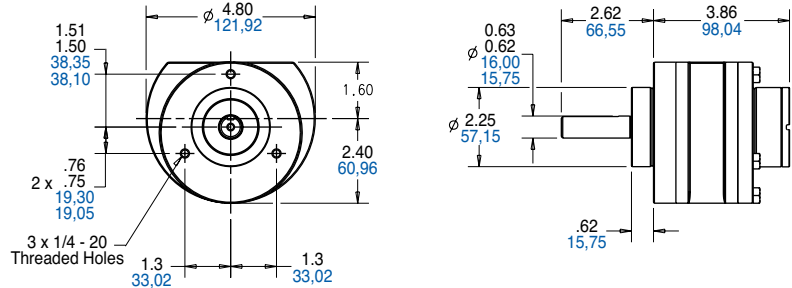
(4 Vanes, Reversible) 16.6 lbs (7.5 kg)

### FEATURES

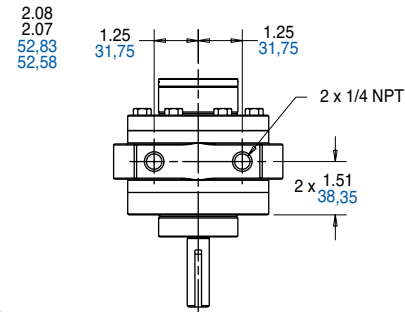
- Sanitary Design
- 304 stainless steel housing, rotor and output shaft
- Face or flange mounting
- Any plane operation
- Fully sealed
-  2 GD c T4

### RECOMMENDED

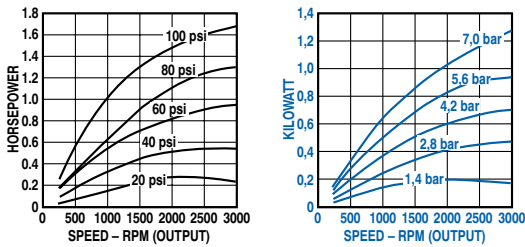
- Filter AH100F
- Regulator AH101R
- Gauge AA807
- Lubricator AH102L
- Food Grade Oil AS117



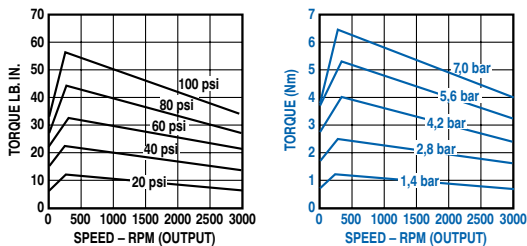
4AM-NRV-200SS



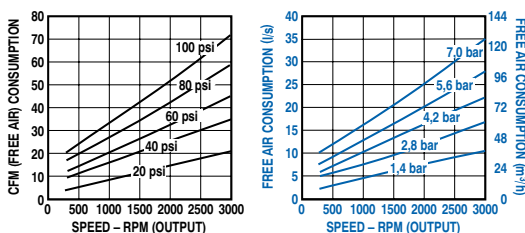
### Output Power vs. Speed



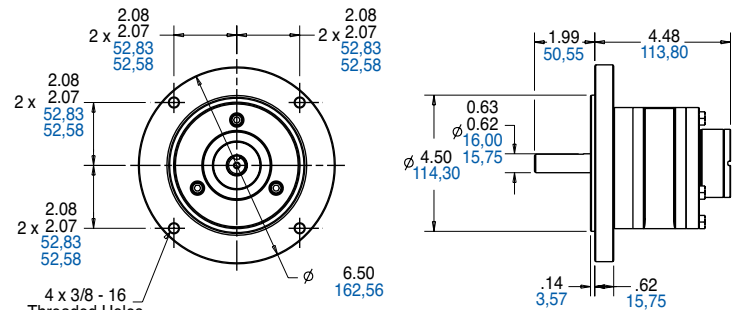
### Torque vs. Speed



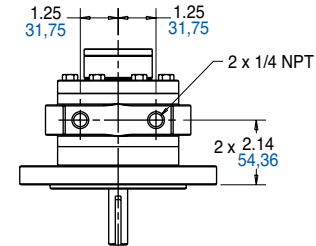
### Air Consumption vs. Speed



### Product Dimensions (inches, mm)



4AM-NRV-201SS





## Model

### 6AM-NRV-200SS, Face Mount

(4 Vanes, Reversible) 17.0 lbs (7.7 kg)

### 6AM-NRV-201SS, NEMA 56C

(4 Vanes, Reversible) 22.1 lbs (1.0 kg)

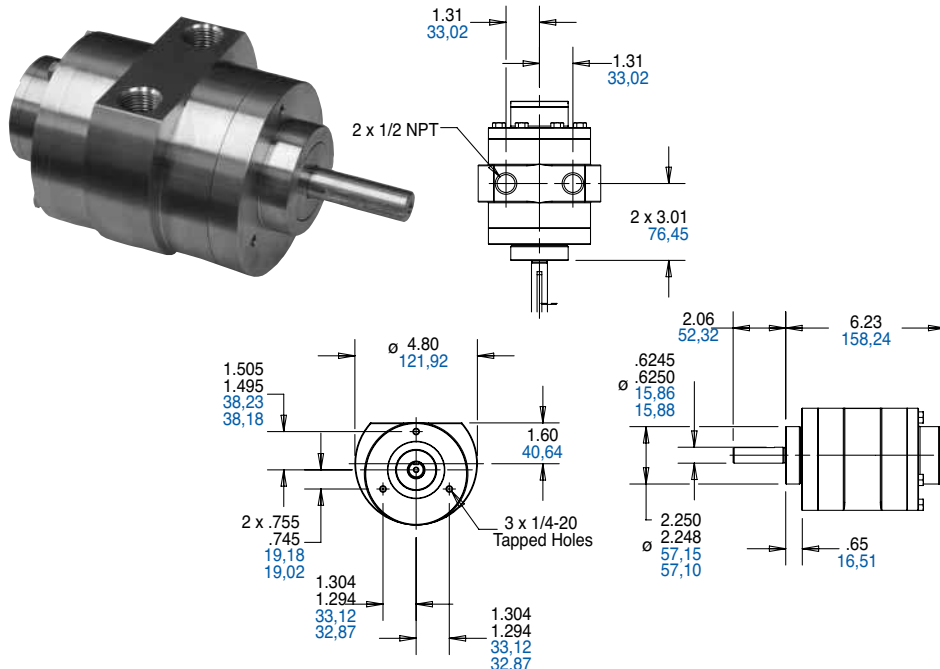
## FEATURES

- Sanitary Design
- 304 stainless steel housing, rotor and output shaft
- Face or flange mounting
- Any plane operation
- Fully sealed
-  2 GD c T4

## RECOMMENDED

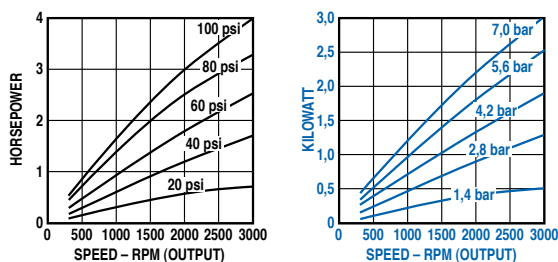
- Filter AH100F
- Regulator AH101R
- Gauge AA807
- Lubricator AH102L
- Food Grade Oil AS117

6AM-NRV-200SS



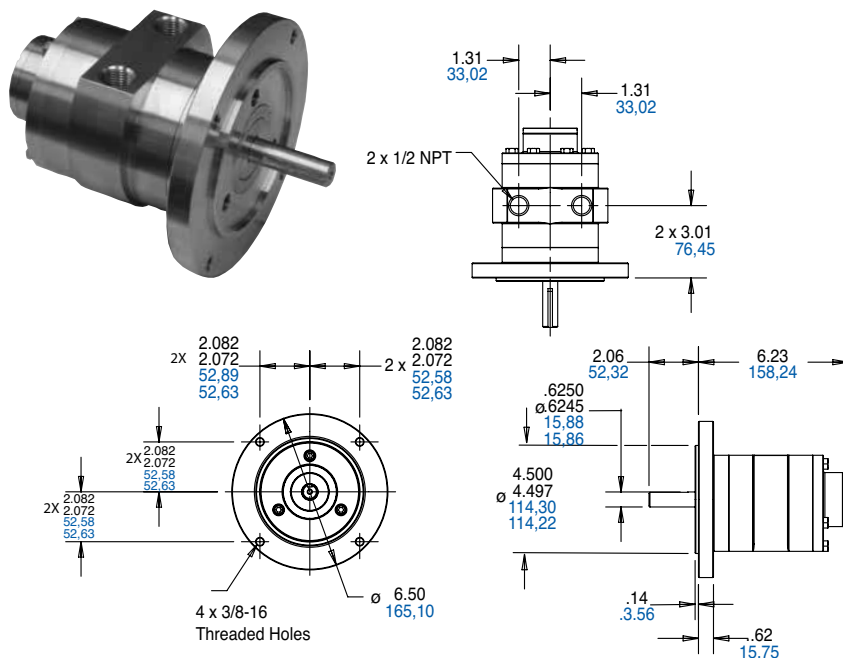
Product Dimensions (inches, mm)

Output Power vs. Speed

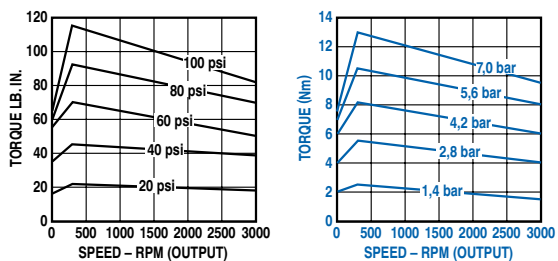


6AM-NRV-201SS

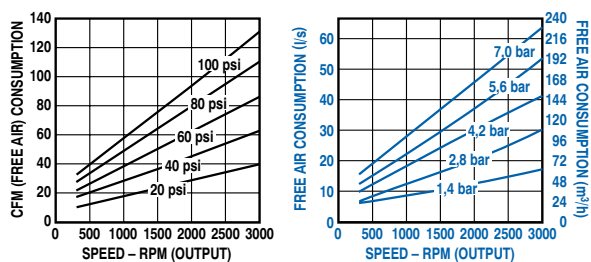
Product Dimensions (inches, mm)



Torque vs. Speed



Air Consumption vs. Speed



### Model

**1AM-NCC-12** (4 Vanes, CCW Rotation)

**1AM-NCW-14** (4 Vanes, CW Rotation)

**1AM-NRV-39A** (4 Vanes, Reversible)

**1AM-NRV-63A** (8 Vanes, Reversible)

**Net wt.** 2 lbs (0,9 kg)

### FEATURES

- Hub mounting
- Any plane operation
- Muffler AF350
-  II, 2 GD c T4

### RECOMMENDED

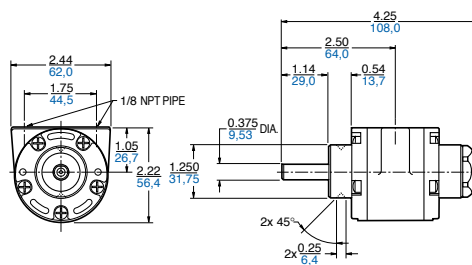
- Filter AH100F
- Regulator AH101R
- Gauge AA806
- Lubricator AH102L
- Oil AD220 – 1 quart (.94 liters)
- Repair kit K200 (Single Rotation)
- Repair kit K201 (Reversible)
- Repair kit K278 (8 Vane, Reversible)

### OPTIONAL

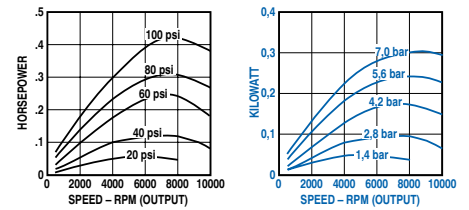
- Foot mounting (see page 38)



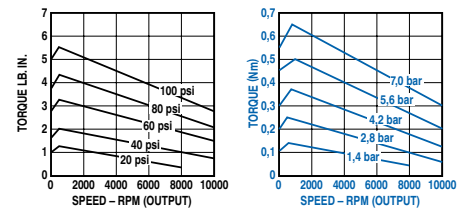
Product Dimensions (inches, mm)



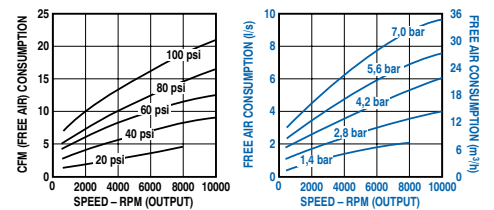
Output Power vs. Speed



Torque vs. Speed



Air Consumption vs. Speed



**1UP-NCC-1A** (4 Vanes, CCW Rotation)

**1UP-NCW-2A** (4 Vanes, CW Rotation)

**1UP-NRV-3A** (4 Vanes, Reversible)

**1UP-NRV-10** (8 Vanes, Reversible)

**Net wt.** 3 lbs (1,4 kg)

### FEATURES

- Hub mounting
- Any plane operation
- Muffler AF350
-  II, 2 GD c T4

### RECOMMENDED

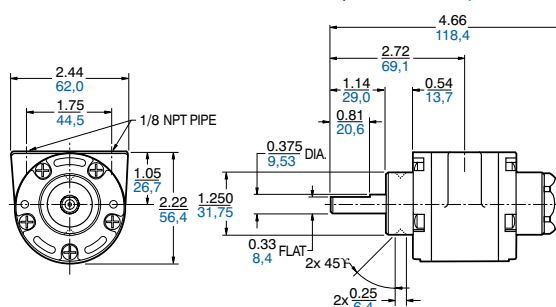
- Filter AH100F
- Regulator AH101R
- Gauge AA807
- Lubricator AH102L
- Oil AD220 – 1 quart (.94 liters)
- Repair kit K285 (Single Rotation)
- Repair kit K286 (Reversible)
- Repair kit K298 (8 Vane, Reversible)

### OPTIONAL

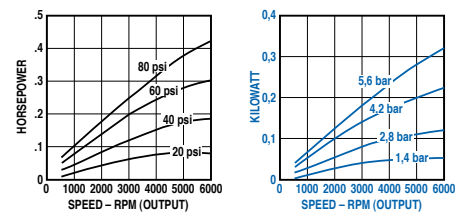
- Foot mounting (see page 38)



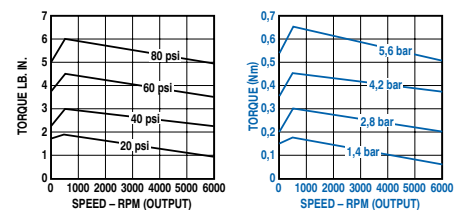
Product Dimensions (inches, mm)



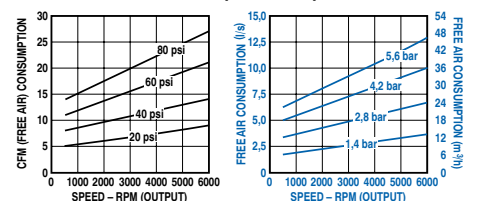
Output Power vs. Speed



Torque vs. Speed



Air Consumption vs. Speed



### Model

**2AM-FCC-1** (4 Vanes, CCW Rotation)

**2AM-FCW-13** (4 Vanes, CW Rotation)

Net wt. 7 lbs (3,2 kg)

### FEATURES

- Foot mounting
- Any plane operation
- Metal muffler AC980 adds 2" height when installed

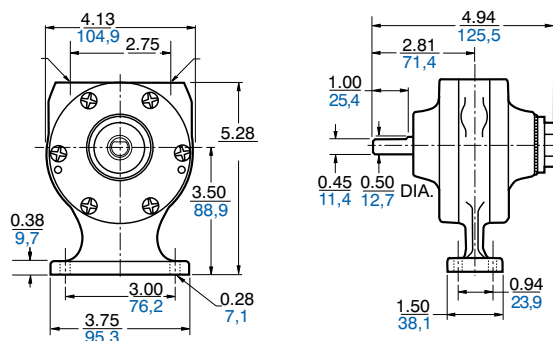
-  II 2 GD c T4

### RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K202 (Single Rotation)



Product Dimensions (inches, mm)



**2AM-NCC-16** (4 Vanes, CCW Rotation)

**2AM-NCW-7B** (4 Vanes, CW Rotation)

**2AM-NRV-89** (4 Vanes, Reversible)

Net wt. 6 lbs (2,7 kg)

### FEATURES

- Hub mounting
- Any plane operation
- Metal muffler AC980 adds 2" height when installed

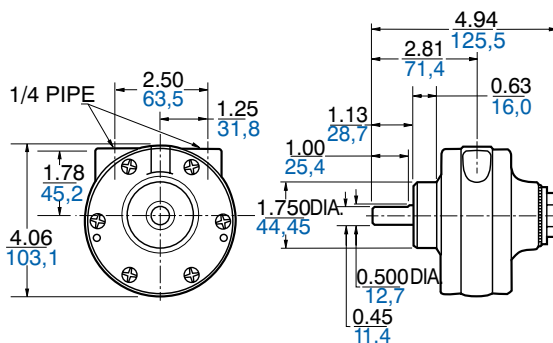
-  II 2 GD c T4

### RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K202 (Single Rotation)
- Repair kit K509 (Reversible)



Product Dimensions (inches, mm)



**2AM-NCC-43A** (4 Vanes, CCW Rotation)

**2AM-NRV-90** (4 Vanes, Reversible)

Net wt. 15 lbs (6,8 kg)

### FEATURES

- NEMA 56C mounting
- Any plane operation
- Metal muffler AC980 adds 2" height when installed

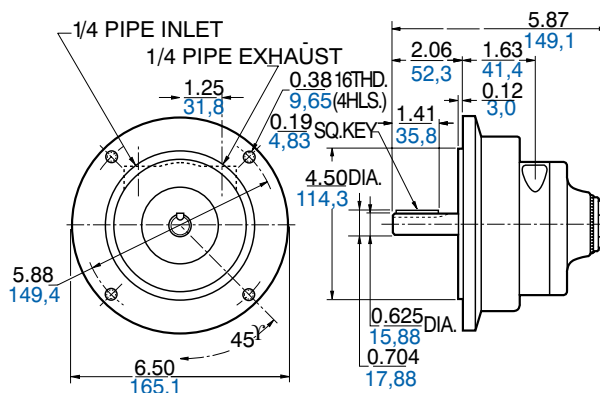
-  II 2 GD c T4

### RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K203A (Single Rotation)
- Repair kit K510 (Reversible)



Product Dimensions (inches, mm)



### Model

#### 2AM-ACC-88

(4 Vanes, CCW Rotation)  
Flange Mount

#### 2AM-ACC-91

(4 Vanes, CCW Rotation)  
Face Mount

#### 2AM-ARV-92

(4 Vanes, Reversible)  
Flange Mount

#### 2AM-ARV-93

(4 Vanes, Reversible)  
Face Mount

### FEATURES

- IEC #72 mounting frame size:  
D71 (2AM-ACC-88, 2AM-ARV-92)  
D71C (2AM-ACC-91, 2AM-ARV-93)
- Any plane operation
- Metal muffler AC980 adds 2" height when installed
-  II 2 GD c T4

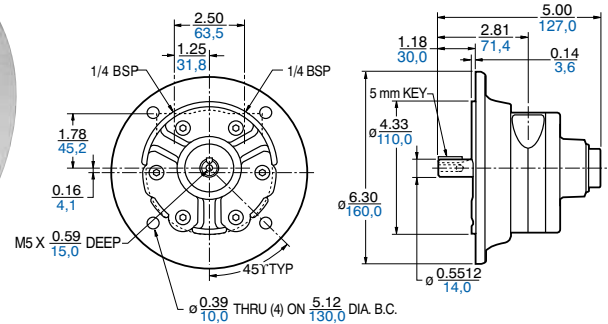
### RECOMMENDED

- Repair kit K203A (Single Rotation)
- Repair kit K510 (Reversible)

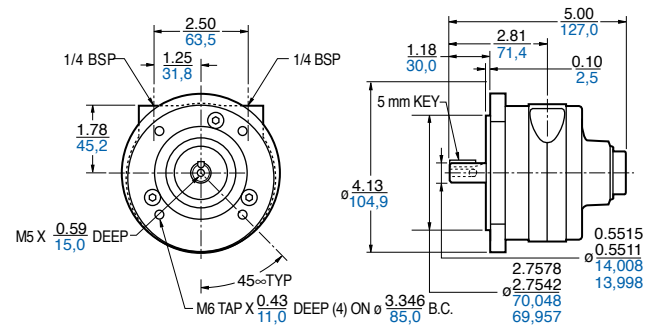


### Product Dimensions (inches, mm)

#### Models 2AM-ACC-88/2AM-ARV-92

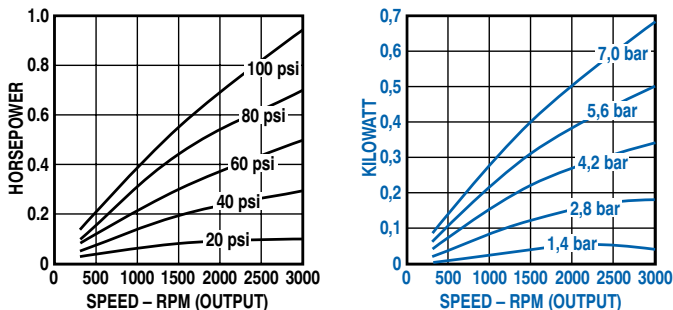


#### Models 2AM-ACC-91/2AM-ARV-93

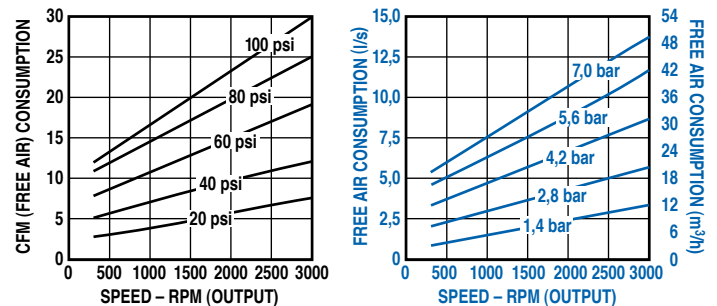


Delivers up to 0.56 kW ( $\frac{3}{4}$  HP). Speeds may be varied from 300 to 3,000 rpm. Max. recommended operating pressure 7 bar (100 psi).

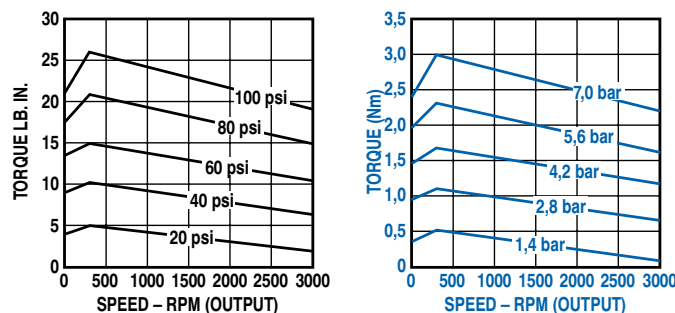
### Output Power vs. Speed



### Air Consumption vs. Speed



### Torque vs. Speed



## MODEL

## 4AM-FRV-24 (4 Vanes, Dual Shaft)

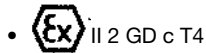
### 4AM-FRV-13C (4 Vanes, Reversible)

### 4AM-FRV-63A (8 Vanes, Reversible)

**Net wt. 9 lbs (4,1 kg)**

## FEATURES

- Foot mounting
- Any plane operation
- Single or dual shaft
- Metal muffler AC980 adds 2" height when installed

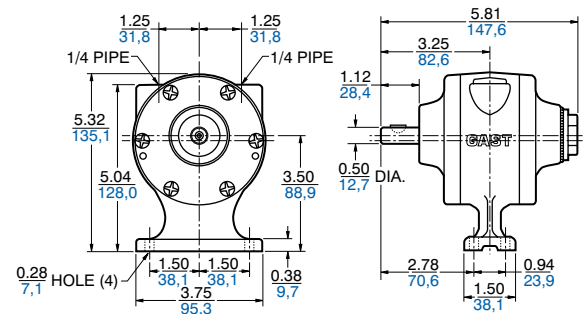


## RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K205 (4 Vane, Reversible)
- Repair kit K279 (8 Vane, Reversible)



Product Dimensions (inches, mm)



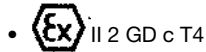
### 4AM-NRV-22B (4 Vanes, Reversible)

### 4AM-NRV-54A (8 Vanes, Reversible)

**Net wt. 9 lbs (4,1 kg)**

## FEATURES

- Face mounting
- Any plane operation
- Metal muffler AC980 adds 2" height when installed

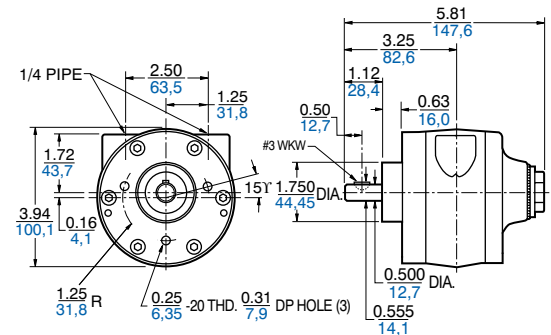


## RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K205 (4 Vane, Reversible)
- Repair kit K279 (8 Vane, Reversible)



### Product Dimensions (inches, mm)



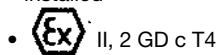
### 4AM-NRV-50C (4 Vanes, Reversible)

### 4AM-NRV-70C (8 Vanes, Reversible)

**Net wt. 12 lbs (5,4 kg)**

## FEATURES

- NEMA 56C mounting
- Any plane operation
- Metal muffler AC980 adds 2" height when installed

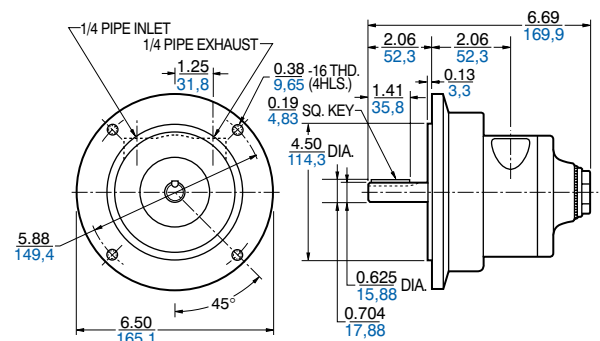


## RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K206A (4 Vane)
- Repair kit K280A (8 Vane)



Product Dimensions (inches, mm)





### 4AM-ARV-119 (4 Vanes, Reversible)

**Net wt. 9 lbs (4,1 kg)**

- IEC #72 mounting frame size D71
- Any plane operation
- Metal muffler AC980 adds 2" height when installed (Includes 3/8 BSP adaptor with air motor)

-  II 2 GD c T4

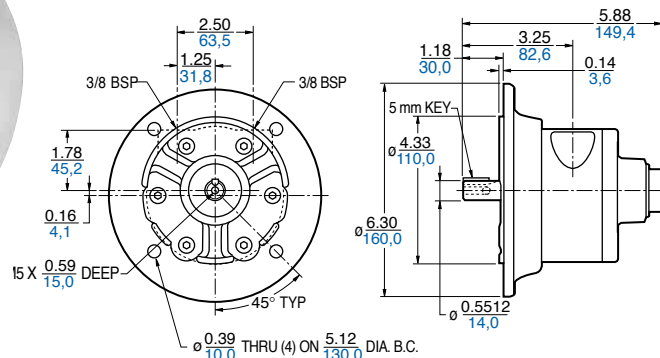
- Repair kit K206C (4AM-ARV-119)
- Repair kit K208B (4AM-ARV-120)

**Note: Performance data represents a 4-vane model with no exhaust restriction.**



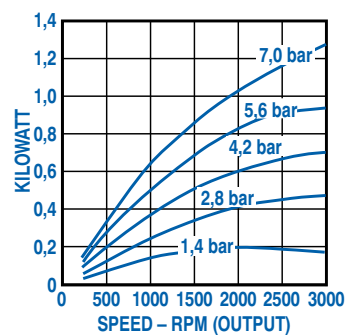
Delivers up to 1,5 kW (2 HP).  
Speeds may be varied from 300  
to 3,000 rpm. Max. recommended  
operating pressure 7 bar (100 psi).

### Product Dimensions (inches, mm)



The graph plots Horsepower (Y-axis, 0 to 1.8) against Speed - RPM (Output) (X-axis, 0 to 3000). Five curves are shown for different pressures: 100 psi, 80 psi, 60 psi, 40 psi, and 20 psi. All curves show an increase in horsepower with increasing speed, with higher pressures resulting in higher horsepower values across the entire speed range.

| Speed - RPM (Output) | 100 psi | 80 psi | 60 psi | 40 psi | 20 psi |
|----------------------|---------|--------|--------|--------|--------|
| 0                    | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    |
| 500                  | 0.45    | 0.35   | 0.25   | 0.15   | 0.10   |
| 1000                 | 0.85    | 0.65   | 0.50   | 0.35   | 0.20   |
| 1500                 | 1.15    | 0.90   | 0.70   | 0.45   | 0.25   |
| 2000                 | 1.40    | 1.10   | 0.85   | 0.50   | 0.25   |
| 2500                 | 1.55    | 1.20   | 0.90   | 0.50   | 0.25   |
| 3000                 | 1.65    | 1.25   | 0.95   | 0.50   | 0.25   |



The graph plots Torque (lb. in.) on the y-axis (0 to 70) against Speed (RPM) on the x-axis (0 to 3000). Five curves represent different pressures: 100 psi, 80 psi, 60 psi, 40 psi, and 20 psi. All curves show a peak torque at low speeds (around 250-500 RPM) and then a gradual decline as speed increases. Higher pressures result in higher torque values across the entire speed range.

| Speed (RPM) | 100 psi | 80 psi | 60 psi | 40 psi | 20 psi |
|-------------|---------|--------|--------|--------|--------|
| 0           | 0       | 0      | 0      | 0      | 0      |
| 250         | 55      | 45     | 32     | 22     | 12     |
| 500         | 50      | 40     | 28     | 20     | 11     |
| 1000        | 40      | 32     | 22     | 16     | 10     |
| 1500        | 32      | 25     | 18     | 13     | 9      |
| 2000        | 25      | 20     | 14     | 10     | 8      |
| 2500        | 20      | 16     | 11     | 8      | 7      |
| 3000        | 15      | 12     | 8      | 6      | 6      |

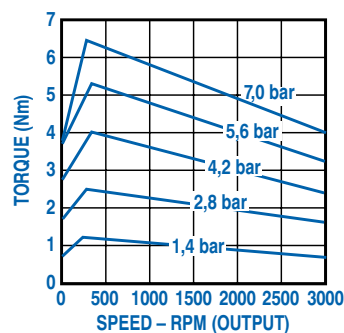
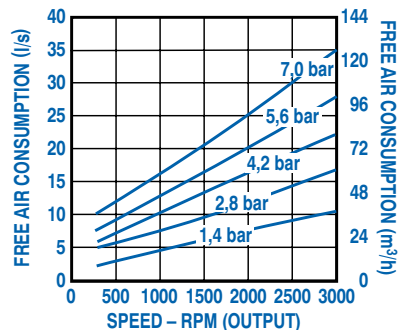


Figure 1 is a line graph titled "CFM (FREE AIR) CONSUMPTION" on the y-axis and "SPEED - RPM (OUTPUT)" on the x-axis. The y-axis ranges from 0 to 80 in increments of 10. The x-axis ranges from 0 to 3000 in increments of 500. Five lines are plotted, representing different pressure settings: 20 psi, 40 psi, 60 psi, 80 psi, and 100 psi. All lines show a positive linear relationship between CFM consumption and RPM. The 100 psi line is the steepest, while the 20 psi line is the least steep.

| RPM (Output) | 20 psi CFM | 40 psi CFM | 60 psi CFM | 80 psi CFM | 100 psi CFM |
|--------------|------------|------------|------------|------------|-------------|
| 500          | 5          | 10         | 15         | 20         | 25          |
| 1000         | 10         | 15         | 20         | 25         | 30          |
| 1500         | 15         | 20         | 25         | 30         | 35          |
| 2000         | 20         | 25         | 30         | 35         | 40          |
| 2500         | 25         | 30         | 35         | 40         | 45          |
| 3000         | 30         | 35         | 40         | 45         | 50          |



### **Model**

**6AM-FRV-5A** (4 Vanes, Reversible)

**6AM-FRV-23A** (8 Vanes, Reversible)

**Net wt.** 21 lbs (9,5 kg)

#### **FEATURES**

- Foot mounting
- Any plane operation
- Metal muffler AC990 adds 2" height when installed

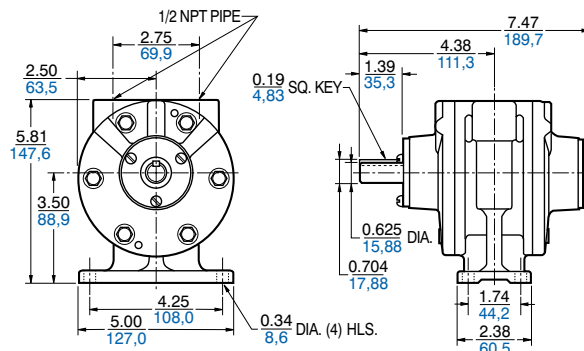
•  II 2 GD c T4

#### **RECOMMENDED**

- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K208 (4 Vane)
- Repair kit K281 (8 Vane)



Product Dimensions (inches, mm)



**6AM-NRV-7A** (4 Vanes, Reversible)

**Net wt.** 18 lbs (8,1 kg)

#### **FEATURES**

- Face mounting
- Any plane operation
- Muffler AC990 adds 2" height when installed

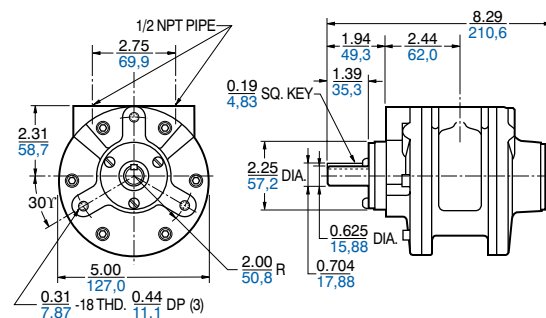
•  II 2 GD c T4

#### **RECOMMENDED**

- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K208



Product Dimensions (inches, mm)



**6AM-NRV-11A** (4 Vanes, Reversible)

**6AM-NRV-22A** (8 Vanes, Reversible)

**Net wt.** 24 lbs (10,8 kg)

#### **FEATURES**

- NEMA 56C mounting
- Any plane operation
- Muffler AC990 adds 2" height when installed

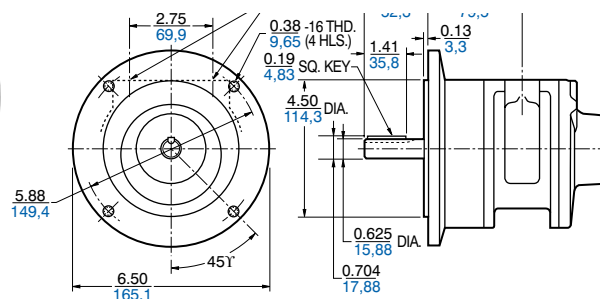
•  II 2 GD c T4

#### **RECOMMENDED**

- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K208 (4 Vane)
- Repair kit K281 (8 Vane)



Product Dimensions (inches, mm)



## Model

### 6AM-ARV-54

(4 Vanes, Reversible)

Net wt. 24 lbs (10,8 kg)

#### FEATURES

- IEC #72 mounting frame size D80
- Any plane operation
- Metal muffler AC990 adds 2" height when installed
-  II 2 GD c T4

#### RECOMMENDED

- Repair kit K281A

### 6AM-ARV-55

(8 Vanes, Reversible)

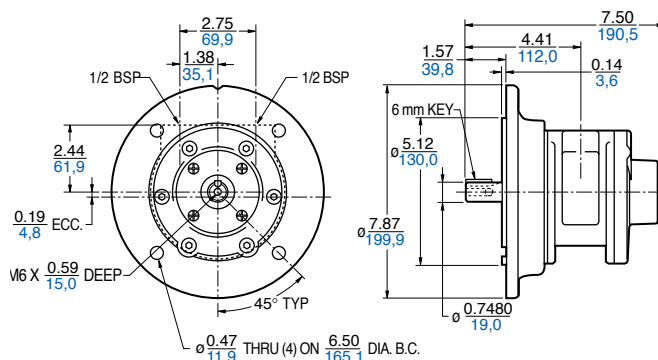
#### FEATURES

- IEC #72 mounting frame size D80
- Any plane operation
- Metal muffler AC990 adds 2" height when installed
-  II 2 GD c T4

#### RECOMMENDED

- Repair kit K281A
- Any plane operation
- Metal muffler AC990 adds 2" height when installed
-  II 2 GD c T4

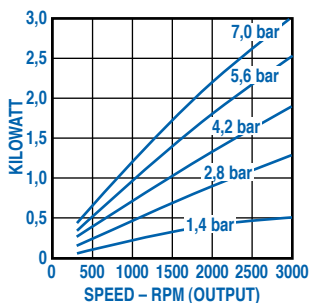
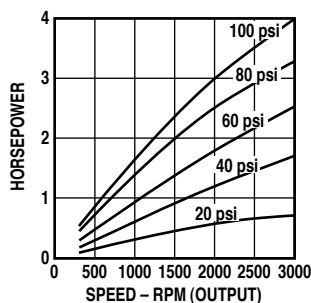
## Product Dimensions (inches, mm)



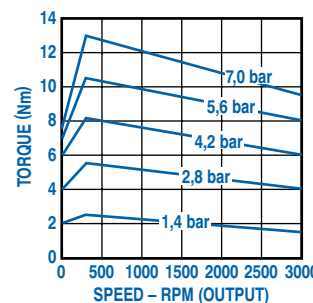
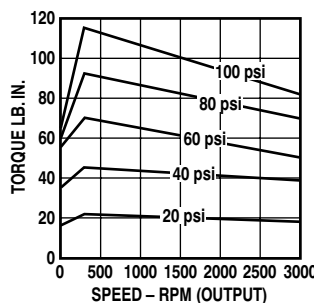
Delivers up to 3 kW (4 HP). Speeds may be varied from 300 to 3,000 rpm. Max. recommended operating pressure 7 bar (100 psi).

Note: Performance data represents a 4-vane model with no exhaust restriction.

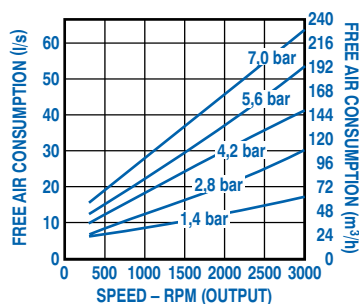
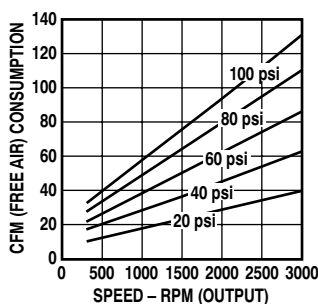
## Output Power vs. Speed



## Torque vs. Speed



## Air Consumption vs. Speed



### **Model**

**8AM-FRV-2B** (4 Vanes, Reversible)

**8AM-FRV-30A** (8 Vanes, Reversible)

**Net wt.** 27 lbs (12,2 kg)

### **FEATURES**

- Foot mounting
- Any plane operation
- Metal muffler AC990 adds 2" height when installed

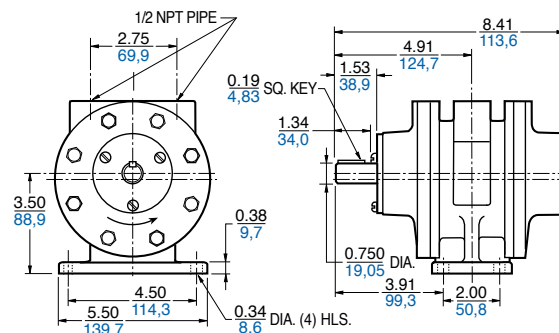
•  II 2 GD c T4

### **RECOMMENDED**

- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Muffler AG600 – above 1,000 rpm
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K210 (4 Vane)
- Repair kit K283 (8 Vane)



**Product Dimensions (inches, mm)**



**8AM-NRV-5B** (4 Vanes, Reversible)

**8AM-NRV-42A** (8 Vanes, Reversible)

**Net wt.** 28 lbs (12,6 kg)

### **FEATURES**

- Face mounting
- Any plane operation
- Metal muffler AC990 adds 2" height when installed

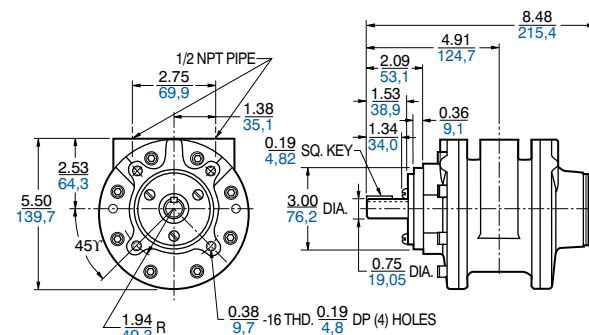
•  II 2 GD c T4

### **RECOMMENDED**

- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Muffler AG600 – above 1,000 rpm
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K210 (4 Vane)
- Repair kit K283 (8 Vane)



**Product Dimensions (inches, mm)**



**8AM-NRV-28A** (4 Vanes, Reversible)

**8AM-NRV-32A** (8 Vanes, Reversible)

**Net wt.** 28 lbs (12,6 kg)

### **FEATURES**

- NEMA 145TC mounting
- Any plane operation
- Metal muffler AC990 adds 2" height when installed

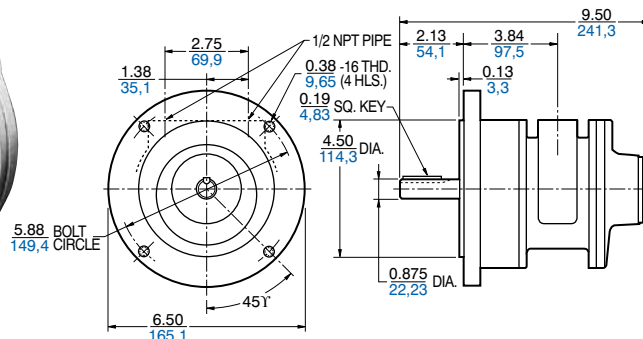
•  II 2 GD c T4

### **RECOMMENDED**

- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Muffler AG600 – above 1,000 rpm
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K211 (4 Vane)
- Repair kit K282 (8 Vane)



**Product Dimensions (inches, mm)**



## 8AM-ARV-70

**Net wt. 28 lbs (12,6 kg)**

- IEC #72 mounting frame size D90
- Any plane operation
- Metal muffler AC990 adds 2" height when installed



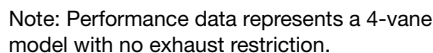
- Repair kit K282A

**8AM-ARV-71**

(8 Vanes, Reversible)

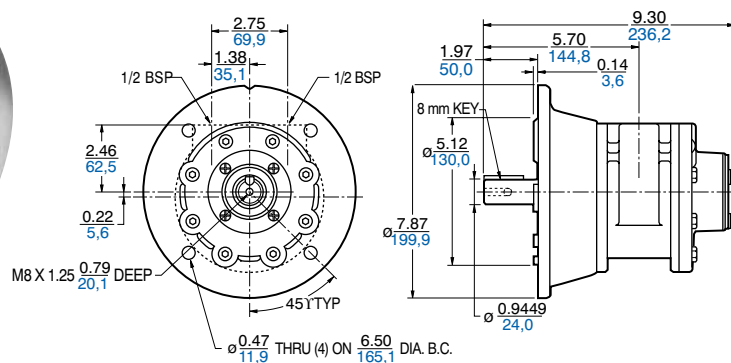
**Net wt. 28 lbs (12,6 kg)**

- IEC #72 mounting frame size D90
- Any plane operation
- Metal muffler AC990 adds 2" height when installed

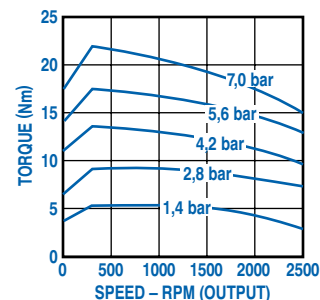
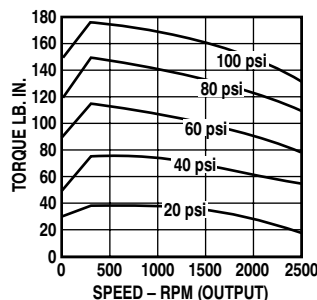
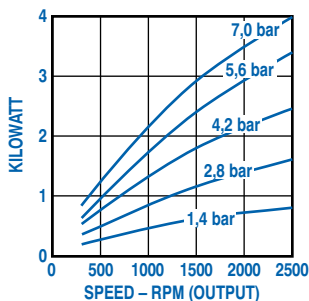
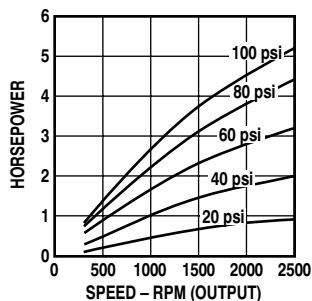


## RECOMMENDED

- Repair kit K282B

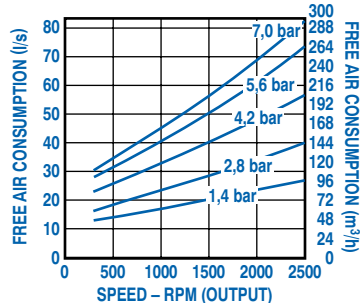


Delivers up to 3,7 kW (5 HP). Speeds may be varied from 300 to 2,500 rpm. Max. recommended operating pressure 7 bar (100 psi).



A line graph showing the relationship between CFM (Free Air) Consumption and Speed - RPM (Output) for different pressures. The Y-axis represents CFM (Free Air) Consumption, ranging from 0 to 180 in increments of 20. The X-axis represents Speed - RPM (Output), ranging from 0 to 2500 in increments of 500. Five lines are plotted, each representing a different pressure: 20 psi, 40 psi, 60 psi, 80 psi, and 100 psi. All lines show a positive linear relationship, with higher pressures resulting in higher CFM consumption for the same RPM.

| Speed - RPM (Output) | 20 psi | 40 psi | 60 psi | 80 psi | 100 psi |
|----------------------|--------|--------|--------|--------|---------|
| 500                  | 25     | 35     | 45     | 55     | 65      |
| 1000                 | 30     | 40     | 50     | 60     | 70      |
| 1500                 | 35     | 45     | 55     | 65     | 75      |
| 2000                 | 40     | 50     | 60     | 70     | 80      |
| 2500                 | 45     | 55     | 65     | 75     | 85      |







# Non-lubricated Air Motors

The NL Series - an alternative to our traditional lubricated styles because no lubricator is necessary

For those air motor applications where contaminated exhaust cannot be tolerated in the workplace, Gast's non-lubricated Air Motors, the NL series, provide the solution.



- **Rugged and Reliable**

Like our traditional lubricated air motors, the NL series will provide thousands of hours of service-free life. Vanes are just as easy and inexpensive to replace.

- **Performance Flexibility**

Gast's non-lubricated air motors are designed so that compressor carry-over will not gum up the vanes. In fact, while no lubrication whatsoever is required to operate the motors, small amounts of oil and water will actually improve the performance.

- **Corrosion Resistant**

Because the body, rotor, and end plates are specially treated, these air motors can tolerate unfavorable moisture-laden conditions.

- **No Oil Expenses**

If you are using several quarts of oil throughout the year, you'll eliminate that expense with non-lubricated air motors.

- **No Periodic Inspection**

With no in-line lubrication system to replenish, the need for time consuming maintenance checks is eliminated.

Gast's non-lubricated Air Motors provide the advantages and benefits of traditional lubricated air motors which include:

- Variable speed
- Non-electrical sparking
- Cool running
- Minimal maintenance
- No-shock starts
- Any plane operation

- Filter AH100F
- Regulator AH101R
- Gauge AA807
- Repair kit K285A



### Model

#### NL32-NCC-1

(4 Vanes, CCW Rotation)

#### NL32-NCW-2

(4 Vanes, CW Rotation)

Net wt. 9 lbs (4,1 kg)

#### NL32-NCC-5

(4 Vanes, CCW Rotation)

#### NL32-NCW-6

(4 Vanes, CW Rotation)

#### NL32-NCC-7

(4 Vanes, CCW Rotation)

#### NL32-NCW-8

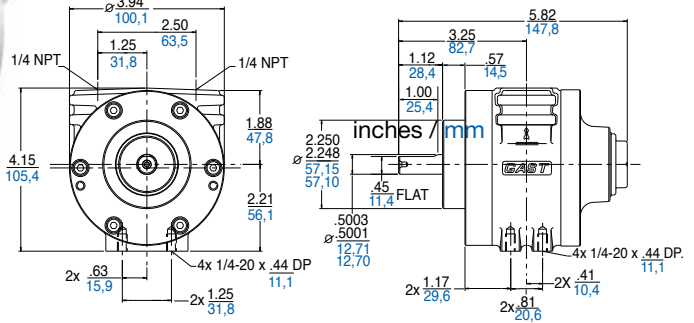
(4 Vanes, CW Rotation)

Net wt. 12 lbs (5,4 kg)



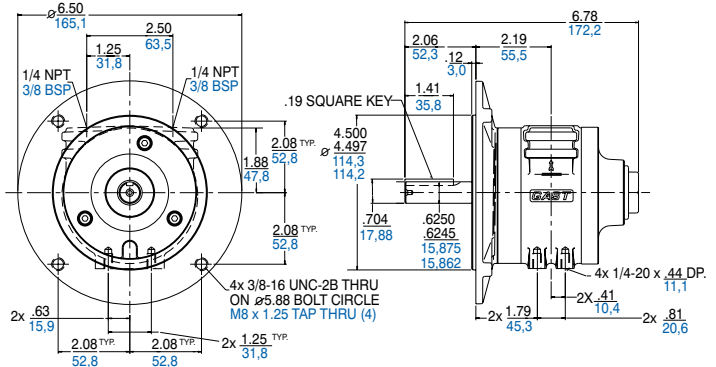
### Product Dimensions (inches, mm)

#### Hub mounting (NL32-NCC-1, NL32-NCW-2)



#### NEMA 56C, U.S. - (NL32-NCC-5, NL32-NCW-6) D71 Flange, Metric - (NL32-NCC-7, NL32-NCW-8)

### Product Dimensions (inches, mm)



### FEATURES

- Hub or foot mounting
- Treated body, rotor, and end plates for corrosion resistance
- No lubrication necessary - no contaminated air in the work area
- Any plane operation
- Metal muffler AC980 adds 2" height when installed
-  II 2 GD c T4

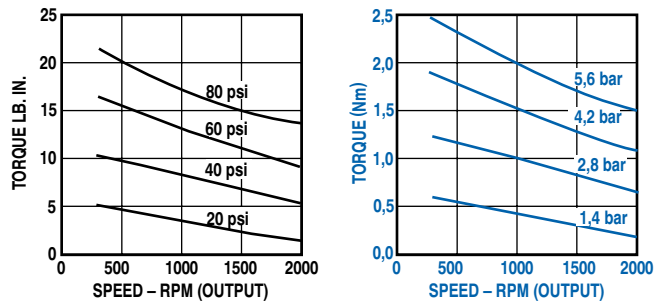
### RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Repair kit K521

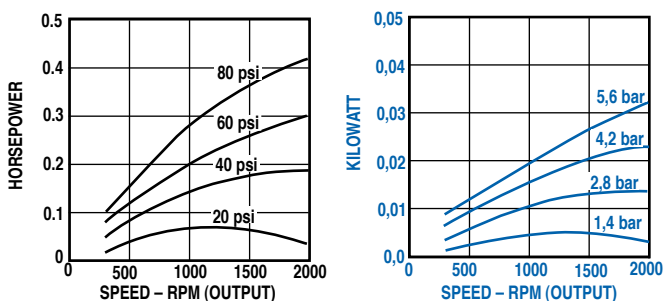
### OPTIONAL

- Foot kit AL220 - each of these models can be turned into foot mounted styles with the installation of optional foot kit AL220, which will add approx. 2" height to the air motor
- Hub mounting model shown with optional foot assembly kit which can be purchased separately.
- Flange style is shown in schematic

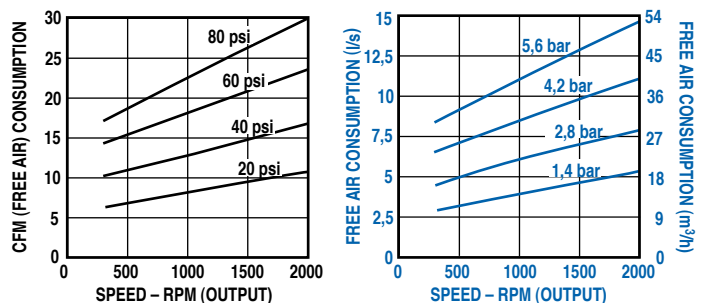
### Torque vs. Speed



### Output Power vs. Speed



### Air Consumption vs. Speed



### Model

#### NL42-NCC-1

(4 Vanes, CCW Rotation)

#### NL42-NCW-2

(4 Vanes, CW Rotation)

Net wt. 18 lbs (8,2 kg)

#### NL42-NCC-5

(4 Vanes, CCW Rotation)

#### NL42-NCW-6

(4 Vanes, CW Rotation)

#### NL42-NCC-7

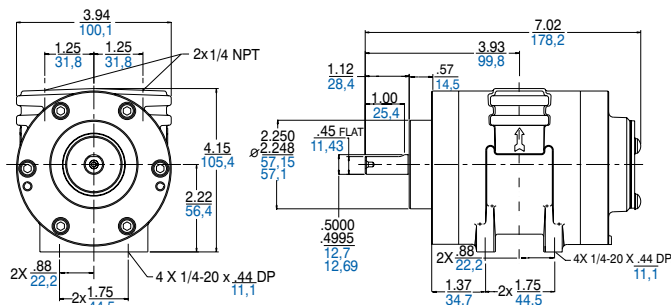
(4 Vanes, CCW Rotation)

Net wt. 21 lbs (9,5 kg)



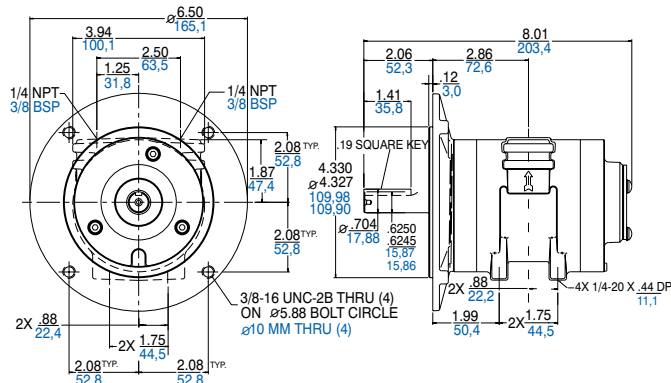
Hub mounting (NL42-NCC-1, NL42-NCW-2)

Product Dimensions (inches, mm)



NEMA 56C, U.S. - (NL42-NCC-5, NL42-NCW-6)  
D71 Flange, Metric - (NL42-NCC-7)

Product Dimensions (inches, mm)



### FEATURES

- Hub or foot mounting
- Treated body, rotor, and end plates for corrosion resistance
- No lubrication necessary - no contaminated air in the work area
- Any plane operation
- Metal muffler AC980 adds 2" height when installed
-  II 2 GD c T4

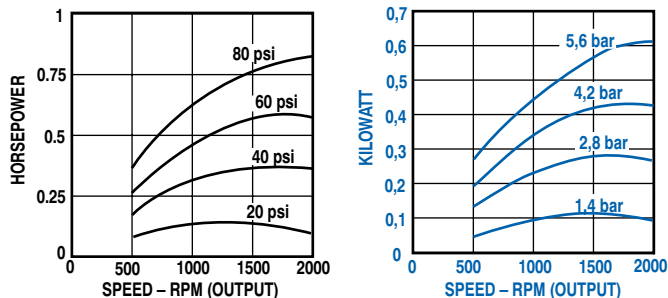
### RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Repair kit K580

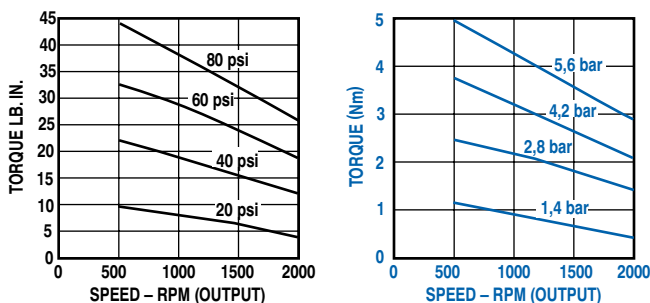
### OPTIONAL

- Foot kit AL414 - each of these models can be turned into foot mounted styles with the installation of optional foot kit AL414, which will add approx. 2" height to the air motor.
- Hub mounting model shown with optional foot assembly kit which can be purchased separately.
- Flange style is shown in schematic

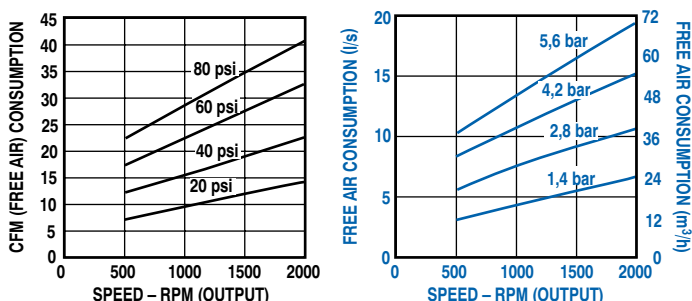
Output Power vs. Speed



Torque vs. Speed



Air Consumption vs. Speed





### Model

#### NL52-NCC-1

(4 Vanes, CCW Rotation)

#### NL52-NCW-2

(4 Vanes, CW Rotation)

Net wt. 13 lbs (6 kg)

#### NL52-NCC-3

(4 Vanes, CCW Rotation)

#### NL52-NCW-4

(4 Vanes, CW Rotation)

Net wt. 14.5 lbs (6,6 kg)

### FEATURES

- Hub, NEMA 56C, 6AM, or foot mounting
- Treated body, rotor, and end plates for corrosion resistance
- No lubrication necessary - no contaminated air in the work area
- Any plane operation
- Metal muffler AC990 adds 2" height when installed

-  II 2 GD c T4

### RECOMMENDED

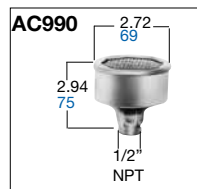
- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Repair kit K833

### OPTIONAL

- Foot kit AL414 - each of these models can be turned into foot mounted styles with the installation of optional foot kit AL414, which will add approx. 2" height to the air motor

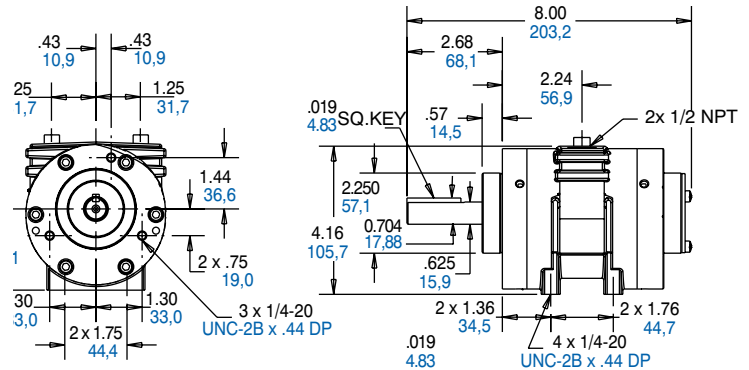


- Hub mounting model shown with optional foot assembly kit which can be purchased separately.

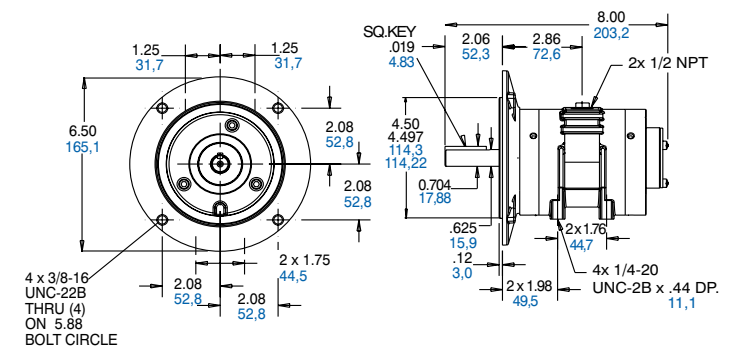


### Product Dimensions (inches, mm)

#### Hub mounting (NL52-NCC-1, NL52-NCW-2)

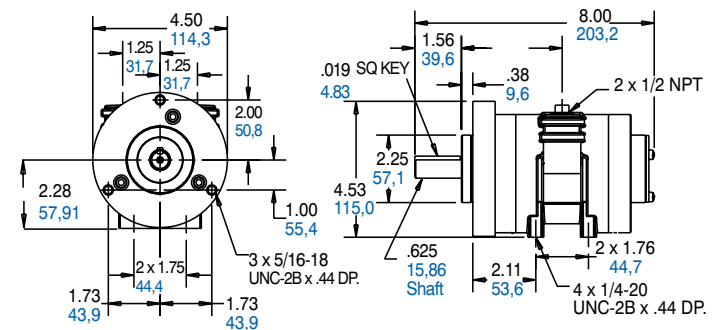


#### NEMA 56C, U.S. (NL52-NCC-3, NL52-NCW-4)

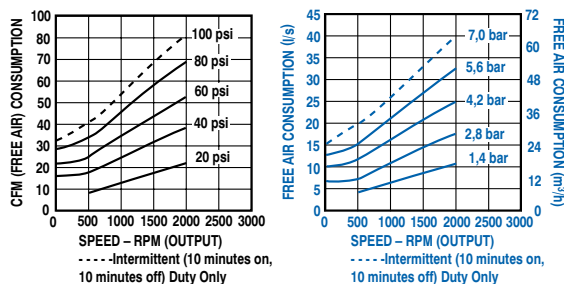


#### 6AM Hub Mounting (NL52-NCC-5, NL52-NCW-6)

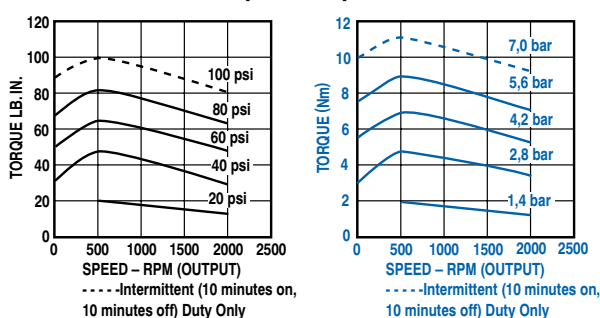
Mounting identical to 6AM-NRV-7A for field replacement



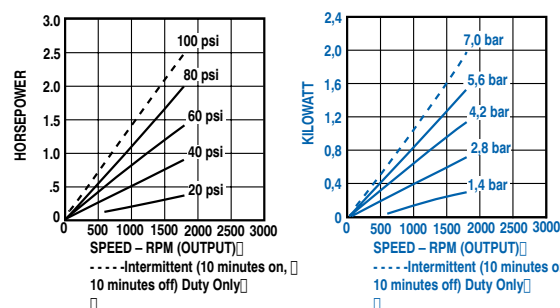
### Air Consumption vs. Speed

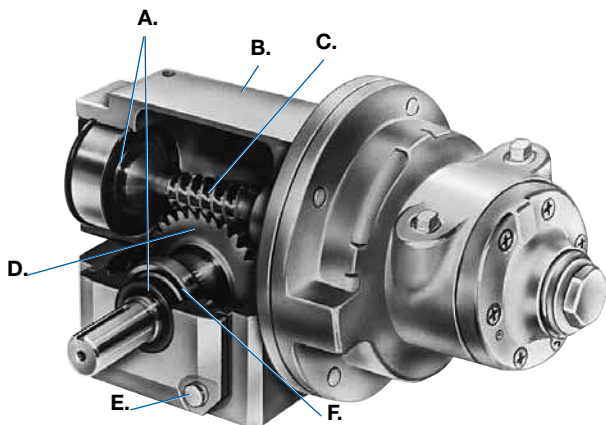


### Torque vs. Speed



### Output Power vs. Speed





Pictured: typical right angle, worm gear reducer.

## A. Bearings

Ball bearings used on input shaft; tapered roller bearings used on output shaft.

## B. Case

Fine close-grain cast iron; crankcase sealed; duplex-milled for parallelism of mounting surfaces.

## C. Worm

8620 alloy steel thread rolled to give uninterrupted grain pattern; carburized and hardened after rolling; high-burnish contact surface from rolling reduces friction coefficient for less heat generation, lower power losses. In large sizes, worms are cut, hardened, and ground to a good micro-finish, providing the ultimate in efficiency and torque capacity.

## D. Worm Gear

Forged bronze; geometry and high helix angle give maximum beam strength, high efficiency.

## E. Cap Screw

High-strength fasteners with corresponding torque specifications prevent loosening or breaking.

## F. Seals

Double-dipped and spring-loaded for leak proofing; tested to ensure compatibility with lubricant.

## Get the right gear motor with all the right options

### More reasons why you should switch from electricity to air.

If you compare Gast Air-Powered Gear Motors with any electric-powered gear motor, there's really no comparison. Here's why:

#### • More Horsepower

Size for size, weight for weight, you can't beat a Gast Gear Motor. A typical rotary vane air motor – the type used in gear motors – developing  $2\frac{1}{2}$  HP (1,9 kW) at 1800 rpm and 90 psi (6,2 bar), weighs just 17 pounds (7,7 kg). A comparable electric motor may be two or three times heavier.

#### • More Speed Control

You can't get more precise turning power than with a Gast Gear Motor. In applications where you need variable speed – like bolt tensioning equipment or rock drilling rigs – one-speed electric motors just won't fit the bill. Precise lifting, lowering, or turning is simple with Gast Gear Motors.

#### • More Flexibility

More than most standard electric-powered gear reducers can provide. Gast Gear Motors give you infinitely variable turning power from 73 to 5200 lb. in. (8 to 587 Nm) of torque. And Gast Gear Motors are instantly reversible through easy valving in the air line.

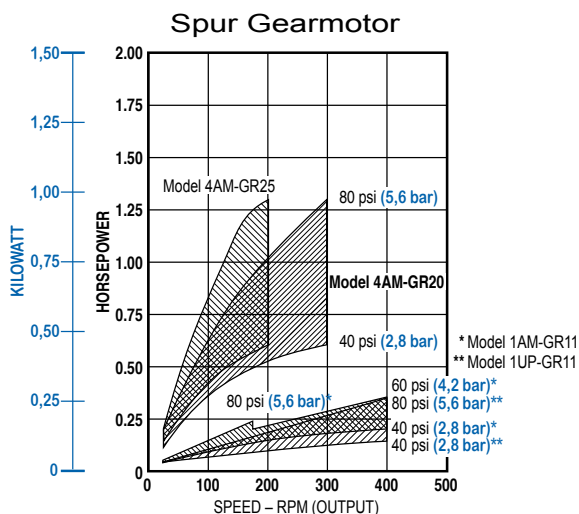
#### • More Configurations

That makes it easier for our product to work in your product. Our Gear Motors are available in four mounting configurations.

#### • More Life

Unlike electric-powered gear motors, there's no chance of burnout with a Gast Gear Motor. They can be stalled indefinitely with no heat buildup. They're non-electrical sparking too, which makes them ideal for use in potentially explosive environments – places where you couldn't even consider electricity.

**⚠ WARNING:** Gast Air Powered Gear Motors are not self-locking. In applications where a break is required for safety in case of air pressure failure, call 800-952-4278 for your nearest distributor.



### Model

#### 1AM-NRV-56-GR11

(4 Vanes, Reversible)

#### 1AM-NRV-60-GR11

(8 Vanes, Reversible)

Net wt. 5 lbs (2,3 kg)

### FEATURES

- 15:1 gear reducer
- Face mounting
- Horizontal or shaft down operation
- Muffler AF350 (shown in photo)
-  II 2 GD c T4

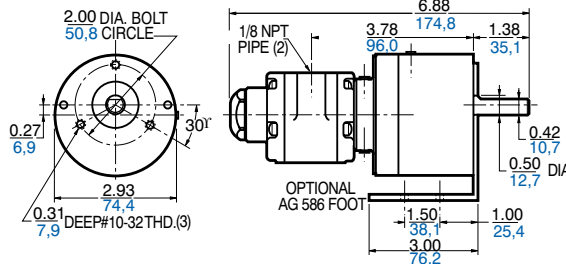
### RECOMMENDED

- Filter AH100F
- Regulator AH101R
- Gauge AA806
- Lubricator AH102L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K278 (Air motor only, 8 Vane)
- Repair kit K201 (Air motor only, 4 Vane)

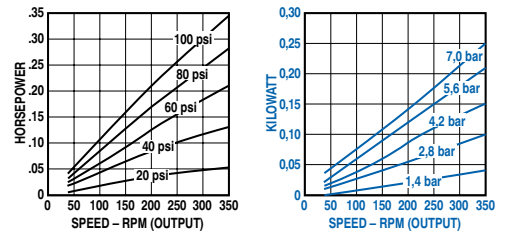


Max. allowable end thrust with 0 overhung load is 100 lbs (45,0 kg). Max. overhung load with 0 end thrust from 100 lbs (45,0 kg) at 333 rpm to 200 lbs (90,0 kg) at 33,3 rpm.

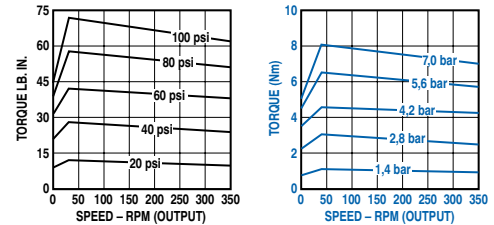
Product Dimensions (inches, mm)



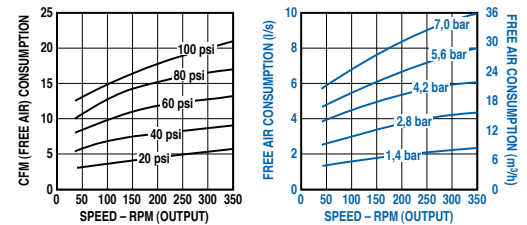
Output Power vs. Speed



Torque vs. Speed



Air Consumption vs. Speed



### MODEL

#### 1UP-NRV-4-GR11

(4 Vanes, Reversible)

#### 1UP-NRV-11-GR11

(8 Vanes, Reversible)

Net wt. 5 lbs (2,3 kg)

### FEATURES

- 15:1 gear reducer
- Face mounting
- Horizontal or shaft down operation
- Muffler AF350 (shown in photo)
-  II 2 GD c T4

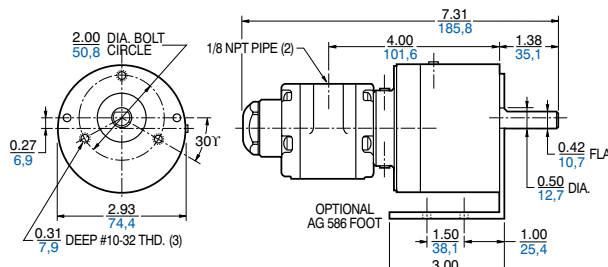
### RECOMMENDED

- Filter AH100F
- Regulator AH101R
- Gauge AA806
- Lubricator AH102L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K298 (Air motor only, 8 Vane)
- Repair kit K286 (Air motor only, 4 Vane)

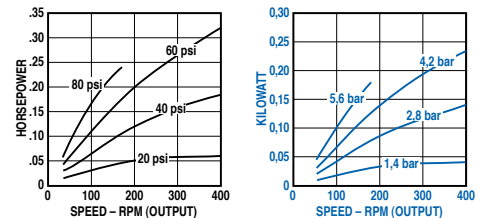


Max. allowable end thrust with 0 overhung load is 100 lbs (45,0 kg). Max. overhung load with 0 end thrust ranges from 100 lbs (45,0 kg) at 333 rpm to 200 lbs (90,0 kg) at 33,3 rpm. Max. recommended pressures to 80 psi (5,6 bar).

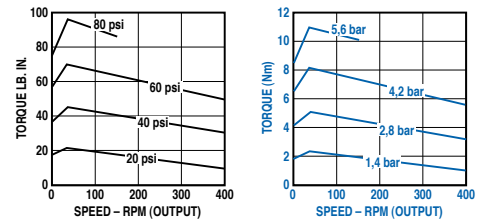
Product Dimensions (inches, mm)



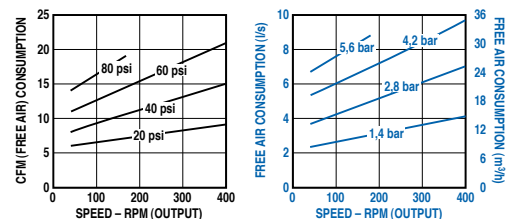
Output Power vs. Speed



Torque vs. Speed



Air Consumption vs. Speed



### Model

#### 2AM-43A-AF20

(4 Vanes, Reversible)

Net wt. 24 lbs (10,9 kg)

### FEATURES

- 20:1 gear reducer
- Flange mounting
- Base-mounted
- Metal muffler AC980 provided not shown  
AC980 adds 2" height when installed

### RECOMMENDED

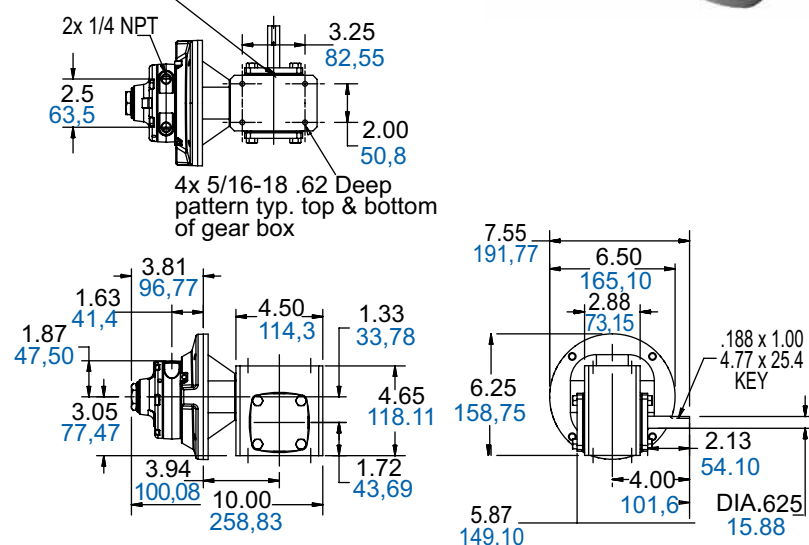
- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K509

Max. allowable overhung load on the output shaft is 240 lbs  
Max allowable thrust load on the output shaft is 300 lbs

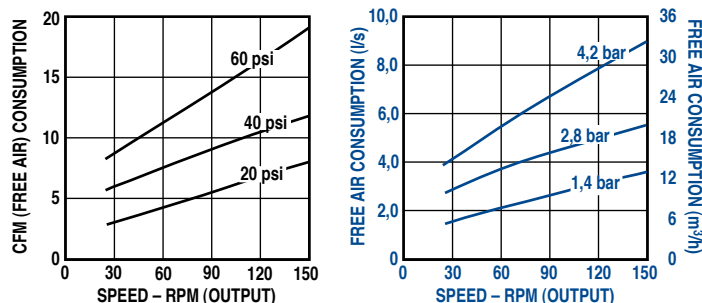


Product Dimensions (inches, mm)

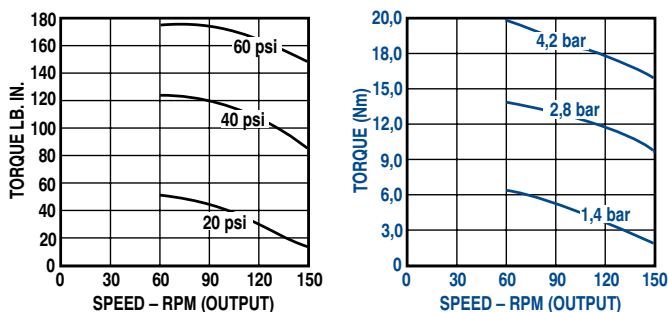
Counter-clockwise output shaft rotation



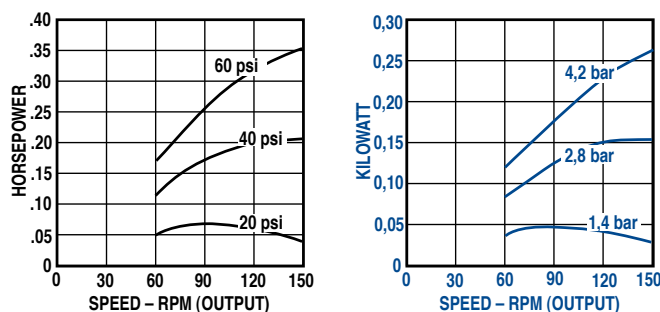
### Air Consumption vs. Speed



### Torque vs. Speed



### Output Power vs. Speed



#### Model

Max. allowable overhung load on the output shaft is 600 lbs  
Max. allowable thrust load on the output shaft is of 500 lbs

#### 2AM-43A-BF20

(4 Vanes, Reversible)

Net wt. 33.55 lbs (15,2 kg)

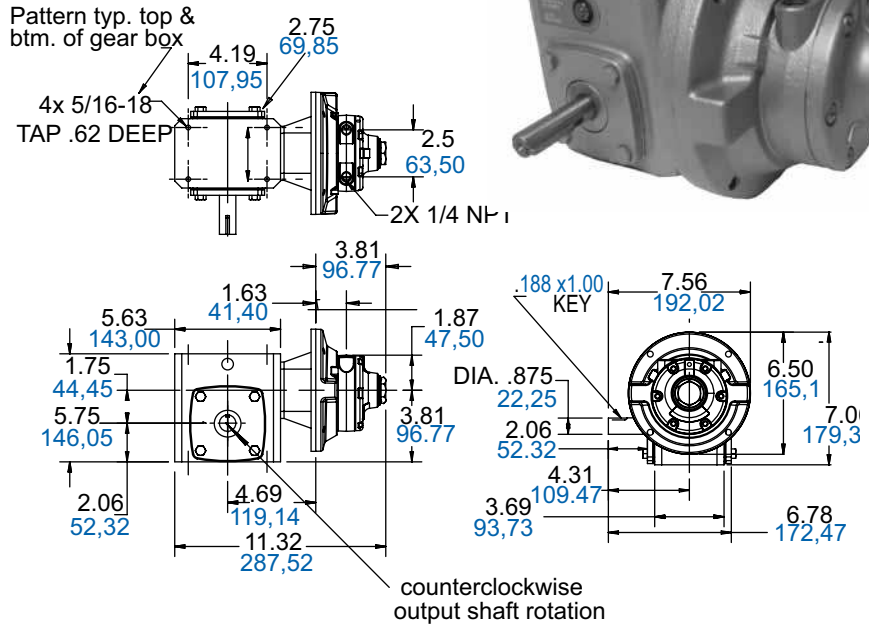
#### FEATURES

- 20:1 gear reducer
- FLANK mounting
- Mount on any plane operation
- Metal muffler AC980 provided not shown  
AC980 adds 2" height when installed

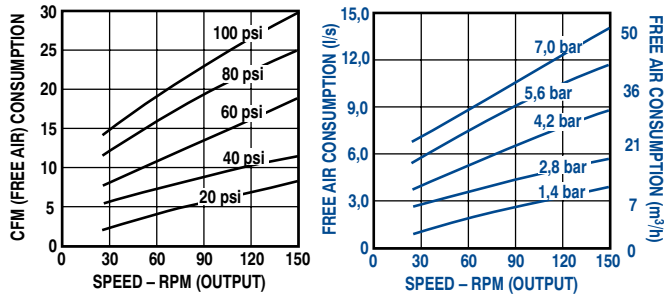
#### RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K509

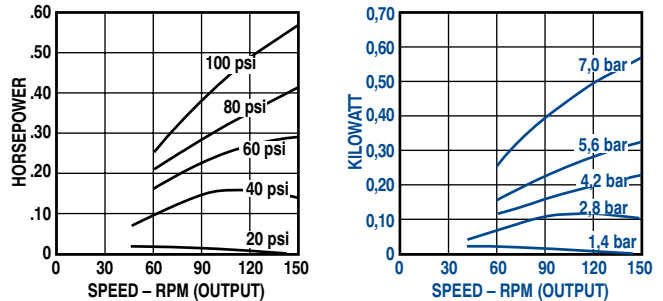
#### Product Dimensions (inches, mm)



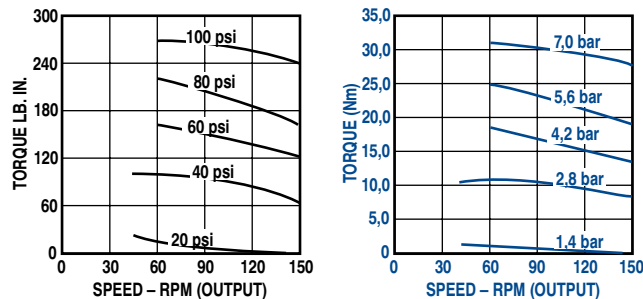
#### Air Consumption vs. Speed



#### Output Power vs. Speed



#### Torque vs. Speed





### Model

#### 4AM-RV-75-GR20

(4 Vanes, Reversible)

Net wt. 28 lbs (12,6 kg)

#### FEATURES

- 10:1 gear reducer
- Face and foot mounting
- Horizontal or shaft down operation
- Metal muffler AC980 adds 2" height when installed
-  II 2 GD c T4

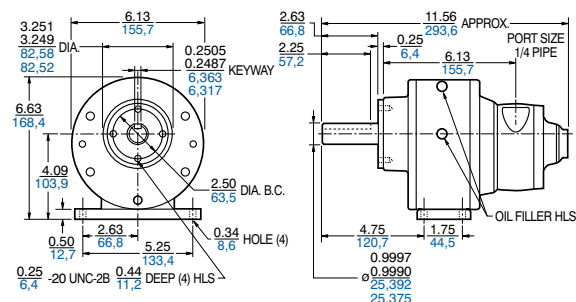
#### RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K205 (Air motor only)

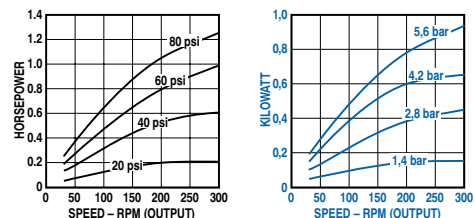
Max. allowable end thrust with 0 overhung load ranges from 200 lbs (90,0 kg) at 300 rpm to 800 lbs (360,0 kg) at 30 rpm. Max. overhung load with 0 end thrust ranges from 200 lbs (90,0 kg) at 300 rpm to 600 lbs (270,0 kg) at 30 rpm. Max. recommended pressures to 80 psi (5,6 bar).



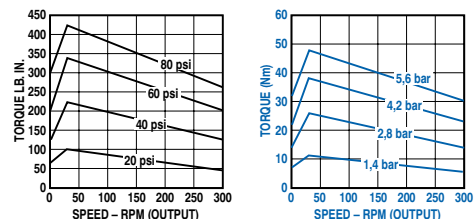
Product Dimensions (inches, mm)



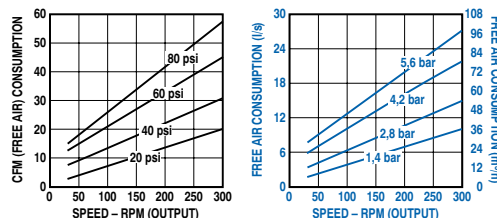
#### Output Power vs. Speed



#### Torque vs. Speed



#### Air Consumption vs. Speed



### MODEL

#### 4AM-RV-75-GR25

(4 Vanes, Reversible)

Net wt. 28 lbs (12,6 kg)

#### FEATURES

- 15:1 gear reducer
- Face, foot mounting
- Horizontal or shaft down operation
- Metal muffler AC980 adds 2" height when installed
-  II 2 GD c T4

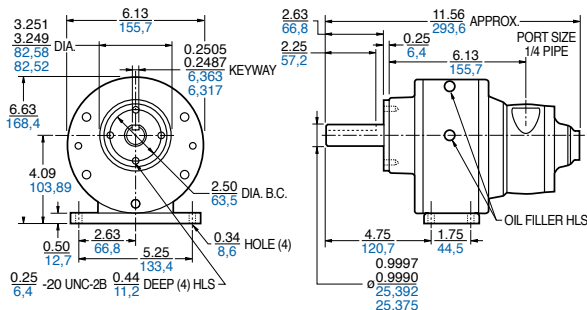
#### RECOMMENDED

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K205 (Air motor only)

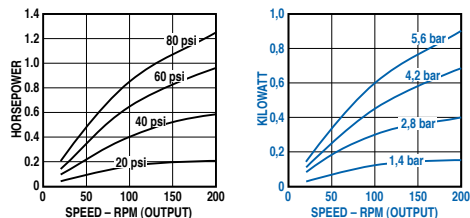
Max. allowable end thrust with 0 overhung load ranges from 250 lbs (112,5 kg) at 200 rpm to 800 lbs (360,0 kg) at 20 rpm. Max. overhung load with 0 end thrust ranges from 200 lbs (90,0 kg) at 200 rpm to 600 lbs (270,0 kg) at 20 rpm. Max. recommended pressures to 80 psi (5,6 bar).



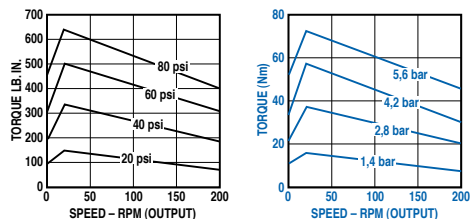
Product Dimensions (inches, mm)



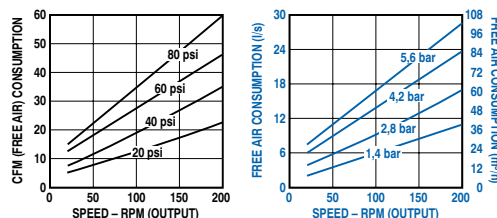
#### Output Power vs. Speed



#### Torque vs. Speed



#### Air Consumption vs. Speed

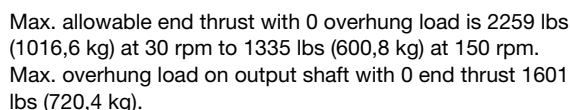


(8 Vanes, Reversible)

**Net wt.** for standard configuration  
60 lbs (27.0 kg)

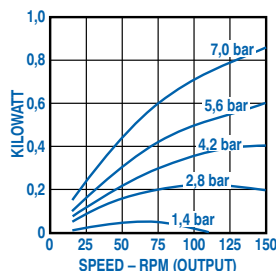
- 20:1 gear reducer
- Base mounting
- Optional mountings and shaft locations available
- Metal muffler AC980 adds 2" height when installed

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K280A (Air motor only)



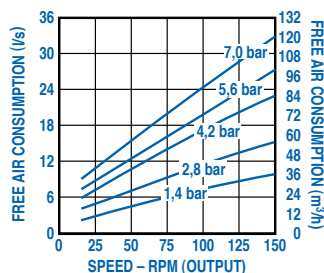
The graph plots Horsepower (Y-axis, 0 to 1.2) against Speed - RPM (OUTPUT) (X-axis, 0 to 150). Five curves are shown for different pressures: 20 psi, 40 psi, 60 psi, 80 psi, and 100 psi. All curves show an increase in horsepower with increasing speed. The 100 psi curve reaches the highest horsepower of approximately 1.1 at 150 RPM. The 20 psi curve starts at approximately 0.15 at 25 RPM and decreases to 0 at 150 RPM.

| Speed - RPM (OUTPUT) | 20 psi | 40 psi | 60 psi | 80 psi | 100 psi |
|----------------------|--------|--------|--------|--------|---------|
| 25                   | 0.15   | 0.20   | 0.25   | 0.30   | 0.35    |
| 50                   | 0.10   | 0.15   | 0.20   | 0.25   | 0.35    |
| 75                   | 0.05   | 0.10   | 0.15   | 0.20   | 0.45    |
| 100                  | 0.02   | 0.08   | 0.12   | 0.18   | 0.60    |
| 125                  | 0.01   | 0.05   | 0.10   | 0.15   | 0.80    |
| 150                  | 0.00   | 0.03   | 0.08   | 0.12   | 1.10    |



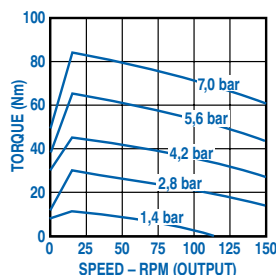
A line graph showing the relationship between Speed - RPM (Output) on the x-axis and CFM (Free Air) Consumption on the y-axis. The x-axis ranges from 0 to 150 in increments of 25. The y-axis ranges from 0 to 80 in increments of 10. Five lines are plotted, representing different pressures: 20 psi, 40 psi, 60 psi, 80 psi, and 100 psi. All lines show a positive linear relationship between speed and CFM consumption.

| Speed - RPM (Output) | 20 psi CFM | 40 psi CFM | 60 psi CFM | 80 psi CFM | 100 psi CFM |
|----------------------|------------|------------|------------|------------|-------------|
| 25                   | 10         | 12         | 15         | 18         | 22          |
| 50                   | 12         | 15         | 18         | 22         | 28          |
| 75                   | 15         | 18         | 22         | 28         | 35          |
| 100                  | 18         | 22         | 28         | 35         | 45          |
| 125                  | 22         | 28         | 35         | 45         | 58          |
| 150                  | 28         | 35         | 45         | 58         | 75          |



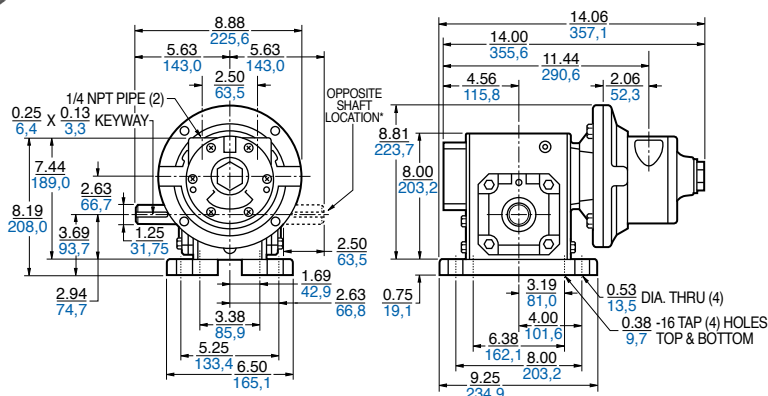
The graph plots Torque in lb. in. on the y-axis (0 to 800) against Speed in RPM (Output) on the x-axis (0 to 150). Five curves are shown for different output pressures: 20 psi, 40 psi, 60 psi, 80 psi, and 100 psi. Each curve shows a peak torque at a specific speed, followed by a decline. Higher pressures result in higher peak torques and slightly higher speeds at the peak.

| Speed (RPM) | 20 psi | 40 psi | 60 psi | 80 psi | 100 psi |
|-------------|--------|--------|--------|--------|---------|
| 0           | 0      | 0      | 0      | 0      | 0       |
| 25          | 100    | 300    | 400    | 550    | 720     |
| 50          | 100    | 300    | 400    | 550    | 720     |
| 75          | 100    | 250    | 350    | 500    | 650     |
| 100         | 100    | 200    | 300    | 450    | 600     |
| 125         | 100    | 150    | 250    | 400    | 550     |
| 150         | 100    | 100    | 200    | 350    | 500     |



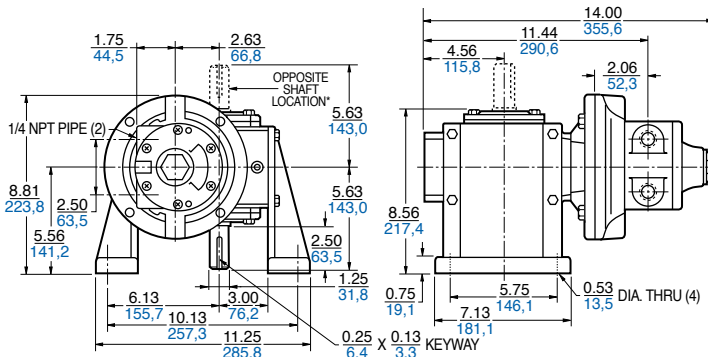
### “B” Mounting (photo)

**4AM-70C-CB20/4AM-70C-CF20**  
(standard shaft) (opposite shaft)



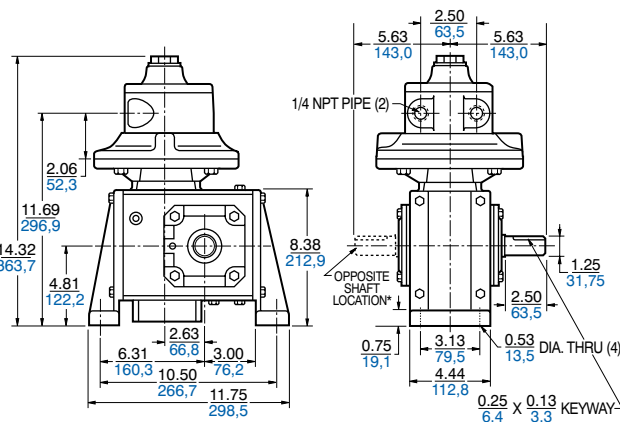
## “C” Mounting

**4AM-70C-CC20/4AM-70C-CG20**  
(standard shaft) (opposite shaft)



## “D” Mounting

**4AM-70C-CD20/4AM-70C-CH20**  
(standard shaft) (opposite shaft)



### Model

#### **4AM-70C-CB60**

(8 Vanes, Reversible)

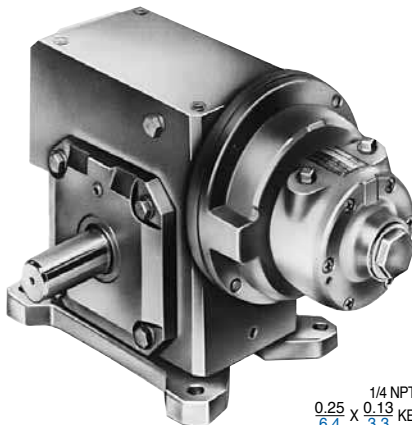
**Net wt.** for standard configuration  
 60 lbs (27,0 kg)

#### **FEATURES**

- 60:1 gear reducer
- Base mounting
- Optional mountings and shaft locations available
- Metal muffler AC980 adds 2" height when installed

#### **RECOMMENDED**

- Filter AH103F
- Regulator AH104R
- Gauge AA806
- Lubricator AH105L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K280A (Air motor only)

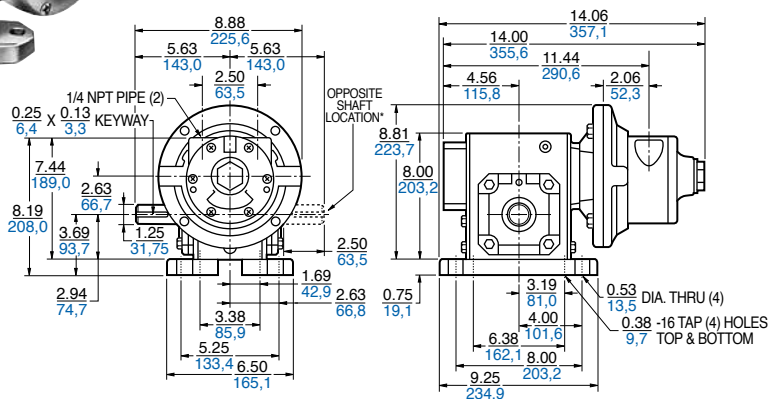


Max. allowable end thrust with 0 overhung load is 3545 lbs (1595,3 kg) at 10 rpm to 2134 lbs (960,3 kg) at 50 rpm. Max. overhung load on output shaft with 0 end thrust 1601 lbs (720,5 kg).

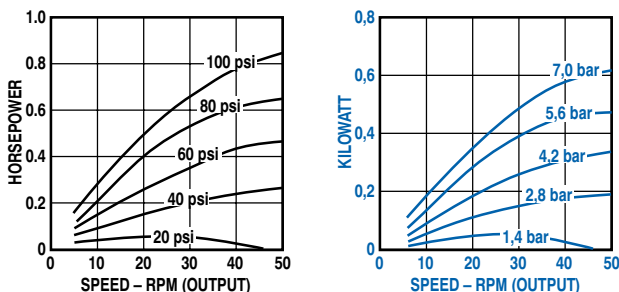
Product Dimensions (inches, mm)

#### **"B" Mounting (photo)**

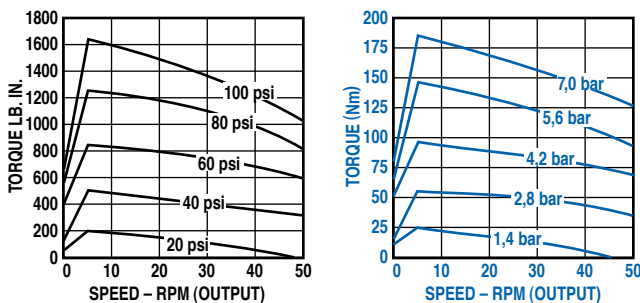
**4AM-70C-CB60/4AM-70C-CF60**  
 (standard shaft) (opposite shaft)



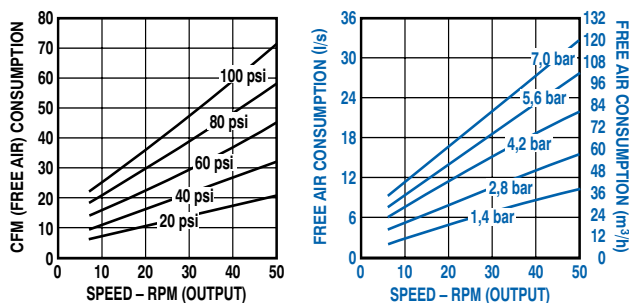
#### **Output Power vs. Speed**



#### **Torque vs. Speed**

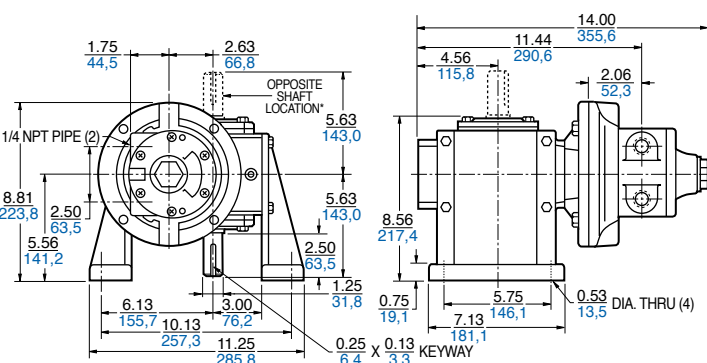


#### **Air Consumption vs. Speed**



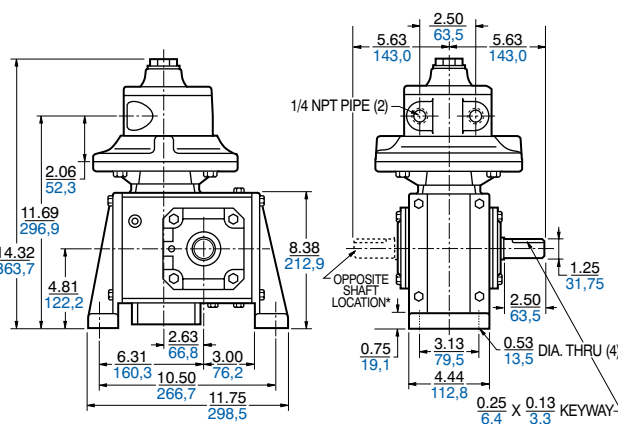
#### **"C" Mounting**

**4AM-70C-CC60/4AM-70C-CG60**  
 (standard shaft) (opposite shaft)



#### **"D" Mounting**

**4AM-70C-CD60/4AM-70C-CH60**  
 (standard shaft) (opposite shaft)



### Model

#### 6AM-22A-CB10

(8 Vanes, Reversible)

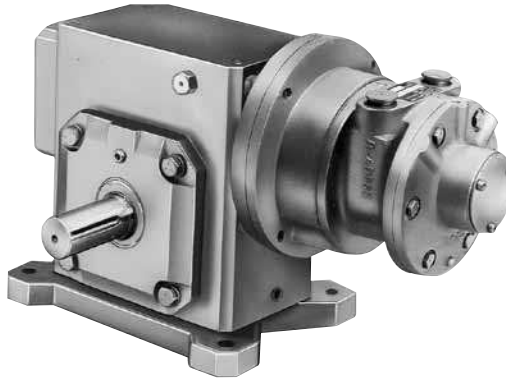
**Net wt.** for standard configuration  
56 lbs (25,2 kg)

#### FEATURES

- 10:1 gear reducer
- Base mounting
- Optional mountings and shaft locations available
- Muffler AC990 (not shown)

#### RECOMMENDED

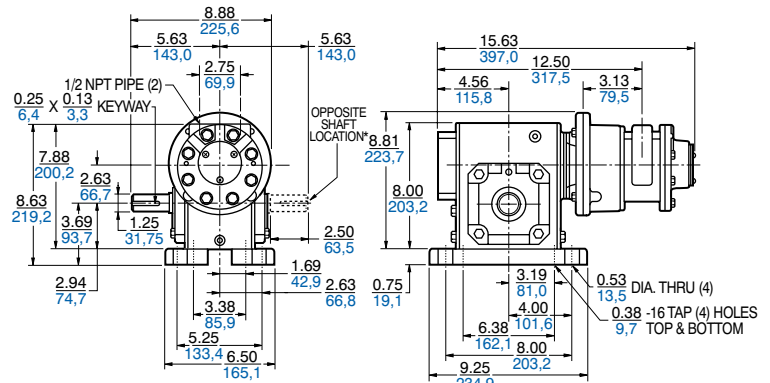
- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K281 (Air motor only)



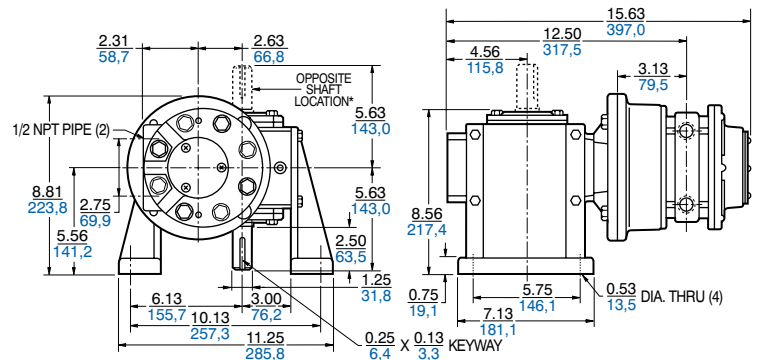
Max. allowable end thrust with 0 overhung load is 1640 lbs (738,0 kg) at 60 rpm to 923 lbs (415,4 kg) at 300 rpm. Max. overhung load on output shaft with 0 end thrust 1601 lbs (720,5 kg).

Product Dimensions (inches, mm)

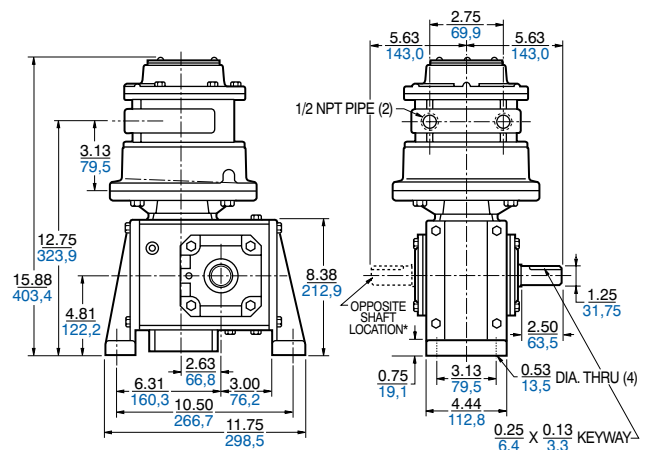
**“B” Mounting (photo)**  
**6AM-22A-CB10 / 6AM-22A-CF10**  
(standard shaft) (opposite shaft)



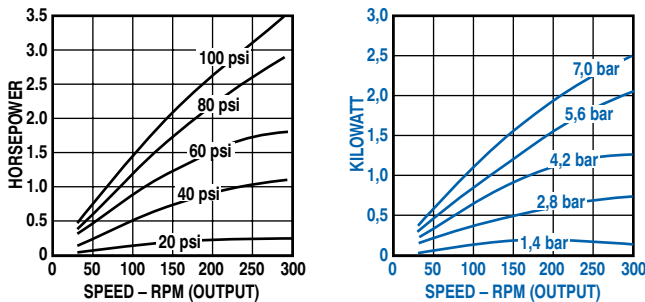
**“C” Mounting**  
**6AM-22A-CC10 / 6AM-22A-CG10**  
(standard shaft) (opposite shaft)



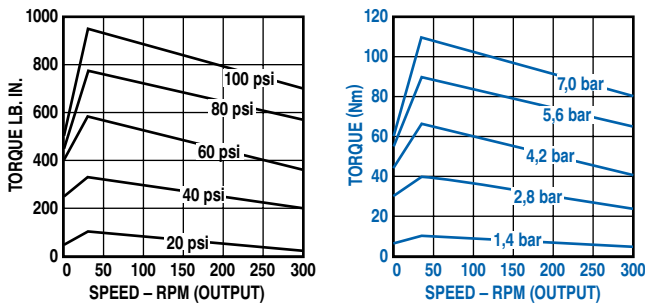
**“D” Mounting**  
**6AM-22A-CD10 / 6AM-22A-CH10**  
(standard shaft) (opposite shaft)



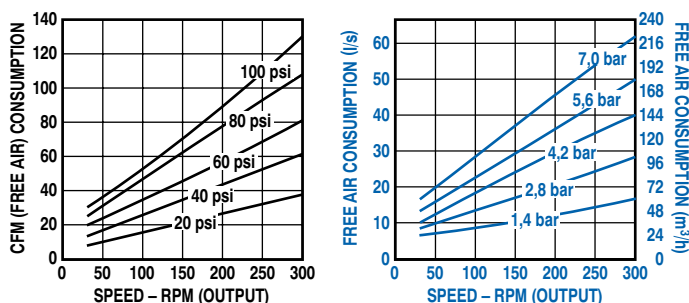
### Output Power vs. Speed



### Torque vs. Speed



### Air Consumption vs. Speed





### Model

#### 6AM-22A-DB20

(8 Vanes, Reversible)

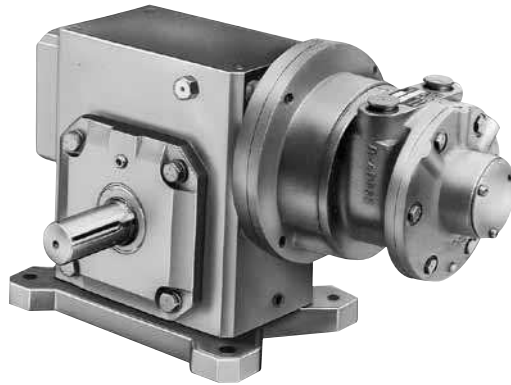
**Net wt.** for standard configuration  
 100 lbs (45,0 kg)

#### FEATURES

- 20:1 gear reducer
- Base mounting
- Optional mountings and shaft locations available
- Muffler AC990 (not shown)

#### RECOMMENDED

- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K281 (Air motor only)

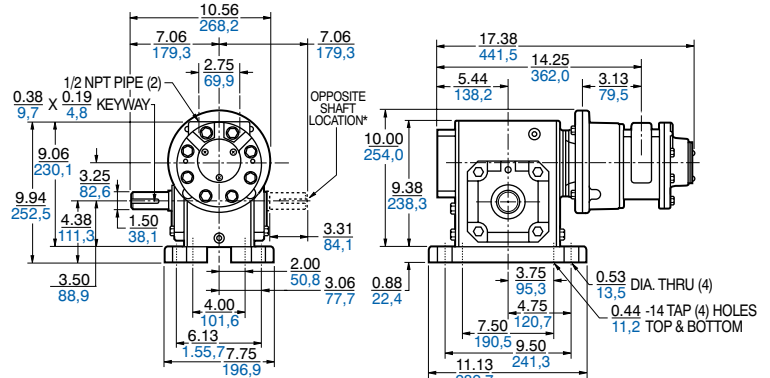


Max. allowable end thrust with 0 overhung load is 3552 lbs (1598,4 kg) at 30 rpm to 2154 lbs (969,3 kg) at 150 rpm.  
 Max. overhung load on output shaft with 0 end thrust 2857 lbs (1285,7 kg).

Product Dimensions (inches, mm)

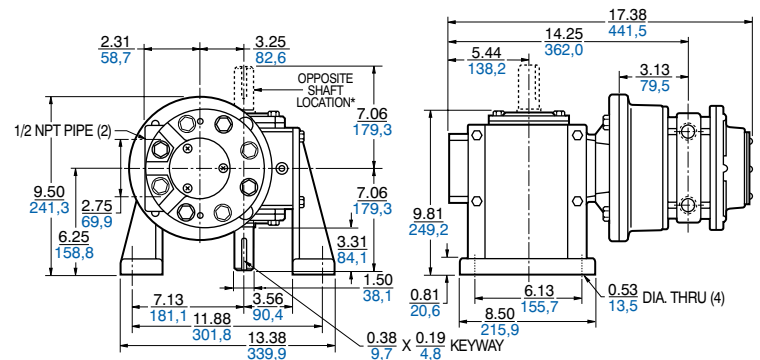
#### “B” Mounting (photo)

6AM-22A-DB20/6AM-22A-DF20  
 (standard shaft) (opposite shaft)



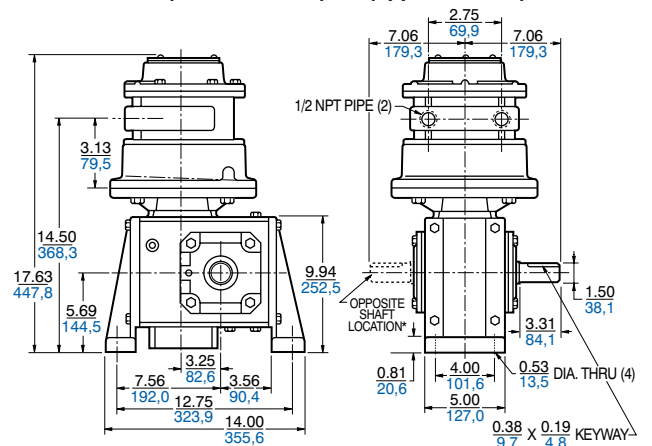
#### “C” Mounting

6AM-22A-DC20/6AM-22A-DG20  
 (standard shaft) (opposite shaft)

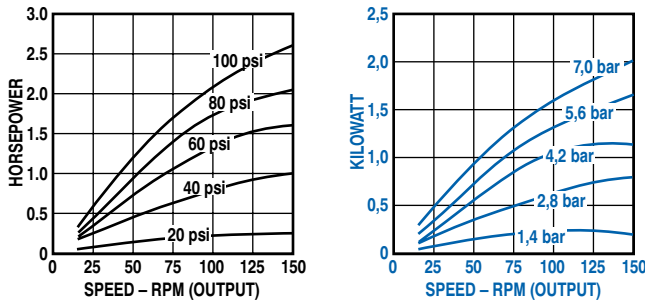


#### “D” Mounting

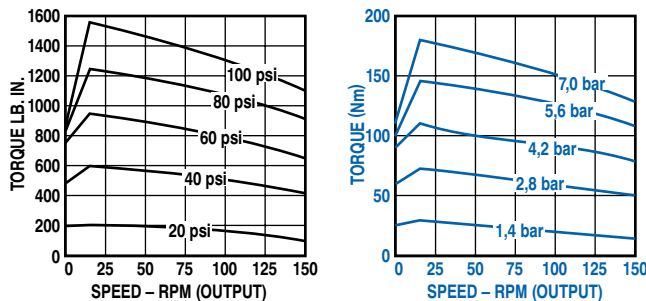
6AM-22A-DD20/6AM-22A-DH20  
 (standard shaft) (opposite shaft)



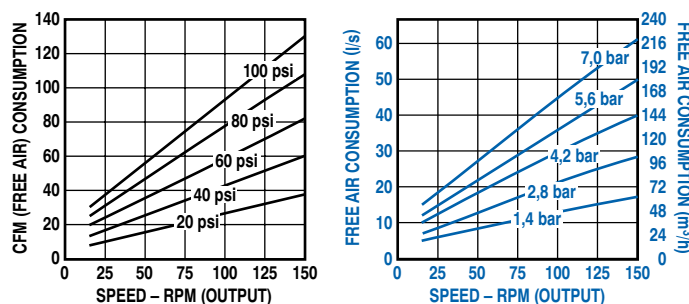
#### Output Power vs. Speed



#### Torque vs. Speed



#### Air Consumption vs. Speed





### Model

#### 6AM-22A-GB40

(8 Vanes, Reversible)

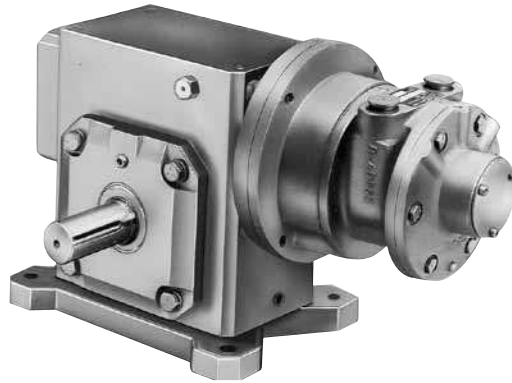
**Net wt.** for standard configuration  
104 lbs (46,8 kg)

### FEATURES

- 40:1 gear reducer
- Base mounting
- Optional mountings and shaft locations available
- Muffler AC990 (not shown)

### RECOMMENDED

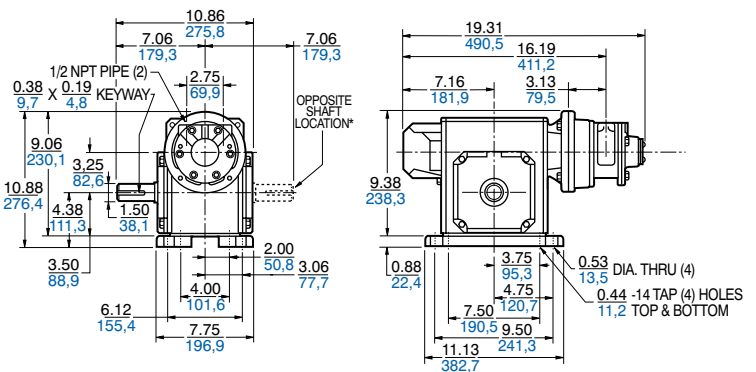
- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K281 (Air motor only)



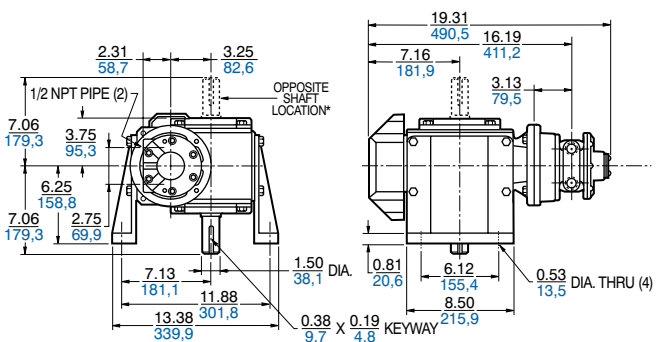
Max. allowable end thrust with 0 overhung load is 3552 lbs (1598,4 kg) at 30 rpm to 2154 lbs (969,3 kg) at 75 rpm. Max. overhung load on output shaft with 0 end thrust 2857 lbs (1285,7 kg).

Product Dimensions (inches, mm)

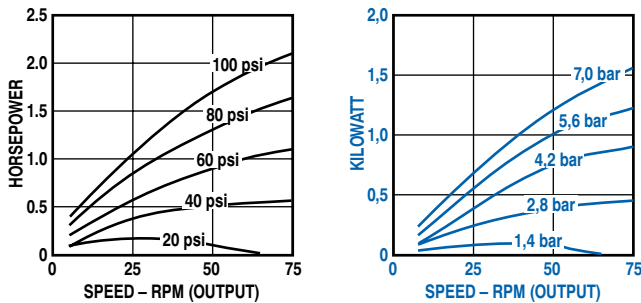
**“B” Mounting (photo)**  
**6AM-22A-GB40/6AM-22A-GF40**  
(standard shaft) (opposite shaft)



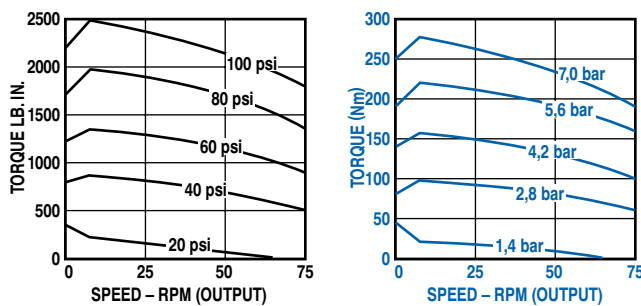
**“C” Mounting**  
**6AM-22A-GC40/6AM-22A-GG40**  
(standard shaft) (opposite shaft)



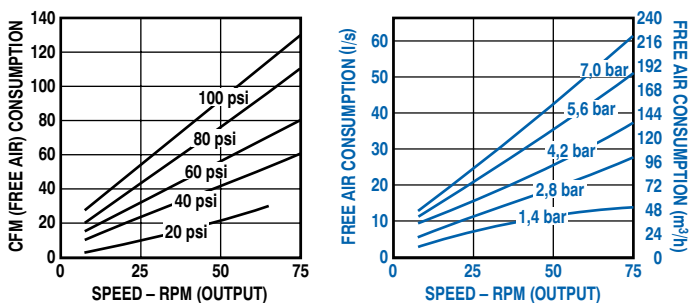
**Output Power vs. Speed**



**Torque vs. Speed**



**Air Consumption vs. Speed**



### Model

#### 8AM-32A-FB20

(8 Vanes, Reversible)

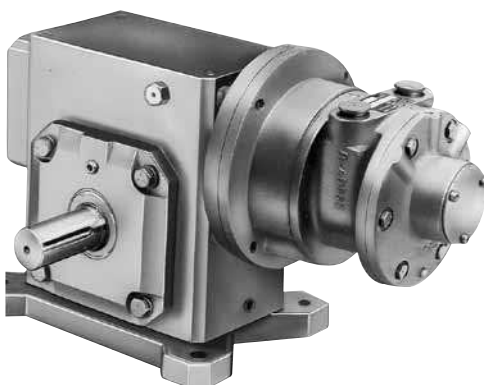
**Net wt.** for standard configuration  
 111 lbs (50,0 kg)

### FEATURES

- 20:1 gear reducer
- Base mounting
- Optional mountings and shaft locations available
- Muffler AC990 (not shown)

### RECOMMENDED

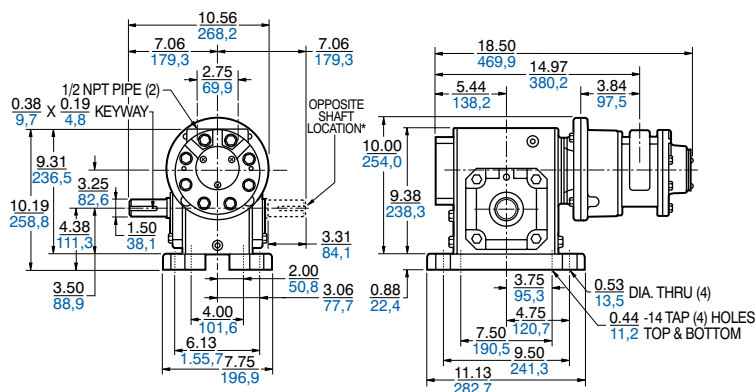
- Filter AH106F
- Regulator AH107R
- Gauge AA806
- Lubricator AH108L
- Muffler AG600 (above 1,000 rpm)
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K282 (Air motor only)



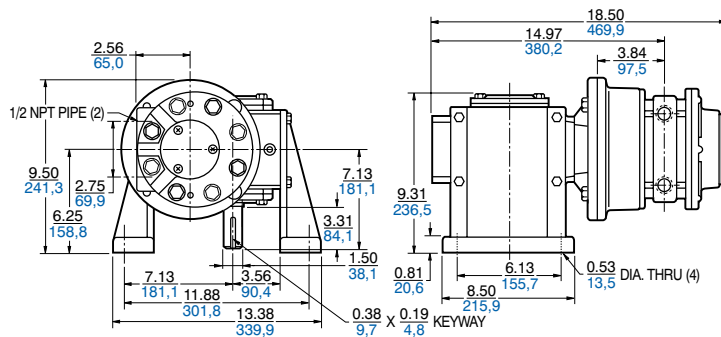
Max. allowable end thrust with 0 overhung load is 3552 lbs (1598,4 kg) at 30 rpm to 2154 lbs (969,3 kg) at 125 rpm. Max. overhung load on output shaft with 0 end thrust 2857 lbs (1285,7 kg).

Product Dimensions (inches, mm)

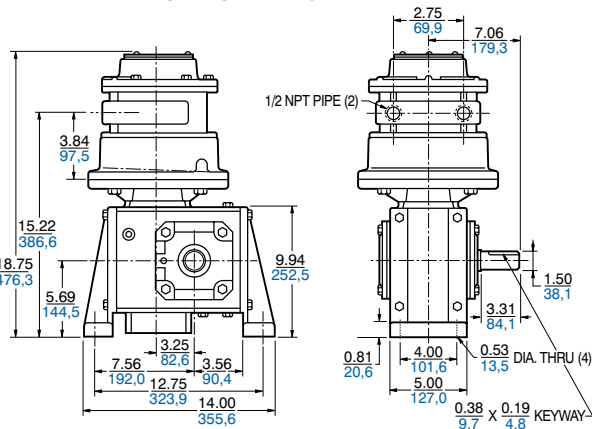
**“B” Mounting (photo)**  
**8AM-32A-FB20/8AM-32A-FF20**  
 (standard shaft) (opposite shaft)



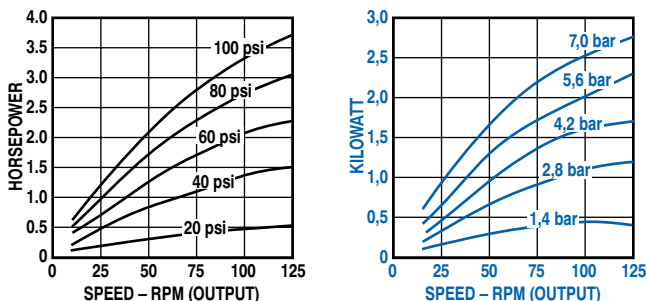
**“C” Mounting**  
**8AM-32A-FC20**



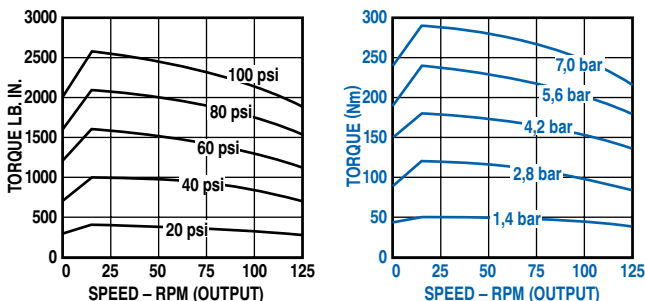
**“D” Mounting**  
**8AM-32A-FD20**



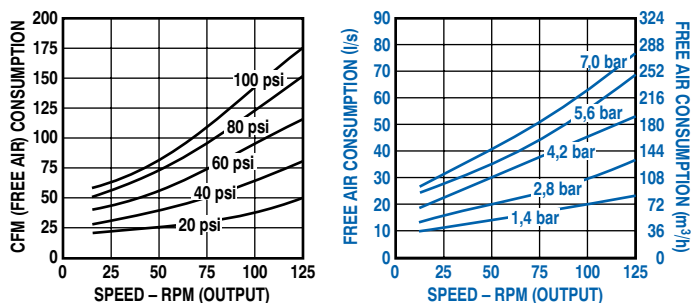
**Output Power vs. Speed**



**Torque vs. Speed**



**Air Consumption vs. Speed**



### Model

#### 16AM-13-HB20

(6 Vanes, Reversible)

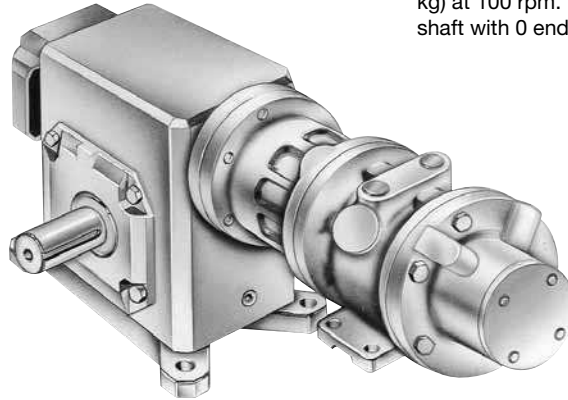
**Net wt.** for standard configuration  
163 lbs (73,4 kg)

### FEATURES

- 20:1 gear reducer
- Base mounting
- Optional mountings and shaft locations available

### RECOMMENDED

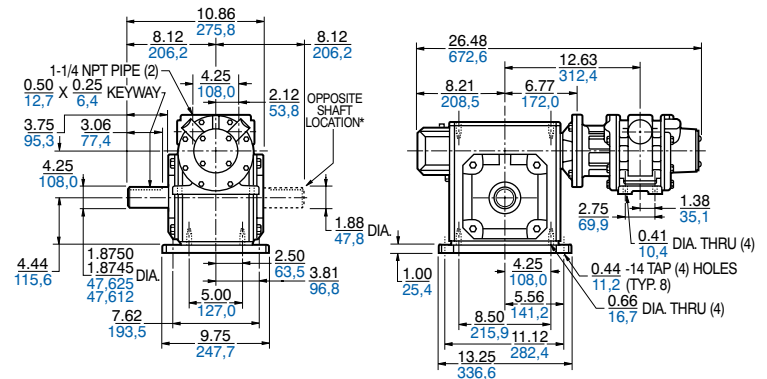
- Filter AH109F
- Regulator AH110R
- Gauge AA806
- Lubricator AH111L
- Muffler AG601
- Oil AD220 – 1 quart (.94 litres)
- Repair kit K213 (Air motor only)



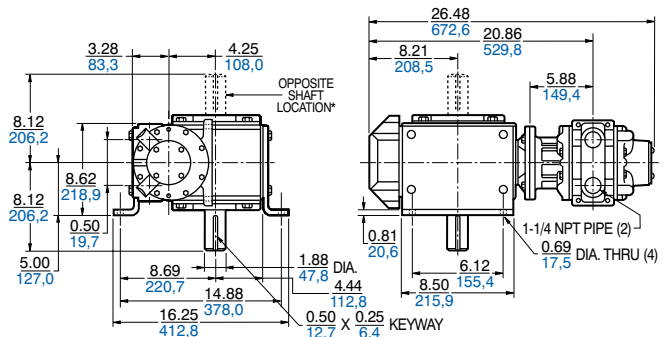
Max. allowable end thrust with 0 overhung load is 3552 lbs (1598,4 kg) at 30 rpm to 2154 lbs (969,3 kg) at 100 rpm. Max. overhung load on output shaft with 0 end thrust 2857 lbs (1285,7 kg).

Product Dimensions (inches, mm)

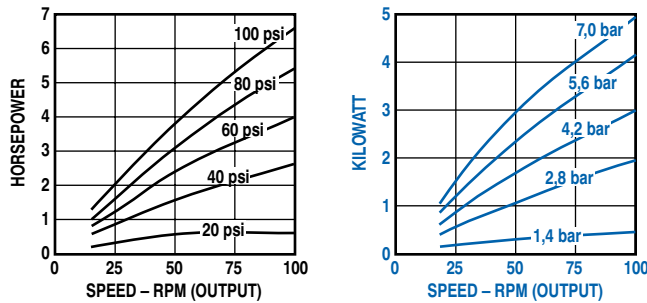
**“B” Mounting** (photo)  
**16AM-13-HB20/16AM-13-HF20**  
(standard shaft) (opposite shaft)



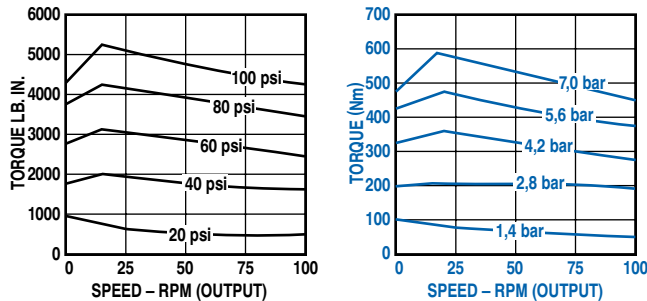
**“C” Mounting**  
**16AM-13-HC20/\*16AM-13-HG20**  
(standard shaft) (opposite shaft)



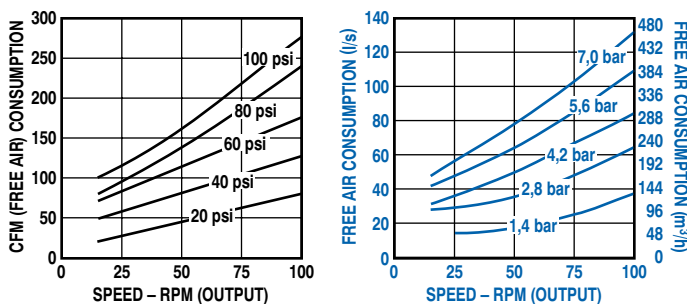
### Output Power vs. Speed



### Torque vs. Speed



### Air Consumption vs. Speed



### FILTERS

| Gast Part Number | Port Size | Flow* SCFM | Used With         | Dimensions - in. (mm) |               |             |
|------------------|-----------|------------|-------------------|-----------------------|---------------|-------------|
|                  |           |            |                   | A                     | B             | C           |
| +AH100F          | 1/8" NPTF | 18         | 1AM/1UP/NL22      | 1.63 (41,4)           | 3.25 (82,6)   | 0.38 (9,7)  |
| +AH103F          | 1/4" NPTF | 50         | 2AM/4AM/NL32/NL42 | 2.75 (69,9)           | 5.84 (148,3)  | 0.69 (17,5) |
| +AH106F          | 1/2" NPTF | 117        | 6AM/8AM/NL52      | 3.91 (99,3)           | 6.69 (169,9)  | 0.67 (17,0) |
| +AH109F          | 1" NPTF   | 365        | 16AM              | 4.75 (120,7)          | 10.44 (265,2) | 1.25 (31,8) |

\*SCFM = Standard cubic feet per minute at 100 psi inlet and 5 psi pressure drop.

+Metal Bowl

### REGULATORS

| Gast Part Number | Port Size | Flow* SCFM | Used With         | Dimensions - in. (mm) |              |             |
|------------------|-----------|------------|-------------------|-----------------------|--------------|-------------|
|                  |           |            |                   | A                     | B            | C           |
| AH101R           | 1/8" NPTF | 11         | 1AM/1UP/NL22      | 1.63 (41,4)           | 2.38 (60,5)  | 0.38 (9,7)  |
| AH104R           | 1/4" NPTF | 50         | 2AM/4AM/NL32/NL42 | 2.44 (62,0)           | 4.00 (101,6) | 1.54 (39,1) |
| AH107R           | 1/2" NPTF | 130        | 6AM/8AM/NL52      | 3.50 (88,9)           | 5.36 (136,1) | 1.50 (38,1) |
| AH110R           | 1" NPTF   | 360        | 16AM              | 4.25 (108,0)          | 5.69 (144,5) | 2.38 (60,5) |

\*SCFM = Standard cubic feet per minute at 100 psi inlet, 80 psi secondary setting and 10 psi pressure drop.

### LUBRICATORS

| Gast Part Number | Port Size | Flow* SCFM | Used With   | Dimensions - in. (mm) |               |             |
|------------------|-----------|------------|-------------|-----------------------|---------------|-------------|
|                  |           |            |             | A                     | B             | C           |
| +AH102L          | 1/8" NPTF | 13         | 1AM/1UP     | 1.77 (45,0)           | 3.37 (85,6)   | 1.76 (44,7) |
| +AH105L          | 1/4" NPTF | 20         | 2AM/4AM     | 2.56 (65,0)           | 5.75 (146,1)  | 1.85 (47,0) |
| +AH108L          | 1/2" NPTF | 90         | 6AM and 8AM | 3.91 (99,3)           | 6.69 (169,9)  | 1.88 (47,8) |
| +AH111L          | 1" NPTF   | 290        | 16AM        | 4.50 (114,3)          | 10.24 (260,1) | 2.22 (56,4) |

\*SCFM = Standard cubic feet per minute at 100 psi inlet and 5 psi pressure drop.

+Metal Bowl

### SPECIFICATIONS

Duty levels and applications may require different FRL's than recommended.

#### FILTER ELEMENT:

- 5 micron

#### PORT THREADS:

- All ports NPTF

#### GAUGE PORTS:

- Regulator Two ports – 1/4" NPTF, can be used as additional outlet ports, full flow 1/4", 1/8" NPTF for AH101R model.

#### PRESSURE RATING:

- Regulator Maximum primary pressure: 250 psi (17 bar)
- Secondary pressure range: Standard 2-125 psi (.14 to 8.6 bar)
- Temperature rating: -10 °F to 175 °F (-23 °C to 80 °C)

#### PRESSURE AND TEMPERATURE RATINGS:

- Polycarbonate Bowls  
200 psi at 120 °F (14 bar at 49 °C) or less  
100 psi at 175 °F (7 bar at 80 °C) or less

#### METAL BOWLS:

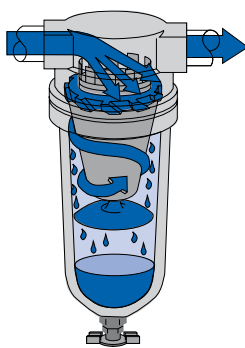
- 250 psi at 175 °F (17 bar at 80 °C) or less

#### BOWLS:

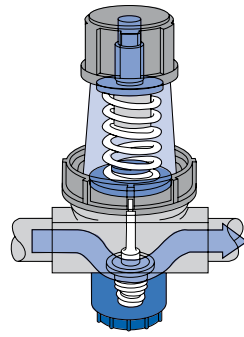
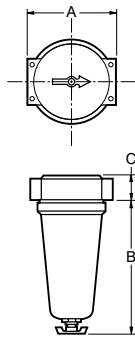
- Metal bowl

#### BOWL CAPACITY:

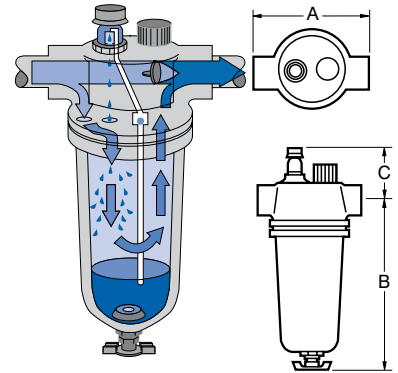
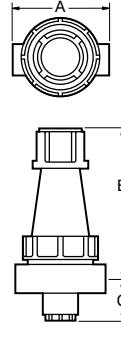
- 1 ounce for 1/8" model
- 5 ounce for 1/4" model
- 8 ounce for 1/2" model
- 32 ounce for 1" model



A filter helps ensure efficient operation by removing solid and liquid contaminants before they enter the air motor.



An air pressure regulator is necessary in most air motor applications to maintain a constant pressure regardless of the rise and fall of line pressure.

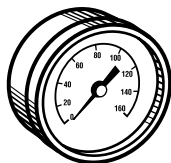


Mist lubricators provide uniform lubrication for the traditional lubricated style air motor. This results in reduced friction, extending the life of moving parts.

### GAUGES

If a gauge is required for your Gast Regulator, please order as a separate item:

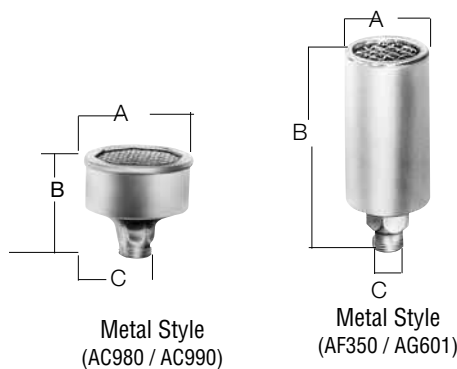
| Gast Part No. | Used On                    | Description         |
|---------------|----------------------------|---------------------|
| AA806         | AH104R<br>AH107R<br>AH110R | 1/4" NPS, 0-160 psi |



### MUFFLERS

| Gast Part Number | Used On           | Dimensions - in (mm) |             |            |
|------------------|-------------------|----------------------|-------------|------------|
|                  |                   | A                    | B           | C          |
| AF350 (Metal)    | 1AM/1UP/NL22      | 1.06 (27)            | 2.81 (71)   | 1/8" NPT   |
| AC980 (Metal)    | 2AM/4AM/NL32/NL42 | 1.72 (44)            | 2.31 (59)   | 1/4" NPT   |
| AC990 (Metal)    | 6AM/8AM           | 2.72 (69)            | 2.94 (75)   | 1/2" NPT   |
| AG601* (Metal)   | 16AM              | 3.12 (79)            | 21.22 (539) | 1 1/4" NPT |

\* Not included with 16AM series, but is recommended.



### OIL

| Gast Part Number     | Used On                         |
|----------------------|---------------------------------|
| Food Grade Oil AS117 | Only stainless steel air motors |
| Oil AD220            | All other Lubricated air motors |

## FOOT ASSEMBLIES FOR 1AM AND 1UP AIR MOTORS AND GEAR MOTORS

### FAST AND SIMPLE INSTALLATION

GAST now offers two foot assemblies in kit form:

AG585 for 1AM and 1UP Air Motors, kit includes foot, three mounting screws, and instruction sheet.

AG586 for 1AM and 1UP Gear Motors, kit includes foot and three mounting screws.

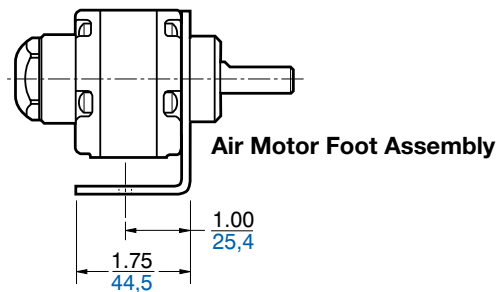
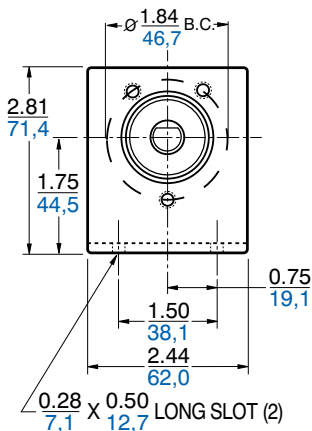
Product Dimensions (inches, mm)



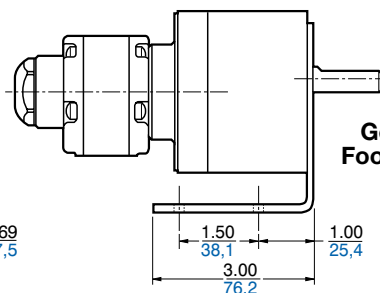
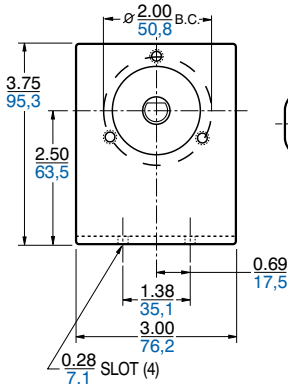
AG585



AG586



Air Motor Foot Assembly



Gear Motor Foot Assembly





The GAST logo is in a bold, blue, italicized sans-serif font.The IDEX CORPORATION logo features the word "IDEX" in a bold, blue, italicized sans-serif font with a stylized star above the 'X', and the word "CORPORATION" in a smaller, blue, sans-serif font below it.

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