



# Monark® 1.5:1, 2:1 and 5:1

## Pneumatic 2-Ball Piston Pumps

### Features and Benefits

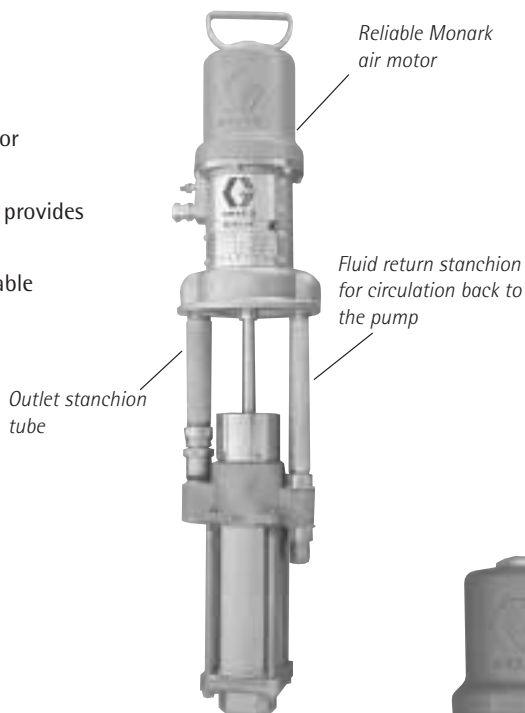
- Drum and stubby length models available for mounting and application flexibility
- Positive displacement, 2-ball piston design, provides uniform and easily controlled delivery
- Stainless steel or carbon steel models available to handle various fluids

### Typical Applications

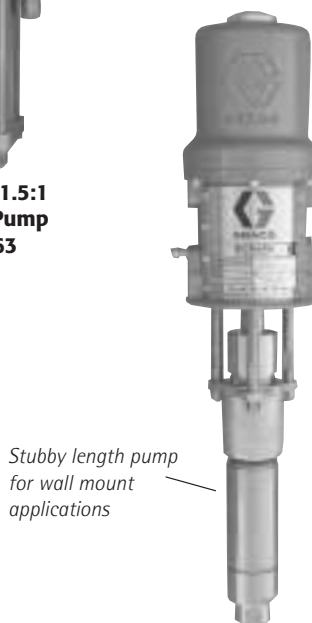
- Fluid transfer and supply
- Paint circulating system
- Chemical cleaning supply pump

### Typical Fluids Handled

- Solventborne and waterborne fluids
- Resins
- Stains/varnishes
- Lacquers
- Texture coatings
- Cleaning fluids
- Adhesives and sealants



**Monark 1.5:1  
Stubby Pump  
218763**



**Monark 5:1  
Stubby Pump  
224343**

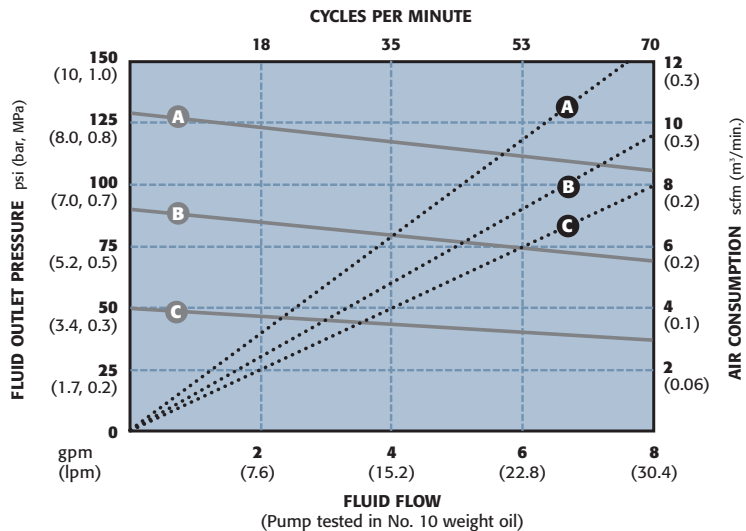
# Monark 1.5:1, 2:1, and 5:1 Pneumatic 2-Ball Piston Pumps

## Technical Specifications

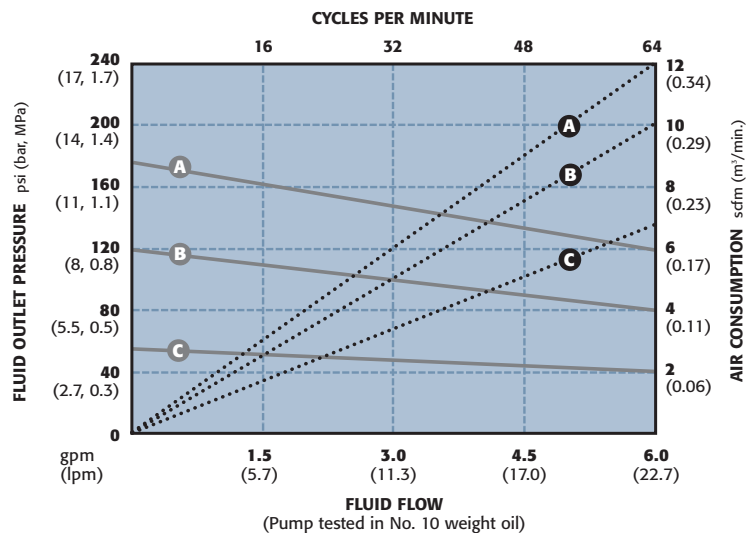
|   | <b>Monark<br/>1.5:1</b>            | <b>Monark<br/>2:1</b>              | <b>Monark<br/>Stubby<br/>5:1</b>   | <b>Monark<br/>Drum<br/>5:1</b>                    |
|---|------------------------------------|------------------------------------|------------------------------------|---|
| Pump ratio                                    | <b>1.5:1</b>                       | <b>2:1</b>                         | <b>5:1</b>                         | <b>5:1</b>  |
| Maximum fluid outlet pressure                 | 180 psi<br>(12 bar, 1.2 MPa)       | 200 psi<br>(14 bar, 1.4 MPa)       | 600 psi<br>(42 bar, 4.2 MPa)       | 900 psi<br>(62 bar, 6.2 MPa)                      |
| Maximum air input pressure                    | 120 psi<br>(8 bar, 0.8 MPa)        | 100 psi<br>(7 bar, 0.7 MPa)        | 120 psi<br>(8.3 bar, 0.8 MPa)      | 180 psi<br>(12.4 bar, 1.2 MPa)                    |
| Fluid flow @ 60 cpm                           | 6.8 gpm (25.7 lpm)                 | 5.4 gpm (20.5 lpm)                 | 2.5 gpm (9.4 lpm)                  | 2.5 gpm (9.4 lpm)                                 |
| Volume per cycle                              | 15 oz. (429 cc)                    | 12 oz. (343 cc)                    | 5 oz. (157 cc)                     | 5 oz. (157 cc)                                    |
| Air consumption @100 psi air @ 20 cpm         | 3 scfm (0.08 m <sup>3</sup> /min.) | 3 scfm (0.08 m <sup>3</sup> /min.) | 3 scfm (0.08 m <sup>3</sup> /min.) | 3 scfm (0.08 m <sup>3</sup> /min.)                |
| Sound pressure level<br>@100 psi air @ 20 cpm | 75 dBA                             | 75 dBA                             | 75 dBA                             | 75 dBA  |
| Air motor inlet                               | 3/8 npsm(f)                        | 3/8 npsm(f)                        | 3/8 npt(f)                         | 3/8 npt(f)  |
| Pump fluid inlet                              | 1-1/2 npt(f)                       | 1-1/2 npt(f)                       | 3/4 npt(f)                         | N/A   |
| Pump fluid outlet                             | 3/4 npt(m)                         | 1 npt(f)                           | 1/2 npt(f)                         | 3/4 npt(f)  |
| Weight  | 36 lb. (16 kg)                     | 40 lb. (18 kg)                     | 20 lb. (9 kg)                      | 30 lb. (13.6 kg)                                  |
| Instruction manual                            | 307653                             | 307985                             | 308116<br>308117 (Hydra-Clean)     | 308118 (Stainless steel)<br>307044 (Carbon steel) |

# Monark 1.5:1, 2:1 and 5:1 Pneumatic 2-Ball Piston Pumps

**Performance Chart for Monark 1.5:1 Pump**

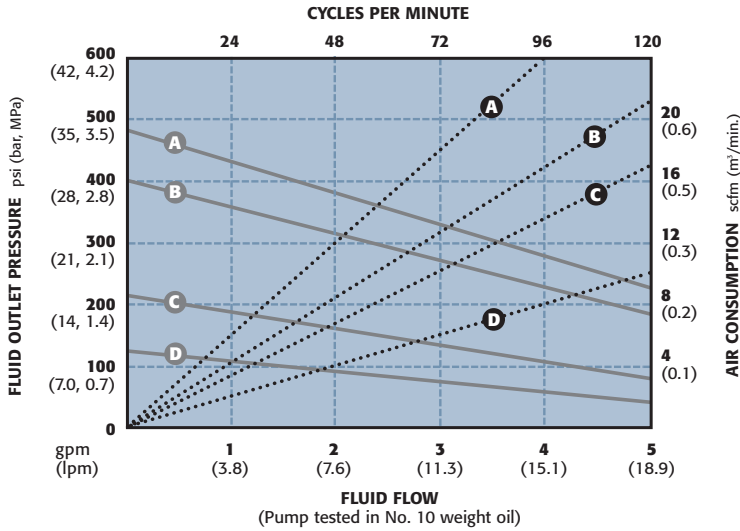


**Performance Chart for Monark 2:1 Drum and Stubby Pumps**



# Monark 1.5:1, 2:1 and 5:1 Pneumatic 2-Ball Piston Pumps

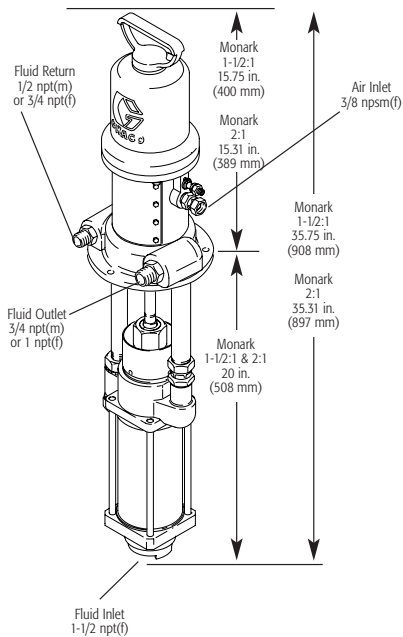
## Performance Chart for Monark 5:1 Drum and Stubby Pumps



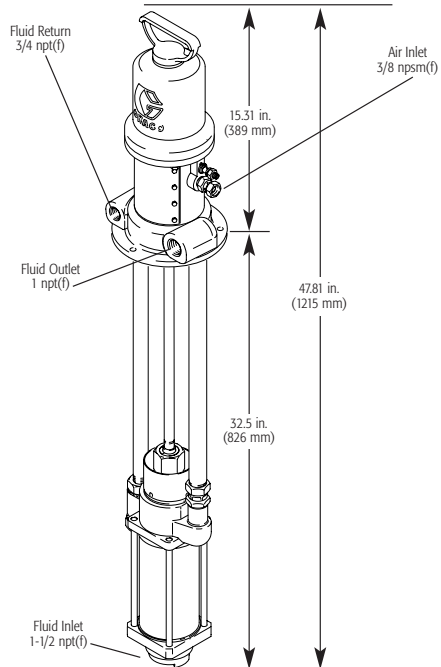
| AIR PRESSURES                    | LEGEND                |
|----------------------------------|-----------------------|
| Ⓐ = @ 120 psi (8.3 bar, 0.8 MPa) | Air Consumption ····· |
| Ⓑ = @ 100 psi (7 bar, 0.7 MPa)   | Fluid Flow ———        |
| Ⓒ = @ 70 psi (4.8 bar, 0.5 MPa)  |                       |
| Ⓓ = @ 40 psi (2.7 bar, 0.8 MPa)  |                       |

# Monark 1.5:1, 2:1 and 5:1 Pneumatic 2-Ball Piston Pumps

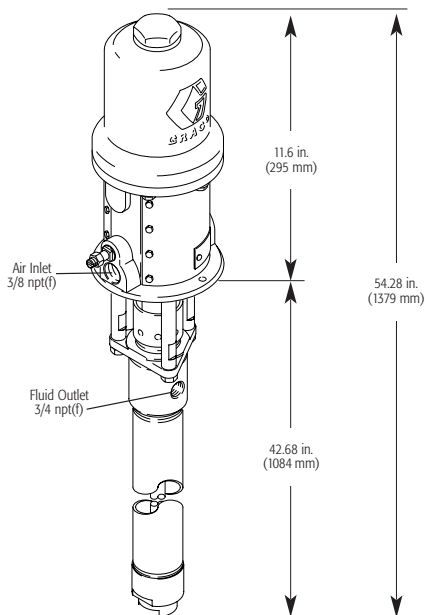
## Dimensions for Monark 1.5:1 and 2:1 Stubby Pumps



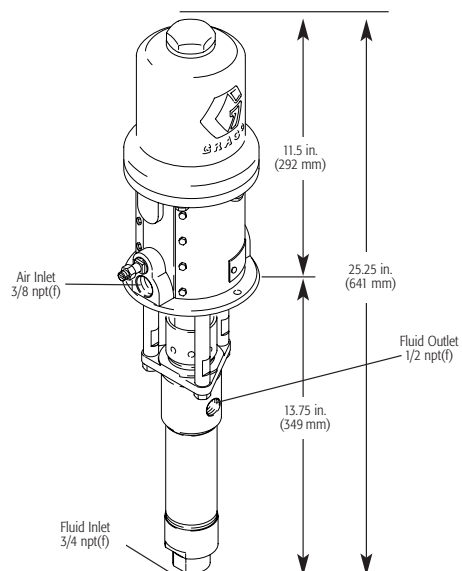
## Dimensions for Monark 2:1 Drum Pump



## Dimensions for Monark 5:1 Drum Pump



## Dimensions for Monark 5:1 Stubby Pump



# Monark 1.5:1, 2:1 and 5:1 Pneumatic 2-Ball Piston Pumps

## Ordering Information

1. Select appropriate pump ratio (1:5, 2:1 or 5:1) based on pressure and flow requirements of the application. Refer to Monark 1.5:1, Monark 2:1 and Monark 5:1 pump performance charts.
2. Select stubby length pump configuration if siphoning from material container, or drum length pump (if available) if immersing in a 55 gallon (200 l) drum.
3. Select lower displacement pump construction (carbon steel or stainless steel) based on the corrosive and chemical characteristics of the fluid to be handled.
4. Select appropriate seal construction based on the chemical characteristics of the fluid to be handled.
5. Order pump part number.

### Pump part number includes motor and lower displacement pump

| Pump part number        | Monark 1.5:1       | Monark 2:1         | Monark 5:1        | Monark 5:1      | Monark 5:1  | Monark 5:1        |
|-------------------------|--------------------|--------------------|-------------------|-----------------|-------------|-------------------|
| <b>Configuration</b>    | <b>Stubby</b>      | <b>Stubby/Drum</b> | <b>Stubby</b>     | <b>Stubby</b>   | <b>Drum</b> | <b>Drum</b>       |
| Air motor               | 210004             | 206955             | 205997            | 205997          | 205997      | 205997            |
| Lower displacement pump | 218746             | 223177             | 224341            | 224344          | 220465      | 224349            |
| Construction            | SST                | CS                 | SST               | SST             | CS          | SST               |
| Seal construction       | 3 UHMWPE/2 Leather | 3 UHMWPE/2 Leather | 2 UHMWPE/2 Teflon | UHMWPE/Neoprene | 4 Teflon    | 2 UHMWPE/2 Teflon |

### Replacement Parts Ordering Information

|                               |                    |                    |                   |                 |            |                   |
|-------------------------------|--------------------|--------------------|-------------------|-----------------|------------|-------------------|
| Air motor repair kit          | 206728             | 206728             | 206728            | 206728          | 206728     | 206728            |
| Standard seal repair kit      | 220927             | 223320             | 224401            | 224402          | 208520     | 224403            |
| Construction                  | 3 UHMWPE/2 Leather | 3 UHMWPE/2 Leather | 2 UHMWPE/2 Teflon | UHMWPE/Neoprene | 4 Teflon   | 2 UHMWPE/2 Teflon |
| Optional seal repair kit      | 237197             | 237194             | 224889            | 224404          | N/A        | 224889            |
| Construction                  | 3 Leather/2 Teflon | 3 Leather/2 Teflon | 4 Teflon          | UHMWPE/Teflon   |            | 4 Teflon          |
| Optional seal repair kit      | 237198             | 237193             | N/A               | N/A             | N/A        | N/A               |
| Construction                  | 4 Leather/1 Teflon | 4 Leather/1 Teflon |                   |                 |            |                   |
| Optional seal repair kit      | 237200             | 223321             | N/A               | N/A             | N/A        | N/A               |
| Construction                  | 5 Teflon           | 5 Teflon*          |                   |                 |            |                   |
| Optional seal repair kit      | 218757             | N/A                | N/A               | N/A             | N/A        | N/A               |
| Construction                  | UHMWPE U-Cup       |                    |                   |                 |            |                   |
| Optional throat seal packings | N/A                | N/A                | 243622            | 243624          | 243622     | 243622            |
| Construction                  |                    |                    | Tuff-Stack™       | Tuff-Stack      | Tuff-Stack | Tuff-Stack        |
| Optional piston seal packings | N/A                | N/A                | 243623            | 243623/243625   | 243623     | 243623            |
| Construction                  |                    |                    | Tuff-Stack        | Tuff-Stack      | Tuff-Stack | Tuff-Stack        |
| Displacement rod              | 180954             | 185650             | 186997            | 186997          | 169504     | 186997            |
| Construction                  | SST                | CS                 | SST               | SST             | SST        | SST               |
| Cylinder                      | 177721             | 185649             | 186994            | 186994          | 186986     | 186986            |
| Construction                  | SST                | CS                 | SST               | SST             | SST        | SST               |

Teflon\* is a registered trademark of Du Pont.

Note: Tuff-Stack part numbers 243622, 243623, 243624, and 243625 sold as 12-count convenience pack.

Tuff-Stack is a proprietary Teflon blend.

# Monark 1.5:1, 2:1 and 5:1 Pneumatic 2-Ball Piston Pumps

## Accessories

- 207365 Wall Bracket**  
For mounting Monark pump to wall.
- 194248 Accessory Packing Tool**  
Eases insertion of piston assembly into cylinder (model 218763, 223186 and 223185).
- 168085 Accessory Assembly Tool**  
Used to install piston assembly into cylinder (models 218956).
- 241953 Monark Muffler Retrofit Kit**  
Upgrades previous Monark air motor design with foam attached to air motor plates. Reduces sound level of Monark air motor.
- 207579 Padded Pliers**  
For servicing Monark air motor trip rod.
- 171818 Adjustment Tool**  
A 0.145 inch (3.7 mm) gauge used to ensure proper clearance between the poppets and the piston on the Monark air motor.
- 236054 Suction Kit**  
Use to siphon material out of 55 gallon (200 l) closed-end drum. Includes siphon tube, bung adapter, 6 ft. (1.8 m) nitrile hose, 1-1/2 npt(m) outlet fitting.
- 207484 Siphon Kit, Aluminum**  
Use to siphon fluid from a 5 gal (18.9 l) pail. Includes nylon suction hose 214960, 3/4" ID, 3.5 ft. (1.1 m) long, 3/4" npt(f) swivel outlet fitting.
- 208259 Siphon Kit, Carbon Steel**  
Use to siphon fluid from a 55 gal (200 l) drum. Includes nylon suction hose 214961, 3/4" ID, 6 ft. (1.8 m), 3/4" npt(f) swivel outlet fitting, bung adapter.
- 208920 Siphon Kit, Aluminum**  
Use to siphon fluid from a 5 gal (18.9 l) pail. Includes nylon suction hose 170706, 1" ID, 4 ft. (1.2 m) long, 3/4" npt(f) swivel outlet fitting, inlet strainer.