

# Oildyne

## ***Miniature Piston Pumps 5 Piston Design***

*Pressures to 276 bar (4000 psi)  
Displacements from .156cc/rev  
to .865cc/rev (.01 to .05 in<sup>3</sup>/rev)*



## Pumping Efficiencies to 90% Allow You to Effectively Use .156 to .865 cc Flow Per Rev. at Pressures to 276 bar (4000 psi)

Once in a great while there's a breakthrough design whose versatility opens broad new opportunities. Oildyne's mini pumps are a prime example.

Mini pumps pump or meter hydraulic oil, brake fluid, and Mil 5606 with equal ease. Need greater versatility?

These fixed displacement axial piston pumps are efficient and powerful too. Tests run on 78 SUS viscosity fluid at 100°F @ 3000 psi showed 90 percent volumetric

efficiency. Capable of 276 bar (4000 psi) operation, mini pumps are available in nine model sizes from .156 to .865 cc per revolution displacement.

Compact size, versatility, efficiency, power and speed are quietly combined in a very cost competitive package in Oildyne's mini pumps. They're suitable for most applications requiring compact power including automotive, marine, medical and military uses.

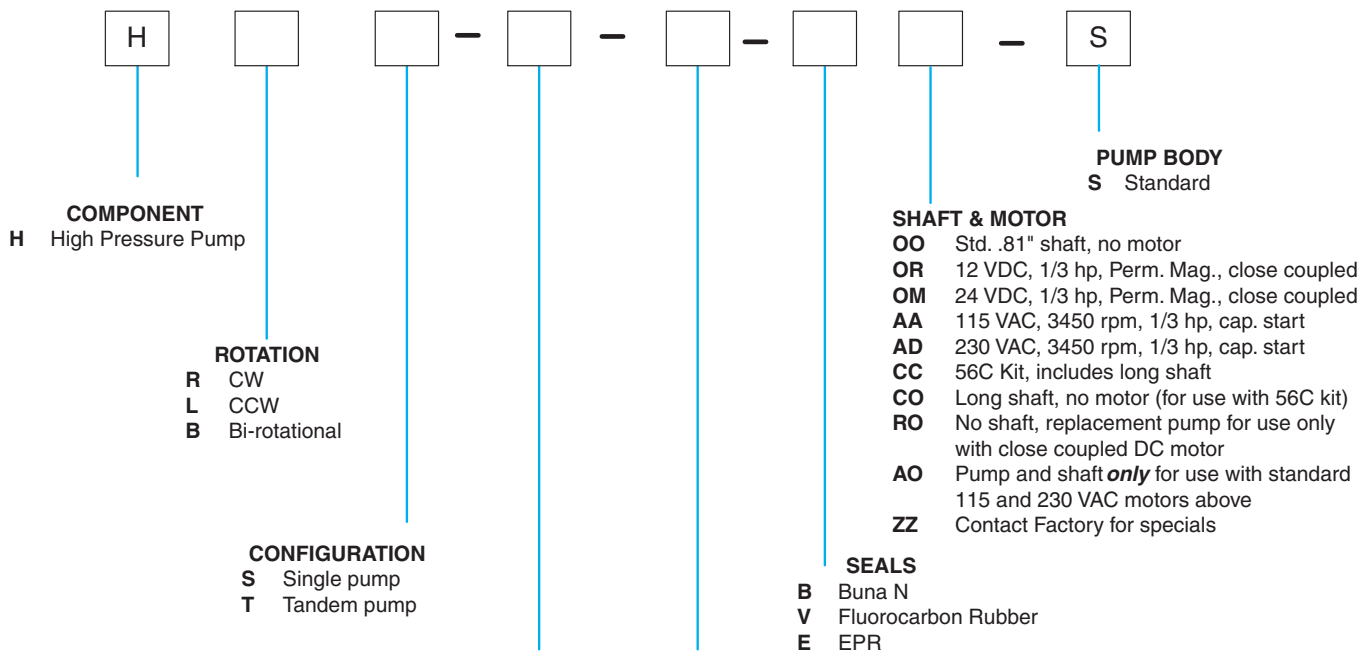
### Mini Pump Features

- .156 to .865 cc displacement per revolution.
- Designed for open circuit systems
- Fixed displacement - Output is controlled by motor speed
- Operating temperature range -40°C to +149°C (-40°F to +300°F).
- Naturally aspirated to 5000 rpm and above depending upon viscosity
- Porting on sides or rear
- Will operate efficiently on extremely thin (1 cS) fluid
- Multiple pumps, special configurations and bi-directional pumps are available on special order.

## General Specifications

| Model                                       | 156   | 206   | 259   | 311   | 346   | 417   | 519   | 692   | 865   |
|---------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Displacement<br>In <sup>3</sup> per rev.    | .0095 | .0126 | .0158 | .0190 | .0211 | .0255 | .0317 | .0422 | .0527 |
| cc /rev                                     | .156  | .206  | .259  | .311  | .346  | .417  | .519  | .692  | .865  |
| GPM @ 3000 RPM                              | .123  | .163  | .205  | .247  | .274  | .330  | .411  | .548  | .685  |
| cc/min @ 3000 RPM                           | 467   | 618   | 778   | 934   | 1038  | 1252  | 1557  | 2076  | 2590  |
| Max RPM @ rated pressure<br>W/O supercharge | 4400  | 4200  | 4000  | 3800  | 3800  | 3700  | 3700  | 3600  | 3500  |
| Operating Pressure (psi)                    |       |       |       |       |       |       |       |       |       |
| Continuous                                  | 3500  | 3500  | 3500  | 3500  | 3500  | 3500  | 3500  | 3250  | 3000  |
| Intermittent                                | 3750  | 3750  | 3750  | 3750  | 3750  | 3750  | 3750  | 3500  | 3500  |
| Maximum                                     | 4000  | 4000  | 4000  | 4000  | 4000  | 4000  | 4000  | 3750  | 3500  |

# Standard Product Ordering Code



| SINGLE or<br>1st PUMP SIZE |             | 2nd PUMP SIZE |             |
|----------------------------|-------------|---------------|-------------|
| CODE                       | DISP.       | CODE          | DISP.       |
| 156                        | .156 cc/rev | 156           | .156 cc/rev |
| 206                        | .206 cc/rev | 206           | .206 cc/rev |
| 259                        | .259 cc/rev | 259           | .259 cc/rev |
| 311                        | .311 cc/rev | 311           | .311 cc/rev |
| 346                        | .346 cc/rev | 346           | .346 cc/rev |
| 417                        | .417 cc/rev | 417           | .417 cc/rev |
| 519                        | .519 cc/rev | 519           | .519 cc/rev |
| 692                        | .692 cc/rev | 692           | .692 cc/rev |
| 865                        | .865 cc/rev | 865           | .865 cc/rev |

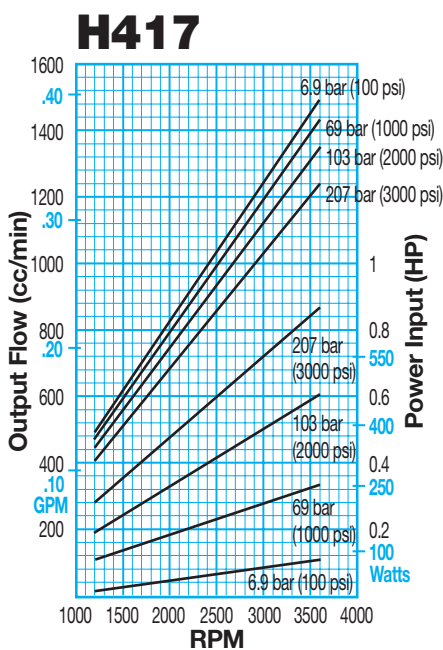
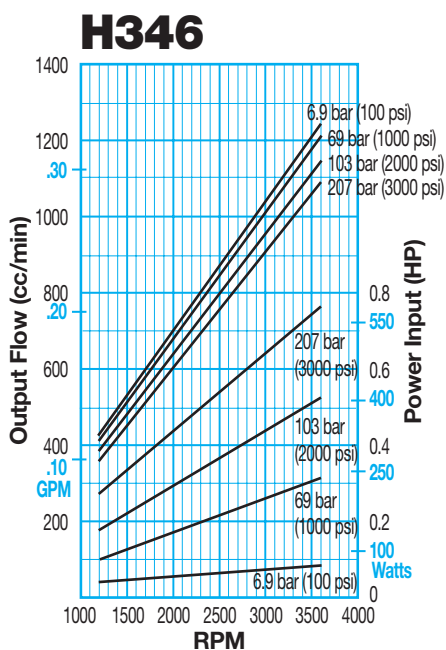
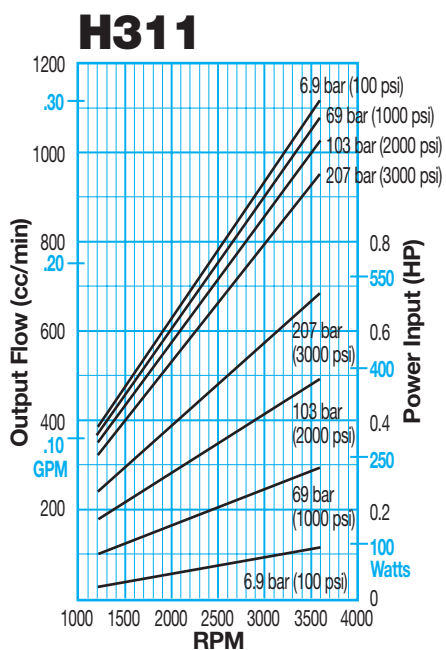
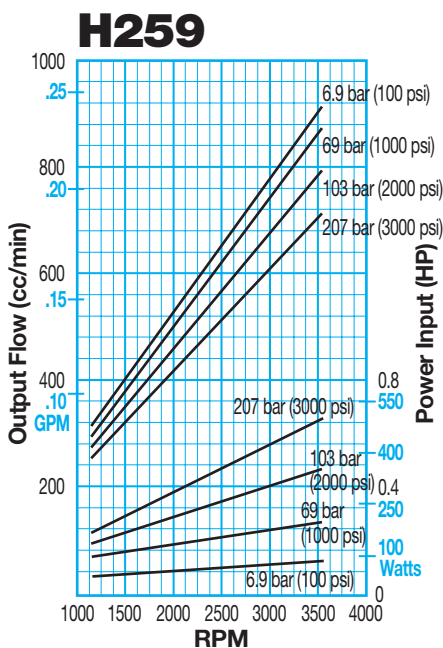
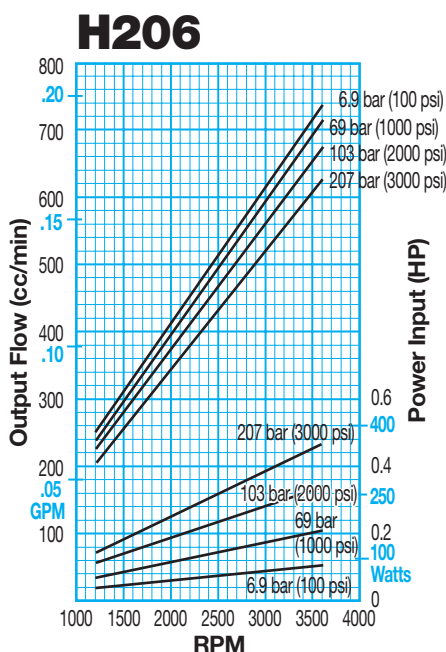
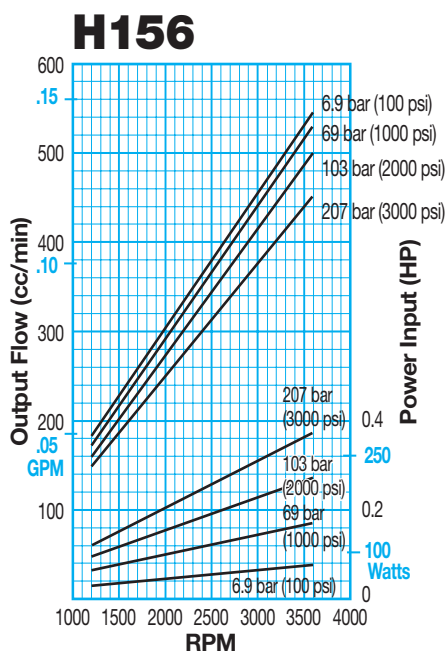
## NOTES:

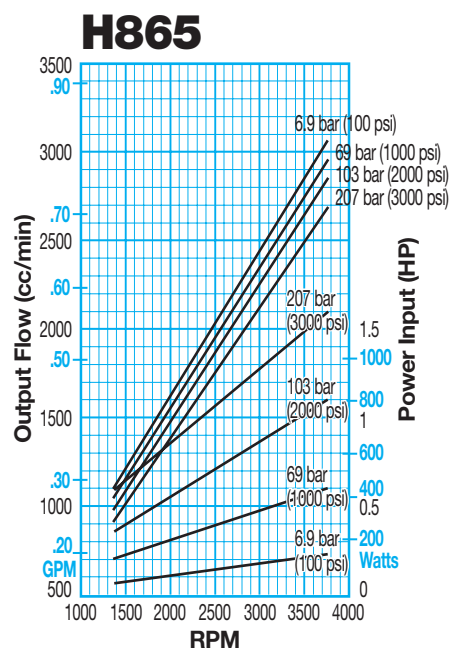
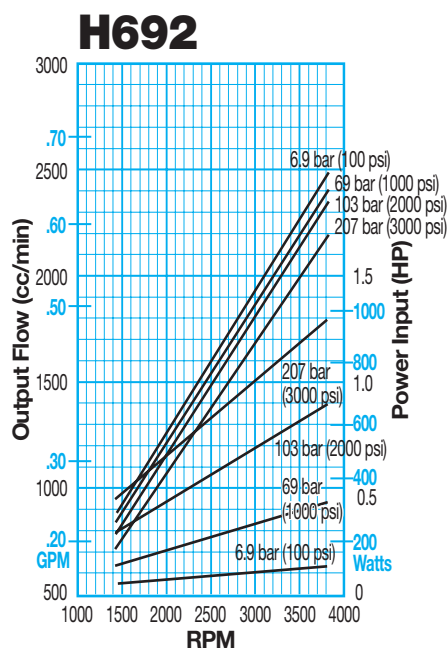
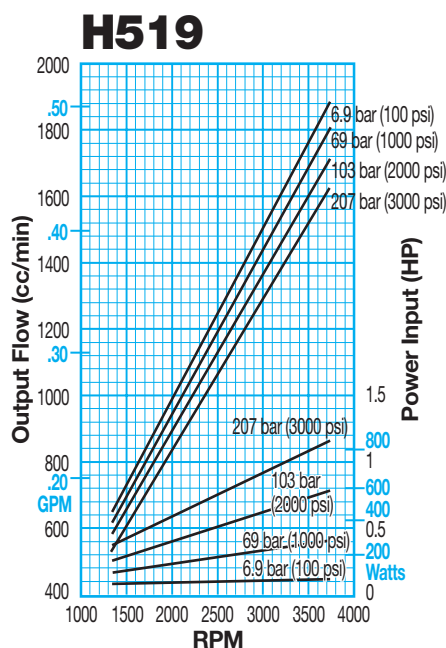
1. Tandem pumps must have larger displacement called out first
2. Tandem pumps are not available with the standard AC or DC motors - only plain shaft or 56C Kit
3. Drive shaft input torque must be under 3.5 n-m (525 in-oz) [equivalent to HRS865 operating at 207 bar (3000 psi); refer to catalog performance curves for torque data]
4. Bi-rotational pumps require the side port as case drain
5. For configurations not shown above please contact Oildyne

## Performance Data

Performance data shown are the average results based upon a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with oil at 78 SUS at 38°C (100°F).

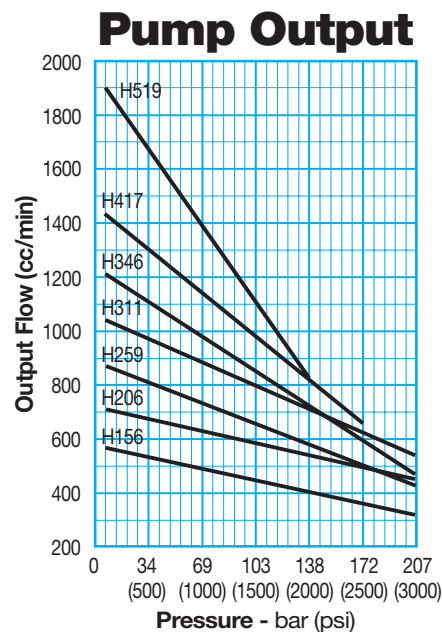
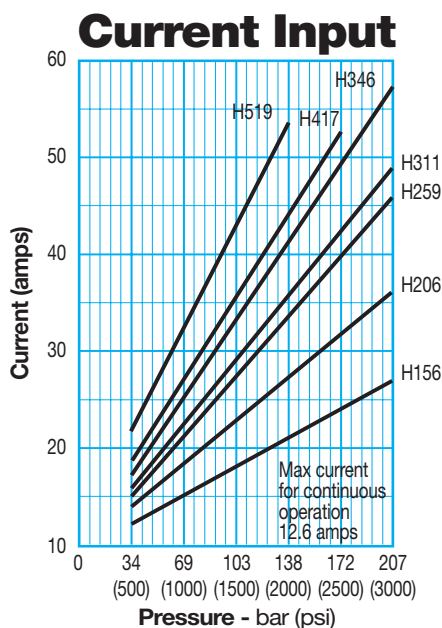
In accordance with our policy of continuing product development, we reserve the right to change specifications shown without notice.





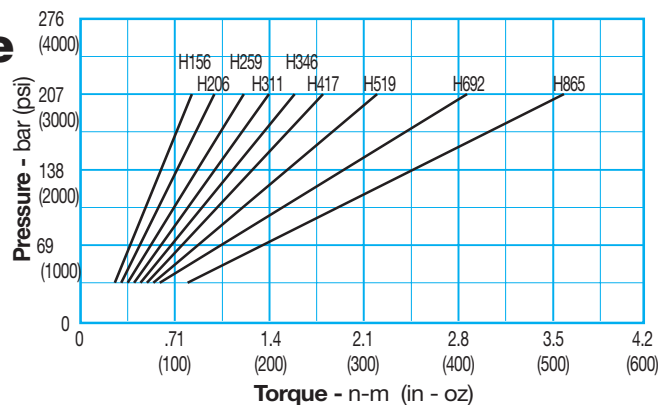
## Typical Performance Data

at 12 VDC as assembled with a standard DC motor

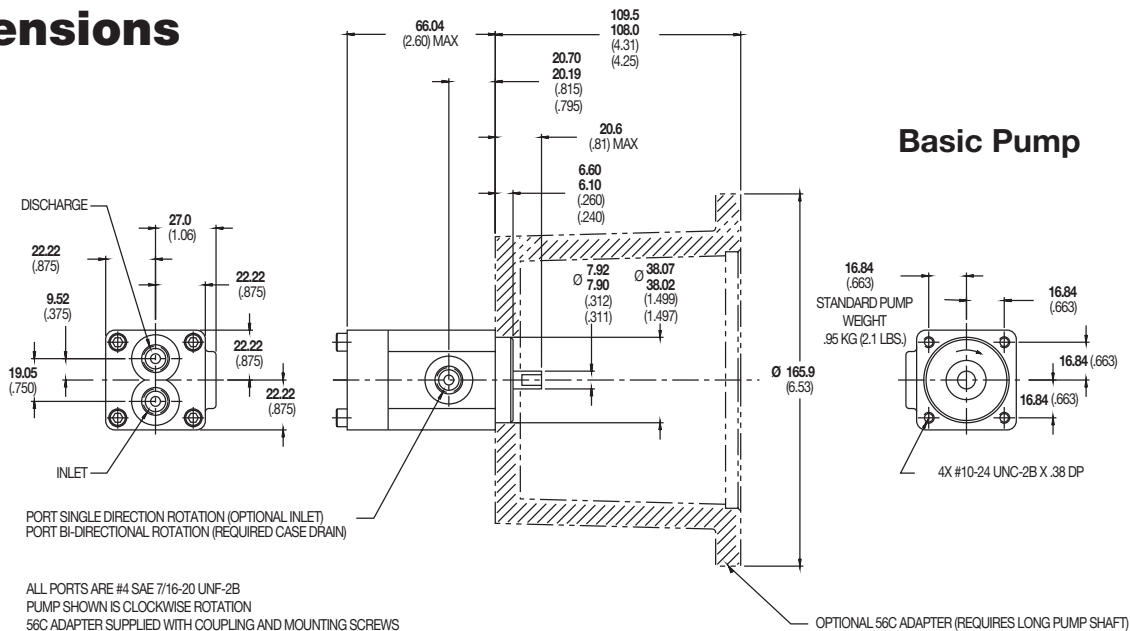


## Average Input Torque

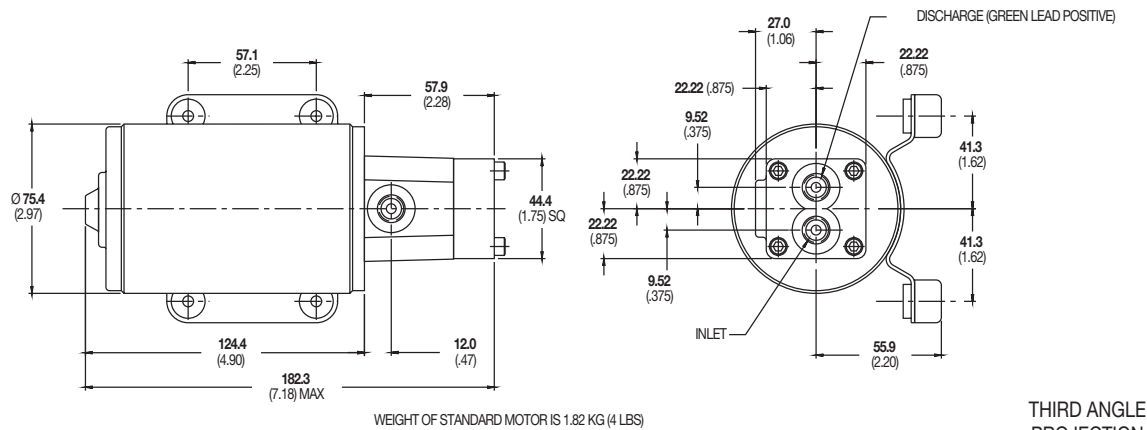
Speed: 3000 RPM



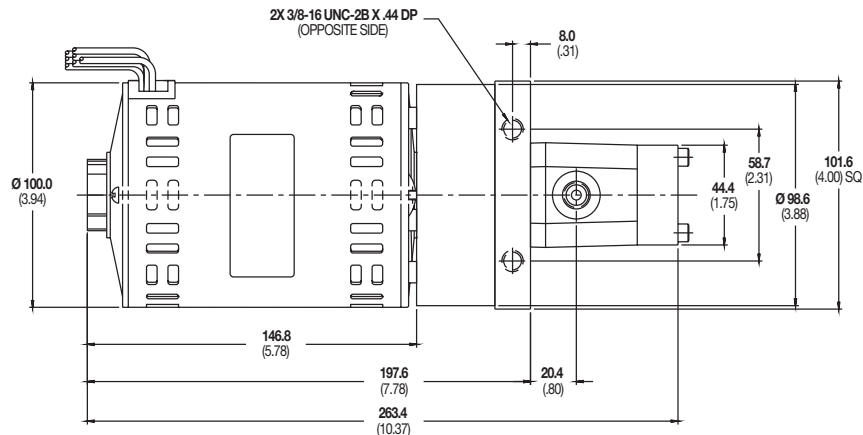
# Dimensions



## Standard 1/3 HP DC Permanent Magnet Motor With Pump



## Standard 1/3 HP AC Motor With Pump



**Note:** All dimensions in mm (inches).