

**C-Series (Low-Flow Coreless Gear Pumps)**

# MODEL 2205-C01/C03/C05

# 2205-C01/C03/C05

**Made in the USA**
**DESCRIPTION**

Flight Works C-Series (Low-Flow Coreless) Gear Pumps are designed to meet the performance and reliability requirements of a wide variety of industries and applications. The 2205-C05 model uses precision-machined parts and a high-torque, low-speed brushed motor to produce very low flow rates with extremely low power consumption and noise. Available encoder options and tightly toleranced components offer precision and reliability, all in an extremely small size and weight.


**STANDARD SPECIFICATIONS**

|                                      |       |  |
|--------------------------------------|-------|--|
| Diff. Pressure (Max)                 | ..... | Up to 100 psi  |
| Flow Rate                            | ..... | 1-50 mL/min  |
| Weight                               | ..... | 60 grams   |
| Fluid Temp.                          | ..... | 0° C to 85° C  |
| Std. Port Size                       | ..... | M3 x 0.5 Threads   |
| Std. Voltages                        | ..... | 6V (C01), 12V (C03), 24V (C05)   |
| Permissible Fluids<br>(P/N Specific) | ..... | Light & Heavy Fuels/Oils (e.g. Kerosene),<br>Water, Alcohols, Solutions, etc.                          |
| Control Options                      | ..... | Open-Loop Control (Voltage)<br>Closed-Loop Control (RPM/Current)<br>(Encoder Required for Closed Loop) |

**APPLICATIONS**

All Flight Works micro gear pumps feature a level of versatility and customization that allows for use in a wide field of applications, including:

- UAVs
- Fuel Cells
- Instrumentation
- Laboratory Experiments
- Medical
- Aerospace

**▲ IMPORTANT**

**This pump is designed to run with an inlet filter (10 microns or better), and should NOT be run dry for extended periods of time (over 30 seconds).**

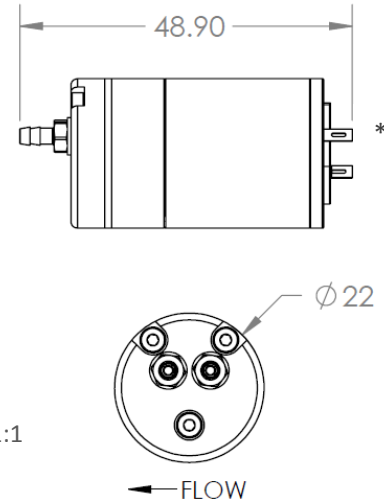
NOTE: This pump is a precision unit, built and assembled as a complete product. Opening or dropping the pump can permanently damage assembly integrity. Specifications are for informational purposes only and may vary depending on the system in which the pump is integrated. Flight Works, Inc. makes no warranties concerning the suitability of this pump for a particular application; as such, it is the customer's responsibility to determine the safety and technical suitability of the system. Specifications subject to change without notice.

## CONSTRUCTION OPTIONS

| PART      | LIGHT OIL CONFIGURATION    | WATER CONFIGURATION        | OPTIONS   |
|-----------|----------------------------|----------------------------|---|
| PUMP HEAD | Anodized Aluminum & 316 SS | Anodized Aluminum & 316 SS | All SS  |
| GEARS     | 416 SS & Hardened 420 SS   | 17-4 SS                    | PEEK Plastic<br>PTFE-Filled Delrin<br>Glass-Filled PTFE<br>Bronze |
| IDLE PIN  | Alloy Steel                | Ceramic                    | Heat-Treated SS   |
| SEALS     | Viton                      | Viton                      | Buna Nitrile<br>EPDM  |
| FITTINGS  | Barbed                     | Barbed                     | Push-to-Connect<br>Compression                                    |
| MOTOR     | Standard                   | Standard                   | Encoder<br>Strain-Relief Wiring<br>Ball Bearings                  |

*Custom configurations can be designed upon customer request  
(Ex. custom cover designs, welding, custom wiring, etc.)*

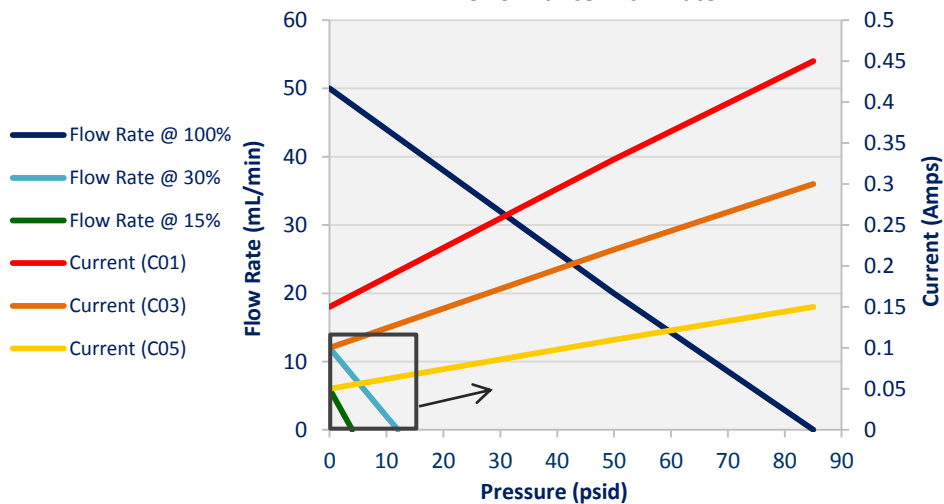
## DIMENSIONS (mm)



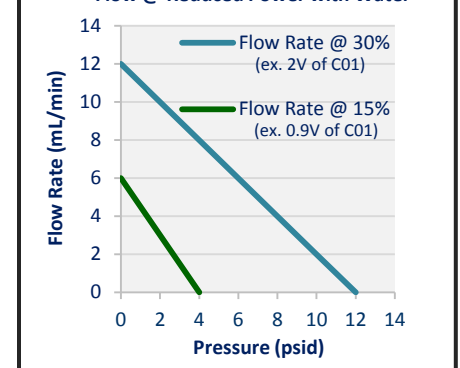
\*Positive and negative solder tabs on motor (for 20 AWG wires)

## PERFORMANCE CHARTS

Performance with Water



Flow @ Reduced Power with Water



## COMMON ACCESSORIES (Contact Flight Works to Purchase)

### FLOW SYSTEM ITEMS

- Filters: 10, 25, 50 Microns
- Fittings: Tee/Elbow/Y/Adapters
- Valves: Ball/Check/Needle

### CONTROL COMPONENTS

- Coreless Encoder Control Package
- Pressure Gauges/Regulators

### TUBING

- Polyurethane Tubing: 3, 4, 6mm
- Tygon Tubing: Medium, Large
- Stainless Steel Tubing: 1/16", 1/8"

PDS010-A