

**YD-GV/GVF
Series**

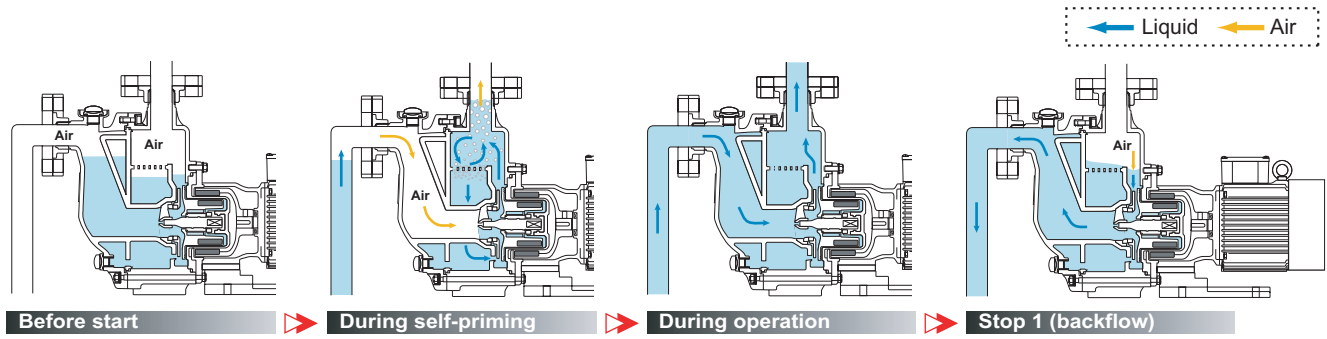
 **WORLD CHEMICAL USA, INC.**

Sealless & Valveless Self-Priming Magnetic Pump

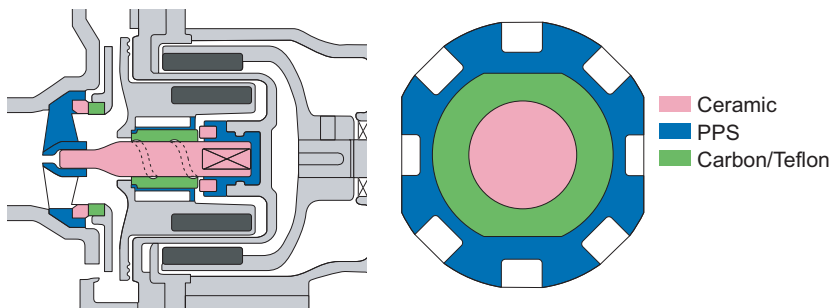


For a wide range of industrial processing and transfer of
acids, caustics, corrosives and wastewater

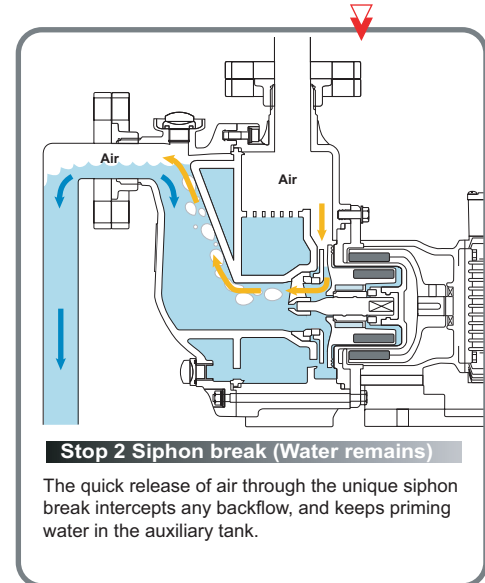
■ UNIQUE VALVELESS MECHANISM (INTERNATIONALLY PATENTED)



■ HEAT RESISTANT BUSHING (INTERNATIONALLY PATENTED)



When pumps run dry, the friction at the contact points causes the shaft and bushing to break down from excess heat. World Chemical's patented heat resistant materials and construction prevents extreme temperature changes at the contact point.



■ FEATURES

1. World's fastest suction (17 feet in less than 2 min.)

With an interior chamber and separating board that enables easy separation of liquid from air, this pump uses an inside chamber to prevent suction of excess air but also releases it to maintain optimum priming. While compact in design, it has the world's fastest suction capacity, priming 17 ft. in less than 2 minutes.

2. Air-Lock/Cavitation Free Construction

Pockets are created when air enters the chamber during priming. The unique internal design of the rear casing and impeller directs and releases the air without affecting the performance of the pump, and prolongs pump life.

3. Prevents and Resistant to Dry Running

The unique valveless mechanism (internationally patented) retains water inside the pump when it is turned off, even without a foot valve. This prevents the pump from running dry.

4. Compact Design and Construction

All parts including the shaft are individually replaceable for quick and easy loading. The most compact design in its class, this lightweight pump is made for greater endurance and higher efficiency.

5. Loose Flange for Easy Setup

The GV/GVF series come with a loose (adjustable) flange which can be turned easily by hand, making setup of the pump effortless.

■ APPLICATIONS

- For transferring bubbly liquid, hazardous liquid or high-gravity liquid
- For transferring liquid where space is limited
- For transferring liquid from/to a dust-free environment (clean room)
- For transferring highly corrosive liquid from a leak-proof tank
- For transferring foamy liquid and high specific gravity liquid
- For pumping liquid to higher grounds
- For pumping from underground pit
- For transferring plating/etching liquid
- For transferring liquid from metal drums or plastic containers

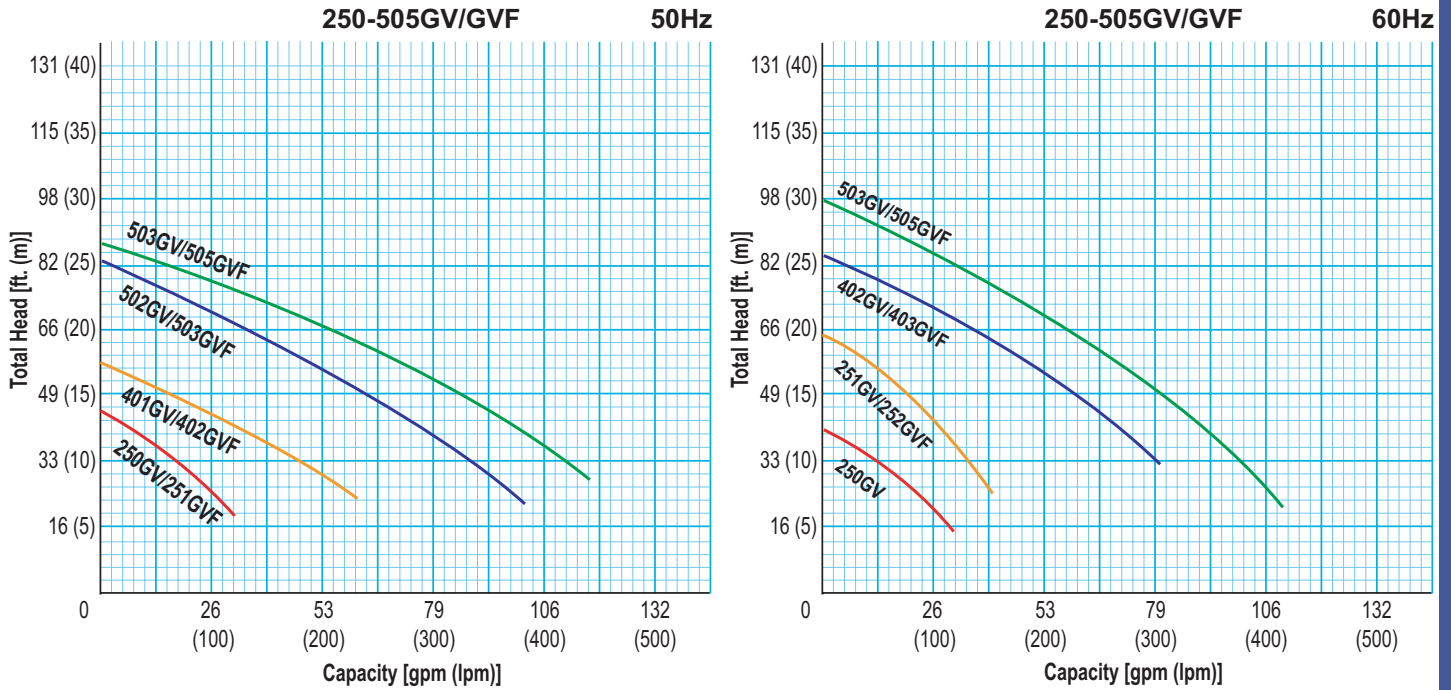
MODEL DESIGNATION

Y D - 2 5 0 G V - C D 6

(1)
(2)
(3)
(4)
(5)

- | | | | | |
|---------------------------|-------------------------|--------------------------|------------------------------------|----------------------|
| (1) Discharge Bore | (2) Motor Output | (3) Main Material | (4) Bushing/O-ring Material | (5) Frequency |
| 25 : 1.0" (25mm) | 0 : 1/2 or 3/4 HP | GV : GFR PP | CE : Carbon/EPDM | 5 : 50 Hz |
| 40 : 1.5" (40mm) | 1 : 1 HP | GVF : CFR ETFE | CD : Carbon/FPM | 6 : 60 Hz |
| 50 : 2.0" (50mm) | 2 : 2 HP | | AE : Alumina Ceramics/EPDM | |
| | 3 : 3 HP | | AD : Alumina Ceramics/FPM | |
| | 5 : 5 HP | | TT : Special material | |

PERFORMANCE CURVES

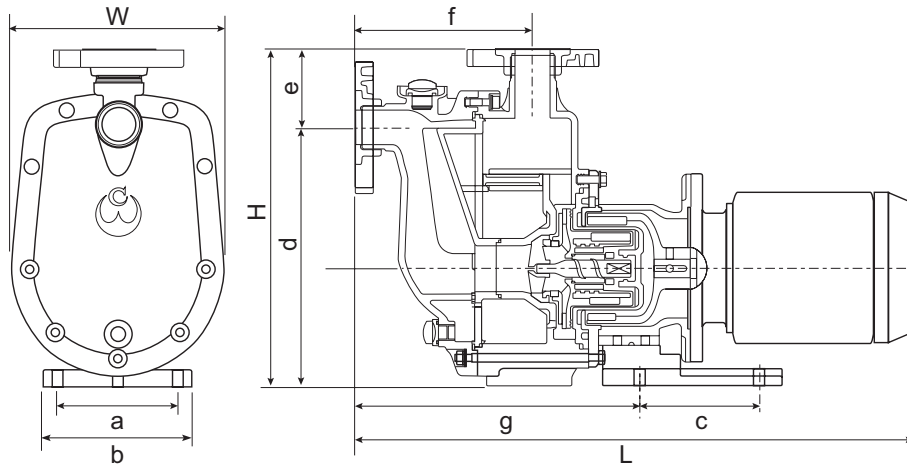


SPECIFICATION

| MODEL | NOMINAL END-FLANGE DIAMETER [inch (mm)] | | MAX HEAD- MAX CAPACITY | | STANDARD SPECIFIED POINT | | MOTOR OUTPUT [HP (kW)] |
|-------------|---|-----------|------------------------|-------------|--------------------------|-------------|------------------------|
| | | | 50 Hz | 60 Hz | 50 Hz | 60 Hz | |
| | | | [m - lpm] | [ft. - gpm] | [m - lpm] | [ft. - gpm] | |
| YD-250GV | 1 (25A) | 1 (25A) | 13.7 - 120 | 41 - 32 | 8 - 80 | 26 - 21 | 1/2 (0.4)* |
| YD-251GV(F) | 1 (25A) | 1 (25A) | 14.4 - 115 | 66 - 41 | 8 - 80 | 39 - 29 | 1 (0.75) |
| YD-252GV(F) | 1 (25A) | 1 (25A) | - | 66 - 41 | - | 39 - 29 | 2 (1.5) |
| YD-401GV | 1.5 (40A) | 1.5 (40A) | 17.5 - 230 | - | 11 - 160 | - | 1 (0.75) |
| YD-402GV(F) | 1.5 (40A) | 1.5 (40A) | 17.5 - 230 | 85 - 81 | 11 - 160 | 56 - 53 | 2 (1.5) |
| YD-403GV(F) | 1.5 (40A) | 1.5 (40A) | - | 85 - 81 | - | 56 - 53 | 3 (2.2) |
| YD-502GV | 2 (50A) | 2 (50A) | 25 - 380 | - | 17 - 200 | - | 2 (1.5) |
| YD-503GV(F) | 2 (50A) | 2 (50A) | 26.5 - 440 | 98 - 110 | 18 - 250 | 59 - 66 | 3 (2.2) |
| YD-505GV(F) | 2 (50A) | 2 (50A) | 26.5 - 440 | 98 - 110 | 18 - 250 | 59 - 66 | 5 (3.7) |

*3/4 HP (0.55 kW) in the U.S.

OUTLINE DIMENSION

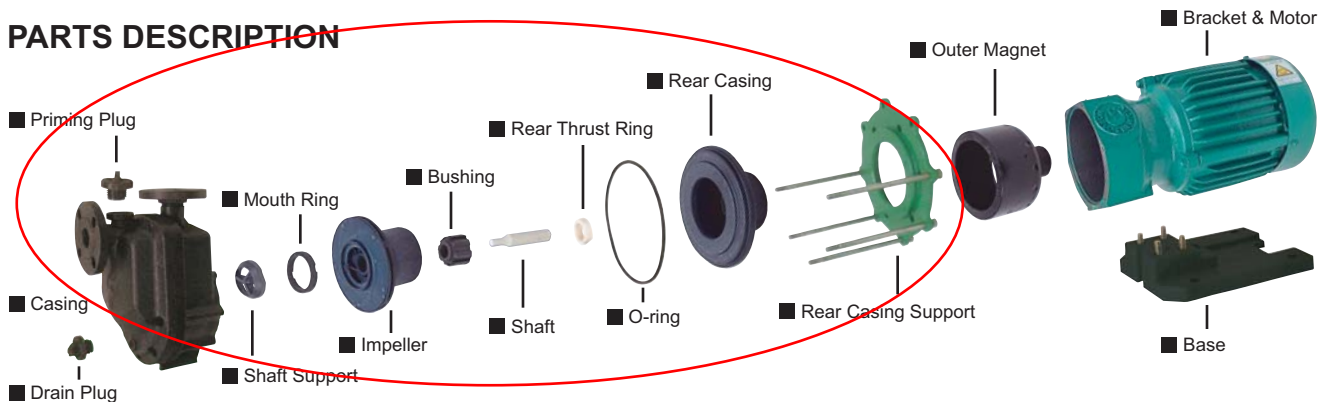


Unit: inch (mm)

| MODEL | W | H | L | a | b | c | d | e | f | g |
|-------------|-----------|------------|------------|-----------|------------|-----------|------------|----------|-----------|------------|
| YD-250GV | 7.7 (196) | 12.8 (325) | 21.0 (533) | 5.1 (130) | 6.3 (160) | 5.1 (130) | 10.0 (255) | 2.8 (70) | 6.6 (167) | 10.8 (275) |
| YD-251GV(F) | | | 22.1 (562) | | | | | | | |
| YD-252GV(F) | | | 23.3 (592) | | | | | | | |
| YD-401GV | 9.0 (228) | 14.2 (360) | 23.3 (592) | 5.1 (130) | 6.3 (160) | 5.1 (130) | 10.9 (276) | 3.3 (84) | 7.5 (190) | 12.0 (305) |
| YD-402GV(F) | | | 24.5 (622) | | | | | | | |
| YD-403GV(F) | | | 24.5 (622) | | | | | | | |
| YD-502GV | 9.8 (248) | 15.3 (389) | 25.3 (643) | 8.2 (208) | 10.2 (260) | 7.9 (200) | 11.7 (296) | 3.7 (93) | 8.1 (206) | 12.2 (309) |
| YD-503GV(F) | | | 28.1 (713) | | | | | | | |
| YD-503GV(F) | | | 9.1 (230) | | | | | | | |

* Measurements are subject to change without notice.

PARTS DESCRIPTION



| PART NAME | MATERIAL | |
|---------------|-------------------------------|-----------------------------|
| | GV | GVF |
| Casing | GFR PP | CFR ETFE |
| Priming Plug | GFR PP | CFR ETFE |
| Drain Plug | GFR PP | CFR ETFE |
| Shaft Support | Alumina Ceramics + GFR PPS | Alumina Ceramics + CFR ETFE |
| Mouth Ring | CFR PTFE | |
| Impeller | GFR PP + Magnet | CFR ETFE + Magnet |
| Bushing | Carbon / Ceramic / PTFE / SiC | |

| PART NAME | MATERIAL | |
|---------------------|------------------------------|----------|
| | GV | GVF |
| Shaft | Alumina Ceramics / SiC | |
| Rear Thrust Ring | Alumina Ceramics / SiC | |
| Rear Casing | GFR PP + GFR PPS | CFR ETFE |
| Rear Casing Support | FC200 | |
| Outer Magnet | FCD450-10 + Magnet | |
| Motor | FC200 + Aluminum Frame Motor | |
| Base | GFR PP / FC200 | |
| O-ring | EPDM / FPM | |

NORTH / SOUTH AMERICA

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