

Pressure Booster Pump Submittal Data

FW0540 1020
Supersedes 0319

| | |
|-------------------------|--------------|
| Job or Customer | |
| Engineer | |
| Contractor | |
| Submitted by | Date |
| Approved by | Date |
| Specification Reference | |
| Quote Date | Quote Number |



| Quantity | Model Number | System Discharge Pressure (PSI) | Flow (GPM) | System Inlet Pressure (PSI) | Volts | Phase | Comments |
|----------|--------------|---------------------------------|------------|-----------------------------|-------|-------|----------|
| | | | | | | | |

PERFORMANCE SPECIFICATIONS

| PRESSURE ADDED - PSI† | | | | | 10 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | Max. Press. PSI | Suction Pipe Tap NPT | Disch. Pipe Tap NPT |
|------------------------|--------------------------------|------------------|-------|-------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|-----------------|----------------------|---------------------|
| Stainless Steel Fitted | Powder-Coated Cast Iron Fitted | Cast Iron Fitted | HP | Stage | Output - Gallons per Minute | | | | | | | | | | | | | | |
| 60Hz Models | | | | | | | | | | | | | | | | | | | |
| PB0508S031 Δ | PB0508C031 | PB0508A031 | 1/3 | 8 | 10.2 | 9.6 | 8.3 | 6.5 | 4.3 | | | | | | | | 96 | 3/4" | 3/4" |
| PB0512S051 Δ | PB0512C051 | PB0512A051 | 1/2 | 12 | 10.0 | 9.5 | 8.3 | 7.1 | 6.0 | 4.0 | 2.3 | | | | | | 132 | | |
| PB0516S071 Δ | PB0516C071 | PB0516A071 | 3/4 | 16 | 10.2 | 9.7 | 9.1 | 8.3 | 7.5 | 6.6 | 5.8 | 4.6 | 3.3 | | | | 189 | | |
| PB0712S071 Δ | PB0712C071 | PB0712A071 | 3/4 | 12 | 14.0 | 13.4 | 12.2 | 10.9 | 9.5 | 8.9 | 7.0 | 4.6 | | | | | 158 | | |
| PB1014S101 Δ | PB1014C101 | PB1014A101 | 1 | 14 | * | * | 14.5 | 13.4 | 12.3 | 11.2 | 9.8 | 8.0 | 6.0 | 2.3 | | | 183 | | |
| PB1016S151 Δ | PB1016C151 | PB1016A151 | 1-1/2 | 16 | * | * | 15.0 | 14.1 | 13.1 | 12.1 | 11.0 | 9.8 | 8.2 | 5.2 | 2.0 | | 212 | | |
| PB1914S201 †† | PB1914C201 †† | PB1914A201 | 2 | 14 | 27.6 | 27.0 | 25.7 | 24.2 | 22.6 | 20.8 | 18.7 | 16.2 | 12.9 | 7.7 | | | 190 | 1" | 1" |
| PB3506S201 | PB3506C201 | PB3506A201 | 2 | 6 | 48.0 | 47.0 | 42.5 | 35.2 | 24.0 | | | | | | | | 85 | | |
| PB2711S201 | PB2711C201 | PB2711A201 | 2 | 11 | * | * | 31.5 | 29.5 | 27.1 | 24.2 | 20.3 | 13.0 | | | | | 147 | | |
| PB3508S301 | PB3508C301 | PB3508A301 | 3 | 8 | 48.0 | 47.5 | 44.0 | 40.0 | 35.2 | 27.5 | | | | | | | 118 | | |
| PB2714S301 †† | PB2714C301 †† | PB2714A301 | 3 | 14 | * | * | 33.0 | 31.5 | 29.8 | 27.9 | 25.6 | 22.8 | 18.9 | 11.1 | | | 187 | | |
| PB2717S303A** | - | - | 3 | 17 | * | * | * | 34.1 | 32.3 | 30.5 | 28.3 | 25.8 | 23.1 | 20.0 | 16.6 | 11.4 | 225 | | |
| - | - | PB5504A201 | 2 | 4 | 77.6 | 71.5 | 52.5 | | | | | | | | | | 55 | 2" | 2" |
| - | - | PB5506A301 | 3 | 6 | 77.8 | 74.4 | 65.0 | 51.1 | 31.9 | | | | | | | | 83 | | |
| - | - | PB8504A201 | 2 | 4 | 105.8 | 90.0 | 47.0 | | | | | | | | | | 49 | | |
| - | - | PB8505A301 | 3 | 5 | 108.8 | 98.8 | 60.0 | 25.0 | | | | | | | | | 60 | | |
| 50Hz Models | | | | | | | | | | | | | | | | | | | |
| PB0508Y031 Δ | PB0508Z031 | PB0508X031 | 1/3 | 8 | 7.5 | 6.8 | 5.0 | 2.0 | | | | | | | | | 66 | 3/4" | 3/4" |
| PB0514Y051 Δ | PB0514Z051 | PB0514X051 | 1/2 | 14 | * | 7.3 | 6.4 | 5.3 | 4.0 | 2.1 | | | | | | | 113 | | |
| PB0714Y071 Δ | PB0714Z071 | PB0714X071 | 3/4 | 14 | * | 10.9 | 9.7 | 8.5 | 7.0 | 5.2 | 2.8 | | | | | | 132 | | |
| PB1020Y101 | PB1020Z101 | PB1020X101 | 1 | 20 | * | 13.0 | 12.2 | 11.4 | 10.5 | 9.5 | 8.2 | 6.8 | 5.0 | 2.0 | | | 183 | | |
| PB1022Y101 | PB1022Z101 | PB1022X101 | 1 | 22 | * | 12.0 | 12.2 | 11.4 | 10.5 | 9.5 | 8.4 | 7.4 | 6.0 | 4.3 | 2.0 | | 203 | | |
| PB1023Y101 | PB1023Z101 | PB1023X101 | 1 | 23 | * | 12.0 | 12.2 | 11.4 | 10.5 | 9.6 | 8.6 | 7.6 | 6.5 | 5.1 | 3.3 | | 213 | | |
| PB1920Y151 | PB1920Z151 | PB1920X151 | 1-1/2 | 20 | * | 22.1 | 21.0 | 19.5 | 18.0 | 16.1 | 14.1 | 11.6 | 8.3 | 2.0 | | | 182 | 1" | 1" |
| PB2717Y201 | PB2717Z201 | PB2717X201 | 2 | 17 | * | 30.8 | 28.9 | 26.7 | 24.1 | 21.2 | 18.0 | 13.5 | | | | | 160 | | |
| PB3508Y151 | PB3508Z151 | PB3508X151 | 1-1/2 | 8 | * | 39.4 | 33.9 | 27.0 | 14.0 | | | | | | | | 84 | | |
| PB3514Y301T | PB3514Z301T | PB3514X301T | 3 | 14 | * | * | 38.5 | 36.5 | 32.1 | 28.1 | 23.0 | 14.4 | | | | | 146 | | |

† Example: If PB0508A031 pump is connected to supply line of sufficient capacity, carrying water at 40 PSI, and the output of the pump is held to 7.3 GPM by a gate valve, the pump will add 40 PSI to line pressure for a total output pressure of 80 PSI.

* Operation of pump in this range may result in reduced pump life and/or motor damage.

To keep pump and seal lubricated, a minimum flow of 1.5 GPM must always be maintained through the pump.

** Only available in 3 phase

†† Models marked are also available in 575V, 3 Phase Only.

Motor voltage:

Open Drip Proof

Single Phase 1/3 - 2 HP - 115/230; 3 HP - 230V 60 Hz.

Three Phase 1/2 - 2 HP - 208-230/460, 50/60Hz.

Three Phase 3 HP - 208-230/460, 60 HZ

Three Phase 2 - 3 HP - 575V, 60Hz

For three phase models, use suffix "3" on the model no.

Example: PB0512A053

Totally Enclosed Fan Cooled

Single Phase: 1/2 thru 3 HP - 115/230V 60/50Hz

Three Phase: 1/2 thru 3 HP - 208/230/460V 60/50Hz

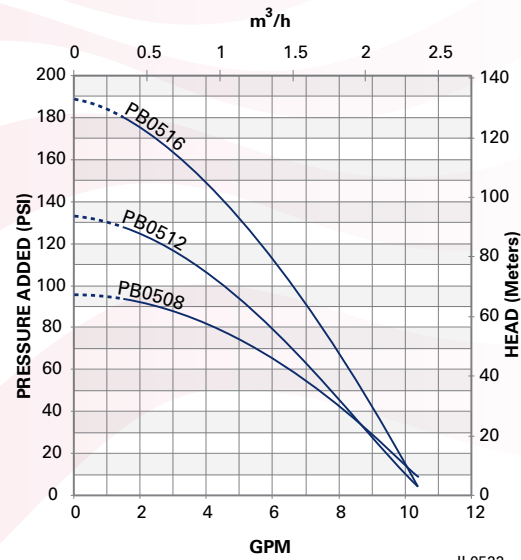
Δ Less than 50% US content



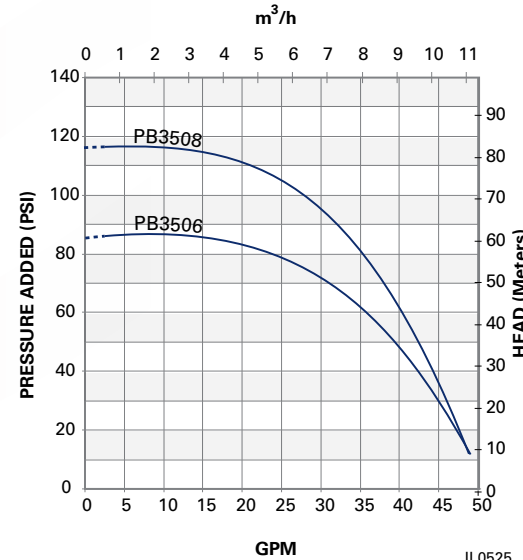
BOOSTER PUMP

60 Hz PERFORMANCE CURVES

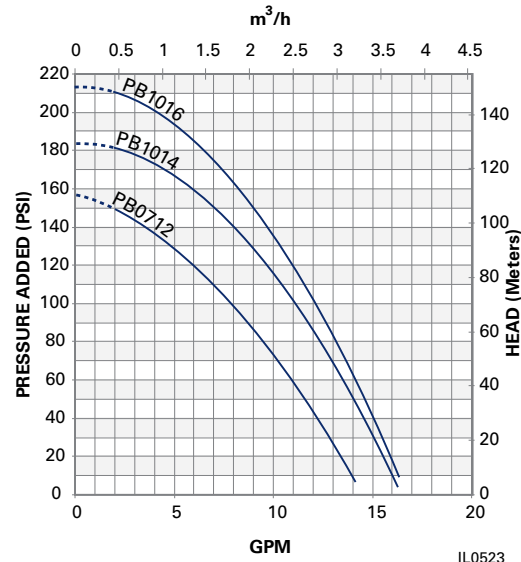
5 GPM



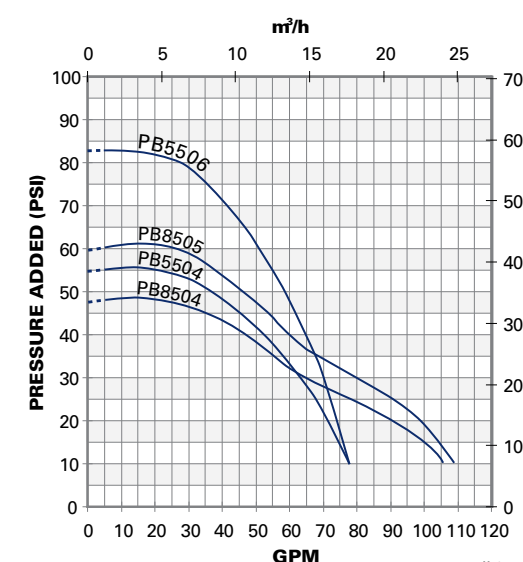
35 GPM



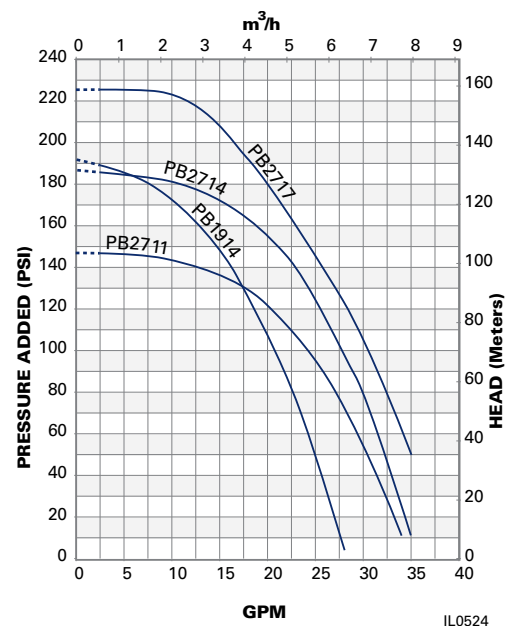
7 and 10 GPM



55 & 85 GPM



19 & 27 GPM



Do not operate pumps in flow range indicated by dotted line.

PUMP DATA

Flow Range: 1.5 TO 41.5 U.S. GPM
 Pressure Boost Range: 86 to 216 PSI
 Liquid Temperatures: 34°F to 140°F



Agency Approvals:
 Duty Cycle Continuous
 Pumping Medium Clear Water
 Service/Repair Information Pump and Motor Field Serviceable



BOOSTER PUMP

MOTOR DATA

| HP | Locked-Rotor Torque (Starting Torque) In-Lbs. | Single Phase | | | | | | 3 Phase | | | | |
|-----|--|--------------|--------------|---|-----------------------------|----------------------------|-----|---------|-----------|-----------------------------|----------------------------|-----|
| | | S.F. | Max. Amb. | Max. Amb. @ SF before Overload Tripping | Breakdown Torque In-Lbs. | Peak Output Power HP kW | | S.F. | Max. Amb. | Breakdown Torque In-Lbs. | Peak Output Power HP kW | |
| 1/3 | 16 | 1.75 | 65° C/149° F | 70° C/158° F | 17 | 0.85 | 0.6 | N/A | N/A | N/A | N/A | N/A |
| 1/2 | 23 | 1.6 | 65° C/149° F | 70° C/158° F | 27 | 1.3 | 1.0 | 1.6 | 65° C | 42 | 2.0 | 1.5 |
| 3/4 | 29 | 1.5 | 65° C/149° F | 70° C/158° F | 42 | 2.1 | 1.6 | 1.5 | 65° C | 49 | 2.3 | 1.7 |
| 1 | 48 | 1.4 | 65° C/149° F | 66° C/151° F | 52 | 2.5 | 1.9 | 1.4 | 65° C | 74 | 3.5 | 2.6 |
| 1.5 | 59 | 1.3 | 65° C/149° F | 66° C/151° F | 76 | 3.8 | 2.8 | 1.3 | 65° C | 90 | 4.3 | 3.2 |
| 2 | 63 | 1.25 | 65° C/149° F | 66° C/151° F | 80 | 4.0 | 3.0 | 1.25 | 65° C | 112 | 5.3 | 4.0 |
| 3 | 65 | 1.0 | 65° C/149° F | 66° C/151° F | 95 | 4.5 | 3.4 | 1.0 | 50° C | 125 | 5.9 | 4.4 |
| 3** | 65 | | | | | | | 1.15 | 40° C | 135 | 6.4 | 4.7 |

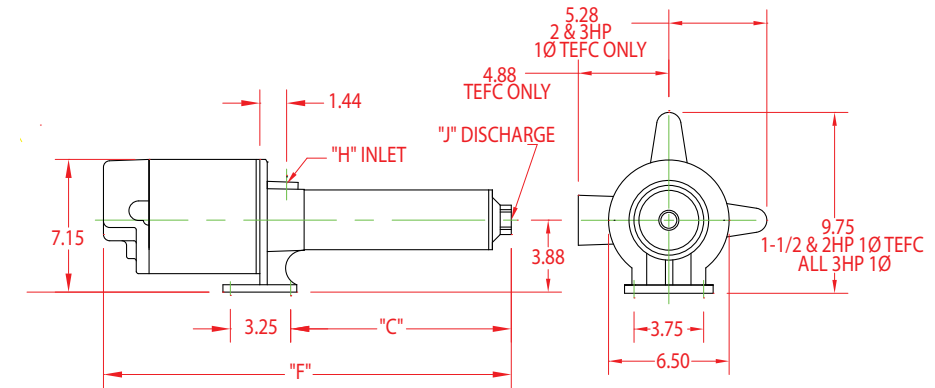
** Only available in 3 phase

Motor voltage:

Open Drip Proof
 Single Phase 1/3 - 2 HP - 115/230; 3 HP - 230V 60 Hz.
 Three Phase 1/2 - 2 HP - 208-230/460, 50/60Hz.
 Three Phase 3 HP - 208-230/460, 60 HZ
 Three Phase 2 - 3 HP - 575V, 60Hz
 For three phase models, use suffix "3" on the model no.
 Example: PB0512A053

Totally Enclosed Fan Cooled
 Single Phase: 1/2 thru 3 HP - 115/230V 60/50Hz
 Three Phase: 1/2 thru 3 HP - 208/230/460V 60/50Hz

PUMP DIMENSIONS 60 HZ



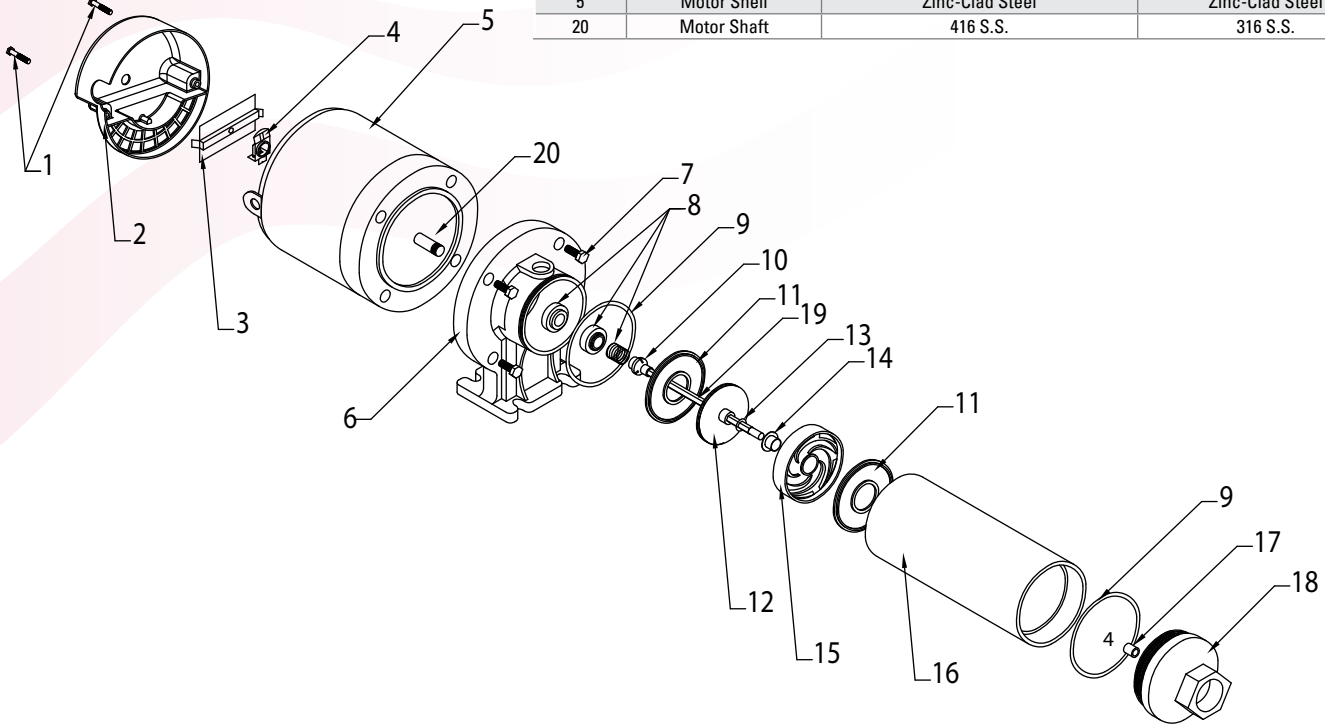
| HP | GPM | Stage | "C" | F | | H | J |
|--------|-----|-------|------|---------|---------|-----|-----|
| | | | | F&W | TEFC | | |
| | | | | TEFC | | | |
| | | | | 1 Phase | 3 Phase | | |
| 1/3 | 5 | 8 | 10.2 | 19.8 | - | .75 | .75 |
| 1/3* | 5 | 8 | 10.2 | 20.1 | 22.0 | .75 | .75 |
| 1/2 | 5 | 12 | 13.4 | 23.3 | 23.2 | .75 | .75 |
| 1/2* | 5 | 14 | 15.0 | 25.3 | 26.8 | .75 | .75 |
| 3/4 | 5 | 16 | 16.5 | 26.9 | 28.8 | .75 | .75 |
| 3/4 | 7 | 12 | 13.4 | 23.8 | 25.6 | .75 | .75 |
| 3/4* | 7 | 14 | 15.0 | 25.8 | 27.2 | .75 | .75 |
| 1 | 10 | 14 | 16.3 | 27.2 | 29.2 | .75 | .75 |
| 1-1/2 | 10 | 16 | 18.1 | 29.6 | 31.5 | .75 | .75 |
| 1* | 10 | 20 | 21.7 | 33.2 | 34.5 | .75 | .75 |
| 1* | 10 | 22 | 23.5 | 35.0 | 36.4 | .75 | .75 |
| 1* | 10 | 23 | 24.4 | 35.9 | 37.7 | .75 | .75 |
| 2 | 19 | 14 | 17.9 | 29.9 | 32.1 | .75 | .75 |
| 1-1/2* | 19 | 20 | 24.1 | 36.1 | 37.4 | .75 | .75 |
| 2* | 19 | 22 | 26.1 | 38.1 | 40.4 | .75 | .75 |
| 2 | 27 | 11 | 15.4 | 27.4 | 29.6 | 1.0 | 1.0 |
| 3 | 27 | 14 | 18.5 | 30.5 | 33.9 | 1.0 | 1.0 |
| 2* | 27 | 17 | 21.6 | 33.6 | 35.8 | 1.0 | 1.0 |
| 3 | 27 | 17 | 21.6 | 33.7 | - | 1.0 | 1.0 |
| 2 | 35 | 6 | 13.9 | 25.9 | 28.2 | 1.0 | 1.0 |
| 3 | 35 | 8 | 17.1 | 29.1 | 32.5 | 1.0 | 1.0 |
| 1-1/2* | 35 | 8 | 17.1 | 29.1 | 30.5 | 1.0 | 1.0 |
| 3* | 35 | 14 | 26.9 | 38.9 | 42.2 | 1.0 | 1.0 |

*50Hz

CONSTRUCTION MATERIALS

CONSTRUCTION MATERIALS - MOTOR

| ITEM NO. | DESCRIPTION | Cast Iron/Powder-Coated MODELS | SS MODELS |
|----------|-----------------|--------------------------------|-----------------|
| 1 | Cover Bolts (2) | Plated Steel | Plated Steel |
| 2 | Cover | Valox | Valox |
| 3 | Switch | AgCd Contacts | AgCd Contacts |
| 4 | Governor | Zinc Plated CRS | Zinc Plated CRS |
| 5 | Motor Shell | Zinc-Clad Steel | Zinc-Clad Steel |
| 20 | Motor Shaft | 416 S.S. | 316 S.S. |



IL0127

CONSTRUCTION MATERIALS - PUMP

| ITEM NO. | DESCRIPTION | Cast Iron/Powder-Coated MODELS | SS MODELS |
|----------|-------------------------------|--------------------------------|-----------------------------|
| 6 | Mounting Ring | Cast Iron/Powder-Coated | 316 S.S. |
| 7 | Motor/Mounting Ring Bolts (4) | Plated Steel | Plated Steel |
| 8 | Seal, Rotary w/Spring | Ceramic - Carbon/S.S. & Buna N | Ceramic-Carbon/S.S. & Viton |
| 9 | O-Ring (2) | Buna-N | Viton |
| 10 | Coupling | 316 Sintered S.S. | 316 Sintered S.S. |
| 11 | Plate | Celcon | Celcon |
| 12 | Impeller | Noryl 731 | Noryl 731 |
| 13 | Shim as Required | 300 S.S. | 300 S.S. |
| 14 | Bearing | 300 S.S. | 300 S.S. |
| 15 | Diffuser | Noryl 731 | Noryl 731 |
| 16 | Barrel | 304 S.S. | 304 S.S. |
| 17 | Discharge Bearing | Sintered Bronze | Sintered Bronze |
| 18 | Discharge Head | Cast Iron/Powder-Coated | 316 S.S. |
| 19 | Pump Shaft | 416 S.S. | 316 S.S. |

