

MB100-Series Centrifugal Pump



Designed for conveying low viscosity fluids in a broad range of applications such as food, dairy, beverage, winery, and brewing markets.

Certifications

- 3A approved
- Elastomers meet FDA 21CFR 177.2600 and 3A 18-03 Class I

Size

- 1" outlet x 1-1/2" inlet

Features

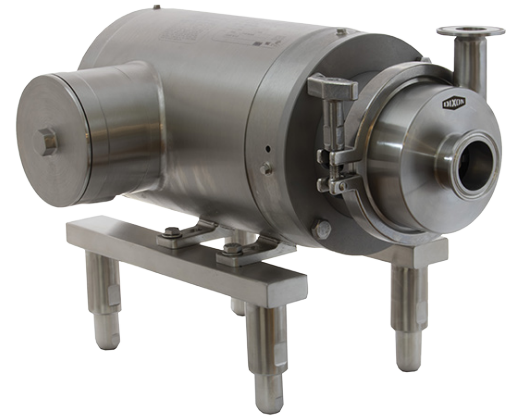
- Standard clamp
 - Uses a standard 4" tube clamp for easy removal and adjustment of the casing
 - Eliminates post and tab construction
- Seal design
 - Robust single mechanical seal design with silicon carbide stationary seal-face and carbon rotary seal-face
- Seal performance
 - Efficient seal path promotes seal cooling and provides less restrictions to adequately clean the seal
- Impeller and shaft design
 - Sealed impeller provides optimal hygienic performance while the split shaft compression collar improves shaft concentricity, reduces vibration, and improves seal life
- Drop-in replacement for other C-100 series pumps
- Wet end mounts to a standard 56C frame motor

Materials

- Product contact metal components: AISI 316L stainless steel, FKM, EPDM, PTFE
- Non-product contact components: AISI 304 stainless steel
- Product contact seals: carbon and silicon carbide

Specifications

- Standard connection: clamp
- Minimum operating temperature: **32°F (0°C)**
- Maximum operating temperature: **212°F (100°C)**
- Viscosity range: 1 - 500 cP
- Surface Finish
 - Product contact metal components: ≤ 32 Ra
 - Non-product contact metal components: ≤ 63 Ra
- Seal type: single mechanical
- Performance characteristics
 - Nominal capacity: up to **75 GPM**
 - Nominal speed: up to 3500 RPM - 60 Hz
- Motors and mounting
 - Motor frame size: NEMA 56C C-face
 - Speeds: 1750 and 3500 RPM
 - Enclosure: TENV or TEFC, stainless steel or epoxy white washdown
- Cleaning method
 - CIP: clean-in-place
- Weight: 9 lbs without motor



MB100-Series Centrifugal Pump - Part Number Key

| MB100-Series Centrifugal Pump Part Number Key Example: MB15A01C1EA1A01 | | Series | Port Size | Finish | Impeller Size | Connections | Seal Type | Elastomer | Frame Size | Motor Type | Electrical | Power and Speed |
|--|-------------|--------|-----------|--------|---------------|-------------|-----------|-----------|------------|------------|------------|-----------------|
| | | MB | 15 | A | 01 | C | 1 | E | A | 1 | A | 01 |
| Series | Code | | | | | | | | | | | |
| MB100 | MB | ← | | | | | | | | | | |
| Port Size | Code | | | | | | | | | | | |
| 1-1/2" inlet x 1" outlet | 15 | ← | | | | | | | | | | |
| Surface Finish | Code | | | | | | | | | | | |
| 32 Ra (I.D. mech. polish) | A | ← | | | | | | | | | | |
| 25 Ra (I.D. mech. polish) | B | | | | | | | | | | | |
| 20 Ra (I.D. mech. polish) | C | | | | | | | | | | | |
| Impeller Size | Code | | | | | | | | | | | |
| 3.68" | 01 | ← | | | | | | | | | | |
| 3.5" | 02 | | | | | | | | | | | |
| 3.25" | 03 | | | | | | | | | | | |
| 3" | 04 | | | | | | | | | | | |
| Connections | Code | | | | | | | | | | | |
| Clamp | C | ← | | | | | | | | | | |
| Weld | B | | | | | | | | | | | |
| Female I-line | F | | | | | | | | | | | |
| Male I-line | M | | | | | | | | | | | |
| Threaded bevel | T | | | | | | | | | | | |
| Plain bevel | P | | | | | | | | | | | |
| Q-line | Q | | | | | | | | | | | |
| Seal Type | Code | | | | | | | | | | | |
| Single mechanical SC vs carbon | 1 | ← | | | | | | | | | | |
| Elastomer | Code | | | | | | | | | | | |
| EPDM | E | ← | | | | | | | | | | |
| FKM | V | | | | | | | | | | | |
| Frame Size | Code | | | | | | | | | | | |
| NEMA 56C | A | ← | | | | | | | | | | |
| Motor Type | Code | | | | | | | | | | | |
| Baldor SS washdown | 1 | ← | | | | | | | | | | |
| Sterling SS washdown | 2 | | | | | | | | | | | |
| Baldor white epoxy painted washdown | 3 | | | | | | | | | | | |
| Sterling white epoxy painted washdown | 4 | | | | | | | | | | | |
| Electrical | Code | | | | | | | | | | | |
| 1PH/60Hz 115/230V | A | ← | | | | | | | | | | |
| 3PH/60Hz 208-230/460V | B | | | | | | | | | | | |
| 3PH/50Hz 190/380V | C | | | | | | | | | | | |
| 3PH/50Hz 380/460V | D | | | | | | | | | | | |
| 3PH/50Hz 220/380/440V | E | | | | | | | | | | | |
| 3PH/50Hz 220/380/415V | F | | | | | | | | | | | |
| Power and Speed | Code | | | | | | | | | | | |
| 0.75HP at 3500 RPM | 01 | ← | | | | | | | | | | |
| 1.0HP at 3500 RPM | 02 | | | | | | | | | | | |
| 1.5HP at 3500 RPM | 03 | | | | | | | | | | | |
| 0.5HP at 1750 RPM | 04 | | | | | | | | | | | |

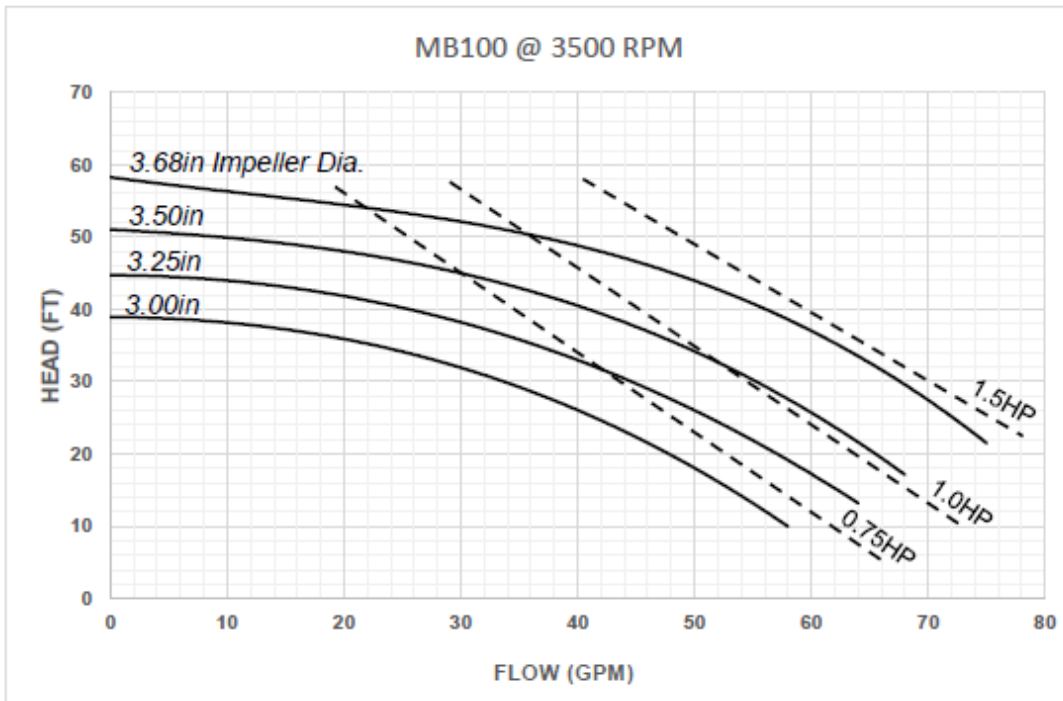
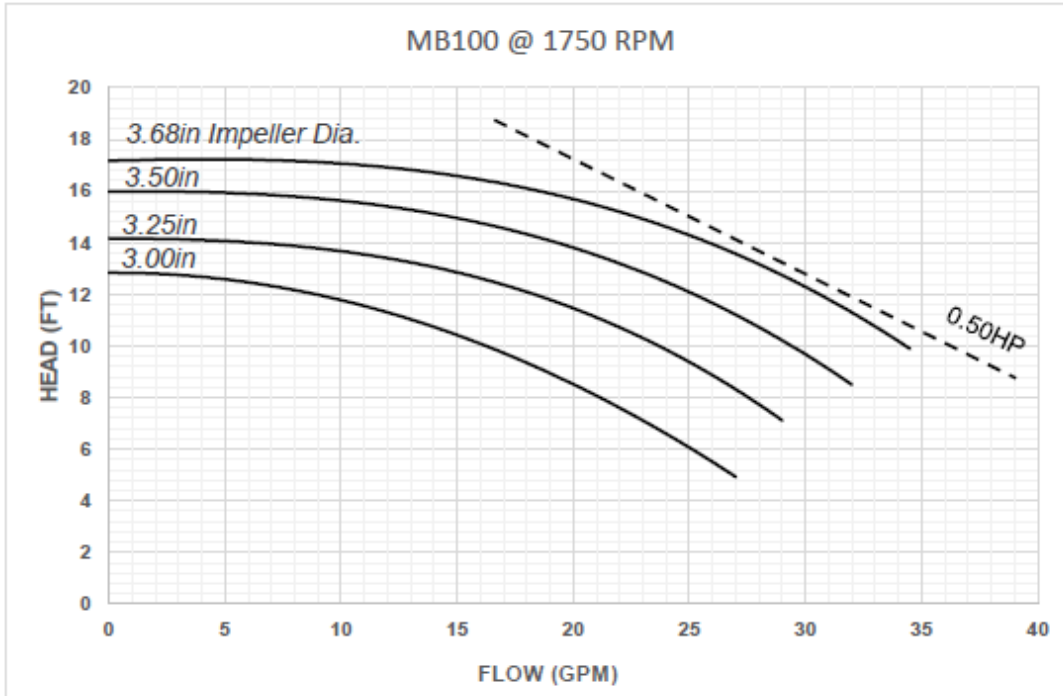
MB100-Series Centrifugal Pump - Pump Curve

Based on H₂O at 70°F (21°C)

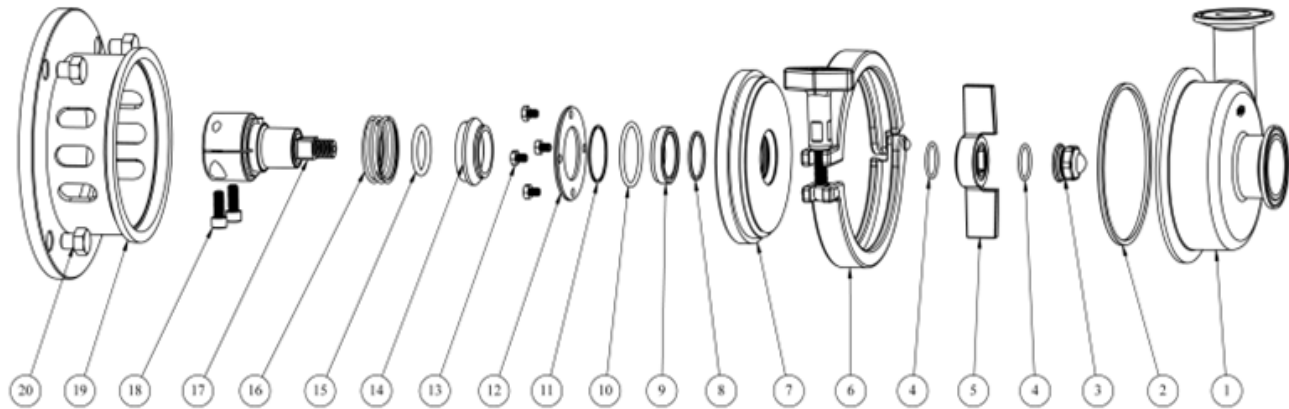
Frequency: 60 HZ

RPM: 1750 and 3500

Size: 1-1/2" x 1" x 3.68"



MB100-Series Centrifugal Pump - Bill of Materials

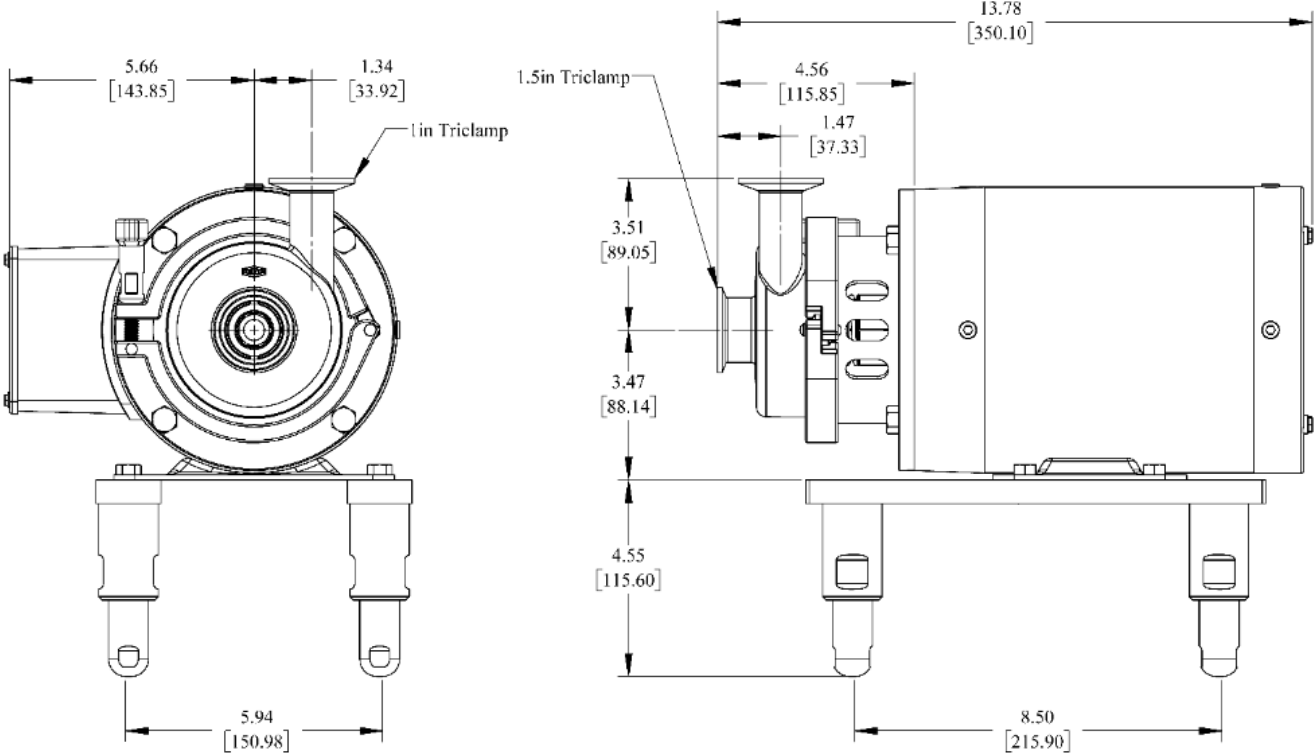


| Item # | Description | Part # | Material | Qty |
|--------|--------------------------------|----------------|--------------------------|-----|
| 1 | casing | MB100-PC-C | 316L | 1 |
| 2 | casing seal* | MB100-PCOR-V | FKM | 1 |
| 3 | impeller nut | MB100-IN | 316L | 1 |
| 4 | impeller O-ring* | MB100-NOR-V | FKM | 2 |
| 5 | impeller (3.680" diameter) | MB100-IMP-3680 | CF3M | 1 |
| 6 | casing clamp | 13MHHM400 | CF8 | 1 |
| 7 | backplate | MB100-BKPL | 316L | 1 |
| 8 | stationary seal gasket - inner | MB100-SSIG | PTFE | 1 |
| 9 | stationary seal | MB100-SS-SC | sintered silicon carbide | 1 |
| 10 | stationary seal O-ring* | MB100-SSOR-V | FKM | 1 |
| 11 | stationary seal gasket - outer | MB100-SSOG | PTFE | 1 |
| 12 | backplate seal ring | MB100-SSP | 304 | 1 |
| 13 | seal plate screw | MB100-SPS | 18-8 | 4 |
| 14 | rotary seal | MB100-RS-C | carbon | 1 |
| 15 | rotary seal O-ring* | MB100-RSOR-V | FKM | 1 |
| 16 | seal spring | MB100-SPR | 304 | 1 |
| 17 | stub shaft (56C) | MB100-SHFT | 316L | 1 |
| 18 | stub shaft bolt | MB100-SBOLT | 18-8 | 1 |
| 19 | adapter | MB100-ADP | 304 | 1 |
| 20 | adapter bolt | P71B-114B-56AB | 18-8 | 4 |

*Optional available materials (see table below for component part numbers).

| Item # | Description | Part # | Material | Qty |
|--------|-------------------------|--------------|----------|-----|
| 2 | casing seal* | MB100-PCOR-E | EPDM | 1 |
| 4 | impeller O-ring* | MB100-NOR-E | EPDM | 2 |
| 10 | stationary seal O-ring* | MB100-SSOR-E | EPDM | 1 |
| 15 | rotary seal O-ring* | MB100-RSOR-E | EPDM | 1 |

MB100-Series Centrifugal Pump - Dimensions



MB100-Series Centrifugal Pump - Repair Kits
Complete Rebuild Seal Repair Kits

| Pump Model | Soft Seal Material | Rotary Seal Material | Stationary Seal Material | Kit Part # | Kit Includes (item #) | Repair Kit BOM | | |
|------------|--------------------|----------------------|--------------------------|-------------|----------------------------|----------------|--------------|-----|
| | | | | | | Item # | Part # | Qty |
| MB100 | FKM | carbon | silicon carbide | MB100-SK1-V | 2, 4, 8, 9, 10, 11, 14, 15 | 2 | MB100-PCOR-V | 1 |
| | | | | | | 4 | MB100-NOR-V | 1 |
| | | | | | | 8 | MB100-SSIG | 1 |
| | | | | | | 9 | MB100-SS-SC | 1 |
| | | | | | | 10 | MB100-SSOR-V | 1 |
| | | | | | | 11 | MB100-SSOG | 1 |
| | | | | | | 14 | MB100-RS-C | 1 |
| | | | | | | 15 | MB100-RSOR-V | 1 |

| Pump Model | Soft Seal Material | Rotary Seal Material | Stationary Seal Material | Kit Part # | Kit Includes (item #) | Repair Kit BOM | | |
|------------|--------------------|----------------------|--------------------------|-------------|----------------------------|----------------|--------------|-----|
| | | | | | | Item # | Part # | Qty |
| MB100 | EPDM | carbon | silicon carbide | MB100-SK1-E | 2, 4, 8, 9, 10, 11, 14, 15 | 2 | MB100-PCOR-E | 1 |
| | | | | | | 4 | MB100-NOR-E | 1 |
| | | | | | | 8 | MB100-SSIG | 1 |
| | | | | | | 9 | MB100-SS-SC | 1 |
| | | | | | | 10 | MB100-SSOR-E | 1 |
| | | | | | | 11 | MB100-SSOG | 1 |
| | | | | | | 14 | MB100-RS-C | 1 |
| | | | | | | 15 | MB100-RSOR-E | 1 |

Soft Seal Repair Kits

| Pump Model | Soft Seal Material | Kit Part # | Kit Includes (item #) | Repair Kit BOM | | |
|------------|--------------------|-------------|-----------------------|----------------|--------------|-----|
| | | | | Item # | Part # | Qty |
| MB100 | FKM | MB100-SK2-V | 2, 4, 10, 15 | 2 | MB100-PCOR-V | 1 |
| | | | | 4 | MB100-NOR-V | 1 |
| | | | | 10 | MB100-SSOR-V | 1 |
| | | | | 15 | MB100-RSOR-V | 1 |

| Pump Model | Soft Seal Material | Kit Part # | Kit Includes (item #) | Repair Kit BOM | | |
|------------|--------------------|-------------|-----------------------|----------------|--------------|-----|
| | | | | Item # | Part # | Qty |
| MB100 | EPDM | MB100-SK2-E | 2, 4, 10, 15 | 2 | MB100-PCOR-E | 1 |
| | | | | 4 | MB100-NOR-E | 1 |
| | | | | 10 | MB100-SSOR-E | 1 |
| | | | | 15 | MB100-RSOR-E | 1 |

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