

CATALOG #66 2025



BANJO LIQUID HANDLING PRODUCTS

2025

CATALOG #66 EFFECTIVE OCTOBER 2024



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# BECAUSE EVERY DROP COUNTS



95% **LESS** SPILLAGE, SAVING YOU MONEY

## 1" POLY DRY FIT™

### FEATURES

- Double poly-ball valves with integrated quick disconnect.
- 1" full-port (unrestricted flow)
- Allows high pressures and flow
- Economical and simpler design without handle locking feature
- 90% less spillage vs. 2 standard valves connected via a coupling.



1" POLY DRY FIT™					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DF100A	1" MALE X FPT NPT W/FKM SEALS	100	1"	1"	1
DF100D	1" FEMALE X FPT NPT W/FKM SEALS	100	1"	1"	1



## VALVE & REPAIR KITS & HANDLES

PART NO	DESCRIPTION	QTY
CV100V	1" FEMALE X FEMALE NPT CHECK	1
MCV100V	1" MANIFOLD CHECK VALVE	1
V10200	KIT FOR V100FP, V125, MV100CF	1
V20200	KIT FOR V125FP, V150, V200	1
V20353TS	T HANDLE FOR V125SL, V150SL	1
V25200	KIT FOR MV220CF, V200FP, V204FP, VA200FP, VFMT200FP, VFMT204FP	1
V25200BL	KIT FOR MV220BL, MV220SL, V200SL	1
V30200	KIT FOR MV300, V300	1
V35200	KT FOR MV300CF, V300FP	1
V40200	KIT FOR V400	1
VA200/150	2" FEMALE NPT X 1 1/2" NOZZLE	1
VS30200	KIT FOR MVSF300, MVSMT300, MVS300CF	1
VSS05200	KIT FOR VSS050	1
VSS10200	KIT FOR VSS100	1
VSS15200	KIT FOR VSS150	1
VSS25200	KIT FOR VSFMT220SS, VSS200	1
VSS35200	KIT FOR VSS300	1

## PIPE FITTINGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
CR025	1/4" POLY CROSS	300	10/BAG
CR038	3/8" POLY CROSS	300	10/BAG
HB038-025	3/8" MALE THREAD X 1/4" HOSE BARB	300	10/BAG
HBF100-90	1" FEMALE THREAD X 1" 90 HOSE BARB	300	10/BAG
HBT025	1/4" HOSE BARB TEE	300	10/BAG
HBT050-038	1/2" X 3/8" HOSE BARB TEE	300	10/BAG
NIP400-SH	4" SHORT POLY NIPPLE	300	1
RB050-018	1/2" MNPT X 1/8" FNPT REDUCER BUSHING	300	10/BAG
RB100-018	1" MNPT X 1/8" FNPT REDUCER BUSHING	300	10/BAG
RB125-038	1" X 3/8" FPT REDUCING BUSHING	300	10/BAG

## MANIFOLD

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100125HBT	1" FLANGE X 1 1/4" HOSE BARB TEE	300	10
M101GSA	1" FULL PORT FLANGE X 1" PVC GLUE SOCKET FITTING	300	10
M200THB100	2" MANIFOLD T X 1" HOSE BARB	150	1
M201TEEV075	2" STANDARD VENTURI T W/ 3/4"	200	1
M220150HBT	1 1/2" HOSE BARB X 1 1/2" HOSE BARB	300	10
M220SWP90	2" PULL PORT FLANGE X FLANGE SWEEP	300	10
M220SWPG90	2" FULL PORT FLANGE X FLANGE SWEEP 1/4" PORT	300	1
M221SWP90	2" FULL PORT MANIFOLD 90° SWEEP	300	1
MLSTM100-80	1" MANIFOLD MINI T STRAINER 80 MESH	300	1
MLSTM100HB	1" MANIFOLD MINI T STRAINER HEAD & BOWL	N/A	1
MLSTM100HBC	1" MANIFOLD MINI T STRAINER HEAD & CLEAR BOWL	N/A	1
MTF100BD	1" FLANGE X 1" FEMALE THREAD W/EPDM GASKET	300	10

## PUMPS

PART NO	DESCRIPTION	HP	QTY	SKID QTY
12049F	HYDRAULIC PEDESTAL HOUSING	N/A	1	N/A
17049A	HYDRAULIC ADAPTER	N/A	1	N/A
200PIHA	2" CAST IRON HYDRAULIC W/O MOTOR	N/A	1	N/A
333POICF	3" CAST IRON PUMP ONLY W/1 3/8" SHAFT & 5 VANE IMPELLER UNASSEMBLED FOR 215TC FRAME	N/A	1	6
BEM10-100	10 HP ELECTRIC MOTOR, 1" SHAFT DIAMETER 3 PHASE	10	1	N/A
BEM101-100	10 HP SINGLE PHASE WITH 1" SHAFT	10	1	N/A
BEM15	15 HP, 215TC, 3PH	15	1	N/A
BEM15-100	15 HP MOTOR WITH 1" DIAMETER SHAFT	15	1	N/A
BEM5	CM3613T, 5HP, 184TC, 3PH	5	1	N/A

## GASKETS

PART NO	DESCRIPTION	HOLE SIZE	FITS POLY	FITS SS	LOT QTY
TF100G	1" & 1/4" POLY BULKHEAD EPDM GASKET	2 1/4"	TF100 & TF125	TF100SS & TF125SS	25
TF100GV	1" & 1/4" POLY BULKHEAD FKM GASKET	2 1/4"	TF100 & TF125	TF100SS & TF125SS	10

## 2" POLY DRY-MATES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM200AT	2" MALE X FPT NPT W/KALREZ® SEALS	100	2"	1 1/2"	1
DM200DT	2" FEMALE X FPT NPT W/KALREZ® SEALS	100	2"	1 1/2"	1

## FEATURES

### 1 1/2" LSQ STRAINERS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
LSS300-C	3" STAINLESS STEEL LINE CAP	N/A	1
LST220SS	20 MESH SS SCREEN	N/A	1
LSQ150-B/C	1 1/2" X 1 1/2" LSQ STRAINER BODY/CAP	N/A	1
LSQ200-GV	2" FKM GASKET	N/A	1

## FITTINGS WITH GAUGE PORTS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100BRBSWPG90	1" FULL PORT X 1" HOSE BARB WITH 1/4" GAUGE PORT	300	10/BAG
M100SWPG90	1" FLANGE X FLANGE SWEEP WITH 1/4" GAUGE PORT	300	10/BAG
M220SWP038G90	2" FULL PORT MANIFOLD SWEEP WITH 3/8" FNPT GAUGE PORT	300	10/BAG
M220SWP050G90	2" FULL PORT FLANGE X FLANGE SWEEP WITH 1/2" GAUGE PORT	300	10/BAG
M221SWP90	2" FULL PORT MANIFOLD SWEEP WITH BLIND GAUGE PORT	300	1
M300BRBSWPG90	3" HOSE BARB X FLANGE SWEEP WITH 1/4" GAUGE PORT	225	1
M300SWP050G90	3" MANIFOLD SWEEP W/ .5" NPT PORT	300	1
M300SWPG90	3" FLANGE X FLANGE SWEEP WITH 1/4" GAUGE PORT	200	1
M200300TEG075	M200 X M200 X M300 WITH 3/4" THREAD PORT	300	1
M200YG45	2" FULL PORT 45° Y FLANGE WITH GAUGE PORT	225	1
M220YG45	2" FULL PORT 45° Y FLANGE WITH 3/4" GAUGE PORT	300	1
M300YG45	3" FULL PORT Y FLANGE WITH 3/4 GAUGE PORT	200	1
M300220WYCG	M300 X M220 Y CROSS WITH 1/4" GAUGE PORT	300	1
TEG075	3/4" POLY T WITH 1/4" FEMALE THREAD	300	10/BAG
TEG100	1" POLY TEE WITH 1/4" FEMALE THREAD	300	10/BAG
TM075/050	8 STATION POLY MANIFOLD	225	1

## COUPLINGS WITH GAUGE PORTS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100CPG025G	1" MANIFOLD COUPLING 2 1/4" PORT	300	10/BAG
M101CPG	1" MANIFOLD COUPLING 2 1/4" LONG W/ BLIND GAUGE PORT	300	10/BAG
M200CPG025G	2" MANIFOLD COUPLING 4 1/2" LONG W/ 1/4" PORT	300	10/BAG
M201CPG	2" MANIFOLD COUPLING 4 1/2" LONG W/ BLIND GAUGE PORT	300	10/BAG
M220CPG2GISO	2" FULL PORT MANIFOLD COUPLING 2" LONG W/ G 1/4" PORT	300	10/BAG
M220CPG3G	2" FULL PORT MANIFOLD COUPLING 3" LONG W/ 1/2" PORTS (3)	225	10/BAG
M220CPG6025G	2" FULL PORT MANIFOLD COUPLING 6" LONG W/ 1/4" PORTS	300	10/BAG
M221CPG	2" FP MANIFOLD COUPLING 3" LONG W/ 3 BLIND GAUGE PORTS	300	1
M221CPG6	2" FP MANIFOLD COUPLING 6" LONG W/ BLIND GAUGE PORT	300	10/BAG
M300CPG12G	3" FP MANIFOLD COUPLING 12" LONG W/ 1/2" GAUGE PORT	150	1
M300CPG2	3" FP MANIFOLD COUPLING 4" LONG W/ BLIND GAUGE PORT	200	1
M300CPG55G	3" FULL PORT MANIFOLD COUPLING 5.5" LONG W/ 1/4" PORT	150	1
M300CPG7025G	3" MANIFOLD COUPLING 7" LONG W/ 1/4" PORT	300	1
M301CPG7	3" MANIFOLD COUPLING 7" LONG	225	1
M300CPG2GISO	3" MANIFOLD COUPLING 2" LONG W/ G 1/4" GAUGE PORT	300	1

## PLUGS WITH GAUGE PORTS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100PLG025	1" FLANGE PLUG WITH 1/4" FEMALE NPT	300	10/BAG
M100PLG050	1" FLANGE PLUG WITH 1/2" FEMALE NPT	300	10/BAG
M200PLG025	2" FLANGE PLUG WITH 1/4" FPT	225	10/BAG
M200PLG038	2" MANIFOLD PLUG WITH 3/8" FPT	300	10/BAG
M200PLG050	2" FLANGE PLUG WITH 1/2" FPT	225	10/BAG
M200PLG075	2" FLANGE PLUG WITH 3/4" FPT	225	10/BAG
M200PLG100	2" FLANGE PLUG WITH 1" FPT	225	10/BAG
M220PLG038	2" FP MNFLD PLUG WITH 3/8" FPT	150	10/BAG
M220PLG075	2" FP FLANGE PLUG WITH 3/4" FPT	225	10/BAG
M300PLG075	3" FLANGE PLUG WITH 3/4" FPT	200	1
M300PLG100	3" FLANGE PLUG WITH 1" FPT	200	1

# M350

**500+ GALLONS PER MINUTE  
NO LEAKS. NO WEAR. NO WORRIES  
PATENTED WET SEAL DESIGN  
ATTACHES EASILY**

More information on our M350 series is on page 122



## EASY-FILL™ VALVES

### FEATURES

- Eliminates multiple fittings for fill applications
- Available in 2" and 3" sizes
- Full flow (full port) design
- Stubby valve configuration reduces profile
- Extended coupler prevents handle interference



EASY-FILL™ VALVES					
PART NO	DESCRIPTION	MAX PSI	LOT QTY	VALVE HANDLE	REPAIR KIT
VSBB204FP	2" FULL PORT EASY-FILL™ VALVE	150	2/BOX	VS25153	VS25200
VSBB205FP	2" FULL PORT EASY-FILL™ VALVE W/CARRY HANDLE	150	4/BOX	VS25153	VS25200
VSBB304FP	3" FULL PORT EASY-FILL™ VALVE	150	2/BOX	V25153	N/A
VSBB305FP	3" FULL PORT EASY-FILL™ VALVE W/CARRY HANDLE	150	4/BOX	V25153	N/A
H25053	2" & 3" CARRY HANDLE	N/A	1	N/A	N/A

## 1/4" -1" POLY MICRO VALVES

### FEATURES

- 90° rotating handle
- 90° locking, rotating handle (with asterisk \*)
- Precision molded polypropylene is reinforced with fiberglass for additional strength.
- Standard FKM seats and O-Rings

**JG John Guest® Fitting**  
The brand "John Guest" is a registered trademark of John Guest International Limited.

### MICRO VALVES

PART NO	DESCRIPTION	MAX PSI	THREAD SIZE	OPENING THRU BALL	LOT QTY
LV025V	1/4" FEMALE NPT MICRO VALVE	300	1/4"	3/8"	10
LV038V	3/8" FEMALE NPT MICRO VALVE	300	3/8"	3/8"	10
LV050V	1/2" FEMALE NPT MICRO VALVE	300	1/2"	15/32"	10
LV050SLV	1/2" SIDE LOAD MICRO VALVE	300	1/2"	1/2"	10
LV050SLLV*	1/2" SIDE LOAD LOCKING MICRO VALVE	300	1/2"	15/32"	10

### MICRO VALVES

PART NO	DESCRIPTION	MAX PSI	THREAD SIZE	OPENING THRU	LOT QTY
LVB038V	3/8" HOSE BARB MICRO VALVE	300	3/8"	3/8"	10
LVB050V	1/2" HOSE BARB MICRO VALVE	300	1/2"	3/8"	10
LVB075V	3/4" HOSE BARB MICRO VALVE	300	3/4"	15/32"	10

### MICRO VALVES

PART NO	DESCRIPTION	MAX PSI	THREAD SIZE	OPENING THRU BALL	LOT QTY
LV025MTV	1/4" FEMALE X MALE NPT MICRO VALVE	300	1/4"	3/8"	10
LV038MTV	3/8" FEMALE X MALE NPT MICRO VALVE	300	3/8"	3/8"	10
LV038050MTV	3/8" FEMALE X 1/2" MALE NPT MICRO VALVE	300	3/8" x 1/2"	3/8"	10
LV038050MTLV*	3/8" FEMALE X 1/2" MALE NPT LOCKING MICRO VALVE	300	3/8" x 1/2"	3/8"	10
LV050MTV	1/2" FEMALE X MALE NPT MICRO VALVE	300	1/2"	15/32"	10
LV050100MTV	1/2" FEMALE X 1" MALE NPT MICRO VALVE	300	1/2"	15/32"	10
LV050100MTLV*	1/2" FEMALE X 1" MALE NPT LOCKING MICRO VALVE	300	1/2" x 1"	15/32"	10

### MICRO VALVES

PART NO	DESCRIPTION	MAX PSI	THREAD SIZE	OPENING THRU BALL	LOT QTY
LVB038050MTV	3/8" HOSE BARB X 1/2" MALE NPT MICRO VALVE	300	1/2"	3/8"	10
LVB075MTV	3/4" HOSE BARB X 3/4" MALE NPT MICRO VALVE	300	3/4"	1/2"	10
LVB075100MTV	3/4" HOSE BARB X 1" MALE NPT MICRO VALVE	300	1"	15/32"	10
LVB075100MTLV*	3/4" HOSE BARB X 1" MALE NPT LOCKING MICRO VALVE	300	1"	15/32"	10

### MICRO VALVES

PART NO	DESCRIPTION	MAX PSI	THREAD SIZE	OPENING THRU BALL	LOT QTY
LVPL025V	1/4" FEMALE PUSH LOCK MICRO VALVE	300	1/4"	3/8"	10
LVPL038V	3/8" FEMALE PUSH LOCK MICRO VALVE	150	3/8"	3/8"	10

## 1/2" - 2" 4 BOLTED VALVES

### FEATURES

- FKM seals.
- Precision molded polypropylene is reinforced with fiberglass for additional strength.
- Self-aligning ball moves freely against the PTFE seats for smooth operation. The valve opens and closes with very little pressure on the handle.
- Ball is diamond turned, after molding, to make it spherically perfect, which provides precise contact between ball and seats.
- PTFE self-lubricating stem bushings and seats cannot stick or bind.
- Stainless steel bolts.

### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring



4 BOLTED VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
V050	1/2" FULL PORT VALVE	300	1/2"	3/4"	6	V10153A	N/A
V075	3/4" FULL PORT VALVE	300	3/4"	3/4"	12	V10153A	N/A
V100	1" STANDARD PORT VALVE	225	1"	3/4"	12	V10153A	N/A
V100FP	1" FULL PORT VALVE	300	1"	1"	12	V10153A	V10200
V125	1 1/4" STANDARD PORT VALVE	300	1 1/4"	1"	6	V10153A	V10200
V125FP	1 1/4" FULL PORT VALVE	225	1 1/4"	1 1/2"	6	V20153	V20200
V150	1 1/2" FULL PORT VALVE	225	1 1/2"	1 1/2"	6	V20153	V20200
V200	2" STANDARD PORT VALVE	225	2"	1 1/2"	12	V20153	V20200

## 2" FULL PORT 4 BOLTED BALL VALVES

### FEATURES

- FKM seals
- Stainless steel bolts
- PTFE self-lubricating stem bushings and seats cannot stick or bind
- Precision molded in fiberglass reinforced polypropylene
- Self-aligning ball moves freely against the PTFE seats for smoother operation
- Valve opens and closes with very little pressure on the handle
- Ball is diamond turned after molding to make it spherically perfect, which provides precise contact between ball and seats



4 BOLTED FULL PORT VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
VFMT204FP	2" FULL PORT VALVE MALE NPT X MALE ADAPTER	150	2"	2"	6/BOX	V25153	V25200
V204FP	2" FULL PORT VALVE	150	2"	2"	8/BOX	V25153	V25200



6 BOLTED VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
V200FP	2" FULL PORT VALVE	225	2"	2"	8/BOX	V25153	V25200
VFMT200FP	2" FULL PORT VALVE W/ F ADAPTER	225	2"	2"	6/BOX	V25153	V25200
V300	3" STANDARD PORT VALVE	225	3"	2 1/2"	8/BOX	V25153	V30200
V300FP	3" FULL PORT VALVE	200	3"	3"	6/BOX	V25153	V35200
V400	4" STANDARD PORT VALVE	100	4"	3 1/2"	1	V25153	V40200

## 2"-4" 6 BOLTED VALVES

### FEATURES

- FKM seals.
- Precision molded polypropylene is reinforced with fiberglass for additional strength.
- Self-aligning ball moves freely against the PTFE seats for smooth operation. The valve opens and closes with very little pressure on the handle.
- Ball is diamond turned, after molding, to make it spherically perfect, which provides precise contact between ball and seats.
- PTFE self-lubricating stem bushings and seats cannot stick or bind.
- Stainless steel bolts.

### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring

## 2" FULL PORT ANSI FLANGE BOLTED BALL VALVES

### FEATURES

- 100% PTFE seats
- FKM seals
- Glass-filled polypropylene
- Unique compact design
- Lightweight
- Gaskets featured on page 74

### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring



VSF200PPAF

FULL PORT ANSI FLANGE BOLTED VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
VSF200PPAF	2" FULL PORT VALVE MALE ADAPTER X 2" ANSI FLANGE	200	2"	2"	6/BOX	V25153SH	VS25200

VALVE ACCESSORIES

FEATURES

- 304 stainless steel construction
- Installs under valve handle
- Comes complete with handle and locking device
- Padlock not included



VALVE ACCESSORIES			
PART NO	DESCRIPTION	FITS VALVES	LOT QTY
V10200	VALVE REPAIR KIT 1" FP & 1 1/4"	V100FP, V125M MV100CF	1
V10270	STRAIGHT MOUNTING BRACKET	V100FP, V125	1
V10271	90° MOUNTING BRACKET	V100FP, V125	1
VL20153	LOCKING DEVICE	V125, V150, V200	1
V25270	STRAIGHT MOUNTING BRACKET	V125FP, V150, V200	1
V25271	90° MOUNTING BRACKET	V125FP, V150, V200	1
V10153138	1" X 1 3/8" HANDLE OFFSET	V100FP, V125	1
V20153138	2" X 1 3/8" HANDLE OFFSET	V125FP, V150, V200	10
V25153138	2" FP X 1 3/8" HANDLE OFFSET	V200FP	1
V10153138BL	1" X 1 3/8" BL HANDLE OFFSET	V100BL, MV100BL	1
V20153138BL	2" X 1 3/8" BL HANDLE OFFSET	V125BL, V150BL, MV200BL	10
V25153138BL	2" FP X 1 3/8" BL HANDLE OFFSET	V200BL, MV220BL	1

VALVE ACCESSORIES

FEATURES

- Stainless steel hardware
- Locks in open and closed positions
- Locking handle replaces standard handle (sold separately)
- Padlock not included



VALVE ACCESSORIES			
PART NO	DESCRIPTION	FITS VALVES	QTY
VL25153	LOCKING HANDLE	V200FP, V300, V300FP, V400, VFMT200FP	1
V25270	STRAIGHT MOUNTING BRACKET	V200FP, V300, V300FP, V400, VFMT200FP	1
V25271	90° MOUNTING BRACKET	V200FP, V300, V300FP, V400, VFMT200FP	1



2" STANDARD PORT STUBBY VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
VSF200	2" MALE ADAPTER X 2" FEMALE NPT	100	2"	1 1/2"	6	VS20152SH	VS20200
VSMT200	2" MALE NPT X 2" FEMALE NPT	100	2"	1 1/2"	6	VS20152SH	VS20200
VSFMT200	2" MALE ADAPTER X 2" MALE NPT	225	2"	1 1/2"	12	VS20152SH	VS20200
VSFHB200	2" MALE ADAPTER X 2" HOSE BARB	100	2"	1 1/2"	6	VS20152SH	VS20200

2" STANDARD PORT STUBBY BALL VALVES

FEATURES

- Stainless steel bolts
- Glass reinforced polypropylene
- Multiple design options
- Unique patented compact design
- Lightweight
- All PTFE seals

2" FP STUBBY STAINLESS STEEL VALVE

FEATURES

- PTFE seals, no elastomers
- Self-aligning ball moves freely against the PTFE seats for smooth operation. The valve opens and closes with very little pressure on the handle
- PTFE self-lubricating stem bushings and seats cannot stick or bind



2" FULL PORT STUBBY STAINLESS STEEL VALVE							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	REPLACEMENT HANDLE	REPAIR KIT
VSFMT220SS	2" FULL PORT STUBBY SS VALVE MALE THREAD X MALE ADAPTER	225	2"	2"	1	VSS20153	VSS25200

# VALVES

## 2" FULL PORT STUBBY BALL VALVES

### FEATURES

- Stainless steel bolts
- 100% PTFE ball seats
- Glass reinforced polypropylene
- Unique patented compact design
- Lightweight
- FKM body seals

### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring



VSMT204FP



VSF204FP



VS204FP



VSFMT204FP



VSFMT204HSFP

### 2" FULL PORT STUBBY VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
VSMT204FP	2" MALE NPT X 2" FEMALE NPT	200	2"	2"	6	VS25153	VS25200
VSF204FP	2" MALE ADAPTER X 2" FEMALE NPT	100	2"	2"	6	VS25153	VS25200
VS204FP	2" FEMALE NPT X 2" FEMALE NPT	225	2"	2"	6	VS25153	VS25200
VSFMT204FP	2" MALE ADAPTER X 2" MALE NPT	150	2"	2"	6	VS25153	VS25200
VSFMT204HSFP	2" FP MALE ADAPTER X 2" MALE NPT W/ SS BALL, STEM & HANDLE	150	2"	2"	6	N/A	VSSH25200



VSF300



VSMT300



VSFMT300

### 3" STANDARD PORT STUBBY VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE STRAIGHT	REPLACEMENT HANDLE SHORT	REPAIR KIT
VSF300	3" FEMALE NPT X 3" MALE ADAPTER	100	3"	2½"	6/BOX	V25153	V25153SH	VS30200
VSMT300	3" FEMALE NPT X 3" MALE NPT	100	3"	2½"	6/BOX	V25153	V25153SH	VS30200
VSFMT300	3" MALE NPT X 3" MALE ADAPTER	225	3"	2½"	6/BOX	V25153	V25153SH	VS30200



VSFMT300FP



VSFMT300HSFP

### 3" FULL PORT STUBBY VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
VSFMT300FP	3" FULL PORT MALE ADAPTER X 3" MALE NPT	100	3"	3"	6/BOX	V25153	VS35200
VSFMT300HSFP	3" FULL PORT MALE ADAPTER X 3" MALE NPT W/SS BALL, STEM & HANDLE	100	3"	3"	6/BOX	VS30153SS	N/A

## 3" STANDARD PORT STUBBY BALL VALVES

### FEATURES

- Stainless steel bolts
- Glass reinforced polypropylene
- FKM body seals
- Unique patented compact design
- Lightweight
- All PTFE seats
- Note: If repair kits not listed, components available.

## 3" FULL PORT STUBBY BALL VALVES

### FEATURES

- Stainless steel bolts
- Glass reinforced polypropylene
- FKM body seals
- Unique patented compact design
- Lightweight
- All PTFE ball seats
- Note: If repair kits not listed, components available.



## 3 WAY BOTTOM LOAD BALL VALVES

### FEATURES

- Stainless steel bolts
- Precision molded in fiberglass reinforced polypropylene for additional strength
- Self-aligning ball moves freely against the PTFE seats for smooth operation
- Ball is diamond turned after molding to make it spherically perfect, which provides precise contact between ball and seats
- PTFE self-lubricating stem bushings and seats
- FKM body seals
- Directional flow, right or left. Valve can be turned off to stop flow



3 WAY BOTTOM LOAD VALVES								
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	HANDLE TYPE	REPLACEMENT HANDLE	REPAIR KIT
V075BL	3/4" 3-WAY BOTTOM LOAD VALVE	200	3/4"	1"	6	T	V10353TB	N/A
V100BL	1" FP 3-WAY BOTTOM LOAD VALVE	225	1"	1"	6	T	V10353TB	N/A
V125BL	1 1/4" 3-WAY BOTTOM LOAD VALVE	300	1 1/4"	1 1/2"	6	T	V20353TB	N/A
V150BL	1 1/2" FP 3-WAY BOTTOM LOAD VALVE	225	1 1/2"	1 1/2"	6	T	V20353TB	N/A
V200BL	2" FP 3-WAY BOTTOM LOAD VALVE	200	2"	2"	8/BOX	STRAIGHT	V25353B	V25200BL

## 3 WAY SIDE LOAD BALL VALVES

### FEATURES

- Stainless steel bolts
- Precision molded in fiberglass reinforced polypropylene for additional strength
- Self-aligning ball moves freely against the PTFE seats for smooth operation
- Ball is diamond turned after molding to make it spherically perfect, which provides precise contact between ball and seats
- PTFE self-lubricating stem bushings and seats
- FKM body seals
- Directional flow, right or left. Valve cannot be turned off to stop flow



3 WAY SIDE LOAD VALVES								
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	HANDLE TYPE	REPLACEMENT HANDLE	REPAIR KIT
V075SL	3/4" 3-WAY SIDE LOAD VALVE	200	3/4"	1"	6	STRAIGHT	V10153A	N/A
V100SL	1" FP 3-WAY SIDE LOAD VALVE	200	1"	1"	6	STRAIGHT	V10153A	N/A
V125SL	1 1/4" 3-WAY SIDE LOAD VALVE	300	1 1/4"	1 1/2"	6	T	V20353TS	N/A
V150SL	1 1/2" FP 3-WAY SIDE LOAD VALVE	225	1 1/2"	1 1/2"	6	T	V20353TS	N/A
V200SL	2" FP 3-WAY SIDE LOAD VALVE	225	2"	2"	8/BOX	STRAIGHT	V25153SH	V25200BL

## 1 1/2" - 2" NOZZLE VALVES

### FEATURES

- Lightweight hose end valve for convenient transfer of liquids into drums, tanks etc
- Angled end flange with 8" long polypropylene fill spout
- All stainless steel bolts



1 1/2"-2" NOZZLE VALVES									
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	FEMALE NPT	LOT QTY	REPLACEMENT HANDLE	REPLACEMENT NOZZLE	REPAIR KIT
VA150	1 1/2" NOZZLE VALVE WITH 90° ELBOW	225	1 1/2" x 8"	1 1/2"	1 1/2"	6	V20152	V20166	V20200
VA200	2" NOZZLE VALVE WITH 90° ELBOW	200	2" x 8"	1 1/2"	2"	6	V20152	V25156	V20200
VA200/150	2" FEMALE NPT X 1 1/2" NOZZLE	200		1 1/2"	1 1/2"	1	V20152	V25156	V20200
VA200FP	2" FP NOZZLE VALVE WITH 90° ELBOW	225	2" x 8"	2"	2"	6/BOX	V25152	V25156	V25200

## 1" DISPENSING NOZZLES

### FEATURES

- Glass reinforced polypropylene
- 304 stainless steel handle, spring and pin
- FKM rubber parts only
- Resists corrosion



1" DISPENSING NOZZLE					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	QTY	REPAIR KIT
VN100	1" DISPENSING NOZZLE	150	1"	1	VN10200
V10161	1" NOZZLE PIPE FOR USE WITH V100, V100FP, UV100FP, SUV100FP	150	1"	1	N/A

# VALVES

## 1/2" - 2" SINGLE UNION SPINWELD VALVES

### FEATURES

- Precision molded in glass reinforced polypropylene for strength and chemical resistance
- PTFE seats for smooth and proper sealing characteristics
- EPDM O-rings to handle most fertilizers and many chemicals
- Double O-rings in stem area for extra sealing protection
- Interlocking body and end plate to allow easy thread connection when installing valves
- Replacement parts not available



SUV125FP

MSUV100FP

### 1/2"-2" SINGLE UNION SPINWELD VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY
SUV050FP	1/2" FULL PORT SINGLE UNION SPINWELD VALVE	300	1/2"	1/2"	10
SUV075FP	3/4" FULL PORT SINGLE UNION SPINWELD VALVE	300	3/4"	3/4"	10
SUV100FP	1" FULL PORT SINGLE UNION SPINWELD VALVE	300	1"	1"	10
SUV125FP	1 1/4" FULL PORT SINGLE UNION SPINWELD VALVE	300	1 1/4"	1 1/4"	10
SUV150FP	1 1/2" FULL PORT SINGLE UNION SPINWELD VALVE	300	1 1/2"	1 1/2"	10
SUV200FP	2" FULL PORT SINGLE UNION SPINWELD VALVE	200	2"	2"	10
MSUV100FP	1" MANIFOLD FULL PORT SINGLE UNION SPINWELD VALVE	300	1"	1"	10

## 1/2" - 2" SINGLE UNION VALVES

### FEATURES

- Precision molded in glass reinforced polypropylene for strength and chemical resistance
- PTFE seats for smooth and proper sealing characteristics
- Double O-rings in stem area for extra sealing protection
- Interlocking body and end plate to allow easy thread connection when installing valves
- Replacement parts not available



### 1/2"-2" SINGLE UNION VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY
UV050FP	1/2" FULL PORT SINGLE UNION VALVE	300	1/2"	3/4"	10
UV075FP	3/4" FULL PORT SINGLE UNION VALVE	300	3/4"	3/4"	10
UV100FP	1" FULL PORT SINGLE UNION VALVE	300	1"	1"	10
UV125FP	1 1/4" FULL PORT SINGLE UNION VALVE	225	1 1/4"	1 1/4"	10
UV150FP	1 1/2" FULL PORT SINGLE UNION VALVE	200	1 1/2"	1 1/2"	10
UV200FP	2" FULL PORT SINGLE UNION VALVE	300	2"	2"	10

## 1/2" - 3" CHECK VALVES

### FEATURES

- One piece construction
- Glass reinforced polypropylene
- 316 stainless steel springs
- EPDM gasket



### 1/2"-3" CHECK VALVES

PART NO	DESCRIPTION	CRACKING PRESSURE PSI	MAX PSI	PIPE SIZE	LOT QTY
CV050	1/2" CHECK VALVE	6-7	300	1/2"	10
CV100	1" CHECK VALVE	1	300	1"	10
CV100MT	1" MALE X FEMALE NPT CHECK VALVE	1	300	1"	10
CV100V	1" FEMALE X FEMALE NPT CHECK	1	300	1"	1
CV221	2" FULL PORT CHECK VALVE	>0.5	300	2"	10
CV300	3" FULL PORT CHECK VALVE	1.5	300	3"	1
CV301	3" FULL PORT CHECK VALVE	>0.5	300	3"	1



### 1/4"-3" STAINLESS STEEL FULL PORT VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	REPAIR KIT	REPLACEMENT HANDLE
VSS025	1/4" SS FULL PORT VALVE	1000	1/4"	1/4"	1	VSS02500	VSS05153
VSS038	3/8" SS FULL PORT VALVE	1000	3/8"	3/8"	1	VSS02500	VSS05153
VSS050	1/2" SS FULL PORT VALVE	1000	1/2"	1/2"	1	VSS05200	VSS05153
VSS075	3/4" SS FULL PORT VALVE	1000	3/4"	3/4"	1	VSS07200	VSS07153
VSS100	1" SS FULL PORT VALVE	1000	1"	1"	1	VSS10200	VSS10153
VSS150	1 1/2" SS FULL PORT VALVE	1000	1 1/2"	1 1/2"	1	VSS15200	N/A
VSS200	2" SS FULL PORT VALVE	1000	2"	2"	1	VSS25200	VSS20153
VSS300	3" SS FULL PORT VALVE	1000	3"	3"	1	VSS35200	N/A

## 1/4" - 3" STAINLESS STEEL FULL PORT VALVES

- 316 stainless steel
- Blow out proof stem
- All valves 100% tested by air, under water at 100 PSI in open and closed positions
- Latch locking handle performs in both open and closed positions
- Mounting pad
- PTFE seals and seats

## 3/4" - 1" PINCH VALVES

- Open position allows full unobstructed flow of 50-60 GPM
- Air pressure collapses the internal rubber sleeve to provide positive shut off
- Standard EPDM rubber bladder seal and FKM available
- Female NPT threads
- ATTENTION: Normally an open valve and has a maximum liquid pressure of 70 PSI. Pressure differential = pressure it takes to close valve



### 3/4"-1" PINCH VALVES

PART NO	DESCRIPTION	GASKET	MAX PSI	PIPE SIZE	PRESSURE DIFFERENTIAL	LOT QTY
PV075	3/4" X 3/4" PINCH VALVE	EPDM	300	3/4"	15 TO 20 PSI	10
PV100	1" X 1" PINCH VALVE	EPDM	300	1"	15 TO 20 PSI	1
PV100-075	1" X 3/4" PINCH VALVE	EPDM	300	1" X 3/4"	15 TO 20 PSI	10
PV100-075V	1" X 3/4" PINCH VALVE	FKM	300	1" X 3/4"	15 TO 20 PSI	1
PV10265	BLADDER FOR PINCH VALVE	EPDM	N/A	N/A	N/A	1
PV10265V	BLADDER FOR PINCH VALVE	FKM	N/A	N/A	N/A	1



## SMALLER

- EVX 2" full port and 3" models are over 35% smaller than the average competitive valve. The 1½", 2" full port and 3" models are also substantially lighter than the average competitive valve.

## SMARTER

- EVX offers many protocol options for your needs:
  - On/Off
  - Regulating
  - Regulating with linear feedback
  - CAN/ISO BUS
  - Proportional control
- Diagnostic options for CANBUS
  - Voltage
  - Temperature
  - Cycle Count

## TOUGHER

- Setting the new standard for electric valve toughness, EVX passes 52 separate durability torture tests including mechanical shock, vibration, extreme temperature, rain/shine, operating pressure, and rigorous longevity tests.



**SMALLER / SMARTER / TOUGHER**

## ¾" - 1½" EVX SERIES

### FEATURES

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- ¾"-1¼" ON/OFF has ¼ sec response
- 1½" ON/OFF has ½ sec response
- Regulating has 4 sec response
- Open/Close verification wires available
- IP68 waterproof
- 0 to 150F (-18 to 65C) operating
- 67 to 221F (-55 to 105C) storage
- On/Off Actuator rated to 500,000 cycles
- Regulating Actuator rated to 250,000 cycles
- Valve rated to 50,000 cycles leak-free
- Bolted valves have the same exact dimensions as our legacy EV valves.
- Additional protocols available including CAN/ISO BUS

### MATERIALS

- 316 stainless steel ball & stem
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- PTFE seats
- FKM stem seals

### ON/OFF

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open)  
0VDC (Close)

### 4 WIRE REGULATING

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)



### ¾" - 1½" EVX ON/OFF BOLTED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
EVX071	¾" FULL PORT ELECTRIC VALVE	300	¾"	1"	1	VP20153SH	EVX10200
EVX101	1" FULL PORT ELECTRIC VALVE	300	1"	1"	1	VP20153SH	EVX10200
EVX121	1¼" STANDARD PORT ELECTRIC VALVE	300	1¼"	1"	1	VP20153SH	EVX10200
EVX151	1½" FULL PORT ELECTRIC VALVE	250	1½"	1½"	1	VP20153SH	EVX20200

### ¾" - 1½" EVX REGULATING BOLTED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
EVXR071	¾" FULL PORT ELECTRIC VALVE	300	¾"	1"	1	VP20153SH	EVX10200
EVXR101	1" FULL PORT ELECTRIC VALVE	300	1"	1"	1	VP20153SH	EVX10200
EVXR151	1½" FULL PORT ELECTRIC VALVE	250	1½"	1½"	1	VP20153SH	EVX20200

## 2" EVX SERIES

### FEATURES

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- ON/OFF has 1½ second response
- Regulating has 4 second response
- Open/Close verification wires available
- IP68 waterproof
- -0 to 150F (-18 to 65C) operating
- -67 to 221F (-55 to 105C) storage
- On/Off Actuator rated to 500,000 cycles
- Regulating Actuator rated to 250,000 cycles
- Valve rated to 50,000 cycles leak-free
- Bolted valves have the same exact dimensions as our legacy EV valves.
- Additional protocols available including CAN/ISO BUS

### MATERIALS

- 316 stainless steel ball & stem
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- PTFE seats
- FKM stem seals

### ON/OFF

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open)  
0VDC (Close)

### 4 WIRE REGULATING

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)



2" EVX ON/OFF BOLTED ELECTRIC VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
EVX201	2" STANDARD PORT ELECTRIC VALVE	250	2"	1½"	1	VP20153	EVX20200
EVX221	2" FULL PORT ELECTRIC VALVE	125	2"	2"	1	VP20153	EVX25200

2" EVX REGULATING BOLTED ELECTRIC VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
EVXR201	2" STANDARD PORT ELECTRIC VALVE	250	2"	1½"	1	VP20153	EVX20200
EVXR221	2" FULL PORT ELECTRIC VALVE	125	2"	2"	1	VP20153	EVX25200



3" EVX ON/OFF ELECTRIC VALVES						
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT
EVX300	3" FULL PORT ELECTRIC VALVE	125	3"	3"	1	VP30153

3" EVX REGULATING ELECTRIC VALVES						
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT
EVXR300	3" FULL PORT ELECTRIC VALVE	125	3"	3"	1	VP30153

## 3" EVX SERIES

### FEATURES

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- ON/OFF has 4 second response
- Regulating has 4 second response
- Open / Close verification available
- IP68 waterproof
- -0 to 150F (-18 to 65C) operating
- -67 to 221F (-55 to 105C) storage
- Actuator rated to 250,000 cycles
- Valve rated to 50,000 cycles leak-free
- Additional protocols available including CAN/ISO BUS

### MATERIALS

- 316 stainless steel ball & stem
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- Zinc alloy lower actuator housing
- PTFE seats
- FKM stem seals

### ON/OFF

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open)  
0VDC (Close)

### 4 WIRE REGULATING

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)

## 3/4" - 2" EVX SERIES BOTTOM & SIDE LOAD VALVES

### FEATURES

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- 1" & 1 1/4" ON/OFF has 3/4 second response
- 1 1/2" & 2" ON/OFF has 1 1/2" second response
- Open / Close verification available
- IP68 waterproof
- -0 to 150F (-18 to 65C) operating
- -67 to 221F (-55 to 105C) storage
- On/Off Actuator rated to 500,000 cycles
- Valve rated to 50,000 cycles leak-free
- These bolted valves have the exact same dimensions as our legacy EV valves.
- Additional protocols available including CAN/ISO BUS

### MATERIALS

- 316 stainless steel ball & stem
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- PTFE seats
- FKM stem seals

### ON/OFF

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open)  
0VDC (Close)

### 4 WIRE REGULATING

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)



### 3/4"-2" EVX BOLTED BOTTOM LOAD ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
EVX075BL	3/4" FULL PORT BOTTOM LOAD ELECTRIC VALVE	300	3/4"	1"	1	VP20153SH	EVX10200
EVX100BL	1" FULL PORT BOTTOM LOAD ELECTRIC VALVE	300	1"	1"	1	VP20153SH	EVX10200
EVX125BL	1 1/4" FULL PORT SIDE LOAD ELECTRIC VALVE	250	1 1/4"	1"	1	VP20153SH	EVX10200
EVX150BL	1 1/2" FULL PORT SIDE LOAD ELECTRIC VALVE	250	1 1/2"	1 1/2"	1	VP20153SH	EVX20200
EVX200BL	2" STANDARD PORT BOTTOM LOAD ELECTRIC VALVE	250	2"	1 1/2"	1	VP20153	EVX20200
EVX220BL	2" FULL PORT BOTTOM LOAD ELECTRIC VALVE	125	2"	2"	1	VP20153	EVX25200

### 3/4"-2" EVX BOLTED SIDE LOAD ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
EVX075SL	3/4" FULL PORT SIDE LOAD ELECTRIC VALVE	300	3/4"	1"	1	VP20153SH	EVX10200
EVX100SL	1" FULL PORT SIDE LOAD ELECTRIC VALVE	300	1"	1"	1	VP20153SH	EVX10200
EVX125SL	1 1/4" FULL PORT SIDE LOAD ELECTRIC VALVE	250	1 1/4"	1"	1	VP20153SH	EVX10200
EVX150SL	1 1/2" FULL PORT SIDE LOAD ELECTRIC VALVE	250	1 1/2"	1 1/2"	1	VP20153SH	EVX20200
EVX200SL	2" STANDARD PORT SIDE LOAD ELECTRIC VALVE	250	2"	1 1/2"	1	VP20153	EVX20200
EVX220SL	2" FULL PORT SIDE LOAD ELECTRIC VALVE	125	2"	2"	1	VP20153	EVX25200

## 3/8" - 1/2" LEV SERIES

### FEATURES

- 12 Volt DC
- Stationary current draw: less than 0.04 amps
- Rotating current draw: less than 0.40 amps
- Stall current: 0.75 amps
- Response time: 1/3 second open to close
- TFM seats
- EPDM seals
- Fiberglass reinforced polypropylene
- Integrated 1/2" mounting slot
- Standard 3 wire configuration



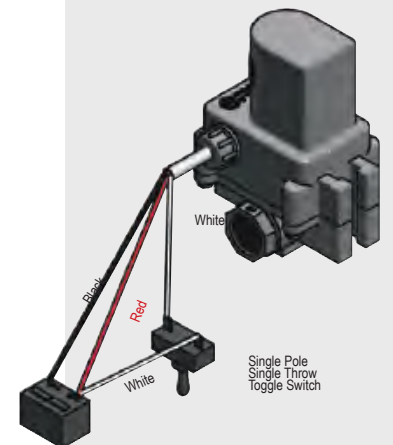
### 3/8"-1/2" ON/OFF ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
LEV038	3/8" FULL PORT ELECTRIC VALVE	300	3/8"	3/8"	1
LEV050	1/2" ELECTRIC VALVE	300	1/2"	15/32"	1



### 3/8" ELECTRIC VALVES W/ PUSH LOCK

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
LEV038PL	3/8" FULL PORT ELECTRIC VALVE W/ PUSH LOCK	150	3/8"	3/8"	1



Battery  
(12 VDC)



## FEATURES

- Waterproof, rated NEMA 6P and IP68M
- LED device diagnostics on EH8 and EH9
- Durable, glass filled nylon housing
- Ignition safe, rated NEMA 7D
- 316 stainless steel stem with EPDM O-rings and PTFE packing
- Conxall, WeatherPak and Deutsch connections available
- CF8M stainless steel valve body



### KZVALVE CONXALL ELECTRICAL CONNECTION DESIGNED TO FIT RAVEN SYSTEMS

PART NO	DESCRIPTION	SIZE	CONTROL TYPE	FEEDBACK	CYCLE TIME	CV	QTY
KZ-67D331AE9SC01	1/2" STANDARD PORT NH3 ELECTRIC VALVE, EH9	1/2"	ON/OFF	(+) @ OPEN	0.7 SEC	15	5
KZ-S8F331AE9SC01	1" FULL PORT NH3 ELECTRIC VALVE, EH9	1"	ON/OFF	(+) @ OPEN	0.7 SEC	68	5
KZ-S8F3320E8SC01	1" FULL PORT NH3 ELECTRIC VALVE, EH9	1"	FAST RATE	N/A	3.0 SEC	68	5
KZ-S8F22K0HU0CF1	1" FULL PORT NH3 ELECTRIC VALVE, EH2	1"	STANDARD RATE	N/A	8.0 SEC	68	5
KZ-67G2210DY0CF1	1 1/4" STANDARD PORT NH3 ELECTRIC VALVE, EH2	1 1/4"	ON/OFF	N/A	1.5 SEC	48	5
KZ-67G2220DY0CF1	1 1/4" STANDARD PORT NH3 ELECTRIC VALVE, EH2	1 1/4"	FAST RATE	N/A	1.5 SEC	48	5
KZ-67G22K0HU0CF1	1 1/4" STANDARD PORT NH3 ELECTRIC VALVE, EH2	1 1/4"	STANDARD RATE	N/A	8.0 SEC	48	5
KZ-67H2210DY0CF1	1 1/2" STANDARD PORT NH3 ELECTRIC VALVE, EH2	1 1/2"	ON/OFF	N/A	1.5 SEC	84	5
KZ-67H2220DY0CF1	1 1/2" STANDARD PORT NH3 ELECTRIC VALVE, EH2	1 1/2"	FAST RATE	N/A	1.5 SEC	84	5
KZ-67H22K0HU0CF1	1 1/2" STANDARD PORT NH3 ELECTRIC VALVE, EH2	1 1/2"	STANDARD RATE	N/A	8.0 SEC	84	5

### KZVALVE INTEGRATED DEUTSCH RECEPTACLE OR ELECTRICAL CONNECTION

PART NO	DESCRIPTION	SIZE	CONTROL TYPE	FEEDBACK	CYCLE TIME	CV	QTY
KZ-S8B281CEBSD01	1/4" STANDARD PORT NH3 ELECTRIC VALVE, EH8	1/4"	ON/OFF	(+) @ CLOSED	0.2 SEC	3.5	5
KZ-S8C281CEBSD01	3/8" STANDARD PORT NH3 ELECTRIC VALVE, EH8	3/8"	ON/OFF	(+) @ CLOSED	0.2 SEC	5.2	5
KZ-67D331CE9SD01	1/2" FULL PORT NH3 ELECTRIC VALVE, EH9	1/2"	ON/OFF	(+) @ CLOSED	0.7 SEC	15	5
KZ-S8F331CE9SD01	1" FULL PORT NH3 ELECTRIC VALVE, EH9	1"	ON/OFF	(+) @ CLOSED	0.7 SEC	68	5

### KZVALVE HARDWARE RETROFIT KITS

PART NO	DESCRIPTION	SIZE	CONTROL TYPE	QTY
KZ-KRKIT	RETROFIT KIT FOR 1 & 1 1/4" RAVEN VALVES	1 & 1 1/4"	HARDWARE ONLY	5
KZ-KR15KIT	RETROFIT KIT FOR 1 1/2" RAVEN VALVES	1 1/2"	HARDWARE ONLY	5

### KZVALVE ACTUATOR OPTIONS

PART NO	DESCRIPTION	CONTROL TYPE	FEEDBACK	CYCLE TIME	QTY
KZ-1AE9SC01	NH3 ACTUATOR, EH9	ON/OFF	N/A	0.7 SEC	5
KZ-10DY0CF1	NH3 ACTUATOR, EH9	ON/OFF	N/A	1.5 SEC	5
KZ-K0HU0CF1	NH3 ACTUATOR, EH2	STANDARD RATE	N/A	8.0 SEC	5
KZ-20E8SC01	NH3 ACTUATOR, EH9	FAST RATE	N/A	1.5 SEC	5
KZ-1CE9SD01	NH3 ACTUATOR, EH9	ON/OFF	N/A	0.7 SEC	5
KZ-20E7SD01	NH3 ACTUATOR, EH9	STANDARD RATE	N/A	3 SEC	5
KZ-20E8SD01	NH3 ACTUATOR, EH9	FAST RATE	N/A	1.7 SEC	5
KZ-20DY0CF1	NH3 ACTUATOR, EH2	FAST RATE	N/A	1.5 SEC	5



- Waterproof KZValve EH2 Actuator
- Conxall connector plug for Raven System
- Coupler
- Mounting bracket
- Fasteners
- Simple replacement instructions
- Note: These kits do not include valves.



## FEATURES

- Waterproof, rated NEMA 6P and IP68M
- LED device diagnostics
- Durable, glass filled nylon housing
- Ignition safe, rated NEMA 7D
- Low maintenance, reversible seat design
- Integrated Deutsch receptacle connection
- PVC ball
- PVC valve body



### KZVALVE VALVES

PART NO	DESCRIPTION	SIZE	OUTLET	PSI @ 70	CV	QTY
KZ-95D33	1/2" VALVE KIT	1/2"	FNPT/SOCKET WELD	250	8.0	5
KZ-95E33	3/4" VALVE KIT	3/4"	FNPT/SOCKET WELD	250	16.0	5
KZ-95F33	1" VALVE KIT	1"	FNPT/SOCKET WELD	250	29.0	5
KZ-95H39	1 1/2" VALVE KIT	1 1/2"	FNPT/SOCKET WELD	125	90.0	5
KZ-95I39	2" VALVE KIT	2"	FNPT/SOCKET WELD	125	150.0	5

### KZVALVE ACTUATED VALVES

PART NO	DESCRIPTION	SIZE	CONTROL TYPE	QTY
KZ-95D33-1CE9S-D0P	1 & 1/4" HARDWARE KIT FOR "KR" SERIES	1 & 1/4"	HARDWARE ONLY	5
KZ-95F33-1CE9S-D0P	1 1/2" HARDWARE KIT FOR "KR" SERIES	1 1/2"	HARDWARE ONLY	5

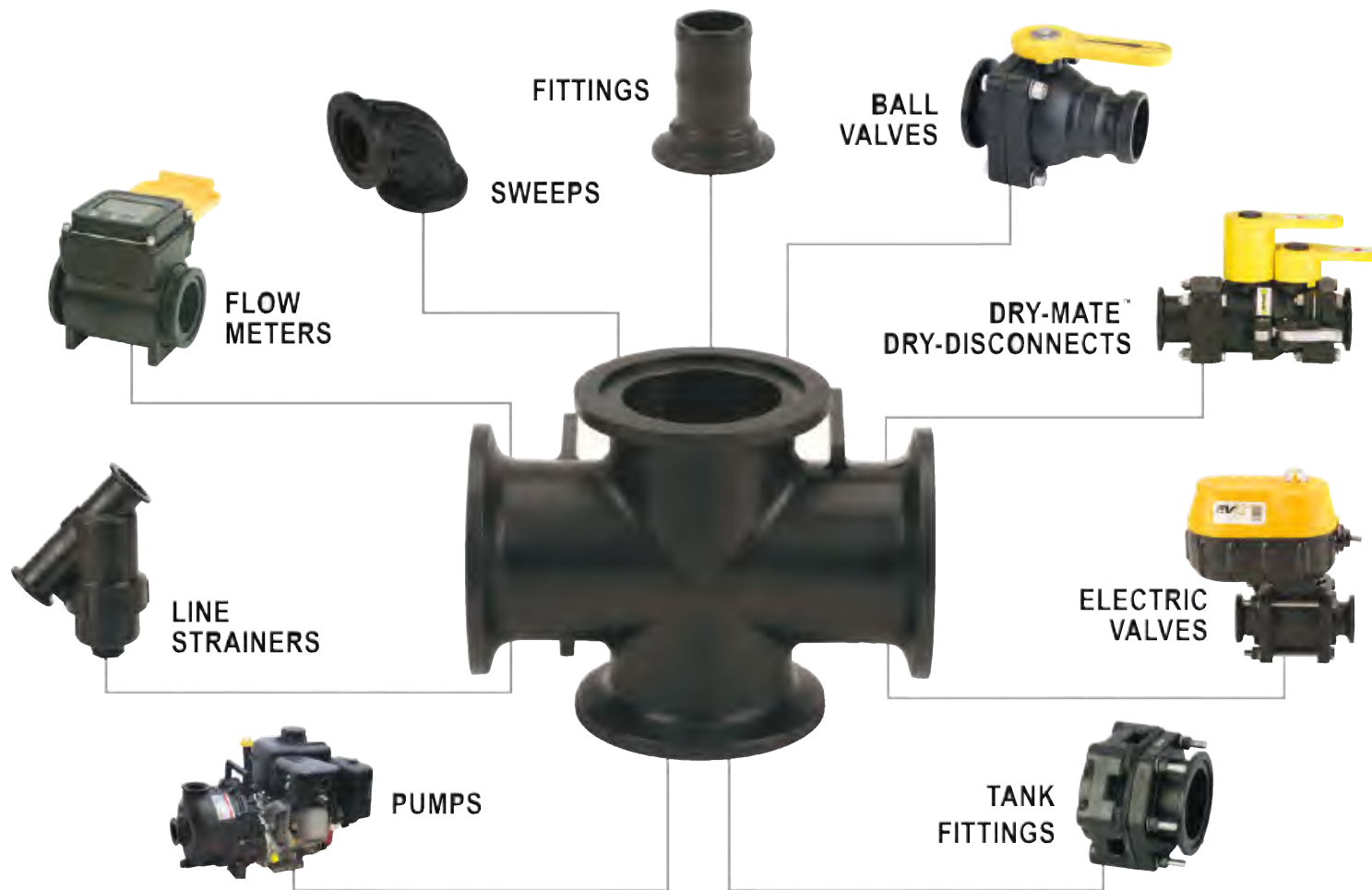
### KZVALVE ACTUATOR ONLY

PART NO	DESCRIPTION	SIZE	CONTROL TYPE	CYCLE TYPE	QTY
KZ-20E7S-D0P	EH9 ACTUATOR	N/A	POSITIONABLE	3.0 SEC	5
KZ-20E8S-D0P	EH9 ACTUATOR	N/A	POSITIONABLE	1.7 SEC	5
KZ-20E9S-D0P	EH9 ACTUATOR	N/A	POSITIONABLE	0.7 SEC	5
KZ-1CE7S-D0P	EH9 ACTUATOR	N/A	ON/OFF	3.0 SEC	5
KZ-1CE8S-D0P	EH9 ACTUATOR	N/A	ON/OFF	1.37 SEC	5
KZ-1CE9S-D0P	EH9 ACTUATOR	N/A	ON/OFF	0.7 SEC	5
KZ-L0E7S-D0P	EH9 ACTUATOR	N/A	CANBUS	3.0 SEC	5

Any technical questions regarding KZValve products, please call (800) 288-1112 (ask for sales)

NO THREADS. NO SWEAT.

FLANGE CONNECTIONS FOR EVERY PRODUCT



### ⚙️ SKIP THE TAPE AND SEALANT

Flange connections utilize clamps instead of threads, facilitating quick and easy assembly and disassembly while ensuring a leak-proof system. Threaded pipe needs tape or sealant, and the slightest imperfection in the pipe or seal can cause a leak. With properly installed flange connections, you won't worry about connection leaks or wait for sealant to cure.

### ⌚ SAVE TIME. SAVE MONEY.

Time spent unthreading systems and repairing leaks from faulty connections is unproductive and ultimately hits your pocketbook. Banjo's manifold flange systems get you back in the field and out of the shop in no time.

### ➔ GET RIGHT TO THE SOURCE

With Banjo manifold flange connections, the days of spending hours unhooking entire systems of valves and fittings are over. You can directly isolate and replace the problematic part or replumb sections without disassembling the whole system.



## 1" MEVX SERIES

### FEATURES

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- ON/OFF has 3/4 second response
- Regulating has 4 second response
- Open / Close verification available
- IP68 waterproof
- -0 to 150F (-18 to 65C) operating
- -67 to 221F (-55 to 105C) storage
- On/Off Actuator rated to 500,000 cycles
- Regulating Actuator rated to 250,000 cycles
- Valve rated to 50,000 cycles leak-free
- Bolted valves have the same exact dimensions as our legacy EV valves.
- Additional protocols available including CAN/ISO BUS

### MATERIALS

- 316 stainless steel ball & stem
- Poly ball available on bolted valves
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- PTFE seats
- FKM stem seals

### ON/OFF

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open) 0VDC (Close)

### 4 WIRE REGULATING

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)

### 1" MEVX ON/OFF WELDED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT
MEVX100	1" FULL PORT ELECTRIC VALVE	300	1"	1"	1	VP20153SH

### 1" MEVX REGULATING WELDED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT
MEVXR100	1" FULL PORT ELECTRIC VALVE	300	1"	1"	1	VP20153SH

### 1" MEVX ON/OFF BOLTED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
MEVX101	1" FULL PORT ELECTRIC VALVE	300	1"	1"	1	VP20153SH	EVX10200

### 1" MEVX REGULATING BOLTED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
MEVXR101	1" FULL PORT ELECTRIC VALVE	300	1"	1"	1	VP20153SH	EVX10200

## 2" MEVX SERIES

### FEATURES

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- ON/OFF has 1½ second response
- Regulating has 4 second response
- Open / Close verification available
- IP68 waterproof
- -0 to 150F (-18 to 65C) operating
- -67 to 221F (-55 to 105C) storage
- On/Off Actuator rated to 500,000 cycles
- Regulating Actuator rated to 250,000 cycles
- Valve rated to 50,000 cycles leak-free
- Bolted valves have the same exact dimensions as our legacy EV valves.
- Additional protocols available including CAN/ISO BUS

### MATERIALS

- 316 stainless steel ball & stem
- Poly ball available on bolted standard port valves
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- PTFE seats
- FKM stem seals

### ON/OFF

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open)  
OVDC (Close)

### 4 WIRE REGULATING

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)



### 2" MEVX ON/OFF WELDED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT
MEVX200	2" STANDARD PORT ELECTRIC VALVE	300	2"	1½"	1	VP20153
MEVX220	2" FULL PORT ELECTRIC VALVE	250	2"	2"	1	VP20153

### 2" MEVX REGULATING WELDED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT
MEVXR200	2" STANDARD PORT ELECTRIC VALVE	250	2"	1½"	1	VP20153
MEVXR220	2" FULL PORT ELECTRIC VALVE	250	2"	2"	1	VP20153

### 2" MEVX ON/OFF BOLTED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
MEVX201	2" STANDARD PORT ELECTRIC VALVE	250	2"	1½"	1	VP20153	EVX20200
MEVX221	2" FULL PORT ELECTRIC VALVE	125	2"	2"	1	VP20153	EVX25200



## 3" MEVX SERIES

### FEATURES

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- ON/OFF 3" has 4 second response
- Regulating 3" has 4 second response
- Open / Close verification available
- IP68 waterproof
- -0 to 150F (-18 to 65C) operating
- -67 to 221F (-55 to 105C) storage
- Actuator rated to 250,000 cycles
- Valve rated to 50,000 cycles leak-free
- Additional protocols available including CAN/ISO BUS

### MATERIALS

- 316 stainless steel ball & stem
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- Zinc alloy lower actuator housing
- PTFE seats
- FKM stem seals

### ON/OFF

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open)  
OVDC (Close)

### 4 WIRE REGULATING

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)

### 3" MEVX ON/OFF ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
MEVX300	3" FULL PORT ELECTRIC VALVE	125	3"	3"	1

### 3" MEVX REGULATING ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
MEVXR300	3" FULL PORT ELECTRIC VALVE	125	3"	3"	1



# MANIFOLD FLANGE CONNECTIONS

## 1"- 3" MEVX SERIES BOTTOM & SIDE LOAD VALVES

### FEATURES

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- ON/OFF 1" has 3/4 second response
- ON/OFF 2" has 1 1/2 second response
- ON/OFF 3" has 4 second response
- Open / Close verification available
- IP68 waterproof
- -0 to 150F (-18 to 65C) operating
- -67 to 221F (-55 to 105C) storage
- 1"-2" On/Off Actuator rated to 500,000 cycles
- 3" On/Off & Regulating Actuator rated to 250,000 cycles
- Valve rated to 50,000 cycles leak-free
- Additional protocols available including CAN/ISO BUS

### MATERIALS

- 316 stainless steel ball & stem
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- Zinc alloy lower actuator housing (3" only)
- PTFE seats
- FKM stem seals

### ON/OFF

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open)  
0VDC (Close)

### 4 WIRE REGULATING

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)



### 1"-3" MEVX BOTTOM LOAD ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
MEVX100BL	1" FULL PORT MANIFOLD BOTTOM LOAD ELECTRIC VALVE	300	1"	1"	1	VP20153SH	EVX10200
MEVX200BL	2" STANDARD PORT MANIFOLD BOTTOM LOAD ELECTRIC VALVE	250	2"	1 1/2"	1	VP20153	EVX20200
MEVX220BL	2" FULL PORT MANIFOLD BOTTOM LOAD ELECTRIC VALVE	125	2"	2"	1	VP20153	EVX25200
MEVX300BL	3" FULL PORT MANIFOLD BOTTOM LOAD ELECTRIC VALVE	125	3"	3"	1	VP30153	EVX30200

### 1"-2" MEVX SIDE LOAD ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
MEVX100SL	1" FULL PORT MANIFOLD SIDE LOAD ELECTRIC VALVE	300	1"	1"	1	VP20153SH	EVX10200
MEVX200SL	2" STANDARD PORT MANIFOLD SIDE LOAD ELECTRIC VALVE	250	2"	1 1/2"	1	VP20153	EVX20200
MEVX220SL	2" FULL PORT MANIFOLD SIDE LOAD ELECTRIC VALVE	125	2"	2"	1	VP20153	EVX25200

### 1"-2" MEVX SIDE LOAD REGULATING ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	OPTIONAL HANDLE KIT	REPAIR KIT
MEVXR100SL	1" FULL PORT MANIFOLD SIDE LOAD ELECTRIC VALVE	300	1"	1"	1	VP20153SH	EVX10200
MEVXR200SL	2" STANDARD PORT MANIFOLD SIDE LOAD ELECTRIC VALVE	250	2"	1 1/2"	1	VP20153	EVX20200
MEVXR220SL	2" FULL PORT MANIFOLD SIDE LOAD ELECTRIC VALVE	125	2"	2"	1	VP20153	EVX25200

# MANIFOLD FLANGE CONNECTIONS

## MEVX BANKED VALVES

### FEATURES

- Valve sizes 1"-2" SP
- Number of valves from two to five bank
- Welded or bolted valves available
- Bolted valves have the same exact dimensions as our legacy EV valves.
- Additional protocols available including CAN/ISO BUS



### MEVX ON/OFF WELDED BANKED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
MEVX102	1" FULL PORT 2 BANK ELECTRIC VALVE	300	1"	1"	1
MEVX103	1" FULL PORT 3 BANK ELECTRIC VALVE	300	1"	1"	1

### MEVX ON/OFF BOLTED BANKED ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
MEVX1012	1" FULL PORT 2 BANK ELECTRIC VALVE	300	1"	1"	1
MEVX1013	1" FULL PORT 3 BANK ELECTRIC VALVE	300	1"	1"	1
MEVX1014	1" FULL PORT 4 BANK ELECTRIC VALVE	300	1"	1"	1
MEVX2013	2" STANDARD PORT ELECTRIC VALVE	300	2"	2"	1



### 1" ON/OFF ELECTRIC VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
MLEV100	1" MANIFOLD ELECTRIC VALVE	300	1"	1/2"	1
MLEV100A	1" MANIFOLD ELECTRIC VALVE WITH HIGHER TORQUE MOTOR, SS BALL	300	1"	1/2"	1
MLEV100C	1" MANIFOLD ELECTRIC VALVE WITH HIGHER TORQUE MOTOR, SS BALL, 3 WIRE	300	1"	1/2"	1

## 1" LEV ELECTRIC MANIFOLD VALVE

### FEATURES

- TFM seats & EPDM seals
- 12-volt DC operated
- Internally fused/automatic reset
- Stationary current draw: less than 0.04 amps
- Rotating current draw: less than 0.40 amps
- Stall current: 0.75 amps
- 1/3 second response time
- Integrated mounting slot
- 3 wire configuration
- Higher torque motor to power through thick liquids and demanding applications. (MLEV100A)
- Reinforced nylon stem more than triples the strength of the standard 1" LEV. (MLEV100A)

### ON/OFF

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open)  
0VDC (Close)

## 1" - 3" 4 & 6 BOLTED VALVES

### FEATURES

- FKM seals.
- Precision molded polypropylene is reinforced with fiberglass for additional strength
- Self-aligning ball moves freely against the PTFE seats for smooth operation. The valve opens and closes with very little pressure on the handle
- Ball is diamond turned, after molding, to make it spherically perfect, which provides precise contact between ball and seats.
- PTFE self-lubricating stem bushings and seats cannot stick or bind
- Stainless steel bolts

### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring



MANIFOLD 4 & 6 BOLTED VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
MV100CF	1" FULL PORT MANIFOLD VALVE	300	1"	1"	12	V10153A	V10200
MV200CF	2" STANDARD PORT MANIFOLD VALVE	225	2"	1½"	12/BOX	V20200	V20200
MV220CF	2" FULL PORT MANIFOLD VALVE	300	2"	2"	8/BOX	V25153	V25200
MV300	3" STANDARD PORT MANIFOLD VALVE	150	3"	2½"	6/BOX	V25153	V30200
MV300CF	3" FULL PORT MANIFOLD VALVE	200	3"	3"	6/BOX	V25153	V35200

## 2" BOLTED 5 WAY VALVE

### FEATURES

- FKM seals
- Precision molded polypropylene is reinforced with fiberglass for additional strength
- Self-aligning ball moves freely against the PTFE seats for smooth operation. The valve opens and closes with very little pressure on the handle
- Ball is diamond turned, after molding, to make it spherically perfect, which provides precise contact between ball and seats.
- PTFE self-lubricating stem bushings and seats cannot stick or bind
- Stainless steel bolts



MANIFOLD BOLTED 5 WAY VALVE						
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	
MV225CF	2" FULL PORT MANIFOLD 5 WAY VALVE	100	2"	2"	1	

## 2" STUBBY VALVES

### FEATURES

- Precision molded polypropylene is reinforced with fiberglass for additional strength.
- Self-aligning ball moves freely against the PTFE seats for smooth operation. The valve opens and closes with very little pressure on the handle.
- Ball is diamond turned, after molding, to make it spherically perfect, which provides precise contact between ball and seats.
- PTFE self-lubricating stem bushings and seats cannot stick or bind.
- Stainless steel bolts.
- Standard port size has TFE seals and Full Port size has FKM seals



2" MANIFOLD STUBBY VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
VSMT200CF	2" STANDARD PORT MANIFOLD VALVE FLANGE X MALE NPT W/TFE SEALS	150	2"	1½"	6	VS20152SH	N/A
VSF200CF	2" STANDARD PORT MANIFOLD VALVE FLANGE X MALE ADAPTER W/TFE SEALS	100	2"	1½"	6	VS20152SH	N/A
MVS220FP	2" FULL PORT MANIFOLD VALVE FLANGE X FEMALE NPT W/FKM SEALS	300	2"	2"	6	VS25153	VS25200
MVSF220FP	2" FULL PORT MANIFOLD VALVE FLANGE X MALE ADAPTER W/FKM SEALS	150	2"	2"	9	VS25153	VS25200
MVS220CF	2" FULL PORT MANIFOLD VALVE FLANGE X FLANGE W/FKM SEALS	150	2"	2"	9	VS25153	VS25200
MVSMT220FP	2" FULL PORT MANIFOLD VALVE FLANGE X MALE NPT W/FKM SEALS	225	2"	2"	9	VS25153	VS25200

Note: N/A repair kits, components available.

## 3" STUBBY VALVES

### FEATURES

- FKM seals.
- Precision molded polypropylene is reinforced with fiberglass for additional strength.
- Self-aligning ball moves freely against the PTFE seats for smooth operation. The valve opens and closes with very little pressure on the handle.
- Ball is diamond turned, after molding, to make it spherically perfect, which provides precise contact between ball and seats.
- PTFE self-lubricating stem bushings and seats cannot stick or bind.
- Stainless steel bolts.



3" MANIFOLD STUBBY VALVES							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	REPLACEMENT HANDLE	REPAIR KIT
MVSF300	3" STANDARD PORT MANIFOLD VALVE FLANGE X MALE ADAPTER	100	3"	2½"	6/BOX	V25153	VS30200
MVSF300FP	3" FULL PORT MANIFOLD VALVE FLANGE X MALE ADAPTER	100	3"	3"	6/BOX	V25153	VS35200
MVSMT300	3" STANDARD PORT MANIFOLD VALVE FLANGE X MALE NPT	225	3"	2½"	4	V25153	VS30200
MVS300CF	3" STANDARD PORT MANIFOLD VALVE FLANGE X FLANGE	200	3"	2½"	6/BOX	V25153	VS30200
MVS300CFFP	3" FULL PORT MANIFOLD VALVE FLANGE X FLANGE	150	3"	3"	6/BOX	V25153	VS35200

## 3" FP STUBBY VALVES WITH STAINLESS STEEL

### FEATURES

- Precision molded polypropylene is reinforced with fiberglass for additional strength.
- Self-aligning ball moves freely against the PTFE seats for smooth operation. The valve opens and closes with very little pressure on the handle.
- Ball is diamond turned, after molding, to make it spherically perfect, which provides precise contact between ball and seats.
- Stainless steel bolts
- Compact design
- FKM seals



MVS300HSFP



MVSMT300HSFP

3" FULL PORT MANIFOLD STUBBY VALVES WITH SS							
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	REPLACEMENT HANDLE	
MVS300HSFP	3" FULL PORT MANIFOLD STUBBY VALVE FLANGE X FLANGE WITH SS BALL, STEM & HANDLE	100	3"	3"	1	VS30153SS	
MVSMT300HSFP	3" FULL PORT MANIFOLD STUBBY VALVE MALE NPT X FLANGE WITH SS BALL, STEM & HANDLE	200	3"	3"	1	VS30153SS	

## 3 WAY BOTTOM LOAD BALL VALVES

### FEATURES

- Stainless steel bolts
- Precision molded in fiberglass reinforced polypropylene for additional strength
- Self-aligning ball moves freely against the PTFE seats for smooth operation
- Ball is diamond turned after molding to make it spherically perfect, which provides precise contact between ball and seats
- PTFE self-lubricating stem bushings and seats
- FKM body seals
- Directional flow, right or left. Valve can be turned off to stop flow

### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring



3 WAY BOTTOM LOAD MANIFOLD VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	HANDLE TYPE	REPLACEMENT HANDLE	REPAIR KIT
MV100BL	1" FP 3-WAY BOTTOM LOAD MANIFOLD VALVE	300	1"	1"	6	T	V10353TB	N/A
MV200BL	2" SP 3-WAY BOTTOM LOAD MANIFOLD VALVE	225	2"	1½"	6	T	V20353TB	V15300SL
MV220BL	2" FP 3-WAY BOTTOM LOAD MANIFOLD VALVE	150	2"	2"	8/BOX	STRAIGHT	V25353B	V25200BL
MV300BL	3" FP 3-WAY BOTTOM LOAD MANIFOLD VALVE	150	3"	3"	4/BOX	STRAIGHT	V25353B	V35200BL

## PRESSURE SPIKE VALVES

### FEATURES

- FKM seals.
- Precision molded polypropylene is reinforced with fiberglass for additional strength.
- 360° orientation
- Preset pressure spring



MANIFOLD PRESSURE SPIKE VALVES

PART NO	DESCRIPTION	CRACKING PRESSURE	MAX PSI	QTY
MPRV100-050	1" X 1" MANIFOLD PRESSURE SPIKE VALVE	50	300	1
MPRV100-075	1" X 1" MANIFOLD PRESSURE SPIKE VALVE	75	300	1
MPRV100-100	1" X 1" MANIFOLD PRESSURE SPIKE VALVE	100	300	1
MPRV100-125	1" X 1" MANIFOLD PRESSURE SPIKE VALVE	125	300	1

## 3 WAY SIDE LOAD BALL VALVES

### FEATURES

- Stainless steel bolts
- Precision molded in fiberglass reinforced polypropylene for additional strength
- Self-aligning ball moves freely against the PTFE seats for smooth operation
- Ball is diamond turned after molding to make it spherically perfect, which provides precise contact between ball and seats
- PTFE self-lubricating stem bushings and seats
- FKM body seals
- Directional flow, right or left. Valve cannot be turned off to stop flow



3 WAY SIDE LOAD MANIFOLD VALVES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	LOT QTY	HANDLE TYPE	REPLACEMENT HANDLE	REPAIR KIT
MV100SL	1" FP 3-WAY SIDE LOAD MANIFOLD VALVE	300	1"	1"	6	T	V10353TB	N/A
MV200SL	2" SP 3-WAY SIDE LOAD MANIFOLD VALVE	225	2"	1½"	5	STRAIGHT	V20153SH	V15300SL
MV220SL	2" FP 3-WAY SIDE LOAD FULL PORT MANIFOLD VALVE	100	2"	2"	8/BOX	STRAIGHT	V25153SH	V25200BL

## DRY-MATE™ DRY-DISCONNECTS

### FEATURES

- Easy to use
- Minimal fluid spillage
- Reduces risk of exposure
- Wide range of chemical resistance
- When properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps.
- Spillage data: 2"=4ml, 3"=15ml

### REPAIR KIT INCLUDES:

- Face seal
- Ball
- Seats
- Body gasket
- Thrust bearings
- Stem bushings



MANIFOLD DRY DISCONNECTS

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY	REPLACEMENT HANDLE	REPAIR KIT
DM200ACF	2" MALE MANIFOLD DRY-MATE WITH FKM SEALS	100	2"	1½"	1	DM20153M	DM20200A
DM200DCF	2" FEMALE MANIFOLD DRY-MATE WITH FKM SEALS	100	2"	1½"	1	DM20153F	DM20200D
DM300ACF	3" MALE MANIFOLD DRY-MATE WITH FKM SEALS	150	3"	3"	1	DM35153M	DM35200
DM300DCF	3" FEMALE MANIFOLD DRY-MATE WITH FKM SEALS	150	3"	3"	1	DM35153F	DM35200

Note: Male and female sold separately

# MANIFOLD FLANGE CONNECTIONS

## BOOM NOZZLE PIPE ADAPTER

### FEATURES

- Eliminates having to thread pipe
- Quick and easy assembly
- No welding necessary
- 360° orientation



BOOM NOZZLE PIPE ADAPTER			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100PA	1" FLANGED PIPE ADAPTER	300	10
M100PAC	1" FLANGED PIPE ADAPTER CAP	300	1
M100PAT	1" FLANGED PIPE ADAPTER TEE	300	1

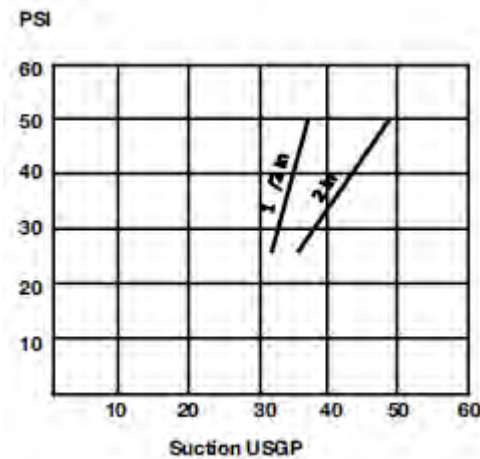
## INDUCTORS

### FEATURES

- Threaded or manifold ends
- Glass reinforced polypropylene
- Designed for use with a volume pump. Typical volumes (80-240 US GPM) and pressures (26-52 PSI) should be used to operate the inductor.



MANIFOLD INDUCTORS					
PART NO	DESCRIPTION	PRESSURE AT PUMP	VOLUME DRAW	OPENING SIZE	LOT QTY
HV200	2" MPT INDUCTOR	225	49 GPM	7/16"	1
MHV200	2" MANIFOLD INDUCTOR WITH 1/2" PORT	300	37 GPM	5/16"	1
MHV220A	2" FULL PORT MANIFOLD INDUCTOR	225	49 GPM	9/16"	5



**Note:** The inductor is designed for use with a volume pump. Typical volumes and pressures used to operate the venturi would be in the 80 to 240 US GPM range at pressures from 26 to 52 PSI.

# MANIFOLD FLANGE CONNECTIONS

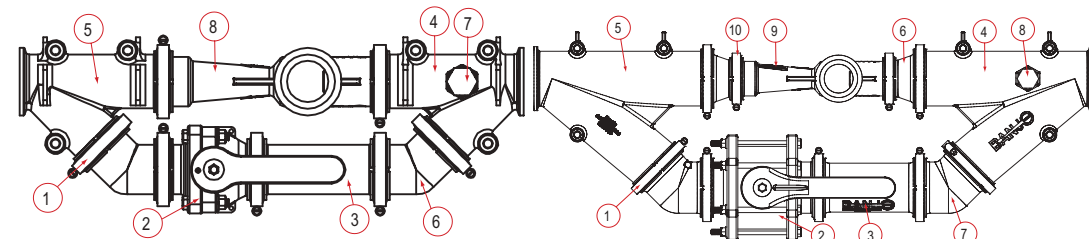
## INDUCTOR SYSTEMS

### FEATURES

- Installed after pump; suction completely empties inductor tank
- Keeps pump free of chemicals
- Easy assembly/installation with manifold connections found on pages 41-47.
- Choose your connections and valve
- Tank for illustration purposes only, not included



MANIFOLD INDUCTOR SYSTEMS			
PART NO	DESCRIPTION	MAX PSI	QTY
MIS220	2" FULL PORT MANIFOLD INDUCTOR SYSTEM FLANGE X FLANGE ASSEMBLED	225	1
MIS300	3" FULL PORT MANIFOLD INDUCTOR SYSTEM FLANGE X FLANGE ASSEMBLED	150	1



MANIFOLD INDUCTORS				MANIFOLD INDUCTORS			
ITEM	PART NO	DESCRIPTION	LOT QTY	ITEM	PART NO	DESCRIPTION	LOT QTY
1	FC220	220 SERIES WORM SCREW CLAMP	10/BAG	1	FC300	300 SERIES WORM SCREW CLAMP	10/BAG
2	MVS220CF	2" FP FLANGE X 2" FP FLANGE	9	2	MV301CF	3" FP FLANGE X 3" FP FLANGE	1
3	M220CPG6	2" X 2" FULL PORT FLANGE X 6"	5	3	M300CPG7	3" X 3" FULL PORT FLANGE X 7"	1
4	M220YG45	2" FULL PORT 45° Y FLANGE W/ 3/4" GAUGE PORT*	1	4	M300YG45	3" FULL PORT 45° Y FLANGE W/ 3/4" GAUGE PORT*	1
5	M220Y45	2" FULL PORT 45° Y FLANGE	5	5	M300Y45	3" FULL PORT 45° Y FLANGE	1
6	M220CPG45	2" FULL PORT 45° COUPLING	10/BAG	6	M300220CPG	3" X 2" FULL PORT REDUCER FLANGE	1
7	PLUG075	3/4" PIPE PLUG	10/BAG	7	M300CPG45	3" FULL PORT 45° COUPLING	1
8	MHV220A	2" FULL PORT POLY VENTURI	5	8	PLUG075	3/4" PIPE PLUG	10/BAG
9	MHV220A	2" FULL PORT POLY VENTURI	5	9	MHV220A	2" FULL PORT POLY VENTURI	5
10	FC220	220 SERIES WORM SCREW CLAMP	10/BAG	10	FC220	220 SERIES WORM SCREW CLAMP	10/BAG
N/S	M221G	2" FULL PORT EPDM MANIFOLD GASKET WITH RIB	30	N/S	M221G	2" FULL PORT EPDM MANIFOLD GASKET WITH RIB	30
N/S	M301G	3" EPDM MANIFOLD GASKET WITH RIB	50	N/S	M301G	3" EPDM MANIFOLD GASKET WITH RIB	50

## FLOW METERS

### FEATURES

- Displays overall total volume and batch total volume
- Flow rate allows for Gallons or Liters per minute
- The display reads 6 digits for rate, 8 digits for total and 1 decimal place reading in tenths
- Magnetic style meter with stainless steel electrodes
- Self calibrating meter
- Measures water and most conductive liquids
- Flow meters will not read petroleum based liquids
- Easy to change six (6) AA batteries
- No moving parts to fail during use
- Glass-reinforced polypropylene
- Temperature range from 0°F to 150°F
- ±1% of reading (between 10% and 100% of maximum flow)
- ±3% of reading (between cutoff and 10% of maximum flow)
- There are 3 photoeyes located on the face of the flow meter. These are not push buttons; to activate you must hold your finger over the photoeye for 2-4 seconds
- It is recommended to have at least 10X the diameter of straight pipe before and after the flow meter



MFM100



MFM220



MFM300

### FLOW METERS

PART NO	DESCRIPTION	MAX PSI	GPM	QTY
MFM100	1" FULL PORT MANIFOLD FLOW METER	200	110 GPM	1
MFM220	2" FULL PORT MANIFOLD FLOW METER	200	300 GPM	1
MFM300	3" FULL PORT FLOW METER	200	670 GPM	1



M100125BRBSSWP90



M100BRBSSWP90



M100BRBSSWPG90



M100SWP90



M100SWPG90



M200SWP90



M220200SWP90



M220ASWP90



M220BRBSSWP90



M220MPTSWP90



M220SWP90



M220SWPG90



M300ASWP90



M300BRBSSWP90



M300MPTSWP90



M300SWP90



M300SWPG90



M300220SWP90

### SWEEPS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100125BRBSSWP90	1" FLANGE X 1 1/4" HOSE BARB SWEEP	300	10/BAG
M100BRBSSWP90	1" FLANGE X HOSE BARB SWEEP	300	10/BAG
M100BRBSSWPG90	1" FULL PORT FLANGE X 1" HOSE BARB SWEEP W/ 1/4" GAUGE PORT	300	10/BAG
M100SWP90	1" FLANGE X FLANGE SWEEP	300	10/BAG
M100SWPG90	1" FLANGE X FLANGE SWEEP W/ 1/4" GAUGE PORT	300	10/BAG
M200SWP90	2" FLANGE X FLANGE SWEEP	300	10/BAG
M200150BRBSSWP90	2" FLANGE X 1 1/2" HOSE BARB SWEEP	300	10/BAG
M220200SWP90	2" FULL PORT FLANGE X 2" FLANGE SWEEP	225	10/BAG
M220ASWP90	2" FULL PORT FLANGE X MALE ADAPTER SWEEP	200	10/BAG
M220BRBSSWP90	2" FULL PORT FLANGE X HOSE BARB SWEEP	225	10
M220MPTSWP90	2" FULL PORT FLANGE X MALE NPT THREAD SWEEP	300	1
M220SWP90	2" FULL PORT FLANGE X FLANGE SWEEP	225	10/BAG
M220SWPG90	2" FULL PORT FLANGE X FLANGE SWEEP W/ 1/4" GAUGE PORT	225	1
M221SWP90	2" FULL PORT MANIFOLD 90° SWEEP	225	1
M300ASWP90	3" FLANGE X MALE ADAPTER SWEEP	100	1
M300BRBSSWP90	3" FLANGE X HOSE BARB SWEEP	225	1
M300BRBSSWPG90	3" FLANGE X HOSE BARB SWEEP W/ 1/4" GAUGE PORT	225	1
M300MPTSWP90	3" FLANGE X MALE NPT THREAD SWEEP	200	1
M300SWP90	3" FLANGE X FLANGE SWEEP	200	1
M300SWPG90	3" FLANGE X FLANGE SWEEP W/ 1/4" GAUGE PORT	200	1
M300220SWP90	3" FULL PORT FLANGE X 2" FULL PORT FLANGE SWEEP	300	1

## SWEEPS

### FEATURES

- Direct replacement for standard 90° flanged couplings
- Positive seals
- Quick and easy assembly
- Easy on/off hose connections
- 360° orientation
- Improved flow for max GPM

# MANIFOLD FLANGE CONNECTIONS

## FITTINGS

### FEATURES

- Quick and easy assembly
- Positive seals
- Easy on/off hose connections
- 360° orientation
- Parts must be ordered in lot quantities.



### SWIVEL

PART NO	DESCRIPTION	MAX PSI	QTY
MSW220	2" FULL PORT MANIFOLD FLANGE SWIVEL	200	1

### CHECK VALVES

PART NO	DESCRIPTION	CRACKING PRESSURE PSI	MAX PSI	LOT QTY
MCV100	1" FLANGED CHECK VALVE	1	300	10
MCV200	2" FLANGED CHECK VALVE	0.5	300	10
MCV100V	1" MANIFOLD CHECK VALVE	1	300	1
MCV221	2" FULL PORT FLANGED CHECK VALVE	>0.5	200	10
MCV300	3" FLANGED CHECK VALVE W/5 LB SPRING	1.5	200	1
MCV301	3" FLANGED CHECK VALVE W/1/2 LB SPRING	>0.5	N/A	1

### PVC GLUE SOCKET

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M101GSA	1" FULL PORT FLANGE X 1" PVC GLUE SOCKET FITTING	300	10
M221GSA	2" FULL PORT FLANGE X 2" PVC GLUE SOCKET FITTING	300	10
M301GSA	3" FULL PORT FLANGE X 3" PVC GLUE SOCKET FITTING	300	1

### 316 SS SOCKET WELD

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100SWFSS	1" FLANGE X 1" SOCKET WELD FITTING	300	10
M200SWFSS	2" FLANGE X 2" SOCKET WELD FITTING	300	1
M220SWFSS	2" FULL PORT FLANGE X 2" SOCKET WELD FITTING	300	10
M220375SWFSS	2" FULL PORT FLANGE X 2" SOCKET WELD FITTING X 3/4"	300	1
M300SWFSS	3" FLANGE X 3" SOCKET WELD FITTING	300	1
M300375SWFSS	3" FLANGE X 3" SOCKET WELD FITTING X 3/4"	300	1

### COUPLINGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100CPG	1" MANIFOLD COUPLING 2 1/4" LONG	300	10/BAG
M100CPG025G	1" MANIFOLD COUPLING 2 1/4" PORT	300	10/BAG
M101CPG	1" MANIFOLD COUPLING 2 1/4" LONG W/ BLIND GAUGE PORT	300	10/BAG
M200CPG	2" MANIFOLD COUPLING 4 1/2" LONG	300	10/BAG
M200CPG025G	2" MANIFOLD COUPLING 4 1/2" LONG W/ 1/4" PORT	300	10/BAG
M200CPG038G	2" MANIFOLD COUPLING 4 1/2" LONG W/ 3/8" PORT	300	10/BAG
M201CPG	2" MANIFOLD COUPLING 4 1/2" LONG W/ BLIND GAUGE PORT	300	10/BAG
M220CPG	2" FULL PORT MANIFOLD COUPLING 2 31/32" LONG	300	10/BAG
M220CPG2GISO	2" FULL PORT MANIFOLD COUPLING 2" LONG W/ G 1/4" PORT	300	10/BAG
M220CPG3G	2" FULL PORT MANIFOLD COUPLING 3" LONG W/ 1/2" PORTS (3)	225	10/BAG
M220CPG6	2" FULL PORT MANIFOLD COUPLING 6" LONG	300	5
M220CPG6025G	2" FULL PORT MANIFOLD COUPLING 6" LONG W/ 1/4" PORTS	300	10/BAG
M221CPG	2" FP MANIFOLD COUPLING 3" LONG W/ 3 BLIND GAUGE PORTS	300	1
M221CPG6	2" FP MANIFOLD COUPLING 6" LONG W/ BLIND GAUGE PORT	300	10/BAG
M300CPG	3" FULL PORT MANIFOLD COUPLING 4" LONG	200	1
M300CPG2	3" FP MANIFOLD COUPLING 4" LONG W/ BLIND GAUGE PORT	200	1
M300CPG7	3" FULL PORT MANIFOLD COUPLING 7" LONG	225	1
M300CPG12G	3" FP MANIFOLD COUPLING 12" LONG W/ 1/2" GAUGE PORT	150	1
M300CPG55	3" MANIFOLD COUPLING 5.5" LONG	150	1
M300CPG55G	3" FULL PORT MANIFOLD COUPLING 5.5" LONG W/ 1/4" PORT	150	1
M300CPG7025G	3" MANIFOLD COUPLING 7" LONG W/ 1/4" PORT	300	1
M300CPG2GISO	3" MANIFOLD COUPLING 2" LONG W/ G 1/4" GAUGE PORT	300	1
M301CPG7	3" MANIFOLD COUPLING 7" LONG	225	1

# MANIFOLD FLANGE CONNECTIONS

## FITTINGS

### FEATURES

- Quick and easy assembly
- Positive seals
- Easy on/off hose connections
- 360° orientation
- Parts must be ordered in lot quantities.



### 45° COUPLINGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100CPG45	1" X 1" 45° FLANGE	300	10/BAG
M200CPG45	2" X 2" 45° FLANGE	300	10/BAG
M220CPG45	2" X 2" FULL PORT 45° FLANGE	225	10/BAG
M300CPG45	3" X 3" FULL PORT 45° FLANGE	225	1

### 90° COUPLINGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100CPG90	1" X 1" 90° FLANGE	300	10/BAG
M200CPG90	2" X 2" 90° FLANGE	300	10/BAG
M200CPG90SH	2" X 2" 90° SHORT FLANGE	300	10/BAG
M220CPG90	2" X 2" 90° FULL PORT FLANGE	200	10/BAG
M300CPG90	3" X 3" 90° FULL PORT FLANGE	200	1

### 45° Y FLANGED COUPLINGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M200YG45	2" 45° Y FLANGE W/ 3/4" GAUGE PORT	225	1
M220Y45	2" FULL PORT 45° Y FLANGE	300	5
M220YG45	2" FULL PORT 45° Y FLANGE W/ 3/4" GAUGE PORT	225	1
M300Y45	3" FULL PORT 45° Y FLANGE	200	1
M300YG45	3" FULL PORT 45° Y FLANGE W/ 3/4" GAUGE PORT	200	1

### 3" MANIFOLD WYE

PART NO	DESCRIPTION	MAX PSI	QTY
M300220WYCG	M300 X M220 X M220 X M220 FULL PORT FLANGE WYE W/ 1/4" GAUGE PORT	300	1

### REDUCER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M200100CPG	2" X 1" REDUCER FLANGE	300	10/BAG
M220100CPG	2" FULL PORT X 1" REDUCER FLANGE	225	10/BAG
M220200CPG	2" FULL PORT X 2" REDUCER FLANGE	225	10/BAG
M300200CPG	3" X 2" REDUCER FLANGE	225	1
M300220CPG	3" X 2" FULL PORT REDUCER FLANGE	225	1

### TEES

PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100TEE	1" FLANGED TEE	300	10/BAG
M101TEE	1" FLANGED TEE LONG	300	10
M200100TEE	2" X 1" FLANGED TEE	300	10
M200TEE	2" FLANGED TEE	200	10/BAG
M220100TEE	2" FULL PORT FLANGED TEE X 1" FLANGED TEE	225	10
M220200TEE	2" FULL PORT FLANGED TEE X 2" FLANGED TEE	300	10
M220TEE	2" FULL PORT FLANGED TEE	225	10
M300TEE	3" FLANGED TEE	225	1

### U BOLTS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
UB100	100 SERIES MOUNTING U BOLT	N/A	1
UB202	2 SERIES MOUNTING U BOLT	N/A	10
UB220	220 SERIES MOUNTING U BOLT	N/A	10

## FITTINGS

### FEATURES

- Quick and easy assembly
- Positive seals
- Easy on/off hose connections
- 360° orientation
- Parts must be ordered in lot quantities.



SS BUTT WELD ADAPTER			
PART NO	DESCRIPTION	MAX PSI	QTY
M220BWASS	2" FULL PORT STAINLESS STEEL BUTT WELD ADAPTER	300	1



FEMALE NPT THREAD			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100050FPT	1" FLANGE X 1/2" FEMALE THREAD	300	10/BAG
M100075FPT	1" FLANGE X 3/4" FEMALE THREAD	300	10/BAG
M100FPT	1" FLANGE X 1" FEMALE THREAD	300	10/BAG
M200FPT	2" FLANGE X 2" FEMALE THREAD	300	10/BAG
M200150FPT	2" FLANGE X 1 1/2" FEMALE THREAD	300	10/BAG
M220FPT	2" FULL PORT FLANGE X 2" FEMALE THREAD	300	10/BAG
M300FPT	3" FLANGE X 3" FEMALE THREAD	200	10/BAG



MALE THREAD			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100075MPT	1" FLANGE X 3/4" MALE THREAD	300	10/BAG
M100MPT	1" FLANGE X 1" MALE THREAD	300	10/BAG
M100125MPT	1" FLANGE X 1 1/4" MALE THREAD	300	10/BAG
M200125MPT	2" FLANGE X 1 1/4" MALE THREAD	300	10/BAG
M200150MPT	2" FLANGE X 1 1/2" MALE THREAD	300	10/BAG
M200MPT	2" FLANGE X 2" MALE THREAD	300	10/BAG
M220MPT	2" FULL PORT FLANGE X 2" MALE THREAD	300	10/BAG
M300MPT	3" FLANGE X 3" MALE THREAD	300	1



316 SS MALE THREAD			
PART NO	DESCRIPTION	MAX PSI	QTY
M100MPTSS	1" FLANGE X 1" MALE THREAD	300	1
M200125MPTSS	2" FLANGE X 1 1/4" MALE THREAD	300	1
M200150MPTSS	2" FLANGE X 1 1/2" MALE THREAD	300	1
M200MPTSS	2" FLANGE X 2" MALE THREAD	300	1
M220150MPTSS	2" FULL PORT FLANGE X 1 1/2" MALE THREAD	300	1
M220MPTSS	2" FULL PORT FLANGE X 2" MALE THREAD	300	1
M300220MPTSS	3" FLANGE X 2" FULL PORT MALE THREAD	300	1
M300MPTSS	3" FLANGE X 3" MALE THREAD	300	1

## FITTINGS

### FEATURES

- Quick and easy assembly
- Positive seals
- Easy on/off hose connections
- 360° orientation
- Parts must be ordered in lot quantities.



PLUGS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100PLG	1" FLANGE PLUG	300	10/BAG
M200PLG	2" FLANGE PLUG	300	10/BAG
M220PLG	2" FULL PORT FLANGE PLUG	300	10/BAG
M300PLG	3" FULL PORT FLANGE PLUG	225	10/BAG
M100PLG025	1" FLANGE PLUG WITH 1/4" FPT	300	10/BAG
M100PLG050	1" FLANGE PLUG WITH 1/2" FPT	300	10/BAG
M200PLG025	2" FLANGE PLUG WITH 1/4" FPT	225	10/BAG
M200PLG038	2" FLANGE PLUG WITH 3/8" FPT	300	10/BAG
M200PLG050	2" FLANGE PLUG WITH 1/2" FPT	225	10/BAG
M200PLG075	2" FLANGE PLUG WITH 3/4" FPT	225	10/BAG
M200PLG100	2" FLANGE PLUG WITH 1" FPT	225	10/BAG
M220PLG038	2" FULL PORT FLANGE PLUG WITH 3/8" FPT	150	10/BAG
M220PLG075	2" FULL PORT FLANGE PLUG WITH 3/4" FPT	225	10/BAG
M300PLG075	3" FLANGE PLUG WITH 3/4" FPT	200	1
M300PLG100	3" FLANGE PLUG WITH 1" FPT	200	1



FEMALE COUPLER			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M220D	2" FULL PORT FLANGE X 2" FEMALE COUPLER	225	20
M303D	3" FULL PORT FLANGE X 3" FEMALE COUPLER WITH 3 ARMS	225	10



MALE ADAPTER			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100A	1" FLANGE X 1" MALE ADAPTER	300	10/BAG
M200A	2" FLANGE X 2" MALE ADAPTER	300	10/BAG
M220A	2" FULL PORT FLANGE X 2" MALE ADAPTER	225	10/BAG
M300A	3" FULL PORT FLANGE X 3" MALE ADAPTER	100	1
M300400A	3" MANIFOLD FLANGE X 4" MALE COUPLER	75	1



CROSS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100CR	1" FLANGED CROSS	300	10/BAG
M200CR	2" FLANGED CROSS	300	10
M220CR	2" FULL PORT FLANGED CROSS	200	10
M300CR	3" FLANGED CROSS	125	1





# MANIFOLD FLANGE CONNECTIONS

## FITTINGS

### FEATURES

- Quick and easy assembly
- Positive seals
- Easy on/off hose connections
- 360° orientation
- Parts must be ordered in lot quantities.



HOSE BARB			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100075BRB	1" FLANGE X 3/4" HOSE BARB	300	10/BAG
M100BRB	1" FLANGE X 1" HOSE BARB	300	10/BAG
M100125BRB	1" FLANGE X 1 1/4" HOSE BARB	300	10/BAG
M200100BRB	2" FLANGE X 1" HOSE BARB	300	10/BAG
M200125BRB	2" FLANGE X 1 1/4" HOSE BARB	300	10/BAG
M200150BRB	2" FLANGE X 1 1/2" HOSE BARB	300	10/BAG
M200BRB	2" FLANGE X 2" HOSE BARB	300	10/BAG
M220100BRB	2" FULL PORT FLANGE X 1" HOSE BARB	300	10/BAG
M220125BRB	2" FULL PORT FLANGE X 1 1/4" HOSE BARB	300	10/BAG
M220150BRB	2" FULL PORT FLANGE X 1 1/2" HOSE BARB	300	10/BAG
M220BRB	2" FULL PORT FLANGE X 2" HOSE BARB	300	10/BAG
M300220BRB	3" FLANGE X 2" FULL PORT HOSE BARB	125	1
M300400BRB	3" FLANGE X 4" HOSE BARB	150	1
M300BRB	3" FLANGE X 3" HOSE BARB	200	1

90° HOSE BARB ELBOW			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100075BRB90	1" FLANGE X 3/4" 90° HOSE BARB	300	10/BAG
M100BRB90	1" FLANGE X 1" 90° HOSE BARB	300	10/BAG
M100125BRB90	1" FLANGE X 1 1/4" 90° HOSE BARB	300	10/BAG
M100150BRB90	1" FLANGE X 1 1/2" 90° HOSE BARB	300	10/BAG
M200100BRB90	2" FLANGE X 1" 90° HOSE BARB	300	10/BAG
M200125BRB90	2" FLANGE X 1 1/4" 90° HOSE BARB	300	10/BAG
M200150BRB90	2" FLANGE X 1 1/2" 90° HOSE BARB	300	10/BAG
M200BRB90	2" FLANGE X 2" 90° HOSE BARB	300	10/BAG
M220150BRB90	2" FULL PORT FLANGE X 1 1/2" 90° HOSE BARB	300	10/BAG
M220BRB90	2" FULL PORT FLANGE X 2" 90° HOSE BARB	300	10/BAG
M300220BRB90	3" FLANGE X 2" 90° FULL PORT HOSE BARB	300	1
M300BRB90	3" FLANGE X 3" 90° HOSE BARB	150	1

45° HOSE BARB ELBOW			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100BRB45	1" FLANGE X 1" 45° HOSE BARB ELBOW	300	10/BAG
M200BRB45	2" FLANGE X 2" 45° HOSE BARB ELBOW	300	10/BAG
M200125BRB45	2" FLANGE X 1 1/4" 45° HOSE BARB ELBOW	300	10/BAG
M200150BRB45	2" FLANGE X 1 1/2" 45° HOSE BARB ELBOW	300	10/BAG
M220BRB45	2" FULL PORT FLANGE X 2" 45° HOSE BARB ELBOW	300	10/BAG
M300BRB45	3" FLANGE X 3" 45° HOSE BARB ELBOW	150	1

HOSE BARB TEE			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
M100050HBT	1" FLANGE X 1/2" HOSE BARB TEE	N/A	10/BAG
M100075HBT	1" FLANGE X 3/4" HOSE BARB TEE	N/A	10/BAG
M100100HBT	1" FLANGE X 1" HOSE BARB TEE	300	10/BAG
M100125HBT	1" FLANGE X 1 1/4" HOSE BARB TEE	300	10/BAG
M220150HBT	1 1/2" FLANGE X 1 1/2" HOSE BARB TEE	300	10/BAG
M220200HBT	2" FULL PORT FLANGE X 2" HOSE BARB TEE	300	10/BAG
M300300HBT	3" FLANGE X 3" HOSE BARB TEE	150	1



Rib keeps gasket in place during assembly.



M302G

M201G

200G

200GV



# MANIFOLD FLANGE CONNECTIONS

## FITTINGS

### FEATURES

- Quick and easy assembly
- Positive seals
- Easy on/off hose connections
- 360° orientation
- Parts must be ordered in lot quantities.

BOLTED FLANGE CLAMPS			
PART NO	DESCRIPTION	TORQUE	QTY
FC220B	2" FULL PORT BOLTED FLANGE CLAMP	150 IN/LBS	1
FC300B	3" BOLTED FLANGE CLAMP	150 IN/LBS	1

T-BOLT FLANGE CLAMPS			
PART NO	DESCRIPTION	TORQUE	QTY
FC220TB	2" FULL PORT HI-TORQUE T-BOLT FLANGE CLAMP	100 IN/LBS	10/BAG
FC300TB	3" FULL PORT HI-TORQUE T-BOLT FLANGE CLAMP	100 IN/LBS	1

FLANGE CLAMPS			
PART NO	DESCRIPTION	TORQUE	QTY
FC100	100 SERIES WORM SCREW CLAMP	50-60 IN/LBS	10/BAG
FC200	200 SERIES WORM SCREW CLAMP	90-100 IN/LBS	10/BAG
FC220	220 SERIES WORM SCREW CLAMP	90-100 IN/LBS	10/BAG
FC300	300 SERIES WORM SCREW CLAMP	90-100 IN/LBS	10/BAG

GASKETS			
PART NO	DESCRIPTION	GASKET MATERIAL	LOT QTY
M100G	100 SERIES MANIFOLD GASKET	EPDM	25
M101G	100 SERIES MANIFOLD GASKET WITH RIB	EPDM	35
M102G	1" & 1 1/4" SKIRTED FLANGE GASKET	EPDM	1
M100GV	100 SERIES GASKET	FKM	10
75GV	3/4" FKM GASKET	FKM	10
150G	200 SERIES GASKET	EPDM	25
150GV	200 SERIES GASKET	FKM	10
200G	220 SERIES FULL PORT GASKET	EPDM	25
200GV	220 SERIES FULL PORT GASKET	FKM	10
M201G	200 SERIES MANIFOLD GASKET WITH RIB	EPDM	30
M202G	1 1/2" SKIRTED FLANGE GASKET	EPDM	1
M221G	220 SERIES FULL PORT MANIFOLD GASKET WITH RIB	EPDM	30
M222G	2" SKIRTED FLANGE GASKET	EPDM	1
300G	300 SERIES GASKET	EPDM	25
300GV	300 SERIES GASKET	FKM	10
M301G	300 SERIES MANIFOLD GASKET WITH RIB	EPDM	50
M302G	3" SKIRTED FLANGE GASKET	EPDM	1

MINI T STRAINERS			
PART NO	DESCRIPTION	MAX PSI	QTY
MLSTM100-80	1" MANIFOLD MINI T STRAINER 80 MESH	300	1
MLSTM100HB	1" MANIFOLD MINI T STRAINER HEAD & BOWL	N/A	1
MLSTM100HBC	1" MANIFOLD MINI T STRAINER HEAD & CLEAR BOWL	N/A	1

## MINI T LINE STRAINERS

### FEATURES

- Heavy duty glass reinforced polypropylene
- Clear bowl made of polycarbonate
- EPDM gaskets standard

# MANIFOLD FLANGE CONNECTIONS

## 1"-2" T LINE STRAINERS

### FEATURES

- EPDM gaskets STD
- Poly ribbed 316 stainless steel screens
- FKM gasket options as noted "V" suffix



1" FULL PORT MANIFOLD T LINE STRAINERS WITH MOUNTING TUBES				
PART NO	DESCRIPTION	MAX PSI	QTY	
MLST100-30	1" MANIFOLD T STRAINER W/30 MESH SCREEN	300	1	
MLST100-50	1" MANIFOLD T STRAINER W/50 MESH SCREEN	300	1	
MLST100-80	1" MANIFOLD T STRAINER W/80 MESH SCREEN	300	1	
MLST100-100	1" MANIFOLD T STRAINER W/100 MESH SCREEN	300	1	
MLST100-80V	1" MANIFOLD T STRAINER W/ 80 MESH SCREEN WITH FKM GASKETS	300	1	

2" STANDARD PORT MANIFOLD T LINE STRAINERS WITH MOUNTING TUBES				
PART NO	DESCRIPTION	MAX PSI	QTY	
MLST150-30	2" MANIFOLD T STRAINER W/30 MESH SCREEN	225	1	
MLST150-50	2" MANIFOLD T STRAINER W/50 MESH SCREEN	225	1	
MLST150-80	2" MANIFOLD T STRAINER W/80 MESH SCREEN	225	1	
MLST150-80V	2" MANIFOLD T STRAINER W/80 MESH SCREEN WITH FKM GASKETS	225	1	
MLST150-100	2" MANIFOLD T STRAINER W/100 MESH SCREEN	225	1	

## 1"-2" Y LINE STRAINERS

### FEATURES

- EPDM gaskets
- Poly ribbed 316 stainless steel screens

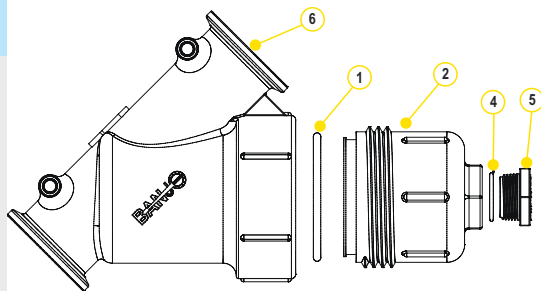


1" FULL PORT MANIFOLD Y LINE STRAINERS WITH MOUNTING TUBES				
PART NO	DESCRIPTION	MAX PSI	QTY	
MLS100-80	1" MANIFOLD Y STRAINER W/80 MESH SCREEN	225	1	

2" STANDARD PORT MANIFOLD Y LINE STRAINERS WITH MOUNTING TUBES				
PART NO	DESCRIPTION	MAX PSI	QTY	
MLS200-20M	2" MANIFOLD Y STRAINER W/20 MESH SCREEN	225	1	
MLS200-50M	2" MANIFOLD Y STRAINER W/50 MESH SCREEN	225	1	
MLS200-80M	M200 Y STRAINER W/ MOUNT 80 MESH	225	1	

2" STANDARD PORT MANIFOLD Y LINE STRAINERS				
PART NO	DESCRIPTION	MAX PSI	QTY	
MLS200-12	2" MANIFOLD Y STRAINER W/12 MESH SCREEN	225	1	
MLS200-20	2" MANIFOLD Y STRAINER W/20 MESH SCREEN	225	1	
MLS200-50	2" MANIFOLD Y STRAINER W/50 MESH SCREEN	225	1	
MLS200-80	2" MANIFOLD Y STRAINER W/80 MESH SCREEN	225	1	

## Y LINE STRAINERS



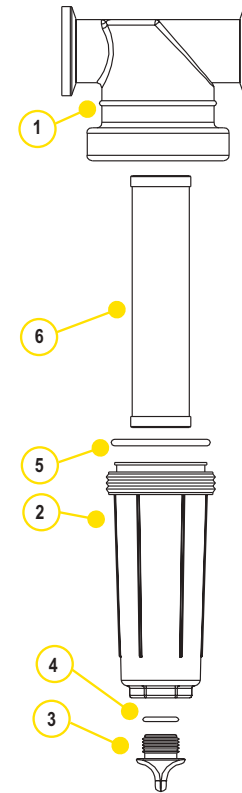
REPLACEMENT PARTS 2"				
ITEM	PART NO	DESCRIPTION	QTY	
1	LS150-G	2" EPDM GASKET	1	
2	LS150-C	2" Y BOWL, DRAIN PLUG, O-RING	1	
3	LSQ200-PL	2" PLUG	1	
4	LSQ200-R	O-RING	1	
5	LST225D	DECAL	1	
6	MLS200BB	2" MANIFOLD Y STRAINER BODY	1	
KIT	MLS200BCM	2" FLANGE Y STRAINER BODY & CAP	1	

# MANIFOLD FLANGE CONNECTIONS

## T LINE STRAINERS

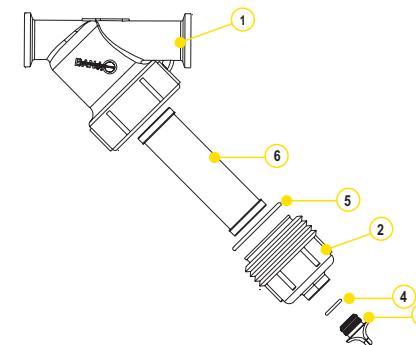
### SCREENS

MESH SIZE	RIB COLOR
16 MESH	BROWN RED
30 MESH	FLAME RED
50 MESH	GENTIAN BLUE
80 MESH	ZINC YELLOW
100 MESH	TRAFFIC GREEN



REPLACEMENT PARTS 1"				
ITEM	PART NO	DESCRIPTION	QTY	
1	MLST100-H	1" T BODY	1	
2	LST100-B	1" T BOWL, DRAIN PLUG, O-RING	1	
3	12777	1/2" PLUG	1	
4	UV15163	O-RING	1	
5	LST100-G	1" EPDM GASKET	1	
5	LST100-GV	1" FKM GASKET	1	
6	LST116	16 MESH SCREEN	1	
6	LST130	30 MESH SCREEN	1	
6	LST150	50 MESH SCREEN	1	
6	LST180	80 MESH SCREEN	1	
6	LST1100	100 MESH SCREEN	1	
KIT	MLST100-HB	KIT INCLUDES ITEMS 1-5	1	

REPLACEMENT PARTS 2"				
ITEM	PART NO	DESCRIPTION	QTY	
1	MLST150-H	1 1/2" T BODY	1	
2	LST150-B	1 1/2" T BOWL, DRAIN PLUG, O-RING	1	
3	LSQ200-PL	1 1/2" PLUG	1	
4	LSQ200-R	O-RING	1	
5	LST150-G	1 1/2" EPDM GASKET	1	
5	LST150-GV	1 1/2" FKM GASKET	1	
6	LST1516	16 MESH SCREEN	1	
6	LST1530	30 MESH SCREEN	1	
6	LST1550	50 MESH SCREEN	1	
6	LST1580	80 MESH SCREEN	1	
6	LST15100	100 MESH SCREEN	1	
KIT	MLST150-HB	KIT INCLUDES ITEMS 1-5	1	



REPLACEMENT PARTS 1"				
ITEM	PART NO	DESCRIPTION	QTY	
1	MLS100B	1" Y BODY	1	
2	LS100-C1	1" Y BOWL, DRAIN PLUG, O-RING	1	
3	12777	1/2" PLUG	1	
4	UV15163	O-RING	1	
5	LS100-G	1" EPDM GASKET	1	
6	LS120	20 MESH SCREEN	1	
6	LS140	40 MESH SCREEN	1	
6	LS180	80 MESH SCREEN	1	
KIT	MLS100BC	KIT INCLUDES ITEMS 1-5	1	

REPLACEMENT PARTS 2"				
ITEM	PART NO	DESCRIPTION	QTY	
1	MLS200B	2" Y BODY	1	
2	LS150-C	2" Y BOWL, DRAIN PLUG, O-RING	1	
3	LSQ200-PL	2" PLUG	1	
4	LSQ200-R	O-RING	1	
5	LS150-G	2" EPDM GASKET	1	
5	LS150-GV	2" FKM GASKET	1	
6	LS206	6 MESH SCREEN	1	
6	LS212	12 MESH SCREEN	1	
6	LS220	20 MESH SCREEN	1	
6	LS230	30 MESH SCREEN	1	
6	LS250	50 MESH SCREEN	1	
6	LS280	80 MESH SCREEN	1	
6	LS2120	120 MESH SCREEN	1	
KIT	MLS200BC	KIT INCLUDES ITEMS 1-5	1	

## Y LINE STRAINERS

### SCREENS

MESH SIZE	RIB COLOR
6 MESH	WHITE
12 MESH	BLACK
20 MESH	BEIGE
30 MESH	FLAME RED
40 MESH	BROWN
50 MESH	GENTIAN BLUE
80 MESH	ZINC YELLOW
100 MESH	TRAFFIC GREEN
120 MESH	BLACK

# MANIFOLD FLANGE CONNECTIONS

## 2" FULL PORT Y LINE STRAINERS

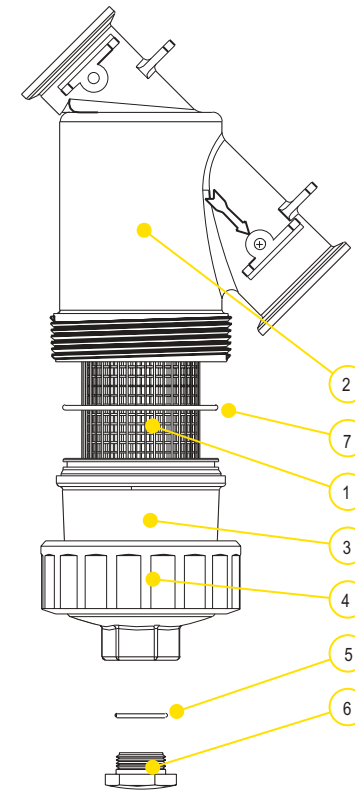
### FEATURES

- EPDM gaskets
- 316 stainless steel screens



### 2" FULL PORT MANIFOLD Y LINE STRAINERS

PART NO	DESCRIPTION	MAX PSI	QTY
MLS222-04	2" FULL PORT MANIFOLD Y STRAINER W/4 MESH SCREEN	225	1
MLS222-10	2" FULL PORT MANIFOLD Y STRAINER W/12 MESH SCREEN	225	1
MLS222-16	2" FULL PORT MANIFOLD Y STRAINER W/16 MESH SCREEN	225	1
MLS222-30	2" FULL PORT MANIFOLD Y STRAINER W/30 MESH SCREEN	225	1
MLS222-50	2" FULL PORT MANIFOLD Y STRAINER W/50 MESH SCREEN	225	1
MLS222-80	2" FULL PORT MANIFOLD Y STRAINER W/80 MESH SCREEN	225	1
MLS222-30V	2" FULL PORT MANIFOLD Y STRAINER W 30 MESH SCREEN	225	1



# MANIFOLD FLANGE CONNECTIONS

## 2" FULL PORT Y LINE STRAINERS

### FEATURES

- EPDM gaskets
- 316 stainless steel screens

### REPLACEMENT PARTS 2"

ITEM	PART NO	DESCRIPTION	QTY
1	LST204SS	4 SS MESH SCREEN	1
1	LST206SS	6 SS MESH SCREEN	1
1	LST208SS	8 SS MESH SCREEN	1
1	LST210SS	10 SS MESH SCREEN	1
1	LST216SS	16 SS MESH SCREEN	1
1	LST230SS	30 SS MESH SCREEN	1
1	LST250SS	50 SS MESH SCREEN	1
1	MLS250SS	50 SS MESH PERFORATED SCREEN	1
1	LST280SS	80 SS MESH SCREEN	1
1	MLS280SS	80 SS MESH PERFORATED SCREEN	1
1	LST2100SS	100 SS MESH SCREEN	1
1	MLS2100SS	100 SS MESH PERFORATED SCREEN	1
2	MLS222B	2" FLANGED Y STRAINER BODY	1
3	MLS220C1	2" FLANGED Y STRAINER CAP	1
4	MLS220R1	2" FLANGED Y STRAINER RING	1
5	LSQ200-R	2" PLUG GASKET	1
6	LSQ200-PL	2" PLUG	1
7	MLS220G1	2" BODY GASKET	1
2-7	MLS222BC	STRAINER WITHOUT SCREEN	1

## 3" Y LINE STRAINERS

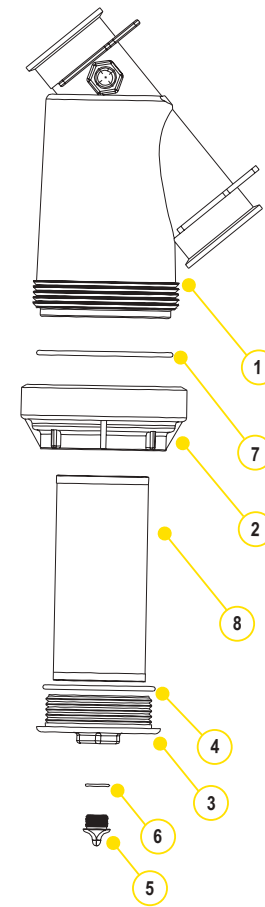
### FEATURES

- EPDM gaskets
- 304 stainless steel screens
- Must use on suction side or non-pressure side in all applications



### 3" FULL PORT MANIFOLD Y LINE STRAINERS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
MLS300-12	3" MANIFOLD Y STRAINER W/12 MESH SCREEN	100	1
MLS300-20	3" MANIFOLD Y STRAINER W/20 MESH SCREEN	100	1
MLS300-50	3" MANIFOLD Y STRAINER W/50 MESH SCREEN	100	1
MLS300-20V	3" MANIFOLD Y STRAINER W/20 MESH SCREEN	100	1



## 3" Y LINE STRAINERS

### FEATURES

- EPDM gaskets
- 304 stainless steel screens
- Must use on suction side or non-pressure side in all applications

### REPLACEMENT PARTS 3"

ITEM	PART NO	DESCRIPTION	QTY
1	MLS300B	3" FLANGED Y STRAINER BODY	1
2	MLS300CAP	3" FLANGED Y STRAINER CAP	1
3	LS300EC	3" END CAP	1
4	MLS300ECG	3" EPDM END CAP GASKET	1
4	MLS300ECGV	3" FKM END CAP GASKET	1
5	13777	3/4" PLUG	1
6	13778	O-RING	1
7	MLS300G	3" EPDM CAP GASKET	1
8	LS304	4 SS MESH SCREEN	1
8	LS308	8 SS MESH SCREEN	1
8	LS312	12 SS MESH SCREEN	1
8	LS320	20 SS MESH SCREEN	1
8	LS350	50 SS MESH SCREEN	1
1-7	MLS300BC	STRAINER WITHOUT SCREEN	1

## BOTTOM DRAIN BOLTED TANK FITTINGS

### FEATURES

- Stainless steel bolts
- Bolt head plugs sealed ultrasonically
- Glass reinforced polypropylene
- EPDM gasket standard
- FKM gasket available



### BOTTOM DRAIN BOLTED TANK FITTINGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
MBF100BD	1" FLANGE X 1" FEMALE THREAD W/EPDM GASKET	150	5
MBF200BD	2" FLANGE X 2" FEMALE THREAD W/EPDM GASKET	150	5
MBF220BD	2" FP FLANGE X 2" FEMALE THREAD W/EPDM GASKET	150	5
MBF300BD	3" FLANGE X 3" FEMALE THREAD W/EPDM GASKET	150	8

## BOTTOM DRAIN BULKHEAD FITTINGS

### FEATURES

- Glass reinforced polypropylene
- EPDM standard
- Groove allows more drainage
- Gasket not included



### BOTTOM DRAIN BULKHEAD FITTINGS

PART NO	DESCRIPTION	HOLE SIZE	MAX PSI	LOT QTY
MTF100BD	1" FLANGE X 1" FEMALE THREAD W/EPDM GASKET	2 1/4"	300	10
MTF220BD	2" FP FLANGE X 2" FEMALE THREAD W/EPDM GASKET	3 1/4"	300	10
MTF300BD	3" FLANGE X 3" FEMALE THREAD W/EPDM GASKET	4 1/2"	200	1

## BOLTED TANK FITTINGS

### FEATURES

- Stainless steel bolts
- Bolt head plugs sealed ultrasonically
- Glass reinforced polypropylene
- EPDM gasket standard
- FKM gasket available



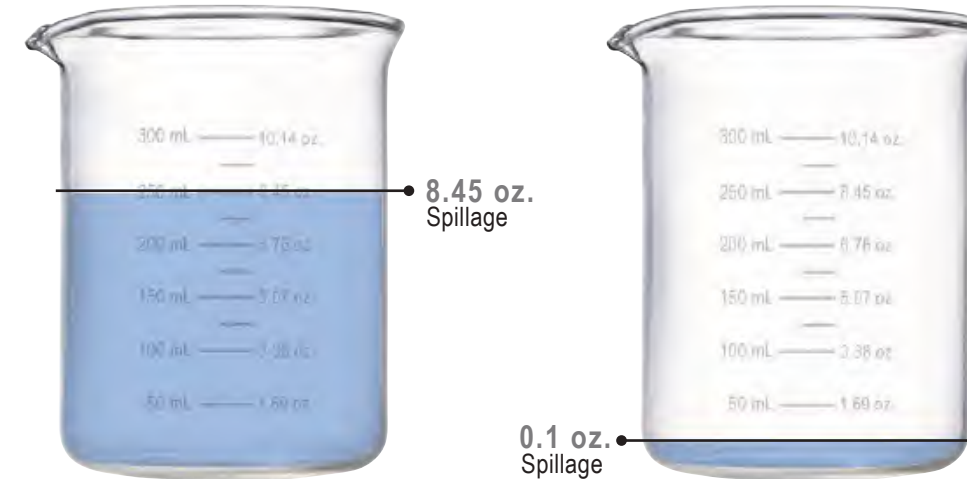
### BOLTED TANK FITTINGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
MBF100	1" FLANGE X 1" FEMALE THREAD W/EPDM GASKET	150	5
MBF200	2" FLANGE X 2" FEMALE THREAD W/EPDM GASKET	150	5
MBF220	2" FP FLANGE X 2" FEMALE THREAD W/EPDM GASKET	150	5
MBF300	3" FLANGE X 3" FEMALE THREAD W/EPDM GASKET	150	5



MAX WALL THICKNESS CHART ON PAGE 160

## NOT YOUR TYPICAL SPILLAGE



STANDARD 2" VALVE

2" DRY-MATE

### 99% SPILLAGE REDUCTION

- Reduction of typical spillage using standard 2" valve with cam lock connection vs. Dry-Mate
- 8.45 oz. (250 mL) vs. 0.1 oz. (3 mL) spillage
- At five disconnections per day, this is **over 118 gallons (450 liters) saved per year**; enough to fill the gas tanks of eight mid-size automobiles

### FEATURES

#### SAFETY FIRST

Product is important, but the safety of your team is essential. With Dry-Mate Dry-Disconnects, leakage from disconnecting is miniscule compared to standard valves. When properly installed and operated, the danger posed by harmful chemicals contacting your team is greatly reduced.

#### EVERY DROP COUNTS

Your product is money. Why waste money in spilling your product every time you disconnect? With Dry-Mate, your spillage amount will be significantly reduced. At 3 mL product spillage for a 2" line, you can have peace of mind that your product is being placed where it should be and not on the ground.

#### PRODUCT ONLY WHERE YOU WANT IT

When a Dry-Mate is properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps.

#### DITCH THE MAINTENANCE

All that spillage has to go somewhere. If you are collecting large areas of spillage run-off, you have to have it pumped out. Reduce your maintenance costs on your spillage pits by keeping fluids contained.

## 1½" POLY DRY-MATES

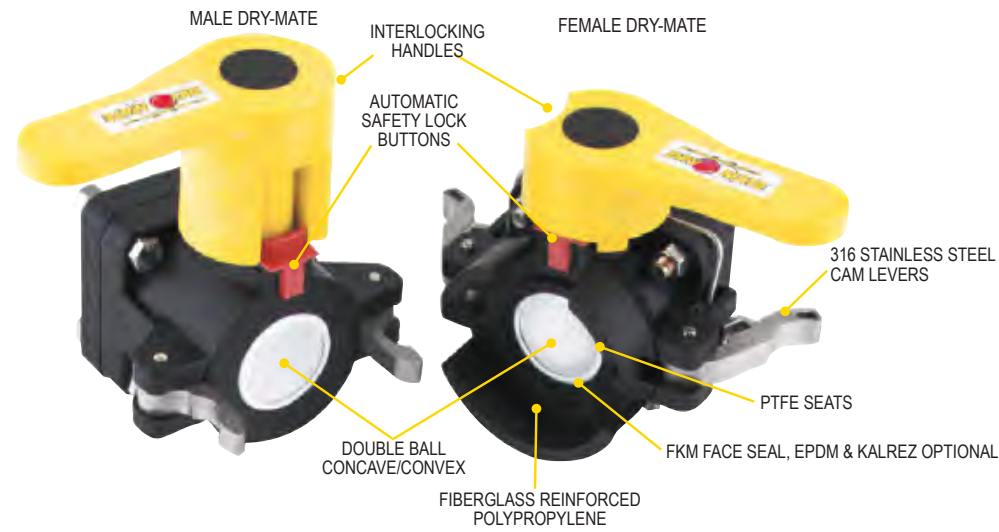
### FEATURES

- Lightweight
- Easy to use
- Economical
- Reduces risk of exposure
- Wide range of chemical resistance
- Unrestricted 1½" flow
- Patented double ball design with cam lever connection
- When properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps
- Spillage data: 1½" = 2ml



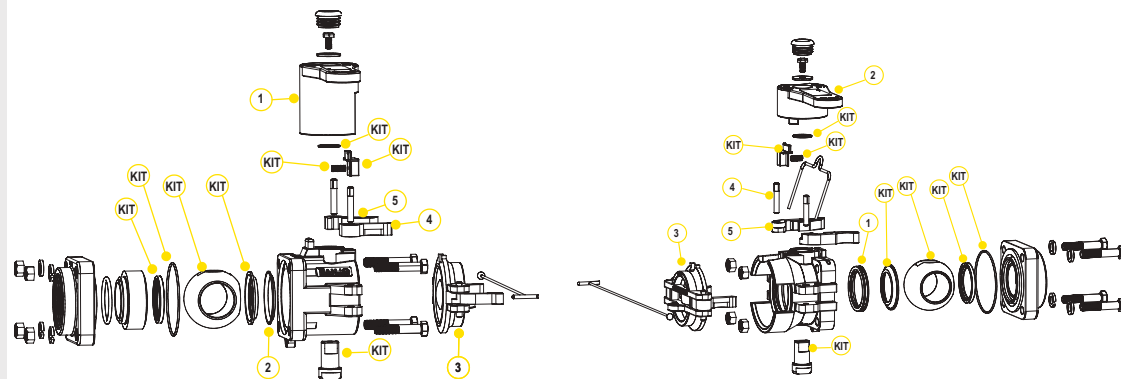
### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring



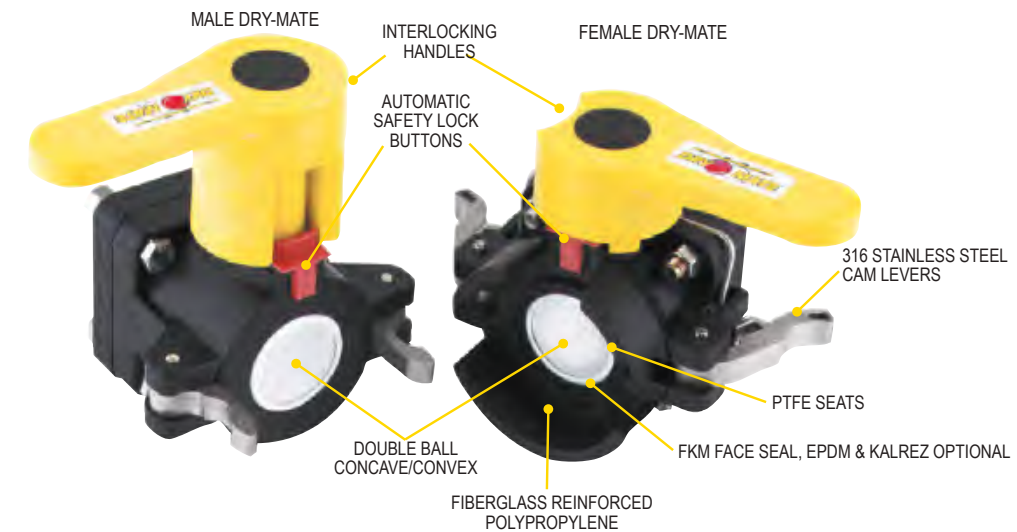
1½" POLY MALE DRY-MATE					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM150A	1½" MALE X FPT NPT W/FKM SEALS	100	1½"	1½"	1
DM150AB	1½" MALE X FPT BSP W/FKM SEALS	100	1½"	1½"	1
DM150AE	1½" MALE X FPT NPT W/EPDM SEALS	100	1½"	1½"	1

1½" POLY FEMALE DRY-MATE					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM150D	1½" FEMALE X FPT NPT W/FKM SEALS	100	1½"	1½"	1
DM150DB	1½" FEMALE X FPT BSP W/FKM SEALS	100	1½"	1½"	1
DM150DE	1½" FEMALE X FPT NPT W/EPDM SEALS	100	1½"	1½"	1



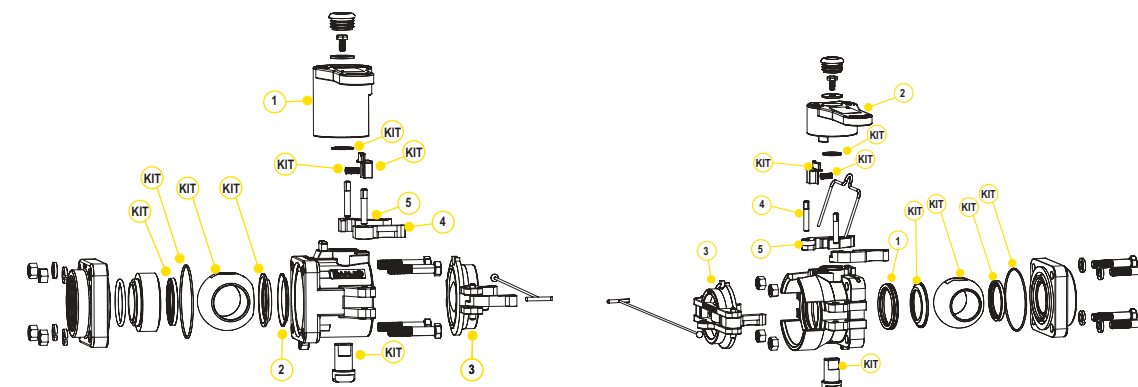
REPLACEMENT PARTS MALE			
ITEM	PART NO	DESCRIPTION	QTY
1	DM20153M	MALE HANDLE	1
1	DB20153M	LOW PROFILE HANDLE	1
2	DB20290	FKM FACE SEAL	1
2	DB20295	EPDM FACE SEAL	1
2	DM20296	KALREZ® FACE SEAL	1
3	DM200CAP	DUST CAP	1
4	DM20300	PROFILE INSERT	2
5	200P	PIN	2
KIT	DM20200A	REPAIR KIT FOR DM150A	1

REPLACEMENT PARTS FEMALE			
ITEM	PART NO	DESCRIPTION	QTY
1	DM20294A	FKM FACE SEAL	1
1	D20295A	EPDM FACE SEAL	1
1	DM20296	KALREZ® FACE SEAL	1
2	DM20153F	FEMALE HANDLE	1
3	DM200PL	DUST PLUG	1
4	200P	PIN	2
5	DM200KX	CAM ARM	2
KIT	DM20200D	REPAIR KIT FOR DM150D	1



2" POLY MALE DRY-MATE					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM200A	2" MALE X FPT NPT W/FKM SEALS	100	2"	1½"	1
DM200AB	2" MALE X FPT BSP W/FKM SEALS	100	2"	1½"	1
DM200AE	2" MALE X FPT NPT W/EPDM SEALS	100	2"	1½"	1
DM200AT	2" MALE X FPT NPT W/KALREZ® SEALS	100	2"	1½"	1
DMMT201A	2" MALE X MALE NPT W/LOW PROFILE HANDLE	100	2"	1½"	1

2" POLY FEMALE DRY-MATE					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM200D	2" FEMALE X FPT NPT W/FKM SEALS	100	2"	1½"	1
DM200DB	2" FEMALE X FPT BSP W/FKM SEALS	100	2"	1½"	1
DM200DE	2" FEMALE W/EPDM SEALS	100	2"	1½"	1
DM200DT	2" FEMALE X FPT NPT W/KALREZ® SEALS	100	2"	1½"	1



REPLACEMENT PARTS MALE			
ITEM	PART NO	DESCRIPTION	QTY
1	DM20153M	MALE HANDLE	1
1	DB20153M	LOW PROFILE HANDLE	1
2	DB20290	FKM FACE SEAL	1
2	DB20295	EPDM FACE SEAL	1
2	DM20296	KALREZ® FACE SEAL	1
3	DM200CAP	DUST CAP	1
4	DM20300	PROFILE INSERT	2
5	200P	PIN	2
KIT	DM20200A	REPAIR KIT FOR DM200A & DM200AE	1

REPLACEMENT PARTS FEMALE			
ITEM	PART NO	DESCRIPTION	QTY
1	DM20294A	FKM FACE SEAL	1
1	DM20295A	EPDM FACE SEAL	1
1	DM20296	KALREZ® FACE SEAL	1
2	DM20153F	FEMALE HANDLE	1
3	DM200PL	DUST PLUG	1
4	200P	PIN	2
5	DM200KX	CAM ARM	2
KIT	DM20200D	REPAIR KIT FOR DM200D & DM200DE	1

## 2" POLY DRY-MATES

### FEATURES

- Lightweight
- Easy to use
- Economical
- Reduces risk of exposure
- Wide range of chemical resistance
- Unrestricted 1½" flow
- Patented double ball design with cam lever connection
- When properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps
- Spillage data: 2" = 2.6ml



### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring

## 2" FULL PORT POLY DRY-MATES

### FEATURES

- Lightweight
- Easy to use
- Economical
- Reduces risk of exposure
- Wide range of chemical resistance
- Unrestricted 2" flow
- Patented double ball design with cam lever connection
- When properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps
- Spillage data: 2" FP = 3.6ml



DM220D

DM220A

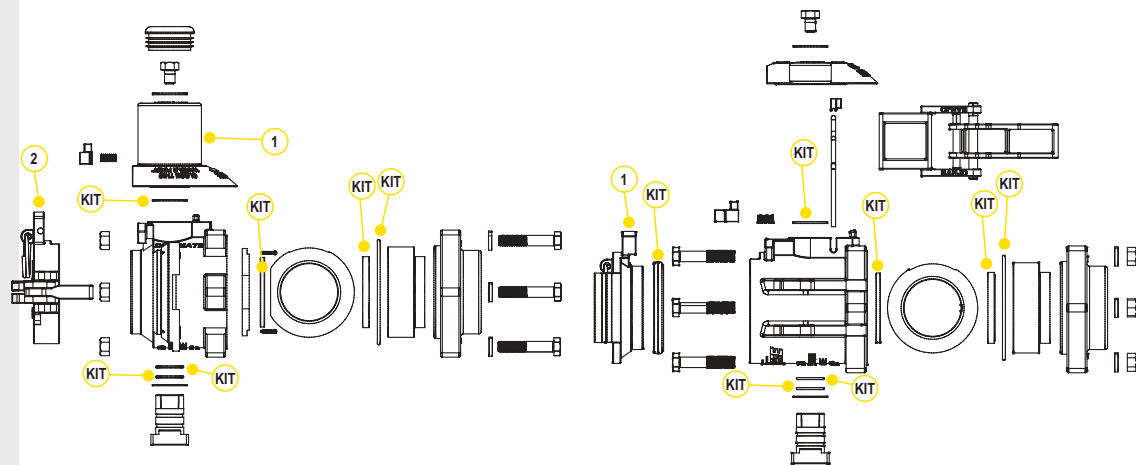
### 2" FULL PORT POLY DRY-MATES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM220D	2" FEMALE X FPT NPT W/FKM SEALS	225	2"	2"	1
DM220A	2" MALE X FPT W/FKM SEALS	225	2"	2"	1



### REPAIR KIT INCLUDES:

- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring
- Face seal

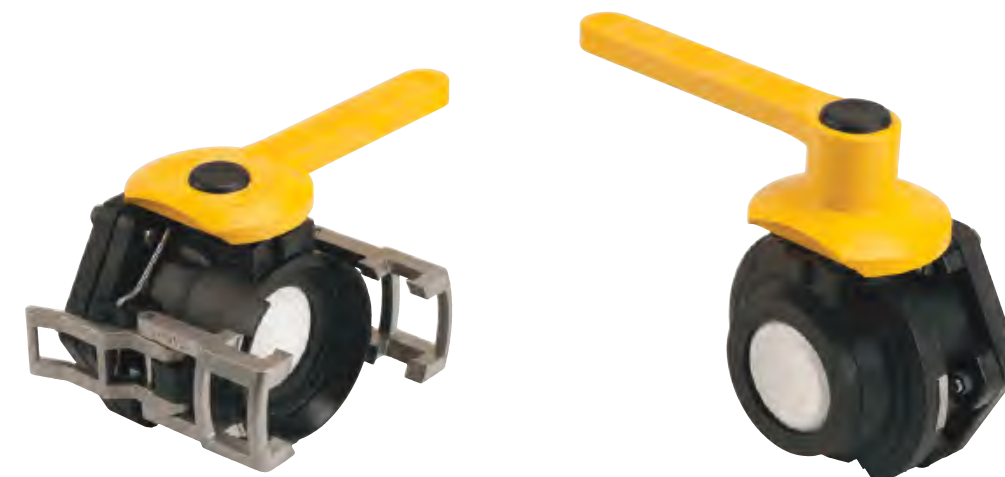


### REPLACEMENT PARTS MALE

ITEM	PART NO	DESCRIPTION	QTY
1	DM25153M	MALE HANDLE	1
2	DM220CAP	DUST CAP	1
KIT	DM25200	REPAIR KIT	1

### REPLACEMENT PARTS FEMALE

ITEM	PART NO	DESCRIPTION	QTY
1	DM25153F	FEMALE HANDLE	1
2	DM221PL	DUST PLUG	1
KIT	DM25200	REPAIR KIT	1



DM300DFP

DM300AFP

### 3" FULL PORT POLY DRY-MATES

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM300AFP	3" FP MALE X 3" FEMALE NPT THREADS W/ FKM SEALS	150	3"	3"	1
DM300DFP	3" FP FEMALE X 3" FEMALE NPT THREADS W/ FKM SEALS	150	3"	3"	1

## 3" FULL PORT POLY DRY-MATES

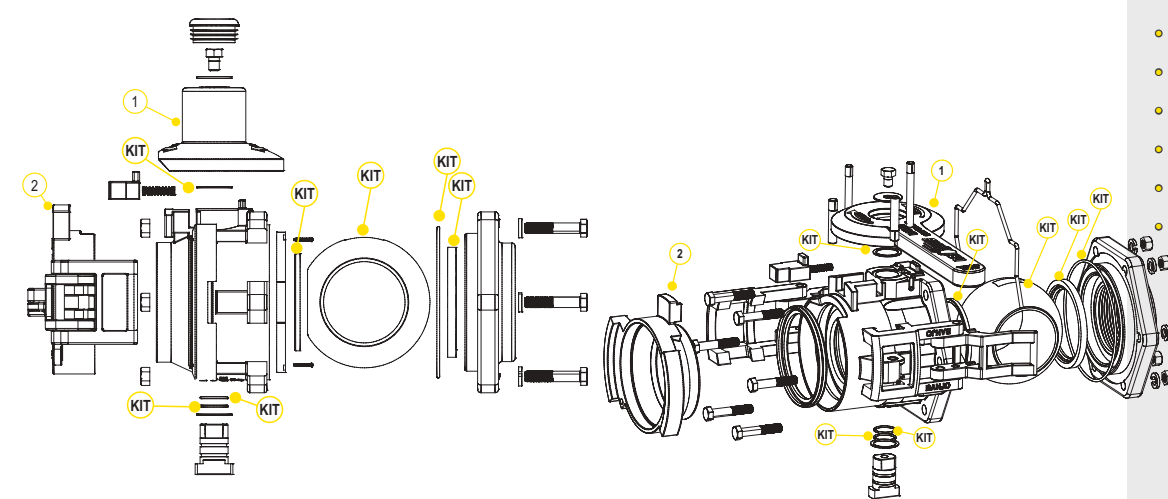
### FEATURES

- Lightweight
- Easy to use
- Economical
- Reduces risk of exposure
- Wide range of chemical resistance
- Unrestricted 3" flow
- Patented double ball design with cam lever connection
- When properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps
- Spillage data: 3" = 20ml



### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring
- Face seal



### REPLACEMENT PARTS MALE

ITEM	PART NO	DESCRIPTION	QTY
1	DM35153M	MALE HANDLE	1
2	DM300CAP	DUST CAP	1
KIT	DM35200	REPAIR KIT	1

### REPLACEMENT PARTS FEMALE

ITEM	PART NO	DESCRIPTION	QTY
1	DM35153F	FEMALE HANDLE	1
2	DM300PL	DUST PLUG	1
KIT	DM35200	REPAIR KIT	1

## 1" FULL PORT STAINLESS STEEL DRY-MATES

### FEATURES

- 316 stainless steel construction
- Unrestricted 1" flow
- Patented double ball design with cam lever connection
- 300°F maximum operating temperature
- 100% PTFE ball seats
- When properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps
- Spillage data: 1" FP = 1.7ml

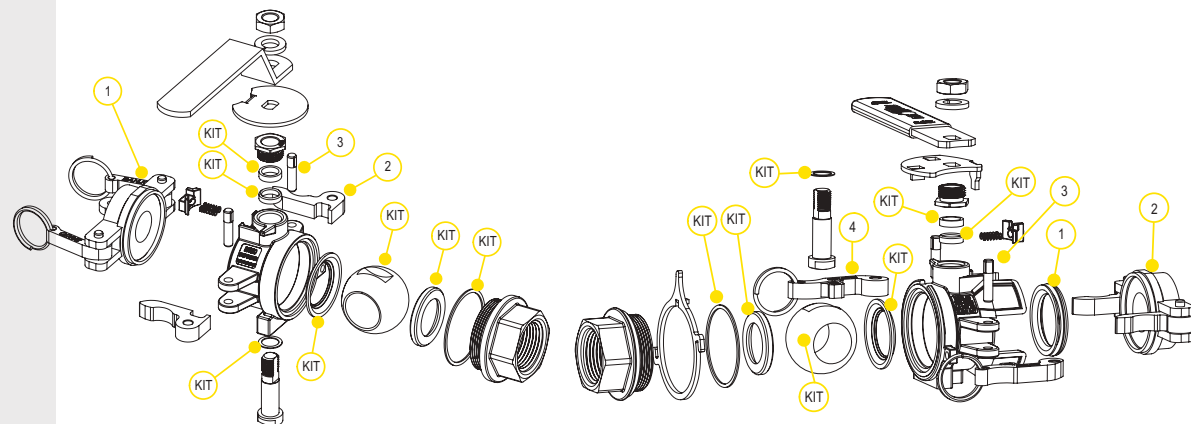


1" FULL PORT STAINLESS STEEL DRY-MATE					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM100ASS	1" MALE X FPT NPT W/ PTFE SEALS	150	1"	1"	1
DM100ABSS	1" MALE X BSPP W/ PTFE SEALS	150	1"	1"	1
DM100DSS	1" FEMALE X FPT NPT W/ FKM SEALS	150	1"	1"	1
DM100DSSE	1" FEMALE X FPT NPT W/ EPDM SEALS	150	1"	1"	1
DM100DBSS	1" FEMALE X BSPP W/ FKM SEALS	150	1"	1"	1



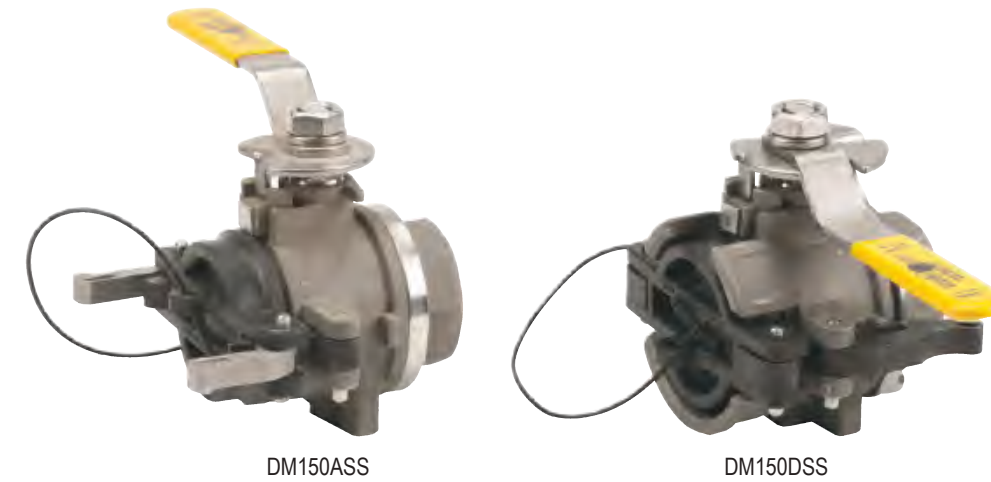
### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring
- Face seal



REPLACEMENT PARTS MALE			
ITEM	PART NO	DESCRIPTION	QTY
1	DM100CAP	DUST CAP	1
2	DM10300	PROFILE INSERT	2
3	100P	PIN	2
KIT	DM101SS	REPAIR KIT	1

REPLACEMENT PARTS FEMALE			
ITEM	PART NO	DESCRIPTION	QTY
1	DM10294A	FKM FACE SEAL	1
1	DM10295A	EPDM FACE SEAL	1
1	DM10296	KALREZ® FACE SEAL	1
2	DM100PL	POLY PLUG	1
3	100P	PIN	2
4	DM100K	CAM ARM	2
KIT	DM102SSV	FKM REPAIR KIT	1



1 1/2" FULL PORT STAINLESS STEEL DRY-MATE					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM150ASS	1 1/2" MALE X FPT NPT W/ PTFE SEALS	150	1 1/2"	1 1/2"	1
DM150ABSS	1 1/2" MALE X BSPP W/ PTFE SEALS	150	1 1/2"	1 1/2"	1
DM150DSS	1 1/2" FEMALE X FPT NPT W/ FKM SEALS	150	1 1/2"	1 1/2"	1
DM150DSSE	1 1/2" FEMALE X FPT NPT W/ EPDM SEALS	150	1 1/2"	1 1/2"	1
DM150DBSS	1 1/2" FEMALE X BSPP W/ FKM SEALS	150	1 1/2"	1 1/2"	1

## 1 1/2" FULL PORT STAINLESS STEEL DRY-MATES

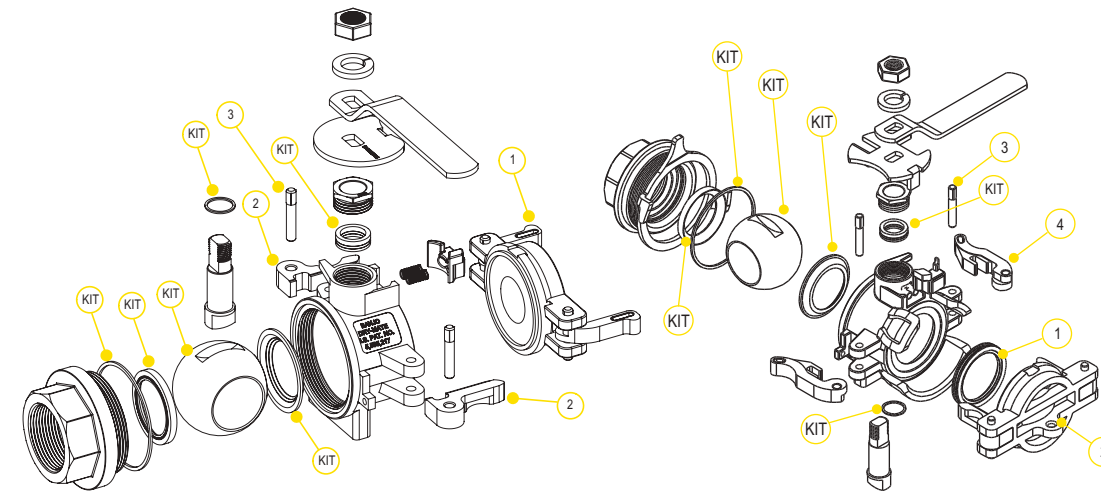
### FEATURES

- 316 stainless steel construction
- Unrestricted 1 1/2" flow
- Patented double ball design with cam lever connection
- 300°F maximum operating temperature
- 100% PTFE ball seats
- When properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps
- Spillage data: 1 1/2" FP = 3ml



### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring
- Face seal



REPLACEMENT PARTS MALE			
ITEM	PART NO	DESCRIPTION	QTY
1	DM200ACAP	DUST CAP	1
2	DM20300	PROFILE INSERT	2
3	200P	PIN	2
KIT	DM201SS	REPAIR KIT	1

REPLACEMENT PARTS FEMALE			
ITEM	PART NO	DESCRIPTION	QTY
1	DM20294A	FKM FACE SEAL	1
1	DM20295A	EPDM FACE SEAL	1
1	DM20296	KALREZ® FACE SEAL	1
2	DM200APL	DUST PLUG	1
3	200P	PIN	2
4	DM200KX	CAM ARM	2
KIT	DM202SSV	FKM REPAIR KIT	1

## 2" STAINLESS STEEL DRY-MATES

### FEATURES

- 316 stainless steel construction
- Patented double ball design with cam lever connection
- 300°F maximum operating temperature
- 100% PTFE ball seats
- When properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps
- Spillage data: 2" = 3.6ml



DM200ASS



DM200DSS

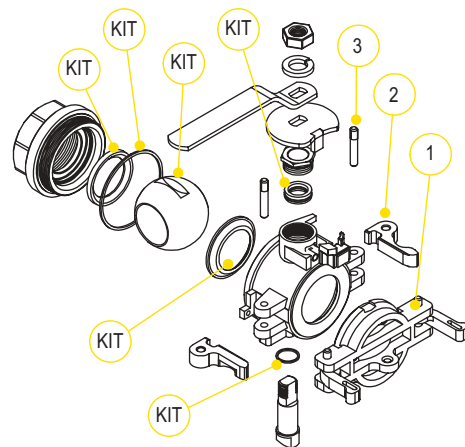
### 2" STANDARD PORT STAINLESS STEEL DRY-MATE

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM200ASS	2" MALE X FPT NPT W/ PTFE SEALS	150	2"	1½"	1
DM200ABSS	2" MALE X BSPP W/ PTFE SEALS	150	2"	1½"	1
DM200DSS	2" FEMALE X FPT NPT W/ FKM SEALS	150	2"	1½"	1
DM200DSST	2" FEMALE X FPT NPT W/ KALREZ® SEALS	150	2"	1½"	1
DM200DBSS	2" FEMALE X BSPP W/ FKM SEALS	150	2"	1½"	1



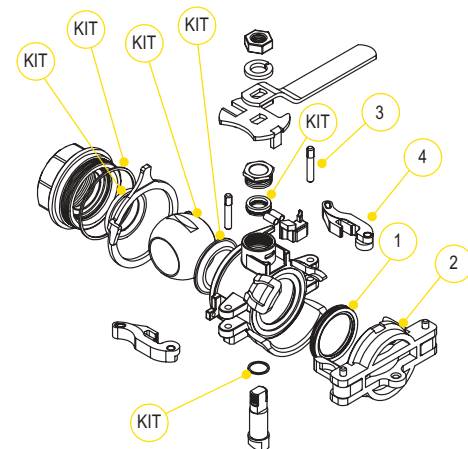
### REPAIR KIT INCLUDES:

- Ball
- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring
- Face seal



### REPLACEMENT PARTS MALE

ITEM	PART NO	DESCRIPTION	QTY
1	DM200ACAP	DUST CAP	1
2	DM20300	PROFILE INSERT	2
3	200P	PIN	2
KIT	DM201SS	REPAIR KIT	1



### REPLACEMENT PARTS FEMALE

ITEM	PART NO	DESCRIPTION	QTY
1	DM20294A	FKM FACE SEAL	1
1	DM20295A	EPDM FACE SEAL	1
1	DM20296	KALREZ® FACE SEAL	1
2	DM200APL	POLY PLUG	1
3	200P	PIN	2
4	DM200KX	CAM ARM	2
KIT	DM202SSV	FKM REPAIR KIT	1



DM220ABSS



DM220DBSS

### 2" FULL PORT STAINLESS STEEL DRY-MATE

PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DM220ASS	2" FULL PORT MALE X FPT NPT W/ PTFE SEALS	300	2"	2"	1
DM220ABSS	2" FULL PORT MALE X BSPP W/ PTFE SEALS	300	2"	2"	1
DM220DSS	2" FULL PORT FEMALE X FPT NPT W/ FKM SEALS	300	2"	2"	1
DM220DBSS	2" FULL PORT FEMALE X BSPP W/ FKM SEALS	300	2"	2"	1

## 2" FULL PORT STAINLESS STEEL DRY-MATES

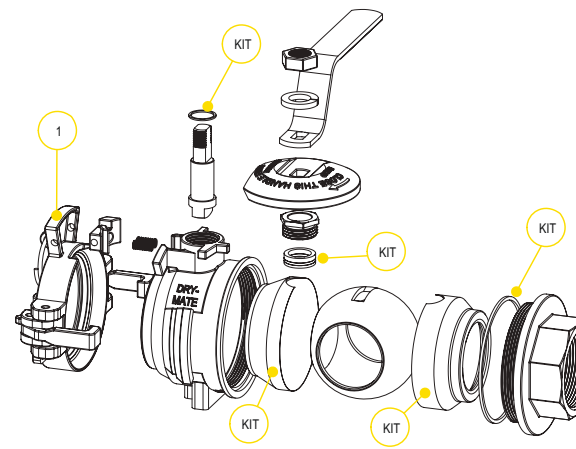
### FEATURES

- 316 stainless steel construction
- Unrestricted 2" flow
- Patented double ball design with cam lever connection
- 300°F maximum operating temperature
- 100% PTFE ball seats
- When properly installed and operated, the assembly will not accidentally separate while fluid is flowing; preventing costly mishaps
- Spillage data: 2" FP = 3.8ml



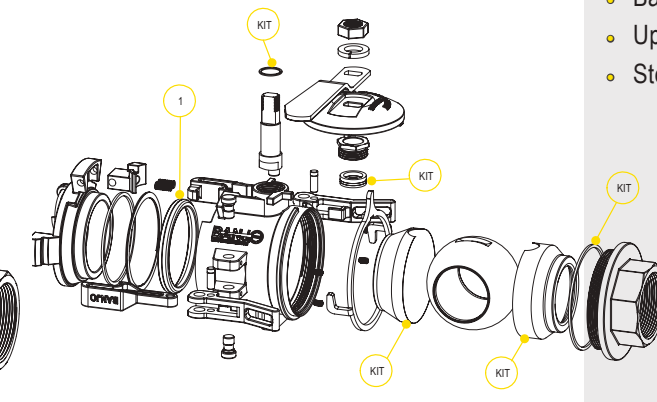
### REPAIR KIT INCLUDES:

- Body gasket
- Thrust washer
- Ball seats
- Upper stem bushing
- Stem o-ring



### REPLACEMENT PARTS MALE

ITEM	PART NO	DESCRIPTION	QTY
1	DM220CAP	DUST CAP	1
KIT	DM221SS	REPAIR KIT	1



### REPLACEMENT PARTS FEMALE

ITEM	PART NO	DESCRIPTION	QTY
1	DM25294	FKM FACE SEAL	1
1	DM25294T	KALREZ® FACE SEAL	1
KIT	DM222SS	REPAIR KIT	1



1" POLY DRY FITS

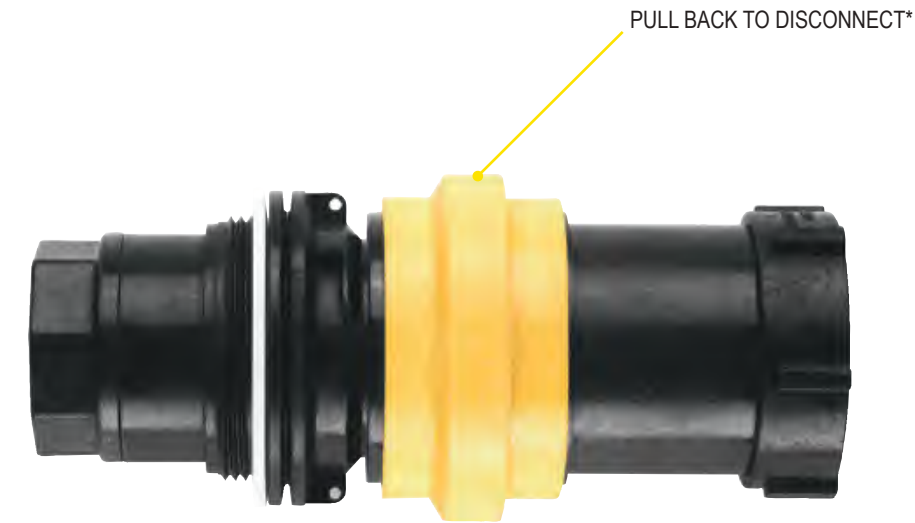
FEATURES

- Double poly-ball valves with integrated quick disconnect
- 1" full-port (unrestricted flow)
- Allows higher pressures & flow
- Economical and simpler design without handle locking feature
- **90+ less spillage** vs. 2 standard valves connected via a coupling



1 1/2" POLY MALE DRY FIT™					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DF100A	1" MALE X FPT NPT W/FKM SEALS	100	1"	1"	1

1 1/2" POLY FEMALE DRY FIT™					
PART NO	DESCRIPTION	MAX PSI	PIPE SIZE	OPENING THRU BALL	QTY
DF100D	1" FEMALE X FPT NPT W/FKM SEALS	100	1"	1"	1



DRY POPPET COUPLINGS

FEATURES

- Lightweight
- Minimal fluid spillage
- Easy to use
- Economical
- Reduces risk of exposure
- Wide range of chemical resistance
- Maximum operating temperature 150° F
- 30 GPM maximum flow
- Precision molded in polypropylene
- 1" female NPT threads

APPLICATIONS

- Agriculture
- Industrial
- Pharmaceutical
- Chemical processing

DRY POPPET COUPLINGS			
PART NO	DESCRIPTION	MAX PSI	QTY
DPCF100	FEMALE DRY POPPET COUPLER, 1" FEMALE NPT THREADS W/ FKM SEALS	100	1
DPCM100	MALE DRY POPPET ADAPTER, 1" FEMALE NPT THREADS W/ FKM SEALS	150	1
DPCMT100	MALE DRY POPPET ADAPTER, W/2" MALE THREADED BODY 1" FEMALE NPT THREADS W/ FKM SEALS	150	1

\*Note: Male adapter and female coupler shown coupled together but sold separately.

SPIN WELD BALL VALVES

FEATURES

- PTFE seats
- FKM stem o-rings
- Precision molded polypropylene is reinforced with fiberglass for additional strength
- Zinc alloy collar
- FKM, EPDM and TPV collar gaskets available
- Handles close in either direction
- For faster shipping, order in box quantities



IDENTIFYING COLLAR NUMBER FOUND HERE

SPINWELD BALL VALVE							
PART NO	DESCRIPTION	GASKET MATERIAL	COLLAR FITS	COLLAR NUMBER	COLLAR ID	MAX PSI	QTY
W230237	2" POLY SPINWELD VALVE W/NPT OUTLET & CAP & FOIL SEAL	FKM	MAUSER®	V22283 C & D	2 1/4"	20	1
W230238	2" POLY SPINWELD VALVE W/QDC OUTLET & CAP & FOIL SEAL	FKM	MAUSER®	V22283 C & D	2 1/4"	20	1
W230239	2" POLY SPINWELD VALVE W/NPT OUTLET & CAP & FOIL SEAL	EPDM	MAUSER®	V22283 C & D	2 1/4"	20	1
W230240	2" POLY SPINWELD VALVE W/QDC OUTLET & CAP & FOIL SEAL	EPDM	MAUSER®	V22283 C & D	2 1/4"	20	1
WSF210FSA	2" POLY SPINWELD VALVE W/QDC OUTLET, FOIL SEAL & CAP	TPV	SCHUTZ®	V20280 A & B	2 3/4"	50	1
WSF210FSAV	2" POLY SPINWELD VALVE W/QDC OUTLET, FOIL SEAL & CAP	FKM	SCHUTZ®	V20280 A & B	2 3/4"	50	1
WSMT210FSA	2" POLY SPINWELD VALVE W/NPT OUTLET, FOIL SEAL & CAP	TPV	SCHUTZ®	V20280 A & B	2 3/4"	225	1
WSMT210FSAV	2" POLY SPINWELD VALVE W/NPT OUTLET, FOIL SEAL & CAP	FKM	SCHUTZ®	V20280 A & B	2 3/4"	225	1

FDA UNION VALVE AND ADAPTERS

FEATURES

- Precision molded in glass reinforced polypropylene for strength and chemical resistance
- PTFE seats or smooth operation and proper sealing characteristics
- Double EPDM o-rings in stem area for extra sealing protection
- Interlocking body and end plate to allow easy thread connection when installing valves

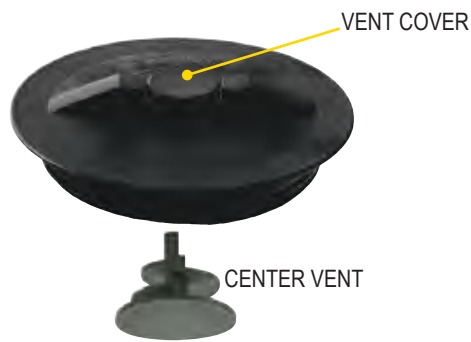


UNION VALVE AND ADAPTERS			
PART NO	DESCRIPTION	MAX PSI	QTY
MBP200	2" BUTTRESS X 2" NPT ASSEMBLY	200	1
NIP2101	2" NPT X BSP NIPPLE	300	1
UV204FPFD	2" FDA UNION VALVE WITH EPDM	225	1

## TANK LIDS

### FEATURES

- Maximum air flow through vent channels
- Airflow equivalent to a 3" hole
- No secondary venting needed
- Baffled vents
- Center vent goes in underside of lid
- NPT Threads



IBC SOLID TANK LIDS			
PART NO	DESCRIPTION	GASKET	LOT QTY
TL650S	6" SOLID TANK LID W/GASKET	TPV	10

IBC TANK LID WITH UNVENTED PLUG			
PART NO	DESCRIPTION	GASKET	LOT QTY
TL651S	6" TANK LID W/ UNVENTED 2" PLUG W/GASKET	TPV	10

IBC TANK LIDS WITH VENTED PLUG			
PART NO	DESCRIPTION	GASKET	QTY
TL652S	6" TANK LID W/ VENTED 2" PLUG W/GASKET	TPV	1
TL652E	6" TANK LID VENTED 2" PLUG W/GASKET	EPDM	1

TANK LID FOR SPRAY TANKS			
PART NO	DESCRIPTION	GASKET	QTY
TL600C	6" VENTED TANK LID	N/A	1

VENTED TANK LIDS			
PART NO	DESCRIPTION	GASKET	QTY
TLVA10	10" VENTED TANK LID & RING ASSEMBLY (NEW STYLE)	N/A	1

SIPHON TUBES		
PART NO	DESCRIPTION	LOT QTY
ST200	2" POLY SIPHON TUBE	5
ST300	3" POLY SIPHON TUBE	5



## POLYPROPYLENE ACCESSORIES

### FEATURES

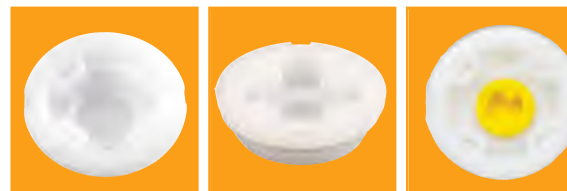
- Glass reinforced polypropylene



BUTTRESS BY MALE ADAPTER				
PART NO	DESCRIPTION	GASKET	PSI	LOT QTY
TA283	2" BUTTRESS X 2" MALE NPT THREADS W/GASKET	TPV	300	10
TA283QD	2" BUTTRESS X 2" MALE ADAPTER QDC W GASKET	TPV	150	10



CAPS			
PART NO	DESCRIPTION	PSI	QTY
201FPT	2" FEMALE NPT CAP - BLACK	20	1
211FPT	2" FEMALE NPT CAP - YELLOW	N/A	1



BUNG PLUGS		
PART NO	DESCRIPTION	QTY
231MPT	2" MPT SOLID BUNG W/ EPDM GASKET	1
TL6531	2" VENTED PLUG W/ EPDM GASKET	1



DUST CAPS & LANYARD			
PART NO	DESCRIPTION	PSI	LOT QTY
200CAP	2" CAM LEVER DUST CAP	200	20
200CAPSH	2" CAM LEVER DUST CAP WITH SHORT ARMS	200	10
201CAPSH	2" CAM LEVER DUST CAP W/SHORT ARMS & RINGS	200	10
202CAP	2" CAM LEVER DUST CAP	20	10
V20207	11" POLYURETHANE LANYARD	N/A	1

## BOLTED TANK FLANGES

### FEATURES

- Stainless steel bolts
- Bolt head plugs ultrasonically sealed
- Glass reinforced polypropylene
- EPDM gaskets standard and FKM available
- **WARNING:** Do not tighten tank flange bolts more than 12 ft pounds



BF150



BF300



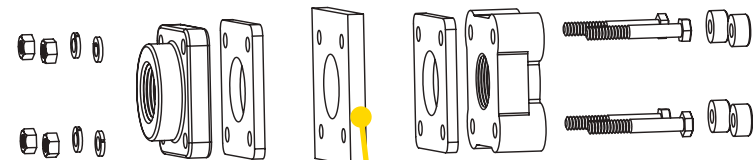
### BOLTED TANK FLANGES

PART NO	DESCRIPTION	LOT QTY
BF075	3/4" X 1" THREADED FLANGE W/EPDM GASKET	10
BF100	1" X 1" THREADED FLANGE W/EPDM GASKET	10
BF150	1 1/2" X 2" THREADED FLANGE W/EPDM GASKET	5
BF200	2" X 2" THREADED FLANGE W/EPDM GASKET	10
BF200V	2" X 2" THREADED FLANGE W/FKM GASKET	10
BF220	2" X 2" FP THREADED FLANGE W/EPDM GASKET	5
BF300	3" X 3" THREADED FLANGE W/EPDM GASKET	4

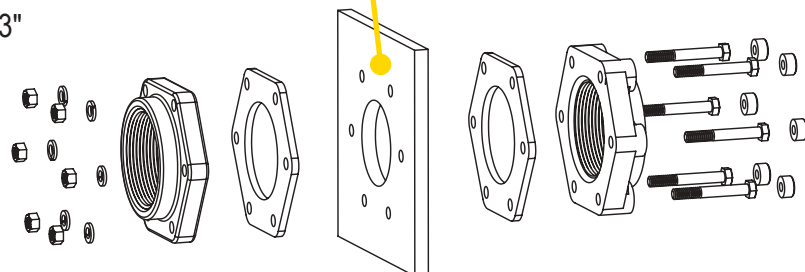
### BOLTED TANK FLANGE GASKETS

PART NO	DESCRIPTION	QTY
BF100GE	1" EPDM GASKET	1
BF200GE	1 1/2" & 2" EPDM GASKET	1
BF200GV	1 1/2" & 2" FKM GASKET	1
BF220GE	2" FULL PORT EPDM GASKET	1
BF220GV	2" FULL PORT FKM GASKET	1
BF300GE	3" EPDM GASKET	1
BF300GV	3" FKM GASKET	1

3/4" — 2"



3"



Tank Wall

## BOLTED BOTTOM DRAIN TANK FLANGES

### FEATURES

- Stainless steel bolts
- Bolt head plugs ultrasonically sealed
- Glass reinforced polypropylene
- EPDM gaskets standard and FKM available
- Allows 100% rinse free
- No sediment build up
- Excellent for avoiding herbicide cross contamination
- Fits most cone bottom and chemical inductor tanks, 30 gallons and larger.
- For faster shipping, order in box quantities



### BOLTED TANK FLANGES

PART NO	DESCRIPTION	LOT QTY
BF075BD	3/4" X 1" THREADED POLY FLANGE W/ EPDM GASKET	5
BF100BD	1" X 1" THREADED POLY FLANGE W/EPDM GASKET	5
BF150BD	1 1/2" X 2" THREADED POLY FLANGE W/EPDM GASKET	5
BF200BD	2" X 2" THREADED POLY FLANGE W/EPDM GASKET	5
BF220BD	2" X 2" FULL PORT THREADED POLY FLANGE W/EPDM GASKET	5
BF300BD	3" X 3" THREADED POLY FLANGE W/EPDM GASKET	4

### BOLTED TANK FLANGE GASKETS

PART NO	DESCRIPTION	QTY
BF100GE	3/4", 1" & 1 1/4" EPDM GASKET	1
BF100GRE	3/4", 1" & 1 1/4" FOOT EPDM GASKET	1
BF100GRV	3/4", 1" & 1 1/4" FOOT FKM GASKET	1
BF200GE	1 1/2" & 2" EPDM GASKET	1
BF200GV	1 1/2" & 2" FKM GASKET	1
BF200GFV	1 1/2" & 2" STD. PORT, 2" FULL PORT FOOT FKM GASKET	1
BF220GE	2" FULL PORT EPDM GASKET	1
BF220GV	2" FULL PORT FKM GASKET	1
BF300GE	3" EPDM GASKET	1
BF300GV	3" FKM GASKET	1
BF300GFE	3" FOOT EPDM GASKET	1
BF300GFV	3" FOOT FKM GASKET	1

## BULKHEAD TANK FITTINGS

### FEATURES

- Double sided female NPT threads
- Available with EPDM or FKM gasket
- Parts must be ordered in lot quantities.



### POLY BULKHEAD FITTINGS

PART NO	DESCRIPTION	HOLE SIZE	MAX PSI	LOT QTY
TF050	1/2" POLY BULKHEAD TANK FITTING W/EPDM GASKET	1 5/8"	300	10/BAG
TF075	3/4" POLY BULKHEAD TANK FITTING W/EPDM GASKET	1 5/8"	300	10/BAG
TF075V	3/4" POLY BULKHEAD TANK FITTING W/FKM GASKET	1 5/8"	300	10
TF100	1" POLY BULKHEAD TANK FITTING W/EPDM GASKET	2 1/4"	300	10/BAG
TF125	1 1/4" POLY BULKHEAD TANK FITTING W/EPDM GASKET	2 1/4"	300	10
TF150	1 1/2" POLY BULKHEAD TANK FITTING W/EPDM GASKET	3"	300	10
TF200	2" POLY BULKHEAD TANK FITTING W/EPDM GASKET	3"	300	10
TF200V	2" POLY BULKHEAD TANK FITTING W/FKM GASKET	3"	300	10
TF220	2" POLY BULKHEAD TANK FITTING W/EPDM GASKET	3 1/4"	300	10
TF300	3" POLY BULKHEAD TANK FITTING W/EPDM GASKET	4 1/2"	300	5
TF400	4" POLY BULKHEAD TANK FITTING W/EPDM GASKET	5 3/4"	225	1

### 316 STAINLESS STEEL BULKHEAD FITTINGS

PART NO	DESCRIPTION	HOLE SIZE	MAX PSI	QTY
TF038SS	3/8" SS BULKHEAD TANK FITTING W/EPDM GASKET	1"	300	1
TF050SS	1/2" SS BULKHEAD TANK FITTING W/EPDM GASKET	1 3/8"	300	1
TF075SS	3/4" SS BULKHEAD TANK FITTING W/EPDM GASKET	1 5/8"	300	1
TF100SS	1" SS BULKHEAD TANK FITTING W/EPDM GASKET	2 1/4"	300	1
TF125SS	1 1/4" SS BULKHEAD TANK FITTING W/EPDM GASKET	2 1/4"	300	1
TF150SS	1 1/2" SS BULKHEAD TANK FITTING W/EPDM GASKET	3"	300	1
TF200SS	2" SS BULKHEAD TANK FITTING W/EPDM GASKET	3"	300	1
TF220SS	2" SS BULKHEAD TANK FITTING W/EPDM GASKET	3 1/4"	300	1
TF300SS	3" SS BULKHEAD TANK FITTING W/EPDM GASKET	4 3/8"	300	1



### BULKHEAD GASKETS

PART NO	DESCRIPTION	HOLE SIZE	FITS POLY	FITS SS	LOT QTY
100G	3/8" BULKHEAD EPDM GASKET	1"		TF038SS	25
100GV	3/8" BULKHEAD FKM GASKET	1"		TF038SS	10
TF100G	1" TANK FLANGE EPDM GASKET	2 7/32"		TF100V	25
TF100GV	1" TANK FLANGE FKM GASKET	2 7/32"		TF100V	10
TF138GV	1/2" BULKHEAD FKM GASKET	1 3/8"		TF050SS	10
150G	1/2" & 3/4" BULKHEAD EPDM GASKET	1 5/8"	TF050 & TF075	TF075SS	25
150GV	1/2" & 3/4" BULKHEAD FKM GASKET	1 5/8"	TF050 & TF075	TF075SS	10
200G	2" BULKHEAD EPDM GASKET	2 1/4"	TF100 & TF125	TF100SS & TF125SS	25
200GV	2" BULKHEAD FKM GASKET	2 1/4"	TF100 & TF125	TF100SS & TF125SS	10
300G	1 1/2" & 2" BULKHEAD EPDM GASKET	3"	TF200 & TF150	TF200SS & TF150SS	25
300GV	1 1/2" & 2" BULKHEAD FKM GASKET	3"	TF200 & TF150	TF200SS & TF150SS	10
TF220G	2" BULKHEAD EPDM GASKET	3 1/4"	TF220	TF220SS	1
TF300G	3" BULKHEAD EPDM GASKET	4 1/2"	TF300	TF300SS	1
TF400G	4" POLY BULKHEAD EPDM GASKET	5 3/4"	TF400		1
TF400GV	4" POLY BULKHEAD FKM GASKET	5 3/4"	TF400		1

PREVENTS SWIRL!



## ANTI VORTEX VENT CAPS

### FEATURES

- Male NPT
- Glass reinforced polypropylene
- 304 stainless steel screen

### ANTI VORTEX VENT CAPS

PART NO	DESCRIPTION	BORE SIZE	BORE AREA	VENT AREA	LOT QTY
VC200	2" ANTI VORTEX VENT CAP WITHOUT SCREEN	2"	3.1 SQ IN	3.9 SQ IN	10
VC230	2" ANTI VORTEX VENT CAP W/12 MESH SS SCREEN	2"	3.1 SQ IN	3.9 SQ IN	10
VC300	3" ANTI VORTEX VENT CAP WITHOUT SCREEN	3"	7 SQ IN	9 SQ IN	1
VC330	3" ANTI VORTEX VENT CAP W/10 MESH SS SCREEN	3"	7 SQ IN	9 SQ IN	1

## ANTI VORTEX TANK FLANGES

### FEATURES

- Standard with FKM
- Prevents swirl in bottom of tank

PREVENTS SWIRL!



### ANTI VORTEX TANK FLANGES

PART NO	DESCRIPTION	HOLE SIZE	QTY
TF100AV	1" ANTI VORTEX TANK FLANGES	2 1/4"	1
TF125AV	1 1/4" ANTI VORTEX TANK FLANGES	2 1/4"	1
TF150AV	1 1/2" ANTI VORTEX TANK FLANGES	3"	1
TF200AV	2" ANTI VORTEX TANK FLANGES	3"	1

## ANSI FLANGES

### FEATURES

- Glass reinforced polypropylene
- Heavy duty



### THREADED ANSI FLANGES

PART NO	DESCRIPTION	LOT QTY
AF100	1" FEMALE THREADED ANSI FLANGE	10/BAG
AF150	1½" FEMALE THREADED ANSI FLANGE	10/BAG
AF200	2" FEMALE THREADED ANSI FLANGE	10
AF300	3" FEMALE THREADED ANSI FLANGE	5
AF400	4" FEMALE THREADED ANSI FLANGE	1

### BLIND ANSI FLANGES

PART NO	DESCRIPTION	LOT QTY
AFB200	2" BLIND ANSI FLANGE	10/BAG
AFB300	3" BLIND ANSI FLANGE	5

### ANSI FLANGE GASKETS

PART NO	DESCRIPTION	QTY
AF100G	1" ANSI FLANGE EPDM GASKET	1
AF100GV	1" ANSI FLANGE FKM GASKET	1
AF150G	1½" ANSI FLANGE EPDM GASKET	1
AF200G	2" ANSI FLANGE EPDM GASKET	1
AF200GV	2" ANSI FLANGE FKM GASKET	1
AF300G	3" ANSI FLANGE EPDM GASKET	1
AF300GV	3" ANSI FLANGE FKM GASKET	1
AF400G	4" ANSI FLANGE EPDM GASKET	1
AF400GV	4" ANSI FLANGE FKM GASKET	1

## ¼"-4" POLYPROPYLENE

### FEATURES

- Stainless steel rings, arms and pins
- Versatile — interchangeable with all types of cam lever couplings
- Precision molded — ensures a uniform and accurate fit
- Durable — polypropylene is glass reinforced for rugged strength
- Smooth operating — finger rings are designed for easy opening of cam levers
- Economical and superior in performance
- Parts must be ordered in lot quantities.
- ¼" and ½" series couplings interchange with ¾" size couplings. Coupling ends are ¾" size.
- 1¼" series couplings interchange with 1" size couplings. Coupling ends are 1" size.
- 1½" x 1¼" couplings interchange with 1½" size couplings. Coupling ends are 1½" size.



### POLYPROPYLENE CAM LEVER COUPLINGS

ITEM	DESCRIPTION	¼"	½"	¾"	1"	1¼"	1½" x 1¼"	1½"	2"	2½"	3"	3" 3 ARMS	4" 3 ARMS
A	MALE ADAPTER X FEMALE THREAD	75A1/4	75A1/2	75A3/4	100A	125A	150125A	150A	200A		300A		400A
B	FEMALE COUPLER X MALE THREAD		75B1/2	75B3/4	100B	125B	150125B	150B	200B		300B	303B	400B
C	FEMALE COUPLER X HOSE BARB		050C	075C	100C	125C	150125C	150C	200C		300C	303C	400C
D	FEMALE COUPLER X FEMALE THREAD		050D	075D	100D	125D	150125D	150D	200D		300D		400D
E	MALE ADAPTER X HOSE BARB		050E	075E	100E	125E	150125E	150E	200E		300E		400E
F	MALE ADAPTER X MALE THREAD		050F	075F	100F	125F	150125F	150F	200F		300F		400F
PL	PLUG FOR FEMALE COUPLER		75PL	75PL	100125PL	100125PL	150PL	150PL	200PL	250PL	300PL		400PL
CAP	CAP FOR MALE ADAPTER		075CAP	075CAP	100125CAP	100125CAP	150CAP	150CAP	200CAP	250CAP	300CAP		400CAP (2 arms)
CAPSH	CAP WITH SHORT ARMS						200CAPSH						

### ¼" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
75A1/4	¾" MALE ADAPTER X ¼" FEMALE THREAD	300	N/A	10/BAG

### ½" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
75A1/2	¾" MALE ADAPTER X ½" FEMALE THREAD	225	N/A	10/BAG
75B1/2	¾" FEMALE COUPLER X ½" MALE THREAD	300	EPDM	10/BAG
050C	¾" FEMALE COUPLER X ½" HOSE BARB	300	EPDM	10/BAG
050D	¾" FEMALE COUPLER X ½" FEMALE THREAD	300	EPDM	10/BAG
050E	¾" MALE ADAPTER X ½" HOSE BARB	300	N/A	10/BAG
050F	¾" MALE ADAPTER X ½" MALE THREAD	300	N/A	10/BAG
075CAP	¾" CAP X MALE ADAPTER	300	EPDM	10/BAG
75PL	¾" PLUG X FEMALE COUPLER	300	N/A	10/BAG



**WARNING!** Couplings should not be disconnected under pressure or with liquid in the line.

## 1/4"-4" POLYPROPYLENE

## 1/4"-4" POLYPROPYLENE

### FEATURES

### FEATURES

- Stainless steel rings, arms and pins
- Versatile — interchangeable with all types of cam lever couplings
- Precision molded — ensures a uniform and accurate fit
- Durable — polypropylene is glass reinforced for rugged strength
- Smooth operating — finger rings are designed for easy opening of cam levers
- Economical and superior in performance
- Standard with EPDM gaskets, FKM gaskets can be ordered separately on page 79
- Parts must be ordered in lot quantities.
- 1/4", 3/8" and 1/2" series couplings interchange with 3/4" size couplings. Coupling ends are 3/4" size.
- 1 1/4" series couplings interchange with 1" size couplings. Coupling ends are 1" size.
- 1 1/2" x 1 1/4" couplings interchange with 1 1/2" size couplings. Coupling ends are 1 1/2" size.

- Stainless steel rings, arms and pins
- Versatile — interchangeable with all types of cam lever couplings
- Precision molded — ensures a uniform and accurate fit
- Durable — polypropylene is glass reinforced for rugged strength
- Smooth operating — finger rings are designed for easy opening of cam levers
- Economical and superior in performance
- Parts must be ordered in lot quantities.
- 1/4", 3/8" and 1/2" series couplings interchange with 3/4" size couplings. Coupling ends are 3/4" size.
- 1 1/4" series couplings interchange with 1" size couplings. Coupling ends are 1" size.
- 1 1/2" x 1 1/4" couplings interchange with 1 1/2" size couplings. Coupling ends are 1 1/2" size.



**WARNING!** Couplings should not be disconnected under pressure or with liquid in the line.

**WARNING!** Couplings should not be disconnected under pressure or with liquid in the line.

### 3/4" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
75A3/4	3/4" MALE ADAPTER X 3/4" FEMALE THREAD	225	N/A	10/BAG
75B3/4	3/4" FEMALE COUPLER X 3/4" MALE THREAD	300	EPDM	10/BAG
075C	3/4" FEMALE COUPLER X 3/4" HOSE BARB	300	EPDM	10/BAG
075D	3/4" FEMALE COUPLER X 3/4" FEMALE THREAD	300	EPDM	10/BAG
075E	3/4" MALE ADAPTER X 3/4" HOSE BARB	300	N/A	10/BAG
075F	3/4" MALE ADAPTER X 3/4" MALE THREAD	300	N/A	10/BAG
075CAP	3/4" CAP X MALE ADAPTER	300	EPDM	10/BAG
75PL	3/4" PLUG X FEMALE COUPLER	300	N/A	10/BAG

### 1" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
100A	1" MALE ADAPTER X 1" FEMALE THREAD	300	N/A	10/BAG
100B	1" FEMALE COUPLER X 1" MALE THREAD	300	EPDM	10/BAG
100C	1" FEMALE COUPLER X 1" HOSE BARB	300	EPDM	10/BAG
100D	1" FEMALE COUPLER X 1" FEMALE THREAD	300	EPDM	10/BAG
100E	1" MALE ADAPTER X 1" HOSE BARB	300	N/A	10/BAG
100F	1" MALE ADAPTER X 1" MALE THREAD	300	N/A	10/BAG
100125CAP	1" CAP X MALE ADAPTER	300	EPDM	10/BAG
100125PL	1" PLUG X FEMALE COUPLER	300	N/A	10/BAG

### 1 1/4" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
125A	1" MALE ADAPTER X 1 1/4" FEMALE THREAD	300	N/A	10/BAG
125B	1" FEMALE COUPLER X 1 1/4" MALE THREAD	300	EPDM	10/BAG
125C	1" FEMALE COUPLER X 1 1/4" HOSE BARB	300	EPDM	10/BAG
125D	1" FEMALE COUPLER X 1 1/4" FEMALE THREAD	300	EPDM	10/BAG
125E	1" MALE ADAPTER X 1 1/4" HOSE BARB	300	N/A	10/BAG
125F	1" MALE ADAPTER X 1 1/4" MALE THREAD	300	N/A	10/BAG
100125CAP	1" CAP X MALE ADAPTER	300	EPDM	10/BAG
100125PL	1" PLUG X FEMALE COUPLER	300	N/A	10/BAG

### 1 1/2" X 1 1/4" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
150125A	1 1/2" MALE ADAPTER X 1 1/4" FEMALE THREAD	225	N/A	10/BAG
150125B	1 1/2" FEMALE COUPLER X 1 1/4" MALE THREAD	300	EPDM	10
150125C	1 1/2" FEMALE COUPLER X 1 1/4" HOSE BARB	300	EPDM	10
150125D	1 1/2" FEMALE COUPLER X 1 1/4" FEMALE THREAD	300	EPDM	10
150125E	1 1/2" MALE ADAPTER X 1 1/4" HOSE BARB	225	EPDM	10/BAG
150125F	1 1/2" MALE ADAPTER X 1 1/4" MALE THREAD	300	N/A	10/BAG
150CAP	1 1/2" CAP X MALE ADAPTER	300	EPDM	10
150PL	1 1/2" PLUG X FEMALE COUPLER	225	N/A	10/BAG

### 1 1/2" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
150A	1 1/2" MALE ADAPTER X 1 1/2" FEMALE THREAD	225	N/A	10/BAG
150B	1 1/2" FEMALE COUPLER X 1 1/2" MALE THREAD	300	EPDM	10
150C	1 1/2" FEMALE COUPLER X 1 1/2" HOSE BARB	300	EPDM	10
150D	1 1/2" FEMALE COUPLER X 1 1/2" FEMALE THREAD	300	EPDM	10
150E	1 1/2" MALE ADAPTER X 1 1/2" HOSE BARB	200	N/A	10/BAG
150F	1 1/2" MALE ADAPTER X 1 1/2" MALE THREAD	300	N/A	10/BAG
150CAP	1 1/2" CAP X MALE ADAPTER	300	EPDM	10
150PL	1 1/2" PLUG X FEMALE COUPLER	225	N/A	10/BAG

### 2" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
200A	2" MALE ADAPTER X 2" FEMALE THREAD	225	N/A	10/BAG
200B	2" FEMALE COUPLER X 2" MALE THREAD	225	EPDM	10/BAG
201B	2" FEMALE COUPLER X 2" EXTENDED MALE THREAD	200	EPDM	10/BAG
200C	2" FEMALE COUPLER X 2" HOSE BARB	225	EPDM	10/BAG
200D	2" FEMALE COUPLER X 2" FEMALE THREAD	200	EPDM	10/BAG
200E	2" MALE ADAPTER X 2" HOSE BARB	200	N/A	10/BAG
200F	2" MALE ADAPTER X 2" MALE THREAD	300	N/A	10/BAG
200CAP	2" CAP X MALE ADAPTER	200	EPDM	10/BAG
200CAPSH	2" CAP X MALE ADAPTER W/SHORT ARMS	200	EPDM	10/BAG
200PL	2" PLUG X FEMALE COUPLER	225	N/A	10/BAG
M200A	2" FLANGE X 2" MALE ADAPTER	300	N/A	10/BAG
M220A	2" FP FLANGE X 2" MALE ADAPTER	225	N/A	10/BAG
M220D	2" FP FLANGE X FEMALE COUPLER	225	EPDM	10/BAG
M300A	3" FP FLANGE X 3" MALE ADAPTER	100	N/A	1
M303D	3" FP FLANGE X 3" FEMALE COUPLER W/3 ARMS	225	EPDM	10/BAG

### 2" X 1 1/2" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
200150C	2" FEMALE COUPLER X 1 1/2" HOSE BARB	300	EPDM	10

### 2 1/2" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	QTY
250CAP	2 1/2" CAP X MALE ADAPTER	300	EPDM	1
250PL	2 1/2" PLUG X FEMALE COUPLER	300	N/A	1

### 3" SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
300A	3" MALE ADAPTER X 3" FEMALE THREAD	100	N/A	1
300B	3" FEMALE COUPLER X 3" MALE THREAD	150	EPDM	1
303B	3" FEMALE COUPLER X 3" EXTENDED MALE THREAD	200	EPDM	10
303B200A	3" FEMALE COUPLER W/ 3 ARMS X 2" MALE ADAPTER	200	EPDM	10
300C	3" FEMALE COUPLER X 3" HOSE BARB	200	EPDM	1
303C	3" FEMALE COUPLER W/ 3 ARMS X 3" HOSE BARB	200	EPDM	10
300D	3" FEMALE COUPLER X 3" FEMALE THREAD	200	EPDM	1
300E	3" MALE ADAPTER X 3" HOSE BARB	150	N/A	1
300F	3" MALE ADAPTER X 3" MALE THREAD	100	N/A	1
300CAP	3" CAP X MALE ADAPTER	100	EPDM	1
300PL	3" PLUG X FEMALE COUPLER	150	N/A	1

### 4" SERIES POLY CAM LEVER COUPLINGS

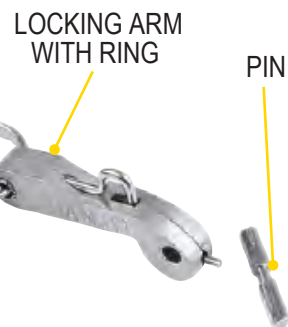
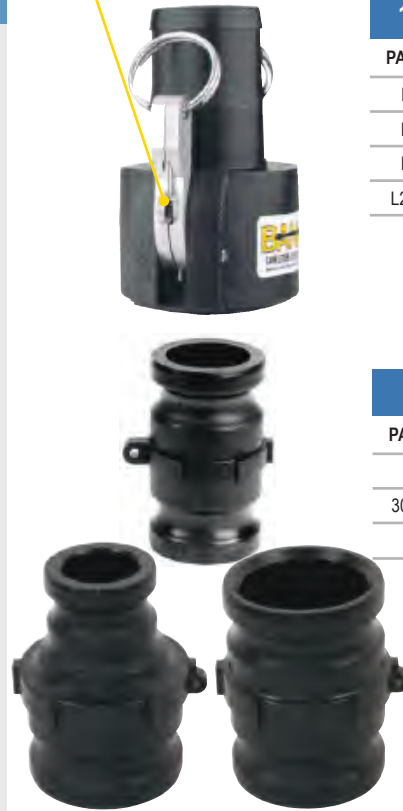
PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
400A	4" MALE ADAPTER X 4" FEMALE THREAD	75	N/A	1
400B	4" FEMALE COUPLER X 4" MALE THREAD	150	EPDM	1
400C	4" FEMALE COUPLER X 4" HOSE BARB	150	EPDM	1
400D	4" FEMALE COUPLER X 4" FEMALE THREAD	100	EPDM	1
400E	4" MALE ADAPTER X 4" HOSE BARB	50	N/A	1
400F	4" MALE ADAPTER X 4" MALE THREAD	75	N/A	1
400CAP	4" CAP X MALE ADAPTER (W/2 ARMS)	100	EPDM	1
400PL	4" PLUG X FEMALE COUPLER	75	N/A	1

## 1/4"-4" POLYPROPYLENE

### FEATURES

- Chemical resistant to protect against corrosion
- Versatile to interchange with all types of cam lever couplings
- Smooth operation makes connections quick and easy
- Parts must be ordered in lot quantities.
- Locking cam arm lever is not intended to be used as a security device or prevent unauthorized opening of coupling assembly.

EASY ACTION LOCKING LEVER!



### 1 1/2" - 2" SERIES LOCKING POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	QTY
L200B	2" FEMALE COUPLER X 2" MALE THREAD	225	EPDM	1
L200C	2" FEMALE COUPLER X 2" HOSE BARB	225	EPDM	1
L200D	2" FEMALE COUPLER X 2" FEMALE THREAD	200	EPDM	1
L200CAP	2" CAP X MALE ADAPTER	200	EPDM	1

### SPOOL ADAPTERS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
200FF	2" MALE ADAPTER X 2" MALE ADAPTER	150	N/A	10/BAG
300F200F	3" MALE ADAPTER X 2" MALE ADAPTER	75	N/A	1
300FF	3" MALE ADAPTER X 3" MALE ADAPTER	75	N/A	1

### REPLACEMENT PARTS

PART NO	DESCRIPTION	LOT QTY
100RING	RING FITS 3/4" & 1"	10
150RING	RING FITS 1 1/2", 2", 3", 4"	10
150(200)K	1 1/2", 2" SS CAM ARM W/RING	1
300K	3" SS CAM ARM WITH RING	1
V20207	11" LANYARD	25
75G	1/2" & 3/4" EPDM GASKET	25
75GV	3/4" FKM GASKET	10
100G	1" & 1 1/4" EPDM GASKET	25
100GV	1" & 1 1/4" FKM GASKET	10
150G	1 1/2" EPDM GASKET	25
150GV	1 1/2" FKM GASKET	10
200G	2" EPDM GASKET	25
200GV	2" FKM GASKET	10
300G	3" EPDM GASKET	25
300GV	3" FKM GASKET	10
400G	4" EPDM GASKET	1
200KL	2" LOCKING CAM ARM WITH RING FITS 1 1/2" & 2"	1
200PKL	2" COUPLING PIN FITS 1 1/2" & 2"	1
200P	2" COUPLING PIN	1
300P	3" COUPLING PIN	1



### 1 1/2" 90° POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
150A90	1 1/2" 90° MALE ADAPTER X 1 1/2" FEMALE THREAD	225	N/A	10/BAG
150C90	1 1/2" 90° FEMALE COUPLER X 1 1/2" HOSE BARB	225	EPDM	10
150D90	1 1/2" 90° FEMALE COUPLER X 1 1/2" FEMALE THREAD	300	EPDM	10
150F90	1 1/2" 90° MALE ADAPTER X 1 1/2" MALE THREAD	300	N/A	10/BAG

### 2" 90° SERIES POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
200A90	2" 90° MALE ADAPTER X 2" FEMALE THREAD	225	N/A	10/BAG
200B90	2" 90° FEMALE COUPLER X 2" MALE THREAD	225	EPDM	10
200C90	2" 90° FEMALE COUPLER X 2" HOSE BARB	225	EPDM	10
200D90	2" 90° FEMALE COUPLER X 2" FEMALE THREAD	200	EPDM	10
200F90	2" 90° MALE ADAPTER X 2" MALE THREAD	225	N/A	10/BAG

### 2" 45° POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
200F45	2" 45° MALE ADAPTER X 2" MALE THREAD	225	N/A	10/BAG

### 2" 45° POLY CAM LEVER COUPLINGS

PART NO	DESCRIPTION	MAX PSI	GASKET	LOT QTY
M220ASWP90	2" FP FLANGE X MALE ADAPTER SWEEP	200	N/A	10/BAG
M300ASWP90	3" FP FLANGE X MALE ADAPTER SWEEP	100	N/A	1



### GARDEN HOSE FITTINGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
GHFT075A	3/4" ADAPTER X 3/4" GARDEN HOSE FEMALE THREAD	225	10/BAG
GHMT075B	3/4" COUPLER X 3/4" GARDEN HOSE MALE THREAD	300	10/BAG
GHFT075D	3/4" COUPLER X 3/4" GARDEN HOSE FEMALE THREAD	300	10/BAG
GHMT075F	3/4" ADAPTER X 3/4" GARDEN HOSE MALE THREAD	300	10/BAG
GHFT075MPT	3/4" MALE NPT X 3/4" GARDEN HOSE FEMALE THREAD	300	10/BAG
GHMT075FPT	3/4" FEMALE NPT X 3/4" GARDEN HOSE MALE THREAD	300	10/BAG
GHMT075MPT	3/4" MALE NPT X 3/4" GARDEN HOSE MALE THREAD	300	10/BAG
GHFT075G	3/4" GARDEN HOSE FITTING GASKET	N/A	25

### GARDEN HOSE NOZZLE

PART NO	DESCRIPTION	MAX PSI	QTY
GHN075	3/4" GARDEN HOSE SPRAY NOZZLE	N/A	1



## 1 1/2"-2" 90° & 45° POLYPROPYLENE

### FEATURES

- Precision molded in polypropylene, reinforced with fiberglass for strength
- Stainless steel rings, arms and pins resist corrosion
- 90° angle couplings and adapters will reduce the number of elbows and other pipe fittings used in plumbing applications



WARNING! Couplings should not be disconnected under pressure or with liquid in the line.

## GARDEN HOSE FITTINGS & NOZZLE

- Same construction and design that farmers use for their heavy spraying applications.
- Rugged, secure quick-connect cam arms
- Heavy-duty thick wall reinforced polypropylene
- Proven, leak-free construction
- Full flow design

### FEATURES

- Heavy duty machined aluminum construction stands up to hard use
- Comfort grip soft rubber
- Resists dents, mars and scratches; protects any surface that comes in contact with nozzle
- Aluminum hose connection provides a tight fit, will not rust
- Multiple spray pattern adjusts from a powerful jet stream to a gentle fan spray. Ideal for all your spraying needs.
- Stainless steel spray cap for precise spray patterns



WARNING! Couplings should not be disconnected under pressure or with liquid in the line.



## SUPER CLAMPS

### FEATURES

- Stainless steel construction
- 304 stainless steel bolt with 316 stainless steel nut to prevent seizing
- 360° sealing surface
- Ideal for high torque applications
- Strong, positive connections where ordinary hose clamps fail
- T-bolt design
- 3 spot welds for extra strength
- Sold in bags of 10 only
- Torque specifications: working torque 50-80 inch pounds, maximum torque 125 inch pounds
- Please note new Min-Max Diameter measurements.



SUPER CLAMPS				
PART NO	DESCRIPTION	MIN-MAX DIAMETER	MAX TORQUE	LOT QTY
TC120	1" T-BOLT HOSE CLAMP	1.18"-1.34"	75 IN-LBS	10/BAG
TC130	1 1/4" T-BOLT HOSE CLAMP	1.34"-1.50"	75 IN-LBS	10/BAG
TC150	1 1/2" T-BOLT HOSE CLAMP	1.50"-1.62"	75 IN-LBS	10/BAG
TC162	1 1/4" T-BOLT HOSE CLAMP	1.59"-1.87"	75 IN-LBS	10/BAG
TC181	1 1/2" T-BOLT HOSE CLAMP	1.84"-2.12"	75 IN-LBS	10/BAG
TC193	1 1/2" T-BOLT HOSE CLAMP	1.90"-2.24"	75 IN-LBS	10/BAG
TC206	2" T-BOLT HOSE CLAMP	2.16"-2.40"	75 IN-LBS	10/BAG
TC218	2" T-BOLT HOSE CLAMP	2.18"-2.52"	75 IN-LBS	10/BAG
TC224	2" T-BOLT HOSE CLAMP	2.24"-2.58"	75 IN-LBS	10/BAG
TC231	2" T-BOLT HOSE CLAMP	2.31"-2.65"	75 IN-LBS	10/BAG
TC250	2" T-BOLT HOSE CLAMP	2.50"-2.84"	75 IN-LBS	10/BAG
TC287	2" T-BOLT HOSE CLAMP	2.87"-3.18"	75 IN-LBS	10/BAG
TC312	3" T-BOLT HOSE CLAMP	3.28"-3.50"	75 IN-LBS	10/BAG
TC331	3" T-BOLT HOSE CLAMP	3.31"-3.70"	75 IN-LBS	10/BAG
TC343	3" T-BOLT HOSE CLAMP	3.50"-3.89"	75 IN-LBS	10/BAG
TC425	4" T-BOLT HOSE CLAMP	4.25"-4.64"	75 IN-LBS	10/BAG
TC438	4" T-BOLT HOSE CLAMP	4.38"-4.69"	180 IN-LBS	10/BAG
TC456	4" T-BOLT HOSE CLAMP	4.56"-4.87"	180 IN-LBS	10/BAG



NIPPLES			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
NIP025-SH	1/4" SHORT POLY NIPPLE	300	10/BAG
NIP038-SH	3/8" SHORT POLY NIPPLE	300	10/BAG
NIP050-SH	1/2" SHORT POLY NIPPLE	300	10/BAG
NIP050-3	1/2" X 3" POLY NIPPLE	300	10/BAG
NIP075-SH	3/4" SHORT POLY NIPPLE	300	10/BAG
NIP075-4	3/4" X 4" POLY NIPPLE	300	10/BAG
NIP075-6	3/4" X 6" POLY NIPPLE	300	10/BAG
NIP100-SH	1" SHORT POLY NIPPLE	300	10/BAG
NIP100-4	1" X 4" POLY NIPPLE	300	10/BAG
NIP100-6	1" X 6" POLY NIPPLE	300	10/BAG
NIP125-SH	1 1/4" SHORT POLY NIPPLE	300	10/BAG
NIP125-4	1 1/4" X 4" POLY NIPPLE	300	10/BAG
NIP125-6	1 1/4" X 6" POLY NIPPLE	300	10/BAG
NIP150-SH	1 1/2" SHORT POLY NIPPLE	300	10/BAG
NIP150-3	1 1/2" X 3" POLY NIPPLE	300	10/BAG
NIP150-4	1 1/2" X 4" POLY NIPPLE	300	10/BAG
NIP150-5	1 1/2" X 5" POLY NIPPLE	300	10/BAG
NIP150-6	1 1/2" X 6" POLY NIPPLE	300	10/BAG
NIP200-SH	2" SHORT POLY NIPPLE	300	10/BAG
NIP200-4	2" X 4" POLY NIPPLE	300	10/BAG
NIP200-6	2" X 6" POLY NIPPLE	300	10/BAG
NIP300-SH	3" SHORT POLY NIPPLE	300	1
NIP300-4	3" X 4" POLY NIPPLE	300	1
NIP300-6	3" X 6" POLY NIPPLE	300	1
NIP400-SH	4" SHORT POLY NIPPLE	300	1



REDUCING NIPPLES			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
RN050-038	1/2" X 3/8" POLY REDUCING NIPPLE	300	10/BAG
RN075-050	3/4" X 1/2" POLY REDUCING NIPPLE	300	10/BAG
RN100-050	1" X 1/2" POLY REDUCING NIPPLE	300	10/BAG
RN100-075	1" X 3/4" POLY REDUCING NIPPLE	300	10/BAG
RN125-075	1 1/4" X 3/4" POLY REDUCING NIPPLE	300	10/BAG
RN125-100	1 1/4" X 1" POLY REDUCING NIPPLE	300	10/BAG
RN150-100	1 1/2" X 1" POLY REDUCING NIPPLE	300	10/BAG
RN150-125	1 1/2" X 1 1/4" POLY REDUCING NIPPLE	300	10/BAG
RN200-125	2" X 1 1/4" POLY REDUCING NIPPLE	300	10/BAG
RN200-150	2" X 1 1/2" POLY REDUCING NIPPLE	300	10/BAG
RN300-200	3" X 2" POLY REDUCING NIPPLE	300	1



PIPE COUPLINGS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
CPLG025	1/4" POLY PIPE COUPLING	300	10/BAG
CPLG038	3/8" POLY PIPE COUPLING	300	10/BAG
CPLG050	1/2" POLY PIPE COUPLING	300	10/BAG
CPLG075	3/4" POLY PIPE COUPLING	300	10/BAG
CPLG100	1" POLY PIPE COUPLING	300	10/BAG
CPLG125	1 1/4" POLY PIPE COUPLING	300	10/BAG
CPLG150	1 1/2" POLY PIPE COUPLING	300	10/BAG
CPLG200	2" POLY PIPE COUPLING	300	10/BAG
CPLG300	3" POLY PIPE COUPLING	225	5



REDUCING COUPLINGS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
RC100-075	1" X 3/4" POLY REDUCING COUPLING	300	10/BAG
RC150-100	1 1/2" X 1" POLY REDUCING COUPLING	300	10/BAG
RC150-125	1 1/2" X 1 1/4" POLY REDUCING COUPLING	300	10/BAG
RC200-050	2" X 1/2" POLY REDUCING COUPLING	300	10/BAG
RC200-100	2" X 1" POLY REDUCING COUPLING	300	10/BAG
RC200-125	2" X 1 1/4" POLY REDUCING COUPLING	300	10/BAG
RC200-150	2" X 1 1/2" POLY REDUCING COUPLING	300	10/BAG
RC300-200	3" X 2" POLY REDUCING COUPLING	300	5

REDUCING BUSHINGS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
RB038-025	3/8" MPT X 1/4" FPT REDUCING BUSHING	300	10/BAG
RB050-018	1/2" MPT X 1/8" FPT REDUCING BUSHING	300	10/BAG
RB050-025	1/2" MPT X 1/4" FPT REDUCING BUSHING	300	10/BAG
RB050-038	1/2" MPT X 3/8" FPT REDUCING BUSHING	300	10/BAG
RB075-025	3/4" MPT X 1/4" FPT REDUCING BUSHING	300	10/BAG
RB075-038	3/4" MPT X 3/8" FPT REDUCING BUSHING	300	10/BAG
RB075-050	3/4" MPT X 1/2" FPT REDUCING BUSHING	300	10/BAG
RB100-018	1" MPT X 1/8" FPT REDUCING BUSHING	300	10/BAG
RB100-025	1" MPT X 1/4" FPT REDUCING BUSHING	300	10/BAG
RB100-050	1" MPT X 1/2" FPT REDUCING BUSHING	300	10/BAG
RB100-075	1" MPT X 3/4" FPT REDUCING BUSHING	300	10/BAG
RB125-038	1" MPT X 3/8" FPT REDUCING BUSHING	300	10/BAG
RB125-075	1 1/4" MPT X 3/4" FPT REDUCING BUSHING	300	10/BAG
RB125-100	1 1/4" MPT X 1" FPT REDUCING BUSHING	300	10/BAG
RB150-075	1 1/2" MPT X 3/4" FPT REDUCING BUSHING	300	10/BAG
RB150-100	1 1/2" MPT X 1" FPT REDUCING BUSHING	300	10/BAG
RB150-125	1 1/2" MPT X 1 1/4" FPT REDUCING BUSHING	300	10/BAG
RB200-075	2" MPT X 3/4" FPT REDUCING BUSHING	300	10/BAG
RB200-100	2" MPT X 1" FPT REDUCING BUSHING	300	10/BAG
RB200-125	2" MPT X 1 1/4" FPT REDUCING BUSHING	300	10/BAG
RB200-150	2" MPT X 1 1/2" FPT REDUCING BUSHING	300	10/BAG
RB300-150	3" MPT X 1 1/2" FPT REDUCING BUSHING	300	1
RB300-200	3" MPT X 2" FPT REDUCING BUSHING	300	1
RB400-300	4" MPT X 3" FPT REDUCING BUSHING	300	5



## PIPE FITTINGS

### FEATURES

- Glass reinforced polypropylene
- Heavy duty (Schedule 80)
- Lightweight with excellent strength
- NPT threads
- Excellent chemical resistance
- Parts must be ordered in lot quantities.

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### PIPE CAPS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
CAP038	3/8" POLY PIPE CAP	300	10/BAG
CAP050	1/2" POLY PIPE CAP	300	10/BAG
CAP075	3/4" POLY PIPE CAP	300	10/BAG
CAP100	1" POLY PIPE CAP	300	10/BAG
CAP125	1 1/4" POLY PIPE CAP	300	10/BAG
CAP150	1 1/2" POLY PIPE CAP	300	10/BAG
CAP200	2" POLY PIPE CAP	300	10/BAG
CAP300	3" POLY PIPE CAP	300	5



### PIPE PLUGS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
PLUG025	1/4" POLY PIPE PLUG	300	10/BAG
PLUG038	3/8" POLY PIPE PLUG	300	10/BAG
PLUG050	1/2" POLY PIPE PLUG	300	10/BAG
PLUG075	3/4" POLY PIPE PLUG	300	10/BAG
PLUG100	1" POLY PIPE PLUG	300	10/BAG
PLUG125	1 1/4" POLY PIPE PLUG	300	10/BAG
PLUG150	1 1/2" POLY PIPE PLUG	300	10/BAG
PLUG200	2" POLY PIPE PLUG	300	10/BAG
PLUG300	3" POLY PIPE PLUG	300	1



### HOSE BARB CROSS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
HBC050075	1/2" X 3/4" HOSE BARB CROSS	300	10/BAG



### CROSSES

PART NO	DESCRIPTION	MAX PSI	LOT QTY
CR025	1/4" POLY CROSS	300	10/BAG
CR038	3/8" POLY CROSS	300	10/BAG
CR050	1/2" POLY CROSS	300	10/BAG
CR075	3/4" POLY CROSS	300	10/BAG
CR100	1" POLY CROSS	300	10/BAG
CR125	1 1/4" POLY CROSS	300	10/BAG
CR150	1 1/2" POLY CROSS	300	10
CR200	2" POLY CROSS	300	10



### TEES

PART NO	DESCRIPTION	MAX PSI	LOT QTY
TEE025	1/4" POLY TEE	300	10/BAG
TEE038	3/8" POLY TEE	300	10/BAG
TEE050	1/2" POLY TEE	300	10/BAG
TEE075	3/4" POLY TEE	300	10/BAG
TEE100	1" POLY TEE	300	10/BAG
TEE125	1 1/4" POLY TEE	300	10/BAG
TEE150	1 1/2" POLY TEE	300	10/BAG
TEE200	2" POLY TEE	300	10
TEE300	3" POLY TEE	225	1



### GAUGE PORT TEE

PART NO	DESCRIPTION	MAX PSI	LOT QTY
TEG075	3/4" POLY TEE W/ 1/4" FEMALE THREAD	300	10/BAG
TEG100	1" POLY TEE W/ 1/4" FEMALE THREAD	300	10/BAG



### 90° ELBOWS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
EL025-90	1/4" 90° POLY ELBOW	300	10/BAG
EL038-90	3/8" 90° POLY ELBOW	300	10/BAG
EL050-90	1/2" 90° POLY ELBOW	300	10/BAG
EL075-90	3/4" 90° POLY ELBOW	300	10/BAG
EL100-90	1" 90° POLY ELBOW	300	10/BAG
EL125-90	1 1/4" 90° POLY ELBOW	300	10/BAG
EL150-90	1 1/2" 90° POLY ELBOW	300	10/BAG
EL200-90	2" 90° POLY ELBOW	300	10/BAG
EL300-90	3" 90° POLY ELBOW	300	1



### 45° ELBOW

PART NO	DESCRIPTION	MAX PSI	LOT QTY
EL100-45	1" 45° POLY ELBOW	300	10/BAG



### 90° STREET ELBOWS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
SL025-90	1/4" 90° POLY STREET ELBOW	300	10/BAG
SL038-90	3/8" 90° POLY STREET ELBOW	300	10/BAG
SL050-90	1/2" 90° POLY STREET ELBOW	300	10/BAG
SL075-90	3/4" 90° POLY STREET ELBOW	300	10/BAG
SL100-90	1" 90° POLY STREET ELBOW	300	10/BAG
SL125-90	1 1/4" 90° POLY STREET ELBOW	300	10/BAG
SL150-90	1 1/2" 90° POLY STREET ELBOW	300	10/BAG
SL200-90	2" 90° POLY STREET ELBOW	300	10/BAG
SL300-90	3" 90° POLY STREET ELBOW	300	1



### 45° STREET ELBOWS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
SL075-45	3/4" 45° POLY STREET ELBOW	300	10/BAG
SL100-45	1" 45° POLY STREET ELBOW	300	10/BAG
SL125-45	1 1/4" 45° POLY STREET ELBOW	300	10/BAG
SL150-45	1 1/2" 45° POLY STREET ELBOW	300	10/BAG
SL200-45	2" 45° POLY STREET ELBOW	225	10/BAG
SL300-45	3" 45° POLY STREET ELBOW	300	5



### 90° HOSE BARB ELBOW

PART NO	DESCRIPTION	MAX PSI	LOT QTY
HBB20012590	2" X 1 1/4" 90° POLY HOSE BARB ELBOW	300	10/BAG



### 90° HOSE BARB ELBOW

PART NO	DESCRIPTION	MAX PSI	LOT QTY
HBEL100-90	1" 90° POLY HOSE BARB ELBOW	300	10/BAG
HBEL150/100-90	1 1/2" X 1" 90° POLY HOSE BARB ELBOW	300	10/BAG

## PIPE FITTINGS

### FEATURES

- Glass reinforced polypropylene
- Heavy duty (Schedule 80)
- Lightweight with excellent strength
- NPT threads
- Excellent chemical resistance
- Parts must be ordered in lot quantities.

## HOSE BARBS

### FEATURES

- Glass reinforced polypropylene
- Heavy duty (Schedule 80)
- Lightweight with excellent strength
- NPT threads
- Excellent chemical resistance
- Parts must be ordered in lot quantities.



STRAIGHT HOSE BARBS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
HB025	1/4" MALE THREAD X 1/4" HOSE BARB	300	10/BAG
HB025-038	1/4" MALE THREAD X 3/8" HOSE BARB	300	10/BAG
HB025-050	1/4" MALE THREAD X 1/2" HOSE BARB	300	10/BAG
HB038	3/8" MALE THREAD X 3/8" HOSE BARB	300	10/BAG
HB038-025	3/8" MALE THREAD X 1/4" HOSE BARB	300	10/BAG
HB038-050	3/8" MALE THREAD X 1/2" HOSE BARB	300	10/BAG
HB050-025	1/2" MALE THREAD X 1/4" HOSE BARB	300	10/BAG
HB050-038	1/2" MALE THREAD X 3/8" HOSE BARB	300	10/BAG
HB050	1/2" MALE THREAD X 1/2" HOSE BARB	300	10/BAG
HB050-075	1/2" MALE THREAD X 3/4" HOSE BARB	300	10/BAG
HB075-038	3/4" MALE THREAD X 3/8" HOSE BARB	300	10/BAG
HB075-050	3/4" MALE THREAD X 1/2" HOSE BARB	300	10/BAG
HB075-058	3/4" MALE THREAD X 5/8" HOSE BARB	300	10/BAG
HB075	3/4" MALE THREAD X 3/4" HOSE BARB	300	10/BAG
HB075-100	3/4" MALE THREAD X 1" HOSE BARB	300	10/BAG
HB100-075	1" MALE THREAD X 3/4" HOSE BARB	300	10/BAG
HB100	1" MALE THREAD X 1" HOSE BARB	300	10/BAG
HB100-125	1" MALE THREAD X 1 1/4" HOSE BARB	300	10/BAG
HB125-075	1 1/4" MALE THREAD X 3/4" HOSE BARB	300	10/BAG
HB125-100	1 1/4" MALE THREAD X 1" HOSE BARB	300	10/BAG
HB125	1 1/4" MALE THREAD X 1 1/4" HOSE BARB	300	10/BAG
HB125-150	1 1/4" MALE THREAD X 1 1/2" HOSE BARB	300	10/BAG
HB150-100	1 1/2" MALE THREAD X 1" HOSE BARB	300	10/BAG
HB150-125	1 1/2" MALE THREAD X 1 1/4" HOSE BARB	300	10/BAG
HB150	1 1/2" MALE THREAD X 1 1/2" HOSE BARB	300	10/BAG
HB150-200	1 1/2" MALE THREAD X 2" HOSE BARB	300	10/BAG
HB200-150	2" MALE THREAD X 1 1/2" HOSE BARB	300	10/BAG
HB200	2" MALE THREAD X 2" HOSE BARB	300	10/BAG
HB300	3" MALE THREAD X 3" HOSE BARB	225	1
HB400	4" MALE THREAD X 4" HOSE BARB	150	1



FEMALE HOSE BARBS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
HB075	3/4" FEMALE THREAD X 3/4" HOSE BARB	300	10/BAG
HB075-90	3/4" FEMALE THREAD X 3/4" 90° HOSE BARB	300	10/BAG
HB075-100	3/4" FEMALE THREAD X 1" HOSE BARB	300	10/BAG
HB075-100	1" FEMALE THREAD X 1" HOSE BARB	300	10/BAG
HB075-100-90	1" FEMALE THREAD X 1" 90° HOSE BARB	300	10/BAG



90° HOSE BARBS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
HB025-90	1/4" MALE THREAD X 1/4" 90° HOSE BARB	300	10/BAG
HB025/038-90	1/4" MALE THREAD X 3/8" 90° HOSE BARB	300	10/BAG
HB025/050-90	1/4" MALE THREAD X 1/2" 90° HOSE BARB	300	10/BAG
HB038-90	3/8" MALE THREAD X 3/8" 90° HOSE BARB	300	10/BAG
HB050/038-90	1/2" MALE THREAD X 3/8" 90° HOSE BARB	300	10/BAG
HB050-90	1/2" MALE THREAD X 1/2" 90° HOSE BARB	300	10/BAG
HB050/075-90	1/2" MALE THREAD X 3/4" 90° HOSE BARB	300	10/BAG
HB075/050-90	3/4" MALE THREAD X 1/2" 90° HOSE BARB	300	10/BAG
HB075-90	3/4" MALE THREAD X 3/4" 90° HOSE BARB	300	10/BAG
HB075/100-90	3/4" MALE THREAD X 1" 90° HOSE BARB	300	10/BAG
HB100/075-90	1" MALE THREAD X 3/4" 90° HOSE BARB	300	10/BAG
HB100-90	1" MALE THREAD X 1" 90° HOSE BARB	300	10/BAG
HB100/125-90	1" MALE THREAD X 1 1/4" 90° HOSE BARB	300	10/BAG
HB125/100-90	1 1/4" MALE THREAD X 1" 90° HOSE BARB	300	10/BAG
HB125-90	1 1/4" MALE THREAD X 1 1/4" 90° HOSE BARB	300	10/BAG
HB125/150-90	1 1/4" MALE THREAD X 1 1/2" 90° HOSE BARB	300	10/BAG
HB150-90	1 1/2" MALE THREAD X 1 1/2" 90° HOSE BARB	300	10/BAG
HB200/150-90	2" MALE THREAD X 1 1/2" 90° HOSE BARB	300	10/BAG
HB200-90	2" MALE THREAD X 2" 90° HOSE BARB	300	10/BAG
HB300-90	3" MALE THREAD X 3" 90° HOSE BARB	225	1



316 STAINLESS STEEL HOSE BARBS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
HB025SS	1/4" MALE THREAD X 1/4" HOSE BARB	300	10
HB025-038SS	1/4" MALE THREAD X 3/8" HOSE BARB	300	10
HB025-050SS	1/4" MALE THREAD X 1/2" HOSE BARB	300	10
HB038SS	3/8" MALE THREAD X 3/8" HOSE BARB	300	10
HB038-050SS	3/8" MALE THREAD X 1/2" HOSE BARB	300	10
HB050SS	1/2" MALE THREAD X 1/2" HOSE BARB	300	10
HB050-058SS	1/2" MALE THREAD X 5/8" HOSE BARB	300	1
HB050-075SS	1/2" MALE THREAD X 3/4" HOSE BARB	300	10
HB075-050SS	3/4" MALE THREAD X 1/2" HOSE BARB	300	10
HB075SS	3/4" MALE THREAD X 3/4" HOSE BARB	300	10
HB075-100SS	3/4" MALE THREAD X 1" HOSE BARB	300	1
HB100-075SS	1" MALE THREAD X 3/4" HOSE BARB	300	1
HB100SS	1" MALE THREAD X 1" HOSE BARB	300	10
HB125SS	1 1/4" MALE THREAD X 1 1/4" HOSE BARB	300	1
HB150SS	1 1/2" MALE THREAD X 1 1/2" HOSE BARB	300	10
HB200SS	2" MALE THREAD X 2" HOSE BARB	300	1
HB300SS	3" MALE THREAD X 3" HOSE BARB	300	1



HOSE BARB TEES			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
HBT025	1/4" HOSE BARB TEE	300	10/BAG
HBT038	3/8" HOSE BARB TEE	300	10/BAG
HBT050	1/2" HOSE BARB TEE	300	10/BAG
HBT050-038	1/2" X 3/8" HOSE BARB TEE	300	10/BAG
HBT050-075	1/2" X 1/2" X 3/4" HOSE BARB TEE	300	10/BAG
HBT075-050	3/4" X 3/4" X 1/2" HOSE BARB TEE	300	10/BAG
HBT075	3/4" HOSE BARB TEE	300	10/BAG
HBT075-100	3/4" X 3/4" X 1" HOSE BARB TEE	300	10/BAG
HBT100-075	1" X 1" X 3/4" HOSE BARB TEE	300	10/BAG
HBT100	1" HOSE BARB TEE	300	10/BAG
HBT200	2" HOSE BARB TEE	300	10
HBT300	3" HOSE BARB TEE	300	1



HOSE BARB THREADED TEES			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
HBT100-100	1" HOSE BARB X 1" HOSE BARB X 1" MALE THREADED HOSE BARB TEE	300	10/BAG
HBT150-100	1 1/2" HOSE BARB X 1 1/2" HOSE BARB X 1" MALE THREADED HOSE BARB TEE	300	10/BAG
HBT150-150	1 1/2" HOSE BARB X 1 1/2" HOSE BARB X 1 1/2" MALE THREADED HOSE BARB TEE	300	10/BAG



SS HOSE BARB THREADED TEES			
PART NO	DESCRIPTION	MAX PSI	QTY
HBT075-050SS	3/4" HOSE BARB X 3/4" HOSE BARB X 1/2" HOSE BARB TEE	N/A	1



HOSE MENDERS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
HM038	3/8" X 3/8" HOSE BARB	300	10/BAG
HM050	1/2" X 1/2" HOSE BARB	300	10/BAG
HM075	3/4" X 3/4" HOSE BARB	300	10/BAG
HM100	1" X 1" HOSE BARB	300	10/BAG
HM125	1 1/4" X 1 1/4" HOSE BARB	300	10/BAG
HM150	1 1/2" X 1 1/2" HOSE BARB	300	10/BAG
HM200	2" X 2" HOSE BARB	300	10/BAG
HM300	3" X 3" HOSE BARB	300	10



SWIVELS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
SW100	1" MALE X 1" FEMALE SWIVEL	300	10
SW150	1 1/2" MALE X 1 1/2" FEMALE SWIVEL	300	1
SW220	2" FULL PORT MALE X 2" FULL PORT FEMALE SWIVEL	150	1



8 STATION MANIFOLD			
PART NO	DESCRIPTION	MAX PSI	QTY
TM075/050	8 STATION MANIFOLD 3/4" INLET X 1/2" OUTLET 1/4" GAUGE PORT	225	1

## PIPE FITTINGS

### FEATURES

- Glass reinforced polypropylene
- Heavy duty (Schedule 80)
- Lightweight with excellent strength
- NPT threads
- Excellent chemical resistance
- Parts must be ordered in lot quantities.

## PIPE SEALANT

### FEATURES

- RectorSeal® No. 21™ is slow drying, soft set multi-purpose sealant designed for use where black is preferred. 8 oz can with brush in the cap. Conforms to TT-S-1732.
- RectorSeal® Tru-Blu™ is fast drying, flexible set designed for high vibration environments. Teflon™ has been added to enhance thread lubrication during assembly and break out. Conforms to TT-S-1732. \*DuPont Registered Trademark

Recommended procedure for sealing pipe threads:

We DO NOT recommend using pipe tape. Pipe tape enlarges the outside diameter of the male thread and may cause the female thread to split. We recommend using a pipe thread sealant. Use on clean tapered threads. Apply a thick even coat on male threads using brush applicator. For pipe diameters smaller than 1 1/4" apply to male threads only. For 1 1/4" and larger sizes apply to both male and female threads. Avoid applying excessive amounts. Hand tighten joints and then torque another 1/2 to 3/4 turn until threads seal.



PIPE SEALANT			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
RS21	RECTORSEAL® NO. 21™ (8 OZ W/ BRUSH IN CAP-24/CASE)		1
RSTB	RECTORSEAL® TRU-BLU™ (8 OZ W/ BRUSH IN CAP-24/CASE)		24

## MINI T STRAINERS

### FEATURES

- Heavy duty glass reinforced polypropylene
- Clear bowl made of polycarbonate
- Black bowl made of polypropylene
- Polypropylene ribbed 316 stainless steel screens
- EPDM gaskets
- Convenient color coded screens for easy mesh size identification (Refer to chart on next page)



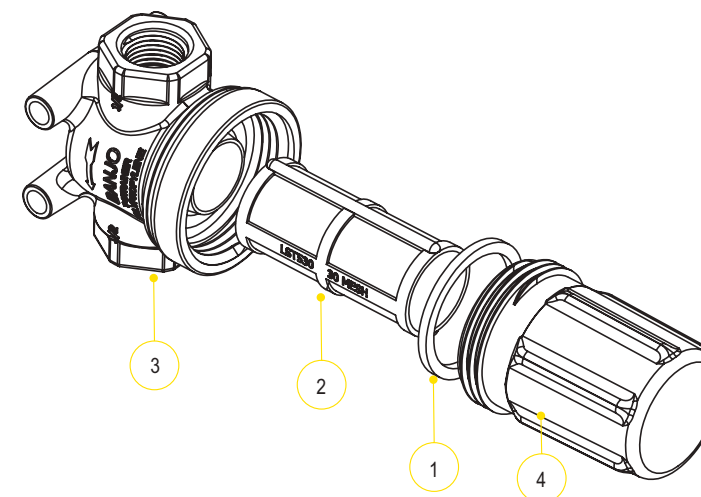
### MINI T STRAINERS W/CLEAR BOWLS

PART NO	DESCRIPTION	MAX PSI	QTY
LSTM050-30C	1/2" X 1/2" CLEAR BOWL STRAINER W/30 MESH SCREEN	100	1
LSTM050-50C	1/2" X 1/2" CLEAR BOWL STRAINER W/50 MESH SCREEN	100	1
LSTM050-80C	1/2" X 1/2" CLEAR BOWL STRAINER W/80 MESH SCREEN	100	1
LSTM075-30C	3/4" X 3/4" CLEAR BOWL STRAINER W/30 MESH SCREEN	100	1
LSTM075-50C	3/4" X 3/4" CLEAR BOWL STRAINER W/50 MESH SCREEN	100	1
LSTM075-80C	3/4" X 3/4" CLEAR BOWL STRAINER W/80 MESH SCREEN	100	1



### MINI T STRAINERS W/BLACK BOWLS

PART NO	DESCRIPTION	MAX PSI	QTY
LSTM050-30	1/2" X 1/2" BLACK BOWL STRAINER W/30 MESH SCREEN	200	1
LSTM050-50	1/2" X 1/2" BLACK BOWL STRAINER W/50 MESH SCREEN	200	1
LSTM050-80	1/2" X 1/2" BLACK BOWL STRAINER W/80 MESH SCREEN	200	1
LSTM075-30	3/4" X 3/4" BLACK BOWL STRAINER W/30 MESH SCREEN	200	1
LSTM075-50	3/4" X 3/4" BLACK BOWL STRAINER W/50 MESH SCREEN	200	1
LSTM075-80	3/4" X 3/4" BLACK BOWL STRAINER W/80 MESH SCREEN	200	1



### REPLACEMENT PARTS

ITEM	PART NO	DESCRIPTION	QTY
1	LSTM050G	EPDM GASKET	1
2	LST530	30 MESH SCREEN	1
2	LST550	50 MESH SCREEN	1
2	LST580	80 MESH SCREEN	1
2	LST5100	100 MESH SCREEN	1
3	LSTM050H	1/2" STRAINER HEAD	1
3	LSTM075H	3/4" STRAINER HEAD	1
4	LSTM050BC	CLEAR BOWL	1
4	LSTM050B	BLACK BOWL	1

### STANDARD MESHES & DATA

	30 MESH	50 MESH	80 MESH	100 MESH
MICRONS	595	297	177	149
WIRE DIAMETER	.012	.009	.0055	.0045
OPENING	.021	.011	.007	.005
% OPEN AREA	40.8	30.3	31.4	30.3

## MINI T STRAINERS

### SCREENS

MESH SIZE	RIB COLOR
30 MESH	FLAME RED
50 MESH	GENTIAN BLUE
80 MESH	ZINC YELLOW
100 MESH	TRAFFIC GREEN

## ¾"-1½" T STRAINERS

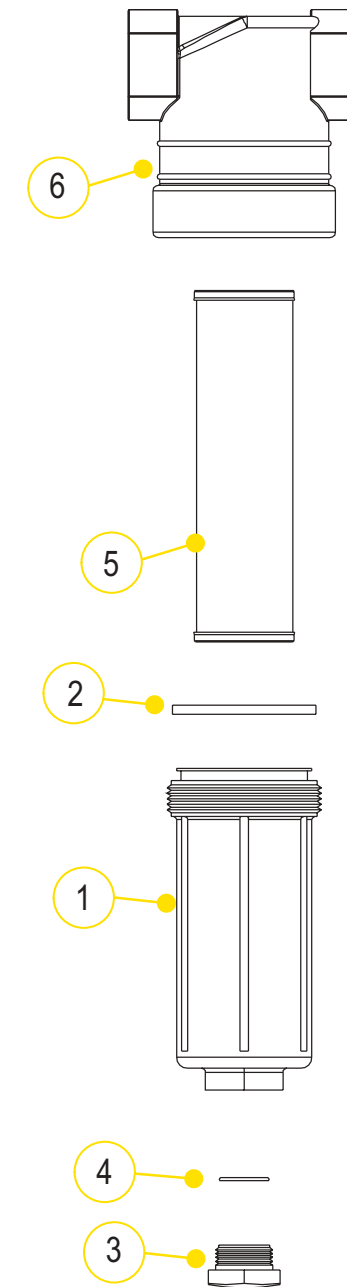
### FEATURES

- Heavy duty glass reinforced polypropylene
- Clean out plug
- Polypropylene ribbed 316 stainless steel screens
- EPDM gaskets standard, FKM available
- Convenient color coded screens for easy mesh size identification (Refer to chart on next page)



¾"-1" T STRAINERS				
PART NO	DESCRIPTION	MAX PSI	QTY	
LST075-16	¾" X ¾" FP T STRAINER W/16 MESH SS SCREEN	300	1	
LST075-30	¾" X ¾" FP T STRAINER W/30 MESH SS SCREEN	300	1	
LST075-50	¾" X ¾" FP T STRAINER W/50 MESH SS SCREEN	300	1	
LST075-80	¾" X ¾" FP T STRAINER W/80 MESH SS SCREEN	300	1	
LST075-100	¾" X ¾" FP T STRAINER W/100 MESH SS SCREEN	300	1	
LST100-16	1" X 1" T STRAINER W/16 MESH SS SCREEN	300	1	
LST100-30	1" X 1" T STRAINER W/30 MESH SS SCREEN	300	1	
LST100-50	1" X 1" T STRAINER W/50 MESH SS SCREEN	300	1	
LST100-80	1" X 1" T STRAINER W/80 MESH SS SCREEN	300	1	
LST100-100	1" X 1" T STRAINER W/100 MESH SS SCREEN	300	1	

1¼"-1½" T STRAINERS				
PART NO	DESCRIPTION	MAX PSI	QTY	
LST125-16	1¼" X 1¼" FP T STRAINER W/16 MESH SS SCREEN	300	1	
LST125-30	1¼" X 1¼" FP T STRAINER W/30 MESH SS SCREEN	300	1	
LST125-50	1¼" X 1¼" FP T STRAINER W/50 MESH SS SCREEN	300	1	
LST125-80	1¼" X 1¼" FP T STRAINER W/80 MESH SS SCREEN	300	1	
LST150-30	1½" X 1½" T STRAINER W/30 MESH SS SCREEN	300	1	
LST150-50	1½" X 1½" T STRAINER W/50 MESH SS SCREEN	300	1	
LST150-80	1½" X 1½" T STRAINER W/80 MESH SS SCREEN	300	1	
LST150-100	1½" X 1½" T STRAINER W/100 MESH SS SCREEN	300	1	



REPLACEMENT PARTS			
ITEM	PART NO	DESCRIPTION	QTY
1	LST100-B	¾" & 1" BOWL (CONTAINS #1, #3, #4)	1
2	LST100-G	¾" & 1" EPDM GASKET	1
2	LST100-GV	¾" & 1" FKM GASKET	1
3	12777	½" PLUG	1
4	UV15163	EPDM O-RING FOR CLEAN OUT PLUG	1
5	LST116	16 MESH SCREEN	1
5	LST130	30 MESH SCREEN	1
5	LST150	50 MESH SCREEN	1
5	LST180	80 MESH SCREEN	1
5	LST1100	100 MESH SCREEN	1
6	LST075-H	¾" STRAINER HEAD	1
6	LST100-H	1" STRAINER HEAD	1
N/S	LST075-HB	¾" STRAINER HEAD, BOWL & GASKET	1
N/S	LST100-HB	1" STRAINER HEAD, BOWL & GASKET	1

REPLACEMENT PARTS			
ITEM	PART NO	DESCRIPTION	QTY
1	LST150-B	1¼" & 1½" BOWL (CONTAINS #1, #3, #4)	1
2	LST150-G	1¼" & 1½" EPDM GASKET	1
2	LST150-GV	1¼" & 1½" FKM GASKET	1
3	LSQ200-PL	1" CLEAN OUT PLUG	1
4	LSQ200-R	EPDM O-RING FOR CLEAN OUT PLUG	1
5	LST1516	16 MESH SCREEN	1
5	LST1530	30 MESH SCREEN	1
5	LST1550	50 MESH SCREEN	1
5	LST1580	80 MESH SCREEN	1
5	LST15100	100 MESH SCREEN	1
6	N/A	1¼" STRAINER HEAD	1
N/S	LST125-HB	1¼" STRAINER HEAD, BOWL & GASKET	1
N/S	LST150-HB	1½" STRAINER HEAD, BOWL & GASKET	1

STANDARD MESHES & DATA					
	16 MESH	30 MESH	50 MESH	80 MESH	100 MESH
MICRONS	1190	595	297	177	149
WIRE DIAMETER	.018	.012	.009	.0055	.0045
OPENING	.044	.021	.011	.007	.005
% OPEN AREA	50.7	40.8	30.3	31.4	30.3

## ¾"-1½" T STRAINERS

SCREENS	
MESH SIZE	RIB COLOR
16 MESH	BROWN RED
30 MESH	FLAME RED
50 MESH	GENTIAN BLUE
80 MESH	ZINC YELLOW
100 MESH	TRAFFIC GREEN

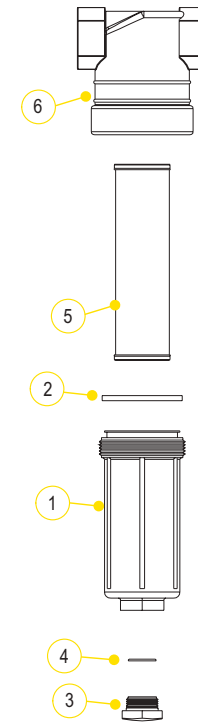
## 2" T STRAINERS POLY/STAINLESS COMBO

### FEATURES

- Heavy duty glass reinforced polypropylene bowl
- 316 stainless steel head
- Clean out plug
- 316 stainless steel screens
- FKM gaskets



2" T STRAINERS POLY/SS COMBO			
PART NO	DESCRIPTION	MAX PSI	QTY
LST200-10SS	2" X 2" T STRAINER (SS HEAD & POLY BODY) W/10 MESH SCREEN	300	1
LST200-50SS	2" X 2" T STRAINER (SS HEAD & POLY BODY) W/50 MESH SCREEN	300	1



REPLACEMENT PARTS			
ITEM	PART NO	DESCRIPTION	QTY
1	LST200-B	2" POLY BOWL (CONTAINS #1, #3, #4)	1
2	LST200-GV	2" FKM GASKET	1
3	LSQ200-PL	1" CLEAN OUT PLUG	1
4	LSQ200-RV	FKM O-RING FOR CLEAN OUT PLUG	1
5	LST204SS	4 MESH SS SCREEN	1
5	LST206SS	6 MESH SS SCREEN	1
5	LST208SS	8 MESH SS SCREEN	1
5	LST210SS	10 MESH SS SCREEN	1
5	LST216SS	16 MESH SS SCREEN	1
5	LST220SS	20 MESH SS SCREEN	1
5	LST230SS	30 MESH SS SCREEN	1
5	LST250SS	50 MESH SS SCREEN	1
5	LST280SS	80 MESH SS SCREEN	1
6	LST200-HSS	2" SS HEAD	1

## 2" T STRAINERS POLY/STAINLESS COMBO

## LSQ STRAINERS

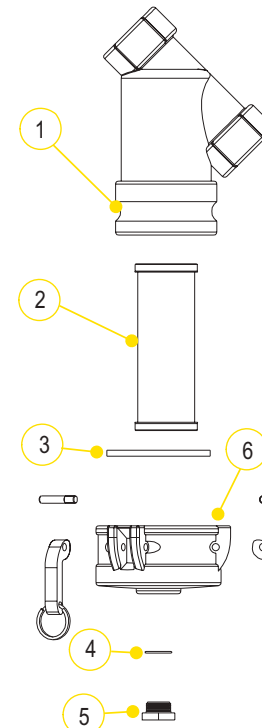
### FEATURES

- Precision molded in glass reinforced polypropylene
- Cam lever configuration for easy access for cleaning and servicing
- 3/4" plug in cam lever cap for attaching ball valve for draining or back flushing
- Poly ribbed 316 stainless steel screen
- EPDM lathe cut gasket
- For faster shipping, order in box quantities
- Convenient color coded screens for easy mesh size identification (Refer to chart on next page)



1 1/2" LSQ STRAINERS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
LSQ150-B/C	1 1/2" X 1 1/2" LSQ STRAINER BODY/CAP	N/A	1

2" LSQ STRAINERS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
LSQ200-06	2" X 2" LSQ STRAINER W/6 MESH SCREEN	100	6/BOX
LSQ200-20	2" X 2" LSQ STRAINER W/20 MESH SCREEN	100	6/BOX
LSQ200-30	2" X 2" LSQ STRAINER W/30 MESH SCREEN	100	6/BOX
LSQ200-50	2" X 2" LSQ STRAINER W/50 MESH SCREEN	100	6/BOX
LSQ200-80	2" X 2" LSQ STRAINER W/80 MESH SCREEN	100	6/BOX



REPLACEMENT PARTS			
ITEM	PART NO	DESCRIPTION	QTY
1	N/A	2" LSQ BODY	1
2	LS206	6 MESH SCREEN	1
2	LS212	12 MESH SCREEN	1
2	LS220	20 MESH SCREEN	1
2	LS230	30 MESH SCREEN	1
2	LS250	50 MESH SCREEN	1
2	LS280	80 MESH SCREEN	1
2	LS2120	120 MESH SCREEN	1
3	LSQ150-B/C	1 1/2" X 1 1/2" LSQ STRAINER BODY/CAP	1
3	LSQ200-G	2" EPDM GASKET	1
3	LSQ200-GV	2" FKM GASKET	1
4	LSQ200R1	O-RING	1
5	N/A	3/4" CLEAN OUT PLUG	1
6	LSQ200-C	2" CAP (CONTAINS #3-6)	1
N/S	LSQ200-B/C	2" BODY/CAP (CONTAINS #1, 3-6)	1

STANDARD MESHES & DATA											
	6 MESH	8 MESH	10 MESH	12 MESH	16 MESH	20 MESH	30 MESH	50 MESH	80 MESH	100 MESH	120 MESH
MICRONS	3360	2380	2000	1680	1190	841	595	297	177	149	116
WIRE DIAMETER	.035	.028	.025	.023	.018	.016	.012	.009	.0055	.0045	.0037
OPENING	.132	.097	.075	.060	.044	.034	.021	.011	.007	.005	.0046
% OPEN AREA	62.7	60.2	56.3	51.8	50.7	46.2	40.8	30.3	31.4	30.3	30.5

## LSQ STRAINERS

### SCREENS

MESH SIZE	RIB COLOR
6 MESH	WHITE
12 MESH	BLACK
20 MESH	BEIGE
30 MESH	FLAME RED
50 MESH	GENTIAN BLUE
80 MESH	ZINC YELLOW
120 MESH	BLACK

## 1/2"-1 1/4" Y STRAINERS

### FEATURES

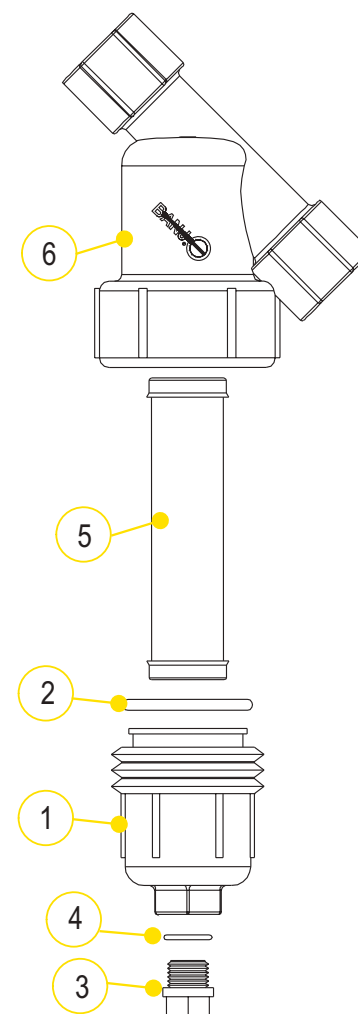
- Heavy duty glass reinforced polypropylene
- Corrosion resistant
- Easy grip end cap
- Heavy duty end cap threads
- Clean out plug
- Polypropylene ribbed 316 stainless steel screens
- EPDM gaskets
- Convenient color coded screens for easy mesh size identification (Refer to chart on next page)



1/2" - 3/4" Y STRAINERS			
PART NO	DESCRIPTION	MAX PSI	QTY
LS050-20	1/2" X 1/2" FP Y STRAINER W/20 MESH SS SCREEN	225	1
LS050-40	1/2" X 1/2" FP Y STRAINER W/40 MESH SS SCREEN	225	1
LS050-80	1/2" X 1/2" FP Y STRAINER W/80 MESH SS SCREEN	225	1
LS075-20	3/4" X 3/4" Y STRAINER W/20 MESH SS SCREEN	225	1
LS075-40	3/4" X 3/4" Y STRAINER W/40 MESH SS SCREEN	225	1
LS075-80	3/4" X 3/4" Y STRAINER W/80 MESH SS SCREEN	225	1



1" - 1 1/4" Y STRAINERS			
PART NO	DESCRIPTION	MAX PSI	QTY
LS100-20	1" X 1" Y STRAINER W/20 MESH SS SCREEN	200	1
LS100-40	1" X 1" Y STRAINER W/40 MESH SS SCREEN	200	1
LS100-80	1" X 1" Y STRAINER W/80 MESH SS SCREEN	200	1
LS125-20	1 1/4" X 1 1/4" Y STRAINER W/20 MESH SS SCREEN	200	1
LS125-40	1 1/4" X 1 1/4" Y STRAINER W/40 MESH SS SCREEN	200	1
LS125-80	1 1/4" X 1 1/4" Y STRAINER W/80 MESH SS SCREEN	200	1



REPLACEMENT PARTS			
ITEM	PART NO	DESCRIPTION	QTY
1	N/A	1/2"-3/4" END CAP (CONTAINS #1, #3, #4)	1
2	LS075-G	1/2"-3/4" O-RING	1
3	12723	1/4" DRAIN PLUG (FITS 1/2"-3/4")	1
4	12724	1/2"-3/4" EPDM O-RING FOR DRAIN PLUG	1
5	LS720	1/2"-3/4" 20 MESH SCREEN	1
5	LS740	1/2"-3/4" 40 MESH SCREEN	1
5	LS780	1/2"-3/4" 80 MESH SCREEN	1
6	N/A	3/4" Y BODY	1
N/S	LS050B/C1	1/2" Y BODY, CAP & GASKET	1
N/S	LS075B/C1	3/4" Y BODY, CAP & GASKET	1

REPLACEMENT PARTS			
ITEM	PART NO	DESCRIPTION	QTY
1	LS100-C1	1"-1 1/4" END CAP (CONTAINS #1, #3, #4)	1
2	LS100-G	1"-1 1/4" O-RING	1
2	LS100-GV	1"-1 1/4" FKM GASKET	1
3	12777	1/2" PLUG (FITS 1"-1 1/4")	1
4	UV15163	EPDM O-RING FOR DRAIN PLUG	1
4	UV15163V	FKM O-RING FOR DRAIN PLUG	1
5	LS120	1"-1 1/4" 20 MESH SCREEN	1
5	LS140	1"-1 1/4" 40 MESH SCREEN	1
5	LS180	1"-1 1/4" 80 MESH SCREEN	1
6	N/A	1" Y BODY	1
6	N/A	1 1/4" Y BODY	1
N/S	LS100B/C1	1" Y BODY, CAP & GASKET	1
N/S	LS125B/C1	1 1/4" Y BODY, CAP & GASKET	1

## 1/2"-1 1/4" Y STRAINERS

SCREENS	
MESH SIZE	RIB COLOR
6 MESH	WHITE
12 MESH	BLACK
20 MESH	BEIGE
30 MESH	FLAME RED
40 MESH	BROWN
50 MESH	GENTIAN BLUE
60 MESH	GENTIAN BLUE
80 MESH	ZINC YELLOW
100 MESH	TRAFFIC GREEN
120 MESH	BLACK

STANDARD MESHES & DATA											
	6 MESH	8 MESH	10 MESH	12 MESH	16 MESH	20 MESH	30 MESH	50 MESH	80 MESH	100 MESH	120 MESH
MICRONS	3360	2380	2000	1680	1190	841	595	297	177	149	116
WIRE DIAMETER	.035	.028	.025	.023	.018	.016	.012	.009	.0055	.0045	.0037
OPENING	.132	.097	.075	.060	.044	.034	.021	.011	.007	.005	.0046
% OPEN AREA	62.7	60.2	56.3	51.8	50.7	46.2	40.8	30.3	31.4	30.3	30.5

## 1½"-2" Y STRAINERS

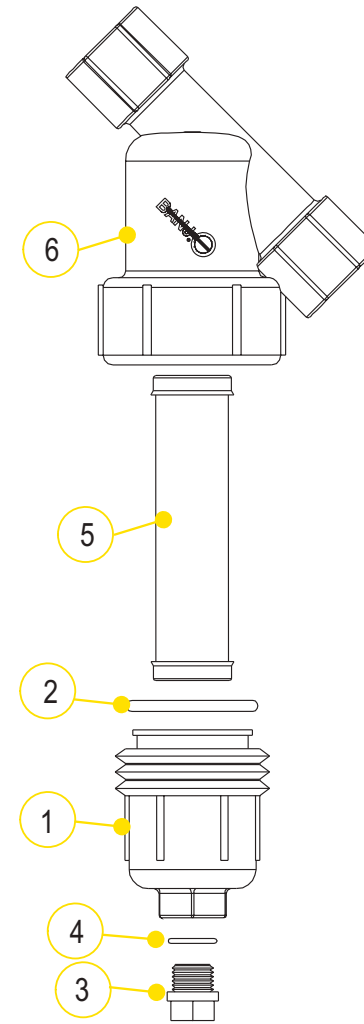
### FEATURES

- Heavy duty glass reinforced polypropylene
- Corrosion resistant
- Easy grip end cap
- Heavy duty end cap threads
- Clean out plug
- Polypropylene ribbed 316 stainless steel screens
- EPDM gaskets
- Convenient color coded screens for easy mesh size identification (Refer to chart on next page)



1½" Y STRAINERS			
PART NO	DESCRIPTION	MAX PSI	QTY
LS150-06	1½" X 1½" Y STRAINER W/6 MESH SS SCREEN	150	1
LS150-12	1½" X 1½" Y STRAINER W/12 MESH SS SCREEN	150	1
LS150-20	1½" X 1½" Y STRAINER W/20 MESH SS SCREEN	150	1
LS150-30	1½" X 1½" Y STRAINER W/30 MESH SS SCREEN	150	1
LS150-50	1½" X 1½" Y STRAINER W/50 MESH SS SCREEN	150	1
LS150-80	1½" X 1½" Y STRAINER W/80 MESH SS SCREEN	150	1
LS150-120	1½" X 1½" Y STRAINER W/120 MESH SS SCREEN	150	1

2" Y STRAINERS			
PART NO	DESCRIPTION	MAX PSI	LOT QTY
LS200-06	2" X 2" Y STRAINER W/6 MESH POLY RIBBED SS SCREEN	150	1
LS200-12	2" X 2" Y STRAINER W/12 MESH POLY RIBBED SS SCREEN	150	1
LS200-20	2" X 2" Y STRAINER W/20 MESH POLY RIBBED SS SCREEN	150	1
LS200-30	2" X 2" Y STRAINER W/30 MESH POLY RIBBED SS SCREEN	150	1
LS200-50	2" X 2" Y STRAINER W/50 MESH POLY RIBBED SS SCREEN	150	5
LS200-80	2" X 2" Y STRAINER W/80 MESH POLY RIBBED SS SCREEN	150	1
LS200-100	2" X 2" Y STRAINER W/100 MESH POLY RIBBED SS SCREEN	150	1
LS200-120	2" X 2" Y STRAINER W/120 MESH POLY RIBBED SS SCREEN	150	1



REPLACEMENT PARTS			
ITEM	PART NO	DESCRIPTION	QTY
1	LS150-C	1½" - 2" END CAP (CONTAINS #1, #3, #4)	1
2	LS150-G	1½"-2" O-RING	1
2	LS150-GV	1½"-2" FKM GASKET	1
3	LSQ200-PL	1" DRAIN PLUG (FITS 1½" - 2")	1
4	LSQ200-RV	1½"-2" FKM O-RING FOR DRAIN PLUG	1
5	LS206	1½"-2" 6 MESH SCREEN	1
5	LS212	1½"-2" 12 MESH SCREEN	1
5	LS220	1½"-2" 20 MESH SCREEN	1
5	LS230	1½"-2" 30 MESH SCREEN	1
5	LS250	1½"-2" 50 MESH SCREEN	1
5	LS280	1½"-2" 80 MESH SCREEN	1
5	LS2100	1½"-2" 100 MESH SCREEN	1
5	LS2120	1½"-2" 120 MESH SCREEN	1
5	LS250P	1½"-2" 50 MESH ALL POLY SCREEN	1
6	N/A	1½" Y BODY	1
6	N/A	2" Y BODY	1
N/S	LS150B/C	1½" Y BODY, CAP & GASKET	1
N/S	LS200B/C	2" Y BODY, CAP & GASKET	1

STANDARD MESHES & DATA									
	6 MESH	8 MESH	12 MESH	20 MESH	30 MESH	50 MESH	80 MESH	100 MESH	120 MESH
MICRONS	3360	2380	1680	841	595	297	177	149	116
WIRE DIAMETER	.035	.028	.023	.016	.012	.009	.0055	.0045	.0037
OPENING	.132	.097	.060	.034	.021	.011	.007	.005	.0046
% OPEN AREA	62.7	60.2	51.8	46.2	40.8	30.3	31.4	30.3	30.5

## 1½"-2" Y STRAINERS

SCREENS	
MESH SIZE	RIB COLOR
6 MESH	WHITE
12 MESH	BLACK
20 MESH	BEIGE
30 MESH	FLAME RED
40 MESH	BROWN
50 MESH	GENTIAN BLUE
80 MESH	ZINC YELLOW
100 MESH	TRAFFIC GREEN
120 MESH	BLACK



## 3" Y STRAINERS

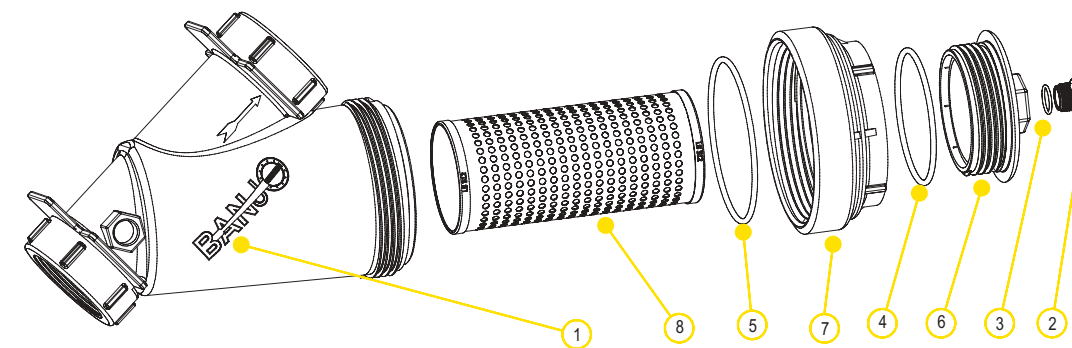
### FEATURES

- Heavy duty glass reinforced polypropylene
- Corrosion resistant
- High volume
- Heavy duty end cap threads
- ½" clean out plug
- 304 stainless steel screens
- EPDM gaskets
- Warning: to be used on suction side or non-pressure side in all applications



### 3" Y STRAINERS

PART NO	DESCRIPTION	MAX PSI	LOT QTY
LSM300-04	3" X 3" Y STRAINER W/4 MESH SCREEN	75	1
LSM300-08	3" X 3" Y STRAINER W/8 MESH SCREEN	75	1
LSM300-12	3" X 3" Y STRAINER W/12 MESH SCREEN	75	1
LSM300-20	3" X 3" Y STRAINER W/20 MESH SCREEN	75	1
LSM300-50	3" X 3" Y STRAINER W/50 MESH SCREEN	75	1



### REPLACEMENT PARTS

ITEM	PART NO	DESCRIPTION	QTY
1	MLS300B1	3" BODY	1
2	13777	¾" PLUG	1
3	13778	O-RING	1
4	MLS300ECG	EPDM END CAP GASKET	1
4	MLS300ECGV	FKM CAP GASKET	1
5	MLS300G	EPDM CAP GASKET	1
6	LS300EC	END CAP ONLY (PLUG SOLD SEPARATELY)	1
7	MLS300CAP	3" CAP	1
8	LS304	4 MESH SCREEN	1
8	LS308	8 MESH SCREEN	1
8	LS312	12 MESH SCREEN	1
8	LS320	20 MESH SCREEN	1
8	LS350	50 MESH SCREEN	1

## 3" Y STRAINERS

- 304 stainless steel screens

## 3" Y STAINLESS STEEL STRAINERS

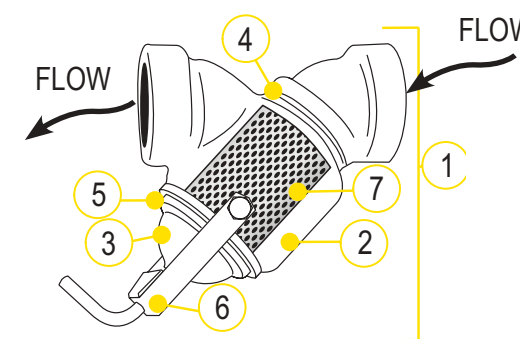
### FEATURES

- Heavy duty stainless steel
- Corrosion resistant
- High volume
- Heavy duty end cap threads
- ½" clean out plug
- 304 stainless steel screens
- EPDM gaskets standard, FKM available
- Maximum operating pressure 225 psi
- Warning: to be used on suction side or non-pressure side in all applications



### 3" Y STRAINERS

PART NO	DESCRIPTION	QTY
LSS300-BC	3" SS BODY, CAP & GASKETS	1
LSS300-C	3" SS CAP	1
LSS300-S	EPDM SCREEN SEAL	1
LSS300-SV	FKM SCREEN SEAL	1
LSS300-G	EPDM CAP GASKET	1
LSS300-GV	FKM CAP GASKET	1



### REPLACEMENT PARTS

ITEM	PART NO	DESCRIPTION	QTY
1	LSS300-BC	3" SS BODY, CAP & GASKETS	1
2	N/A	3" SS BODY	1
3	LSS300-C	3" SS CAP	1
4	LSS300-S	EPDM SCREEN SEAL	1
4	LSS300-SV	FKM SCREEN SEAL	1
5	LSS300-G	EPDM CAP GASKET	1
5	LSS300-GV	FKM CAP GASKET	1
6	LSS300-H	HANDLE/CLAMP ASSEMBLY	1
7	LSS306	6 MESH SS SCREEN	1
7	LSS308	8 MESH SS SCREEN	1
7	LSS312	12 MESH SS SCREEN	1
7	LSS320	20 MESH SS SCREEN	1
7	LSS330	30 MESH SS SCREEN	1
7	LSS350	50 MESH SS SCREEN	1

## 3" Y STAINLESS STEEL STRAINERS

- 304 stainless steel screens

<b>PUMP ACCESSORIES</b> PAGES 95	SUCTION BASKET STRAINERS BASE PLATES
<b>2" POLY PUMPS</b> PAGES 96 - 109	GAS ENGINE PUMPS PUMP ONLY/ BEARING PEDESTAL WET SEAL WITH GAS ENGINE ELECTRIC MOTOR DRIVEN HYDRAULIC MOTOR DRIVEN MANIFOLD
<b>3" POLY PUMPS</b> PAGES 110- 119	GAS ENGINE PUMPS PUMP ONLY/ BEARING PEDESTAL MANIFOLD HYDRAULIC MOTOR DRIVEN WET SEAL WITH GAS ENGINE
<b>1½" &amp; 2" CAST IRON PUMPS</b> PAGES 120 - 127	GAS ENGINE PUMPS PUMP ONLY/ BEARING PEDESTAL WET SEALS ELECTRIC MOTOR DRIVEN HYDRAULIC MOTOR DRIVEN
<b>2" CAST IRON 222 SERIES PUMPS</b> PAGES 128- 131	GAS ENGINE PUMPS PUMP ONLY/ BEARING PEDESTAL HYDRAULIC MOTOR DRIVEN ELECTRIC MOTOR DRIVEN MANIFOLD WET SEAL
<b>3" CAST IRON PUMPS</b> PAGES 132 - 137	GAS ENGINE PUMPS PUMP ONLY/ BEARING PEDESTAL WET SEALS HYDRAULIC MOTOR DRIVEN
<b>3" CAST IRON 333 SERIES PUMPS</b> PAGES 138 - 139	GAS ENGINE PUMPS PUMP ONLY/ BEARING PEDESTAL ELECTRIC MOTOR DRIVEN
<b>3" CAST IRON MANIFOLD WET SEAL M332 SERIES PUMPS</b> PAGES 140 - 143	GAS ENGINE PUMPS PUMP ONLY/ BEARING PEDESTAL ELECTRIC MOTOR DRIVEN HYDRAULIC MOTOR DRIVEN
<b>4" CAST IRON 444 SERIES PUMPS</b> PAGES 144 - 145	GAS ENGINE PUMPS PUMP ONLY
<b>2" &amp; 3" STAINLESS STEEL PUMPS</b> PAGES 146- 153	GAS ENGINE PUMPS PUMP ONLY/ BEARING PEDESTAL ELECTRIC MOTOR DRIVEN HYDRAULIC MOTOR DRIVEN

## SUCTION BASKET STRAINERS

### FEATURES

- Made of polyethylene
- Prevents plugging and damage to pump while suctioning from streams or ponds.



### SUCTION BASKET STRAINERS

PART NO	DESCRIPTION	QTY
200SBS	2" FEMALE THREAD POLY BASKET	1
300SBS	3" FEMALE THREAD POLY BASKET	1

## BASE PLATE ASSEMBLY

### FEATURES

- Universal fit for 1½", 2" and 3" polypropylene or cast iron pumps



### BASE PLATE ASSEMBLY

PART NO	DESCRIPTION	QTY
18700	BASE PLATE ASSEMBLY INCLUDES PLATE, COUPLING GUARD, BOLT BAG AND SHIMS	1

## 2" POLY PUMPS

### FEATURES

- Precision molded construction
- Lightweight
- Corrosion resistant
- Superior design
- Low maintenance
- EPDM standard, FKM available
- Engine warranty service available at authorized Briggs & Stratton® and Honda® dealers



2" POLY PUMPS W/GAS ENGINES					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
200PH-5	2" POLY PUMP W/5.5 HP HONDA® ENGINE	5.5	1	12	
200PH-5E	2" POLY PUMP W/5.5 HP HONDA® ENGINE W/ ELECTRIC START	5.5	1	12	
200PH-5V	2" POLY PUMP W/5.5 HP HONDA® ENGINE W/FKM & 316 SS SEAL	5.5	1	12	
200PH6	2" POLY PUMP W/6.5 HP HONDA® ENGINE	6.5	1	12	
200P6PRO	2" POLY PUMP W/6.5 HP BRIGGS & STRATTON® ENGINE PRO SERIES	6.5	1	12	
200P6PROE	2" POLY PUMP W/6.5 HP BRIGGS & STRATTON® ENGINE PRO SERIES W/ELECTRIC START	6.5	1	12	
200P6PROV	2" POLY PUMP W/6.5 HP BRIGGS & STRATTON® ENGINE PRO SERIES W/FKM & 316 SS SEAL	6.5	1	12	



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS

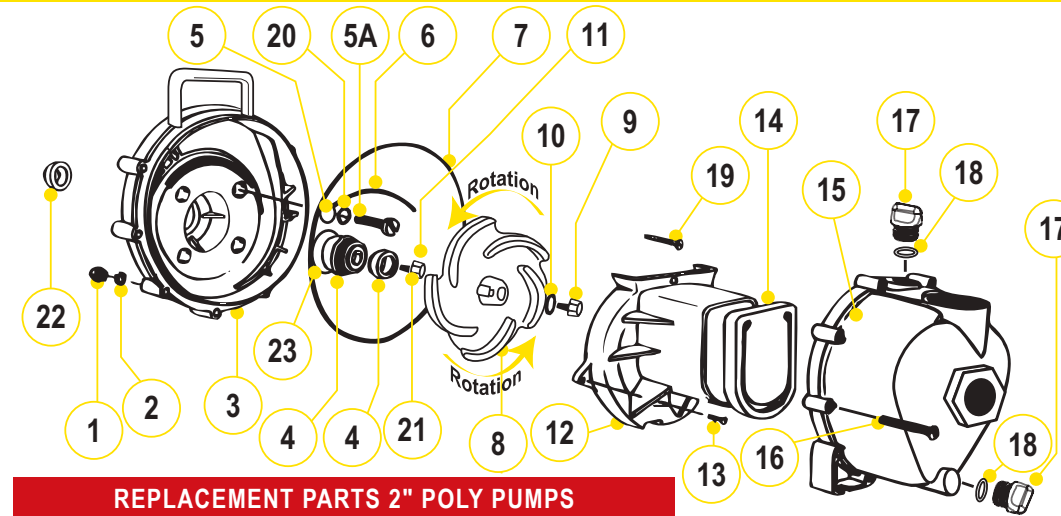


2" POLY PUMP BEARING PEDESTALS					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
200PB	2" POLY BEARING PEDESTAL W/ 3/4" SHAFT & 3 VANE IMPELLER	N/A	1	18	
205PB	2" POLY BEARING PEDESTAL W/ 3/4" SHAFT & 5 VANE IMPELLER	N/A	1	18	
205PB-V	2" POLY BEARING PEDESTAL W/ 3/4" SHAFT & 5 VANE IMPELLER W/FKM & 316 SS SEAL	N/A	1	18	



2" POLY PUMP ONLYS					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
200PO	2" POLY PUMP ONLY* W/ 3 & 5 VANE IMPELLER	N/A	1	27	
200PO-V	2" POLY PUMP ONLY* W/ 3 & 5 VANE IMPELLER W/FKM & 316 SS SEAL	N/A	1	27	

Note: Requires 3/4" shaft on motor

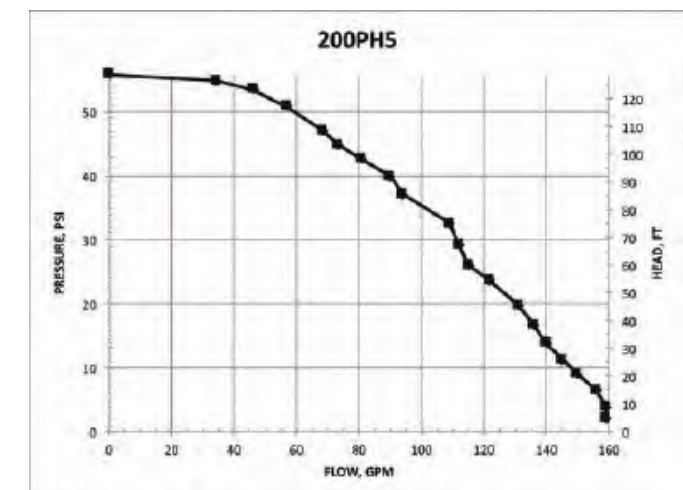
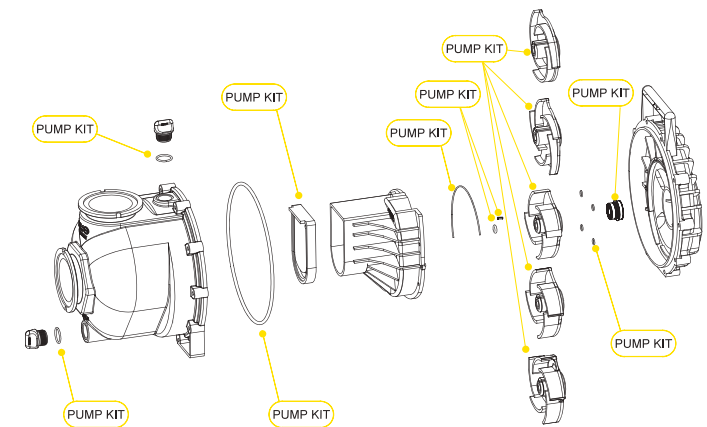


REPLACEMENT PARTS 2" POLY PUMPS			
ITEM	PART NO	DESCRIPTION	QTY
1	V07019	SS BODY NUTS	10
2	V07018	SS LOCK WASHERS	10
3	12703A	POLY PUMP REAR BRACKET	1
4	12713	SEAL ASSEMBLY	1
4	12713V	FKM SEAL ASSEMBLY	1
5	12717	O-RING FOR SCREW HEAD	4
5	12717V	FKM O-RING FOR SCREW HEAD	4
5A	12715A	SS BRACKET SCREWS	4
6	12754	O-RING SEGMENT	1
6	12754V	FKM O-RING SEGMENT	1
7	12719A	BODY O-RING	1
7	12719AV	FKM BODY O-RING	1
8	12772	5 VANE IMPELLER	1
8	12771A	3 VANE IMPELLER	1
9	12765A	SS IMPELLER BOLT	1
10	A204	O-RING	1
10	A204V	FKM O-RING	1
11	12775A	IMPELLER HEX NUT	1
12	12702A	POLY PUMP VOLUTE	1
13	12725	SS VOLUTE SCREWS	1
14	12705	POLY PUMP CHECK VALVE	1
14	12705V	FKM CHECK VALVE	1
15	12712A	BODY ASSEMBLY	1
16	12720	SS BODY SCREWS	10
17	12777	1/2" PLUG	2
18	UV15163	PRIME/DRAIN PLUG O-RING	2
18	UV15163V	FKM PRIME/DRAIN PLUG O-RING	2
19	12900	SS UPPER VOLUTE SCREW	1
20	12901	SS REAR BRACKET WASHER	4
21	12902A	IMPELLER KEY	1
22	12716	POLY PUMP SLINGER	1
23	12710	O-RING FOR SEAL ASSEMBLY	1
23	12710V	FKM O-RING FOR SEAL ASSEMBLY	1
N/S	12882A	BEARING PEDESTAL	1
N/S	12099	7/16"-14 X 1.25" HHCS	1
KIT	12000A	POLY PUMP EPDM REPAIR KIT (ITEMS 4-8, 10, 14, 18, 21-23 & 12099)	1
KIT	12000AV	POLY PUMP FKM REPAIR KIT (ITEMS 4-8, 10, 14, 18, 21-23 & 12099)	1
KIT	12999A	PUMP SEAL/O-RING KIT (ITEMS 5-7, 10, 18, 22, 23 & 12099)	1
KIT	12999AV	FKM PUMP SEAL/O-RING KIT (ITEMS 5-7, 10, 18, 22, 23 & 12099)	1

## 2" POLY PUMPS

### KITS 2" POLY PUMPS

PART NO	REPAIR KIT NO	SEAL KIT NO
200PH-5	12000A	12999A
200PH-5E	12000A	12999A
200PH-5V	12000AV	12999AV
200PH6	12000A	12999A
200P6PRO	12000A	12999A
200P6PROE	12000A	12999A
200P6PROV	12000AV	12999AV
200PB	12000A	12999A
205PB	12000A	12999A
205PB-V	12000AV	12999AV
200PO	12000A	12999A
200PO-V	12000AV	12999AV

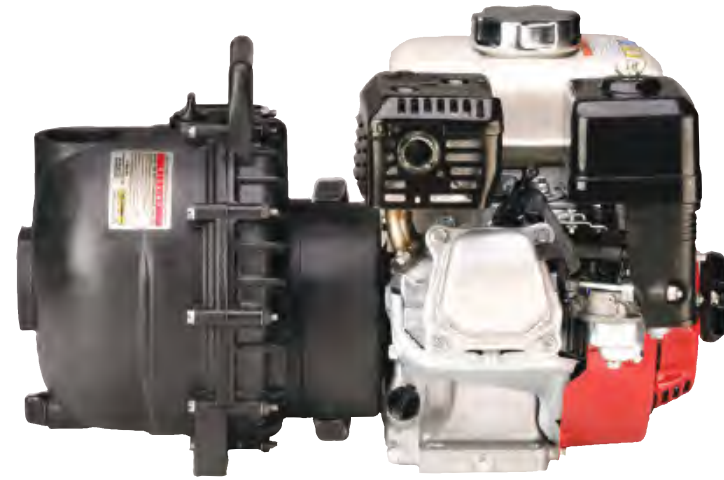


## 2" POLY WET SEAL PUMPS

## 2" POLY WET SEAL PUMPS

### FEATURES

- Run dry capability
- Double seal contained in ethylene glycol reservoir. Carbon ceramic seal faces with stainless steel cup and spring with EPDM rubber.
- Pump end separated from engine
- V-shaped for quicker priming
- Engine warranty service available at authorized Briggs & Stratton® and Honda® dealers



### 2" POLY WET SEAL PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
200PH5W	2" POLY WET SEAL PUMP W/5.5 HP HONDA® ENGINE	5.5	1	12

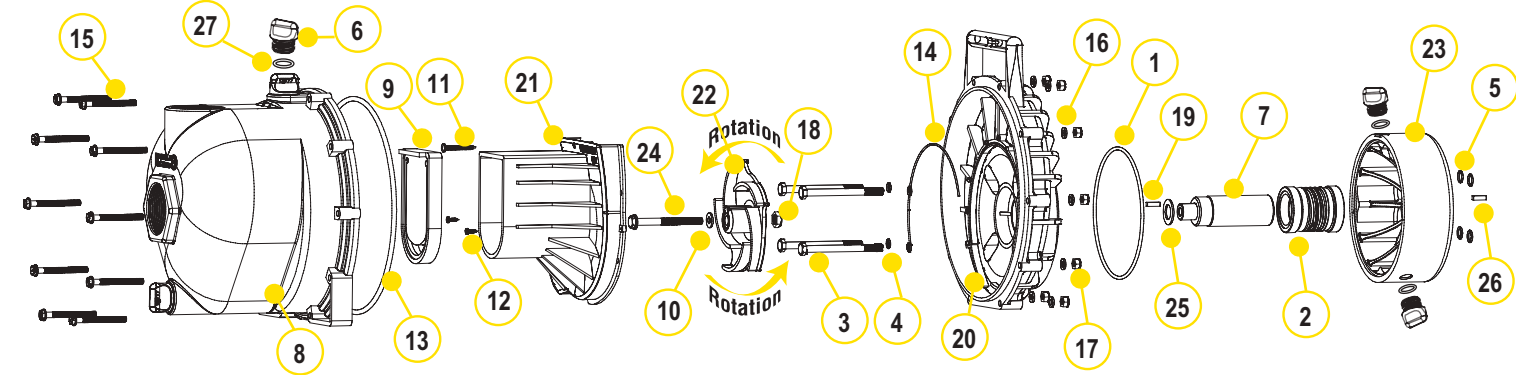


WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



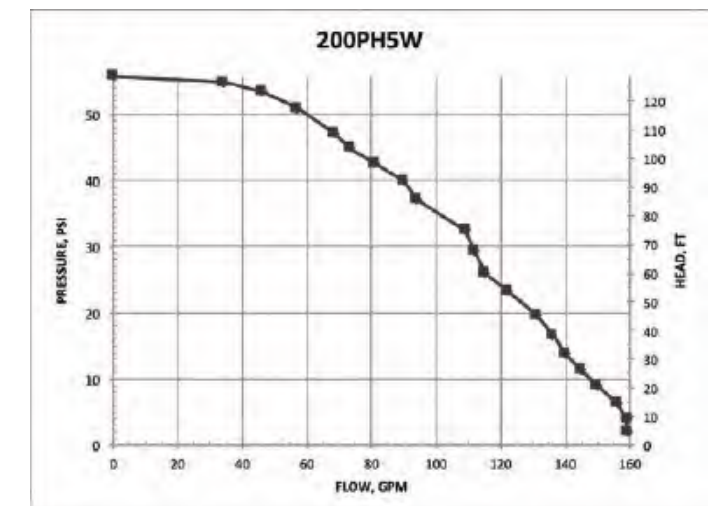
### 2" POLY WET SEAL PUMP ONLY

PART NO	DESCRIPTION	HP	QTY	SKID QTY
205POW	2" POLY WET SEAL PUMP ONLY, 5 VANE IMPELLER WITH EPDM SEALS	N/A	1	27



### REPLACEMENT PARTS 2" POLY PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	13719	O-RING	1
2	15035E	EPDM MECHANICAL SEAL ASSEMBLY	1
3	13034	5/16" -24 X 3 3/4" HHCS	4
4	12717	O-RING FOR BRACKET SCREW	4
5	12709	O-RING	4
6	12777	1/2" PLUG	4
7	12155	ADAPTER SHAFT	1
8	12712A	BODY ASSEMBLY	1
9	12705	CHECK VALVE	1
10	A204	IMPELLER BOLT GASKET	1
11	12900	#10 X 1 1/2" PPH SMS	1
12	12725	#6 X 1/2" PPH SMS	2
13	12719A	BODY O-RING	1
14	12754	O-RING SEGMENT	1
15	12720	1/4" - 20 X 2 1/2" SL IND HWHS	10
16	V07018	1/4" LOCK WASHER	10
17	V07019	1/4" - 20 HEX NUT	10
18	12775A	7/16" - 14 HEX NUT	1
19	12902A	3/16" SQ. X 5/8" KEY	2
20	12707W	WET SEAL REAR BRACKET	1
21	12702A	VOLUTE	1
22	12772	5 VANE IMPELLER	1
23	12202W	WET SEAL RESERVOIR	1
24	12766	5/16" - 24 X 3 1/4" HFS	1
25	CV10175	GASKET	1
26	12902A	1/4" SQ. 3/4" KEY STOCK	1
27	UV15163	O-RING FOR DRAIN PLUG	4



## 2" POLY PUMPS WITH ELECTRIC MOTORS

### FEATURES

- Additional drive unit protection with added 1" spacer for ultimate protection
- The "Super Slinger" included for even more drive unit protection (not shown)



### 2" POLY PUMPS W/ELECTRIC MOTORS

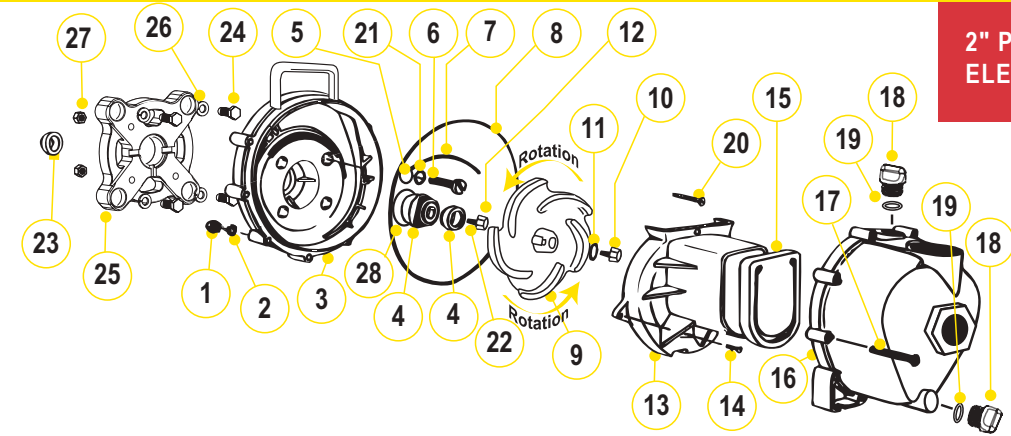
PART NO	DESCRIPTION	HP	QTY	SKID QTY
234PPE5	2" POLY PUMP W/5 HP THREE PHASE ELECTRIC MOTOR W/ EPDM ELASTOMERS	5	1	3
234PPE5V	2" POLY PUMP W/5 HP THREE PHASE ELECTRIC MOTOR W/FKM ELASTOMERS	5	1	3
234PPE51	2" POLY PUMP W/5 HP SINGLE PHASE ELECTRIC MOTOR W/ EPDM ELASTOMERS	5	1	3
234PPE51V	2" POLY PUMP W/5 HP SINGLE PHASE ELECTRIC MOTOR W/FKM ELASTOMERS	5	1	3



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



## 2" POLY PUMPS WITH ELECTRIC MOTORS

### REPLACEMENT PARTS 2" POLY PUMPS

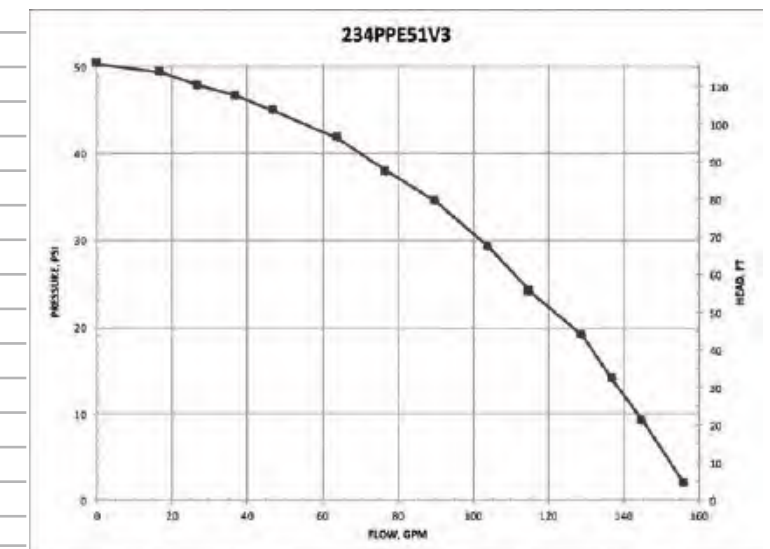
ITEM	PART NO	DESCRIPTION	QTY
1	V07019	SS BODY NUTS	10
2	V07018	SS LOCK WASHERS	10
3	12703A	POLY PUMP REAR BRACKET	1
4	12713	SEAL ASSEMBLY EPDM	1
4	12713V	SEAL ASSEMBLY FKM	1
5	12717	SCREW HEADS O-RING EPDM	4
5	12717V	SCREW HEADS O-RING FKM	4
6	N/A	SS BRACKET SCREWS	4
7	12754	O-RING SEGMENT EPDM	1
7	12754V	O-RING SEGMENT FKM	1
8	12719A	BODY O-RING EPDM	1
8	12719AV	BODY O-RING FKM	1
9	12772	5 VANE IMPELLER	1
10	12765A	SS IMPELLER BOLT	1
11	A204	O-RING	1
11	A204V	FKM O-RING	1
12	12775A	IMPELLER HEX NUT	1
13	12702A	POLY PUMP VOLUTE	1
14	12725	SS VOLUTE SCREWS	2
15	12705	POLY PUMP CHECK VALVE EPDM	1
15	12705V	POLY PUMP CHECK VALVE FKM	1
16	12712A	BODY ASSEMBLY EPDM	1
16	N/A	BODY ASSEMBLY FKM	1
17	12720	SS BODY SCREWS	10
18	12777	1/2" PLUG	2
19	UV15163	PRIME/DRAIN PLUG O-RING	2
19	UV15163V	FKM PRIME/DRAIN PLUG O-RING	2
20	12900	SS UPPER VOLUTE SCREW	1
21	12901	SS REAR BRACKET WASHER	4
22	12902A	IMPELLER KEY	1
23	12716	PUMP SLINGER	1
24	17704	3/8"-16 X 1.25" HHCS	8
25	12046	56C FRAME ADAPTER	1
26	V20018	LOCK WASHER FOR 56C FRAME ADAPTER	8
27	V10119	NUT FOR 56C FRAME ADAPTER	4
28	12710	O-RING FOR SEAL ASSEMBLY	1
28	12710V	FKM O-RING FOR SEAL ASSEMBLY	1
NS	BEM5-182CZ	5 HP, 182CZ, 3 PH	1
NS	BEM51-182CZ	5 HP, 182CZ, 1 PH	1

### REPLACEMENT PARTS 2" POLY PUMPS

ITEM	PART NO	DESCRIPTION	QTY
N/S	17701	BASE PLATE	1
N/S	12099	7/16"-14 X 1.25" HHCS	1
N/S	12052	56C FRAME ADAPTER SHAFT FOR 200PEO	1
KIT	12756	56C FRAME ADAPTER KIT (ITEMS 6, 22, 24-27, 12052, 12053, 15751, 15752)	1
KIT	12000A	POLY PUMP EPDM REPAIR KIT (ITEMS 4, 5, 7, 8, 9, 11, 15, 19, 22-23 & 12099)	1
KIT	12000AV	POLY PUMP FKM REPAIR KIT (ITEMS 4, 5, 7, 8, 9, 11, 15, 19, 22-23 & 12099)	1
KIT	12999A	PUMP SEAL/O-RING KIT (ITEMS 4, 5, 7, 8, 11, 19, 23)	1
KIT	12999AV	FKM PUMP SEAL/O-RING KIT (ITEMS 4, 5, 7, 8, 11, 19, 23)	1

### KITS 2" POLY PUMPS

PART NO	REPAIR KIT NO	SEAL KIT NO	FRAME ADAPTER KIT
234PPE5	12000A	12999A	12756
234PPE5V	12000AV	12999AV	12756
234PPE51	12000A	12999A	12756
234PPE51V	12000AV	12999AV	12756



## 2" POLY PUMPS WITH HYDRAULIC MOTORS

### FEATURES

- Precision molded construction
- Lightweight
- Corrosion resistant
- Low maintenance
- Hydraulic fluid capacity is minimum 6 gallons and maximum 10 gallons
- Open or closed system
- 3600 R.P.M.
- Recommendation to use the motor spool control valve or a suitable equivalent. The lack of such a valve in this circuit may cause failure to the hydraulic motor and will void warranty.



### 2" POLY PUMPS W/HYDRAULIC MOTORS

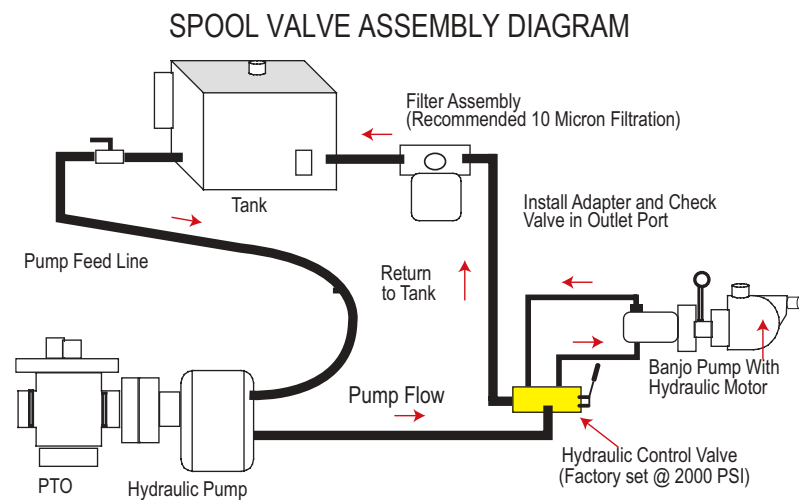
PART NO	DESCRIPTION	HP	QTY	SKID QTY
200PHA	2" POLY PUMP WITHOUT HYDRAULIC MOTOR	N/A	1	27
200PHY	2" POLY PUMP W/12 HP HYDRAULIC MOTOR	12.0	1	18
200PHYW	2" POLY WET SEAL PUMP W/12 HP HYDRAULIC MOTOR	12.0	1	18



**WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP**



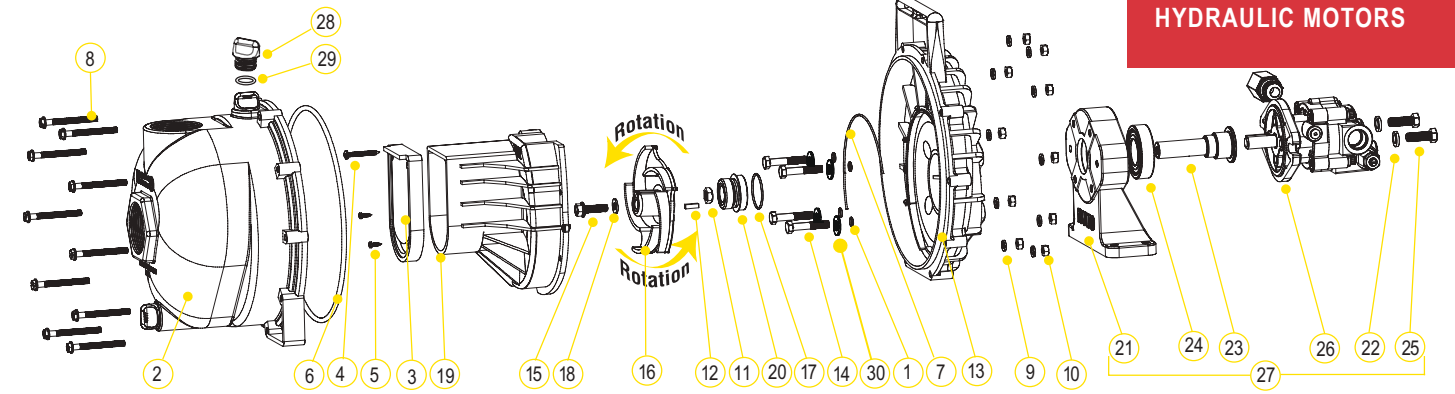
**WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS**



### HYDRAULIC MOTOR SPOOL VALVE

PART NO	DESCRIPTION	HP	QTY
HSV1000	HYDRAULIC MOTOR SPOOL VALVE	N/A	1

## 2" POLY PUMPS WITH HYDRAULIC MOTORS



### REPLACEMENT PARTS 2" POLY PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	12717	O-RING FOR SCREW HEADS	4
2	12712A	BODY ASSEMBLY	1
3	12705	CHECK VALVE	1
4	12900	SS UPPER VOLUTE SCREW	1
5	12725	SS VOLUTE SCREWS	2
6	12719A	BODY O-RING	1
7	12754	O-RING SEGMENT	1
8	12720	SS BODY SCREWS	10
9	V07018	SS LOCK WASHERS	10
10	V07019	SS BODY NUTS	10
11	12775A	IMPELLER HEX NUT	1
12	12902A	IMPELLER KEY	1
13	12703A	POLY PUMP REAR BRACKET	1
14	12715A	5/16"-24 X 1.75" HHCS	4
15	12765A	SS IMPELLER BOLT	1
16	12772	5 VANE IMPELLER	1
17	12710	O-RING FOR SEAL ASSEMBLY	1
18	A204	O-RING	1
19	12702A	POLY PUMP VOLUTE	1
20	12713	MECHANICAL SEAL ASSEMBLY	1
21	12049F	HYDRAULIC PEDESTAL HOUSING	1
22	V20018	3/8" LOCK WASHER	2
23	12055E	ADAPTER SHAFT	1
24	17056E	BEARING	1
25	18010SS	3/8"-16 X 1.25" HHCS	2
26	HY1013	HYDRAULIC MOTOR	1
27	12600B	COMPLETE HYDRAULIC ASSEMBLY	1
28	12777	1/2" PLUG	2
29	UV15163	O-RING FOR PLUG	2
30	12901	WASHER (200PHA & 200PHY)	4
N/S	HY1003	HYDRAULIC MOTOR SEAL KIT	1
KIT	12000A	POLY PUMP EPDM REPAIR KIT (ITEMS 1, 3, 6, 7, 12, 16-18, 20, 12099)	1
KIT	12999A	PUMP SEAL/O-RING KIT (ITEMS 1, 6, 7, 17, 20, 29, 12099)	1

### KITS 2" POLY PUMPS

PART NO	EPDM REPAIR KIT NO	EPDM SEAL KIT NO	HYDRAULIC MOTOR SEAL KIT
200PHA	12000A	12999A	N/A
200PHY	12000A	12999A	HY1003

### HYDRAULIC MOTOR DATA

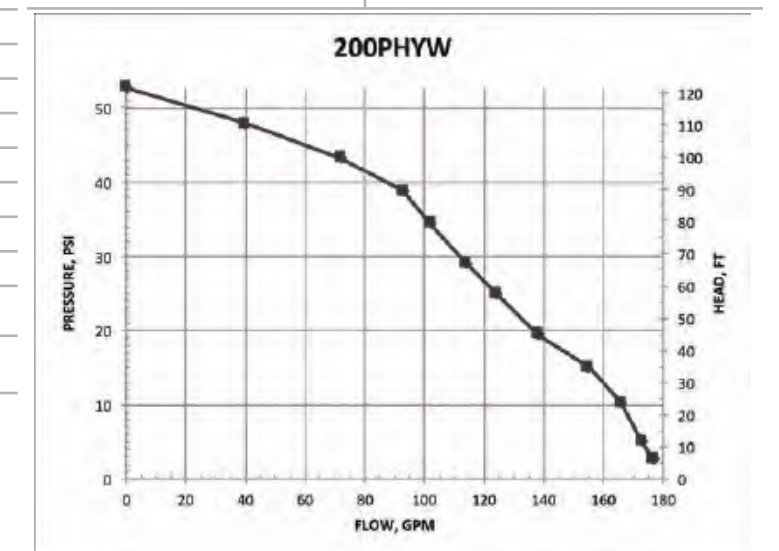
U.S. GALLONS/REV.	0.0025
CUBIC INCHES/REV.	0.580
LITERS/REV.	0.0097
MAX HYDRAULIC PRESSURE	2000 PSI
MIN HYDRAULIC PRESSURE	200 PSI
INLET PORT	SAE 10 (7/8-14 UNF-2B)
OUTLET PORT	SAE 10 (7/8-14 UNF-2B)
MINIMUM GPM REQUIRED	6 GPM 2400 RPM
MAXIMUM GPM REQUIRED	10 GPM 4000 RPM
IDEAL GPM REQUIRED	9 GPM 3600 RPM

### CONNECTION INFORMATION

INLET	"A" PORT
OUTLET	"B" PORT
SUPPLIED CHECK VALVE IS TO ENSURE PROPER ROTATION OF THE BANJO PUMP. PLACE CHECK VALVE IN OUTLET PORT (MARKED "B") FOR PROPER RIGHT HAND ROTATION.	

### SPOOL VALVE INFORMATION

REQUIRED OUTLET FLOW	MIN 6 GPM / MAX 10 GPM
REQUIRED SYSTEM PRESSURE	MIN 600 PSI / MAX 3000 PSI



## 2" POLY MANIFOLD PUMPS WITH GAS ENGINES

### FEATURES

- Precision molded construction
- Lightweight
- Corrosion resistant
- Low maintenance
- See pages 43-49 on manifold fittings for easy plumbing.



### 2" POLY MANIFOLD PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M220PH5	2" POLY MANIFOLD PUMP W/5.5 HP HONDA® ENGINE	5.5	1	12
M220PH6	2" FP MANIFOLD PUMP W/6.5 HP HONDA® ENGINE	6.5	1	12
M220P6PRO	2" FP MANIFOLD PUMP W/6.5 HP BRIGGS & STRATTON® PRO SERIES ENGINE	6.5	1	12



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP

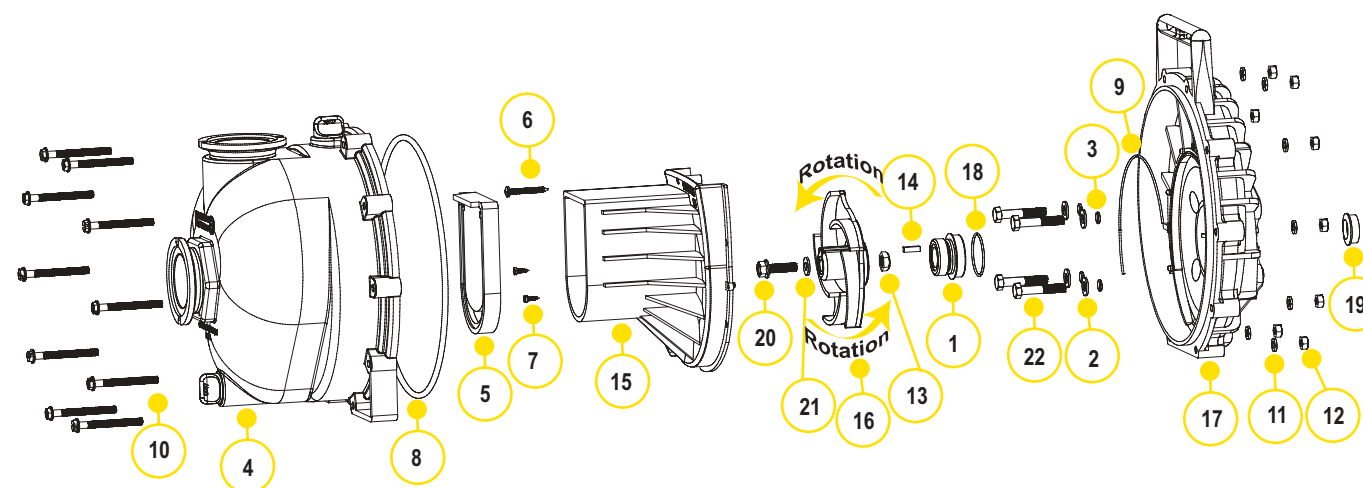


WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



### 2" POLY MANIFOLD PUMP ONLY

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M225PO	2" POLY MANIFOLD PUMP ONLY W/ 3/4" SHAFT & 5 VANE IMPELLER	N/A	1	27



### REPLACEMENT PARTS 2" POLY PUMPS

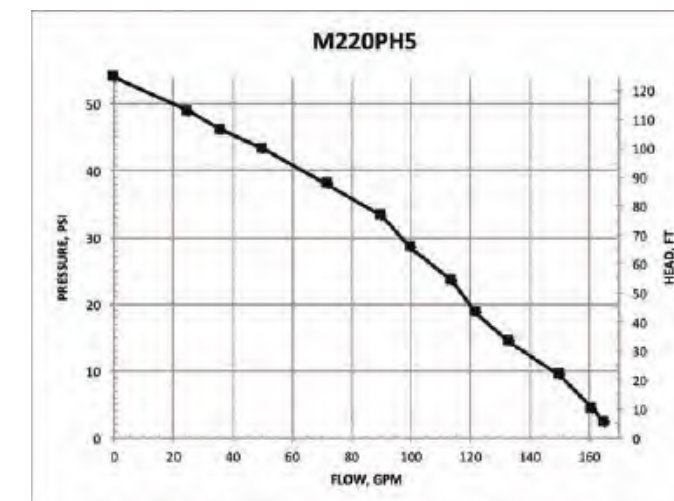
ITEM	PART NO	DESCRIPTION	QTY
1	12713	MECHANICAL SEAL ASSEMBLY	1
2	12901	SS REAR BRACKET WASHER	4
3	12717	O-RING FOR SCREW HEAD	4
4	M12712	2" FP MANIFOLD PUMP BODY ASSEMBLY	1
5	12705	POLY PUMP CHECK VALVE	1
6	12900	SS UPPER VOLUTE SCREW	1
7	12725	SS VOLUTE SCREWS	2
8	12719A	BODY O-RING	1
9	12754	O-RING SEGMENT	1
10	12720	SS BODY SCREWS	10
11	V07018	SS LOCK WASHERS	10
12	V07019	SS BODY NUTS	10
13	12775A	IMPELLER HEX NUT	1
14	12902A	IMPELLER KEY	1
15	12702A	POLY PUMP VOLUTE	1
16	12772	5 VANE IMPELLER	1
16	12771A	3 VANE IMPELLER	1
17	12703A	POLY PUMP REAR BRACKET	1
18	12710	O-RING FOR SEAL ASSEMBLY	1
19	12716	POLY PUMP SLINGER	1
20	12765A	SS IMPELLER BOLT	1
21	A204	O-RING	1
22	12715A	SS BRACKET SCREWS	4
KIT	12000A	POLY PUMP EPDM REPAIR KIT (ITEMS 2,4,7,8,14, 17,19,21,30, 12099)	1
KIT	12000AV	POLY PUMP FKM REPAIR KIT (ITEMS 2,4,7,8,14, 17,19,21,30, 12099)	1
KIT	12999A	PUMP SEAL/O-RING KIT (ITEMS 2,4,7,8,17,19,21,30, 12099)	1
KIT	12999AV	FKM PUMP SEAL/O-RING KIT (ITEMS 4-7,8,10,18, 23 & 12099)	1

## 2" POLY MANIFOLD PUMPS WITH GAS ENGINES

### KITS 2" POLY PUMPS

PART NO	EPDM REPAIR KIT NO	FKM REPAIR KIT NO	EPDM SEAL KIT NO	FKM SEAL KIT NO
M220PH5	12000A	12000AV	12999A	12999AV
M220PH6	12000A	12000AV	12999A	12999AV
M220P6PRO	12000A	12000AV	12999A	12999AV
M225PO	12000A	12000AV	12999A	12999AV

SEE 12000A & 12000AV KIT DRAWING ON PAGE 101



## 2" POLY MANIFOLD WET SEAL PUMPS

## 2" POLY MANIFOLD WET SEAL PUMPS

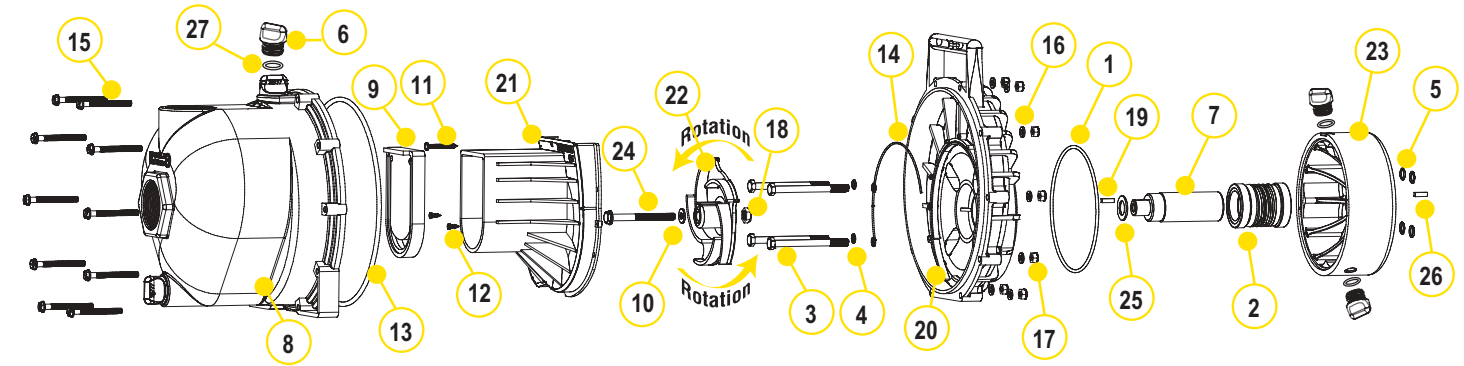
### FEATURES

- Run dry capability
- Double seal contained in ethylene glycol reservoir. Carbon ceramic seal faces with stainless steel cup and spring with EPDM rubber
- Pump end separated from engine
- Large weep holes between pump and engine
- V-shaped for quicker priming
- See pages 43-49 on manifold fittings for easy plumbing.



### 2" POLY MANIFOLD WET SEAL PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M220PH5W	2" POLY MANIFOLD WET SEAL PUMP W/5.5 HP HONDA® ENGINE	5.5	1	12



### REPLACEMENT PARTS 2" POLY PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	13719	O-RING	1
2	15035E	EPDM MECHANICAL SEAL ASSEMBLY	1
3	13034	5/16" -24 X 3 3/4" HHCS	4
4	12717	O-RING FOR BRACKET SCREW	4
5	12709	O-RING	4
6	12777	1/2" PLUG	4
7	12155	ADAPTER SHAFT	1
8	M12712	2" FP MANIFOLD PUMP BODY ASSEMBLY	1
9	12705	CHECK VALVE	1
10	A204	IMPELLER BOLT GASKET	1
11	12900	#10 X 1 1/2" PPH SMS	1
12	12725	#6 X 1/2" PPH SMS	2
13	12719A	BODY O-RING	1
14	12754	O-RING SEGMENT	1
15	12720	1/4" - 20 X 2 1/2" SL IND HWHS	10
16	V07018	1/4" LOCK WASHER	10
17	V07019	1/4" - 20 HEX NUT	10
18	12775A	7/16" - 14 HEX NUT	1
19	12902A	3/16" SQ. X 5/8" KEY	2
20	12707W	WET SEAL REAR BRACKET	1
21	12702A	VOLUTE	1
22	12772	5 VANE IMPELLER	1
23	12202W	WET SEAL RESERVOIR	1
24	12766	5/16" - 24 X 3 3/4" HFS	1
25	CV10175	GASKET	1
26	12902A	1/4" SQ. 3/4" KEY STOCK	1
27	UV15163	O-RING FOR DRAIN PLUG	4



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS





## 3" POLY PUMPS

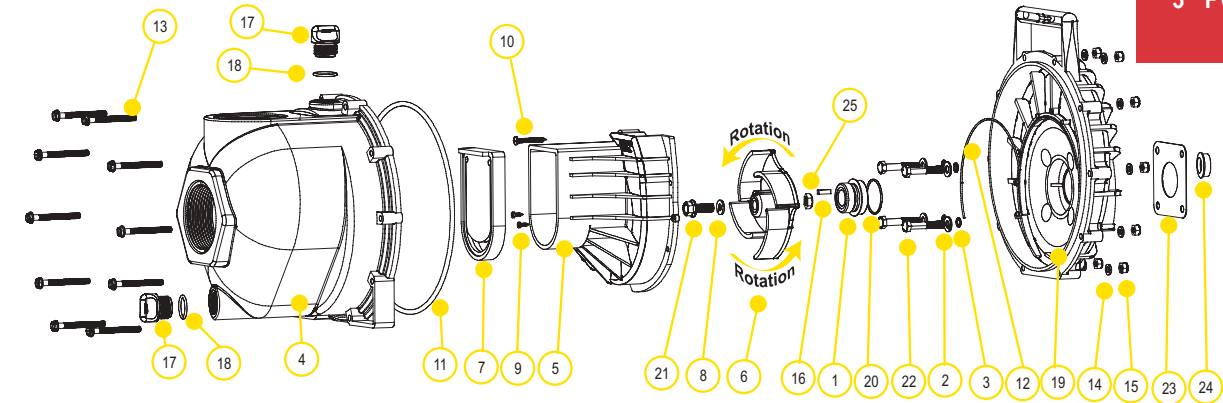
## 3" POLY PUMPS

### FEATURES

- Large weep holes between pump and engine
- V-shaped for quicker priming
- Pump only comes unassembled



3" POLY PUMPS W/GAS ENGINES					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
300PH-6	3" POLY PUMP W/6.5 HP HONDA® ENGINE	6.5	1	16	
300P11PRO	3" POLY PUMP W/11 HP BRIGGS & STRATTON® ENGINE PRO SERIES W/ELECTRIC START & PULL ROPE	11	1	8	



REPLACEMENT PARTS 3" POLY PUMPS			
ITEM	PART NO	DESCRIPTION	QTY
1	12713	SEAL ASSEMBLY	1
2	12901	SS REAR BRACKET WASHER	1
3	12717	O-RING FOR SCREW HEAD	1
4	13712	BODY ASSEMBLY	1
5	13702	POLY PUMP VOLUTE	1
6	13771	4 VANE TRIMMED IMPELLER (300PH-6, 300PB & 300PO)	1
6	13772	4 VANE IMPELLER (300P11PRO)	1
7	12705	CHECK VALVE	1
8	A204	O-RING	1
9	12900	SS UPPER VOLUTE SCREW	1
10	12725	SS VOLUTE SCREWS	1
11	12719A	BODY O-RING	1
12	12754	O-RING SEGMENT	1
13	12720	SS BODY SCREWS	1
14	V07018	SS LOCK WASHERS	1
15	V07019	SS BODY NUTS	1
16	12902A	IMPELLER KEY	1
17	13777	3/4" PLUG	1
18	13778	O-RING	1
19	12703A	POLY PUMP REAR BRACKET	1
20	12710	O-RING FOR SEAL ASSEMBLY	1
21	12765A	SS IMPELLER BOLT 5/16 X 24 X 1.12 (300PH-6)	1
21	13765	SS IMPELLER BOLT 3/8 X 24 X 1.75 (300P11PRO)	1
22	12715A	SS BRACKET SCREWS	1
23	15751	REAR BRACKET SHIM	1
24	12716	POLY PUMP SLINGER	1
25	12775A	IMPELLER HEX NUT	1
N/S	12882A	BEARING PEDESTAL	1
N/S	12099	7/16"-14 X 1.25" HHCS	1
N/S	12000A	POLY PUMP EPDM REPAIR KIT (ITEMS 1, 3, 6-8, 11, 12, 16, 18, 20, 24 & 12099)	1
N/S	13999	PUMP SEAL/O-RING KIT (ITEMS 1, 3, 8, 11, 12, 18, 20, 24 & 12099)	1

KITS 3" POLY PUMPS		
PART NO	EPDM REPAIR KIT NO	EPDM SEAL KIT NO
300PH-6	12000A	13999
300P11PRO	12000A	13999
300PB	12000A	13999
300PO	12000A	13999

SEE 12000A KIT DRAWING ON PAGE 101



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



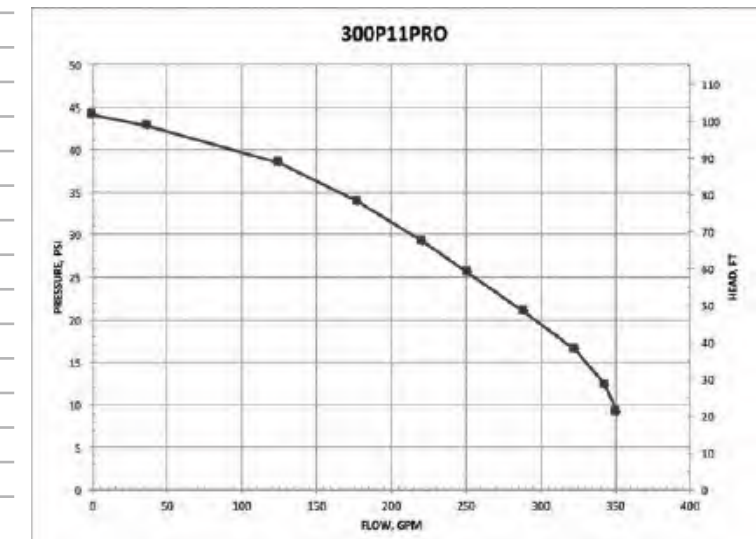
WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



3" POLY BEARING PEDESTAL					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
300PB	3" POLY BEARING PEDESTAL W/ 3/4" SHAFT & 4 VANE IMPELLER	N/A	1	18	



3" POLY PUMP ONLY					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
300PO	3" POLY PUMP ONLY W/ 3/4" SHAFT & 4 VANE IMPELLER	N/A	1	27	



## 3" POLY MANIFOLD PUMPS

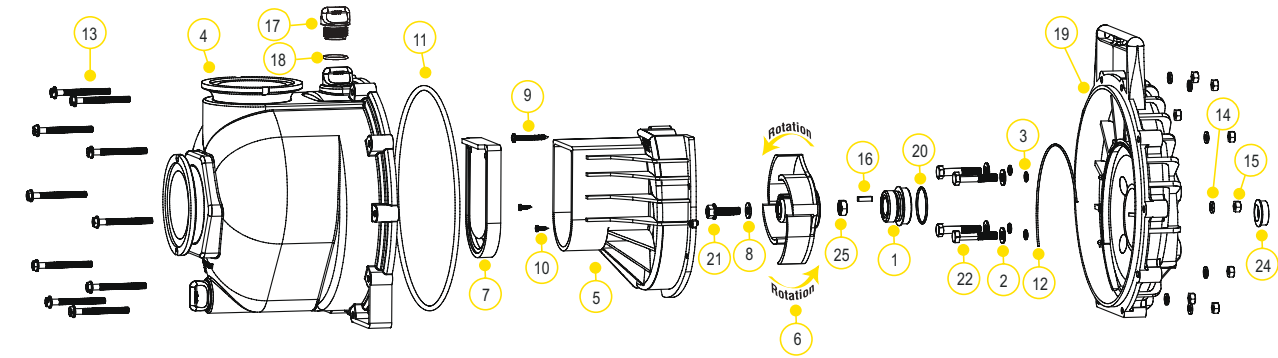
## 3" POLY MANIFOLD PUMPS

### FEATURES

- Large weep holes between pump and engine
- V-shaped for quicker priming
- Pump only comes unassembled
- See pages 43-49 on manifold fittings for easy plumbing.



3" POLY MANIFOLD PUMPS W/GAS ENGINES				
PART NO	DESCRIPTION	HP	QTY	SKID QTY
M300PH6	3" POLY MANIFOLD PUMP W/6.5 HP HONDA® ENGINE	6.5	1	12
M300P11PRO	3" POLY MANIFOLD PUMP W/11 HP BRIGGS & STRATTON® PRO SERIES W/ELECTRIC START & PULL ROPE	11	1	12



### REPLACEMENT PARTS 3" POLY MANIFOLD PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	12713	SEAL ASSEMBLY	1
2	12901	SS REAR BRACKET WASHER	4
3	12717	O-RING FOR SCREW HEAD	4
4	M13712	MANIFOLD BODY ASSEMBLY	1
5	13702	POLY PUMP VOLUTE	1
6	13771	4 VANE TRIMMED IMPELLER (M300PH-6, M300PB & M300PO)	1
6	13772	4 VANE IMPELLER (M300P11PRO)	1
7	12705	CHECK VALVE	1
8	A204	O-RING	1
9	12900	SS UPPER VOLUTE SCREW	4
10	12725	SS VOLUTE SCREWS	2
11	12719A	BODY O-RING	1
12	12754	O-RING SEGMENT	1
13	12720	SS BODY SCREWS	10
14	V07018	SS LOCK WASHERS	10
15	V07019	SS BODY NUTS	10
16	12902A	IMPELLER KEY	1
17	13777	3/4" PLUG	2
18	13778	O-RING	2
19	12703A	POLY PUMP REAR BRACKET	1
20	12710	O-RING FOR SEAL ASSEMBLY	1
21	12765A	SS IMPELLER BOLT 5/16 X 24 X 1.12 (-6)	1
21	13765	SS IMPELLER BOLT 3/8 X 24 X 1.75 (M300P11PRO)	1
22	12715A	SS BRACKET SCREWS	4
23	15751	REAR BRACKET SHIM	1
24	12716	POLY PUMP SLINGER	1
25	12775A	IMPELLER HEX NUT	1
N/S	12882A	BEARING PEDESTAL	1
N/S	12099	7/16"-14 X 1.25" HHCS	1
N/S	12000A	POLY PUMP EPDM REPAIR KIT (ITEMS 1, 3, 6-8, 11, 12, 16, 18, 20, 24 & 12099)	1
N/S	13999	PUMP SEAL/O-RING KIT (ITEMS 1, 3, 8, 11, 12, 18, 20, 24 & 12099)	1

### KITS 3" POLY PUMPS

PART NO	EPDM REPAIR KIT NO	EPDM SEAL KIT NO
M300PH6	12000A	13999
M300P11PRO	12000A	13999
M300PB	12000A	13999
M300PO	12000A	13999



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



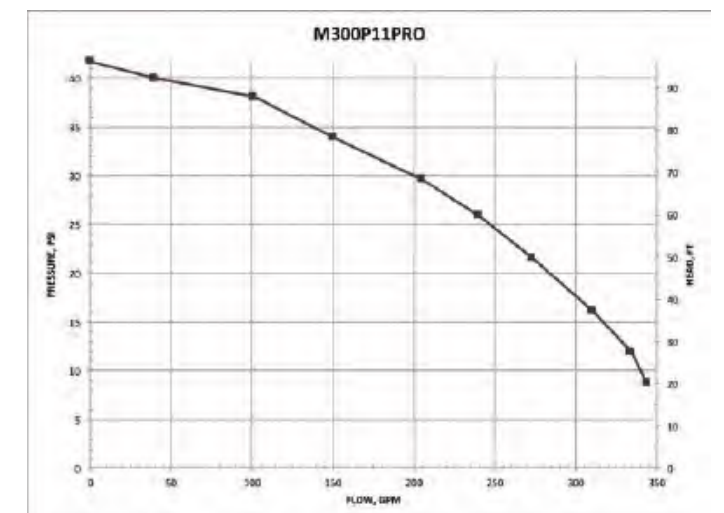
### 3" POLY MANIFOLD BEARING PEDESTAL

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M300PB	3" POLY MANIFOLD BEARING PEDESTAL W/ 3/4" SHAFT & 4 VANE IMPELLER	N/A	1	18



### 3" POLY MANIFOLD PUMP ONLY

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M300PO	3" POLY MANIFOLD PUMP ONLY W/ 3/4" SHAFT & 4 VANE IMPELLER	N/A	1	27



# CENTRIFUGAL PUMPS

## 3" POLY PUMPS WITH HYDRAULIC MOTORS

### FEATURES

- Precision molded construction
- Lightweight
- Corrosion resistant
- Low maintenance
- Hydraulic fluid capacity is minimum 6 gallons and maximum 10 gallons
- Open or closed system
- 3600 R.P.M.
- Recommendation to use the motor spool control valve or a suitable equivalent. The lack of such a valve in this circuit may cause failure to the hydraulic motor and will void warranty.



### 3" POLY PUMPS W/HYDRAULIC MOTORS

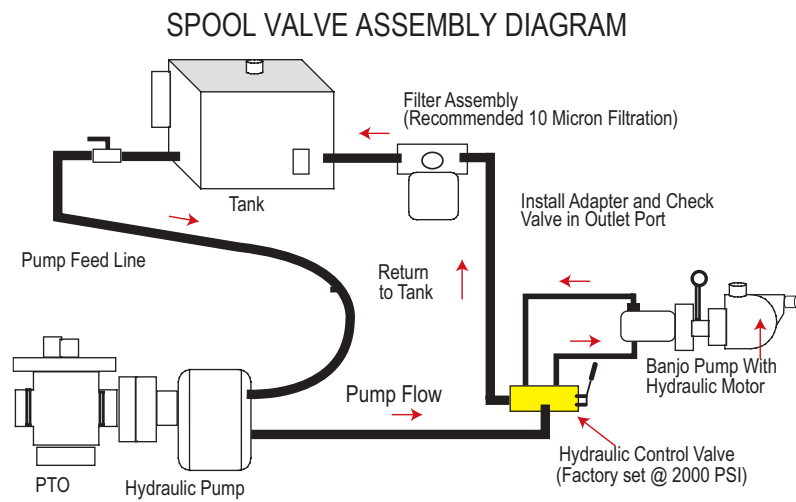
PART NO	DESCRIPTION	HP	QTY	SKID QTY
300PHY	3" POLY PUMP W/12 HP H HYDRAULIC MOTOR	12	1	18
300PHYW	3" POLY WET SEAL PUMP W/12 HP HYDRAULIC MOTOR	12	1	12
300PHA	3" POLY PUMP W/OUT HYDRAULICS	N/A	1	27



**WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP**



**WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS**

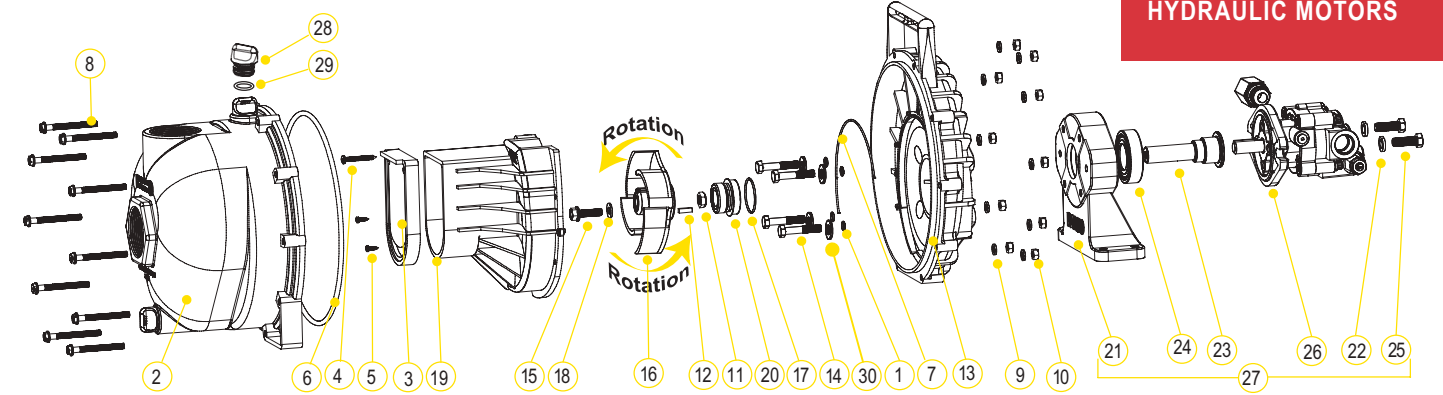


### HYDRAULIC MOTOR SPOOL VALVE

PART NO	DESCRIPTION	HP	QTY
HSV1000	HYDRAULIC MOTOR SPOOL VALVE	N/A	1

# CENTRIFUGAL PUMPS

## 3" POLY PUMPS WITH HYDRAULIC MOTORS



### REPLACEMENT PARTS 3" POLY PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	12717	O-RING FOR SCREW HEADS	4
2	13712	BODY ASSEMBLY	1
3	12705	CHECK VALVE	1
4	12900	SS UPPER VOLUTE SCREW	4
5	12725	SS VOLUTE SCREWS	2
6	12719A	BODY O-RING	1
7	12754	O-RING SEGMENT	1
8	12720	SS BODY SCREWS	10
9	V07018	SS LOCK WASHERS	10
10	V07019	SS BODY NUTS	10
11	12775A	IMPELLER HEX NUT	1
12	12902A	IMPELLER KEY	1
13	12703A	POLY PUMP REAR BRACKET	1
14	12715A	5/16"-24 X 1.75" HHCS	4
15	12765A	SS IMPELLER BOLT	1
16	13772	TRIMMED 4 VANE IMPELLER	1
17	12710	O-RING FOR SEAL ASSEMBLY	1
18	A204	O-RING	1
19	13702	POLY PUMP VOLUTE	1
20	12713	MECHANICAL SEAL ASSEMBLY	1
21	12049F	HYDRAULIC PEDESTAL HOUSING (MUST ORDER 17056E & 12055E)	1
22	V20018	3/8" LOCK WASHER	2
23	12055E	ADAPTER SHAFT	1
24	17056E	BEARING	1
25	18010SS	3/8" - 16 X 1 1/8" SS CAP SCREW HXHD	2
26	HY1013	HYDRAULIC MOTOR	1
27	12600B	COMPLETE HYDRAULIC ASSEMBLY	1
28	13777	3/4" PLUG	2
29	13778	O-RING	2
30	12901	SS REAR BRACKET WASHER (300PHY)	4
N/S	HY1003	HYDRAULIC MOTOR SEAL KIT	1
KIT	12000A	POLY PUMP EPDM REPAIR KIT (ITEMS 1, 3, 6, 7, 16, 18, 20, 29, 12099)	1
KIT	13999	PUMP SEAL/O-RING KIT (ITEMS 2,4,7-8,16,18,19, 21, 30, 12099)	1

### KITS 3" POLY PUMPS

PART NO	EPDM REPAIR KIT NO	EPDM SEAL KIT NO	HYDRAULIC MOTOR SEAL KIT
300PHY	12000A	13999	HY1003

### HYDRAULIC MOTOR DATA

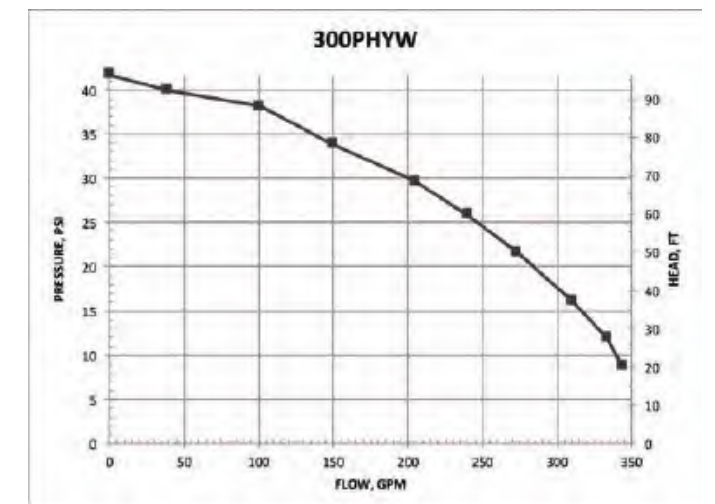
U.S. GALLONS/REV.	0.0025
CUBIC INCHES/REV.	0.580
LITERS/REV.	0.0097
MAX HYDRAULIC PRESSURE	2000 PSI
MIN HYDRAULIC PRESSURE	200 PSI
INLET PORT	SAE 10 (7/8-14 UNF-2B)
OUTLET PORT	SAE 10 (7/8-14 UNF-2B)
MINIMUM GPM REQUIRED	6 GPM 2400 RPM
MAXIMUM GPM REQUIRED	10 GPM 4000 RPM
IDEAL GPM REQUIRED	9 GPM 3600 RPM

### CONNECTION INFORMATION

INLET	"A" PORT
OUTLET	"B" PORT
SUPPLIED CHECK VALVE IS TO ENSURE PROPER ROTATION OF THE BANJO PUMP. PLACE CHECK VALVE IN OUTLET PORT (MARKED "B") FOR PROPER RIGHT HAND ROTATION.	

### SPOOL VALVE INFORMATION

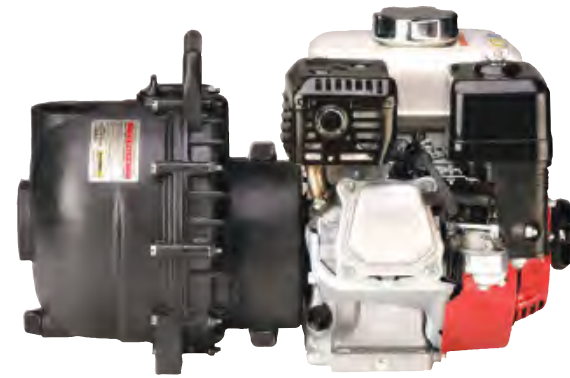
REQUIRED OUTLET FLOW	MIN 6 GPM / MAX 10 GPM
REQUIRED SYSTEM PRESSURE	MIN 600 PSI / MAX 3000 PSI



## 3" POLY WET SEAL PUMPS

### FEATURES

- Run dry capability
- Double seal contained in ethylene glycol reservoir. Carbon ceramic seal faces with stainless steel cup and spring with EPDM rubber.
- V-shaped for quicker priming
- Engine warranty service available at authorized Briggs & Stratton® and Honda® dealers
- Due to weight and size of pumps, Banjo ships these by truck only.



### 3" POLY WET SEAL PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
300PH6W	3" POLY WET SEAL PUMP W/6 HP HONDA® ENGINE	6	1	12
300P11PROV	3" POLY WET SEAL PUMP W/11 HP BRIGGS & STRATTON® ENGINE PRO SERIES W/ELECTRIC START & PULL ROPE	11	1	8
300PH13W	3" POLY WET SEAL PUMP W/13 HP HONDA® ENGINE W/ELECTRIC START & PULL ROPE	13	1	8



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



### 3" POLY WET SEAL BEARING PEDESTAL

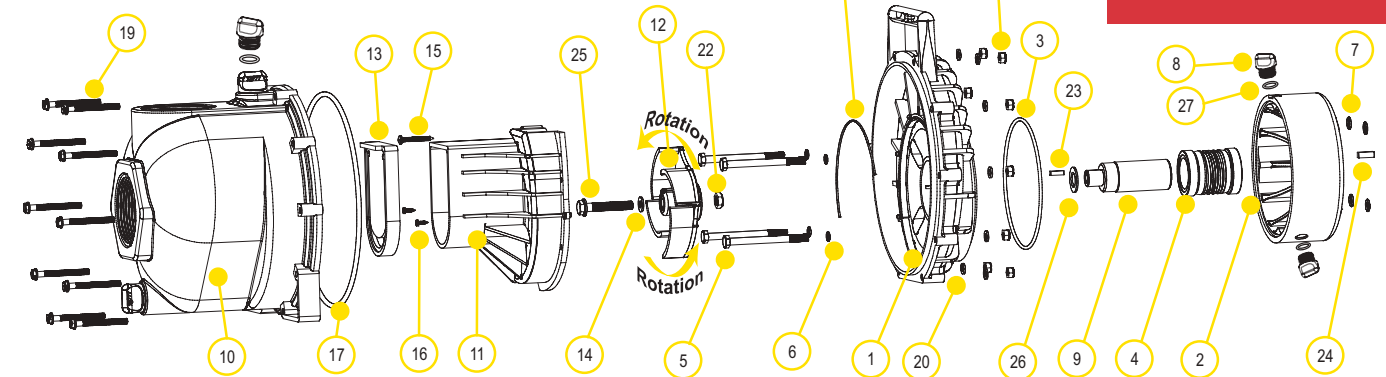
PART NO	DESCRIPTION	HP	QTY	SKID QTY
300PBW	3" POLY WET SEAL BEARING PEDESTAL W/ 3/4" SHAFT & 4 VANE IMPELLER	N/A	1	27



### 3" POLY WET SEAL PUMP ONLY

PART NO	DESCRIPTION	HP	QTY	SKID QTY
300POW	3" POLY WET SEAL PUMP ONLY FOR 1" SHAFT	N/A	1	27
300POW6	3" POLY WET SEAL PUMP ONLY FOR 3/4" SHAFT	N/A	1	27

## 3" POLY WET SEAL PUMPS

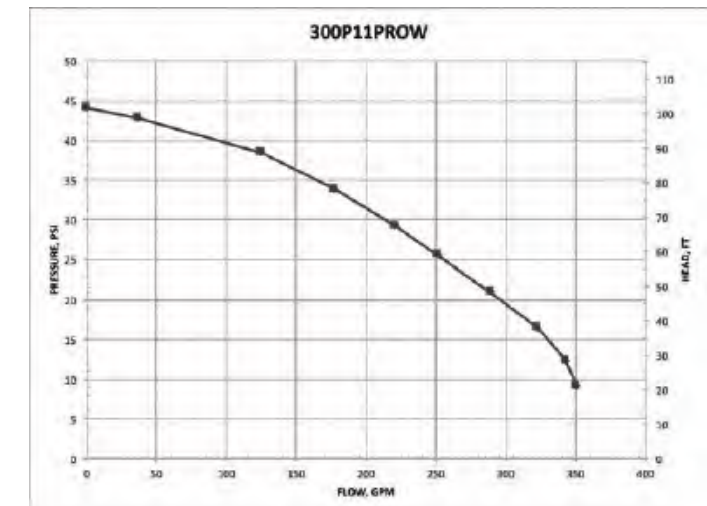


### REPLACEMENT PARTS 3" POLY PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	12703AW	WET SEAL REAR BRACKET	1
2	12201W	WET SEAL RESERVOIR	1
2	12202W	WET SEAL RESERVOIR (300POW6)	1
3	13719	O-RING	1
3	13719V	FKM O-RING (301POWV)	1
4	15035E	EPDM MECHANICAL SEAL ASSEMBLY	1
4	15035	MECHANICAL SEAL ASSEMBLY (301POWV)	1
5	13034	5/16" -24 X 3 3/4" HHCS	4
6	12717	O-RING FOR BRACKET SCREW	4
6	12717V	FKM O-RING FOR BRACKET SCREW (301POWV)	4
7	12709	O-RING	4
7	12709V	FKM O-RING (301POWV)	4
8	12777	1/2" PLUG	4
9	13055	ADAPTER SHAFT (300PH6W & 300PH13W)	1
9	N/A	ADAPTER SHAFT (300P11PROV & 301POWV)	1
9	12155	ADAPTER SHAFT (300PH6W)	1
10	13712	BODY ASSEMBLY	1
10	13712	FKM BODY ASSEMBLY (301POWV)	1
11	13702	VOLUTE	1
12	13772	4 VANE IMPELLER	1
12	13771	TRIMMED IMPELLER (300POW6)	1
13	12705	CHECK VALVE	1
13	12705V	FKM CHECK VALVE (301POWV)	1
14	A204	IMPELLER BOLT GASKET	1
14	A204V	FKM IMPELLER BOLT GASKET (301POWV)	1
15	12900	#10 X 1 1/2" PPH SMS	1
16	12725	#6 X 1/2" PPH SMS	2
17	13719	BODY O-RING	1
17	13719V	FKM BODY O-RING (301POWV)	1
18	12754	O-RING SEGMENT	1
18	12754V	FKM O-RING SEGMENT (301POWV)	1
19	12720	1/4" - 20 X 2 1/2" SL IND HWHS	10
20	V07018	1/4" LOCK WASHER	10
21	V07019	1/4" - 20 HEX NUT	10
22	12775A	7/16" - 14 HEX NUT	1
23	12902A	3/16" SQ. X 5/8" KEY	2
24	16901	1/4" SQUARE KEY	1
25	13766	3/8-24 X 2 1/4" HFS	1

### REPLACEMENT PARTS 3" POLY PUMPS

ITEM	PART NO	DESCRIPTION	QTY
26	CV10175	GASKET	1
26	CV10175V	FKM GASKET (301POWV)	1
27	UV15163	O-RING FOR DRAIN PLUG	4
27	UV15163V	FKM O-RING FOR DRAIN PLUG (301POWV)	4



## 3" POLY MANIFOLD WET SEAL PUMPS

### FEATURES

- Run dry capability
- Double seal contained in ethylene glycol reservoir. Carbon ceramic seal faces with stainless steel cup and spring with EPDM rubber
- Pump end separated from engine
- V-shaped for quicker priming
- Engine warranty service available at authorized dealers
- See pages 43-49 on manifold fittings for easy plumbing.



### 3" POLY MANIFOLD WET SEAL PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M300PH6W	3" POLY MANIFOLD WET SEAL PUMP W/6 HP HONDA® ENGINE	6	1	12



### 3" POLY MANIFOLD WET SEAL PUMP ONLY

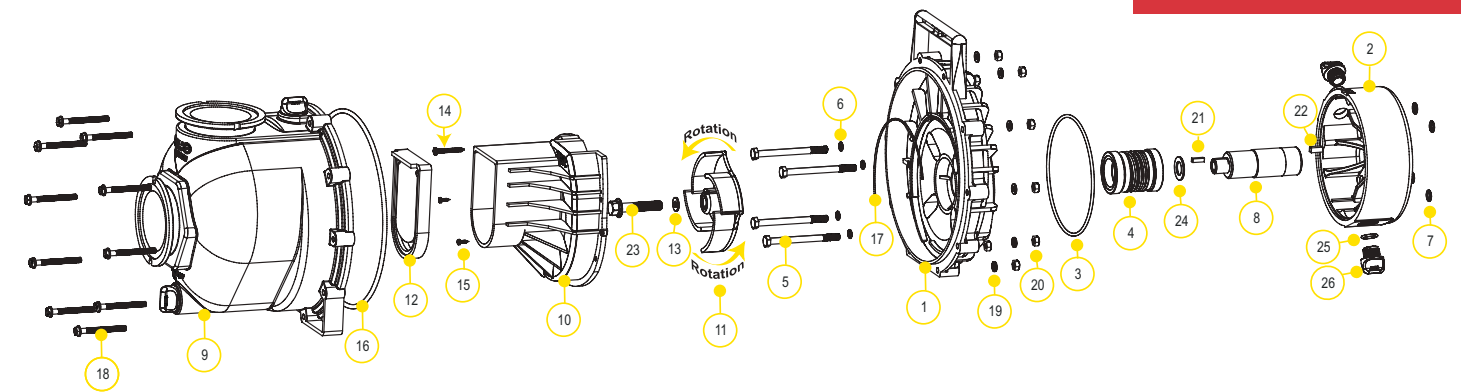
PART NO	DESCRIPTION	HP	QTY	SKID QTY
M300POW6	3" POLY MANIFOLD WET SEAL PUMP ONLY FOR 3/4" SHAFT	N/A	1	27



### 3" POLY MANIFOLD WET SEAL PUMP W/HYDRAULIC

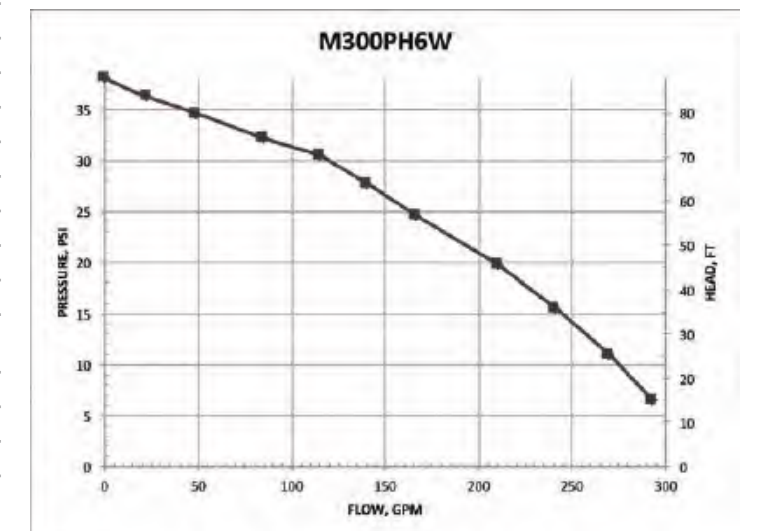
PART NO	DESCRIPTION	HP	QTY	SKID QTY
M305PHYW	3" POLY MANIFOLD WET SEAL PUMP W/HYDRAULIC MOTOR	N/A	1	12

## 3" POLY MANIFOLD WET SEAL PUMPS



### REPLACEMENT PARTS 3" POLY PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	12707W	WET SEAL REAR BRACKET FOR 6 HP HONDA® ENGINE & BEARING PEDESTAL	1
2	12202W	WET SEAL RESERVOIR FOR 6 HP HONDA® ENGINE & BEARING PEDESTAL	1
3	13719	O-RING	1
4	15035E	MECHANICAL SEAL ASSEMBLY EPDM	1
5	13034	5/16" - 24 X 3 3/4" HHCS	4
6	12717	O-RING FOR BRACKET SCREW	4
7	12709	O-RING	4
8	12155	ADAPTER SHAFT FOR 6 HP HONDA® ENGINE & BEARING PEDESTAL	1
9	M13712	MANIFOLD BODY ASSEMBLY	1
10	13702	VOLUTE	1
11	13771	4 VANE IMPELLER	1
11	13772A	5 VANE IMPELLER (M305PHYW)	1
12	12705	CHECK VALVE	1
13	A204	O-RING	1
14	12900	#10 X 1 1/2" PPH SMS 18-8 SS	1
15	12725	#6 X 1 1/2" PPH SMS 18-8 SS	1
16	12719A	BODY O-RING	1
17	12754	O-RING SEGMENT	1
18	12720	1/4" - 20 X 2 1/2" SL IND HWHS	10
19	V07018	1/4" LOCK WASHER	10
20	V07019	1/4" - 20 HEX NUT	10
21	12902A	3/16" SQ. X 3/8" KEY	1
22	16901	1/4" SQ. 3/4" KEY STOCK	1
23	12766	5/16"-24 X 3 1/4" HFS FOR 6 HP HONDA® ENGINE & BEARING PEDESTAL	1
24	CV10175	GASKET	1
25	UV15163	O-RING	2
26	12777	1/2" PLUG	2



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS

# M350

**500+ GALLONS PER MINUTE  
NO LEAKS. NO WEAR. NO WORRIES  
PATENTED WET SEAL DESIGN  
ATTACHES EASILY**



## CENTRIFUGAL PUMPS

### 3" POLY M350 MANIFOLD WET SEAL PUMPS

#### FEATURES

- 500+ Gallons per Minute
- Polymer components molded from polypropylene
- EPDM seals
- All stainless steel hardware
- Tandem wet seal design
- Produces less wear
- Prevents seal breakage from high pressure clean out
- Eliminates eight leak points
- Works with natural system pressure to keep seal intact
- No exposed moving parts
- Typical operating speed: 3600 RPM
- Run dry capability of greater than one hour.
- Capable of handling occasional solid particles in suspension up to 1/2" in diameter.
- Maximum self-priming height 25 ft (7.6 m) for hydraulic version
- (0.422" priming hole); 28 ft (8.5 m) for standard version (0.250" priming hole)
- Engine warranty service available at authorized dealers
- See pages 43-49 on manifold fittings for easy plumbing.



**WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS**

#### 3" POLY MANIFOLD WET SEAL PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M350PVAN14W	3" POLY MANIFOLD WET SEAL PUMP W/14 HP VANGUARD® ENGINE	14	1	6



#### 3" POLY MANIFOLD WET SEAL PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M350PH13W	3" POLY MANIFOLD WET SEAL PUMP W/13 HP HONDA® ENGINE	13	1	6



#### 3" POLY MANIFOLD WET SEAL PUMP W/ELECTRIC MOTOR

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M350PE15W	3" POLY MANIFOLD WET SEAL PUMP W/15 HP 3 PHASE ELECTRIC MOTOR	N/A	1	1



#### 3" POLY MANIFOLD WET SEAL PUMP ONLYS

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M350POW	3" POLY MANIFOLD WET SEAL PUMP ONLY FOR 1" SHAFT GAS ENGINES	N/A	1	27
M350PEOW	3" POLY MANIFOLD WET SEAL PUMP ONLY FOR ELECTRIC MOTOR	N/A	1	27



#### 3" POLY MANIFOLD WET SEAL PUMP W/HYDRAULIC

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M350PHYW	3" POLY MANIFOLD WET SEAL PUMP W/HYDRAULIC MOTOR	N/A	1	12



# CENTRIFUGAL PUMPS

## 3" POLY M350 MANIFOLD WET SEAL PUMPS



### 3" POLY MANIFOLD WET SEAL PUMP W/HYDRAULIC

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M350PHAW	3" POLY MANIFOLD WET SEAL PUMP W/HYDRAULIC PEDESTAL (NO MOTOR)	N/A	1	12



### 3" POLY WET SEAL BEARING PEDESTAL

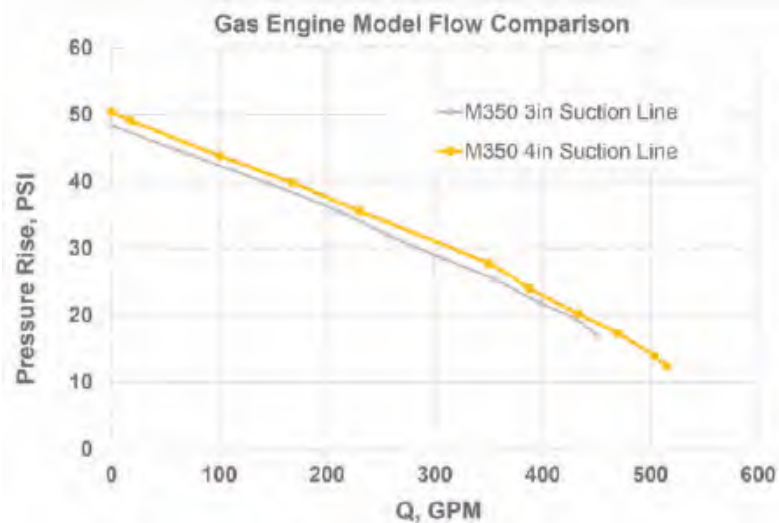
PART NO	DESCRIPTION	HP	QTY	SKID QTY
M350PBW	3" POLY WET SEAL BEARING PEDESTAL W/ 1" SHAFT & 4 VANE IMPELLER	N/A	1	12



### 4" PLUMBING FITTINGS

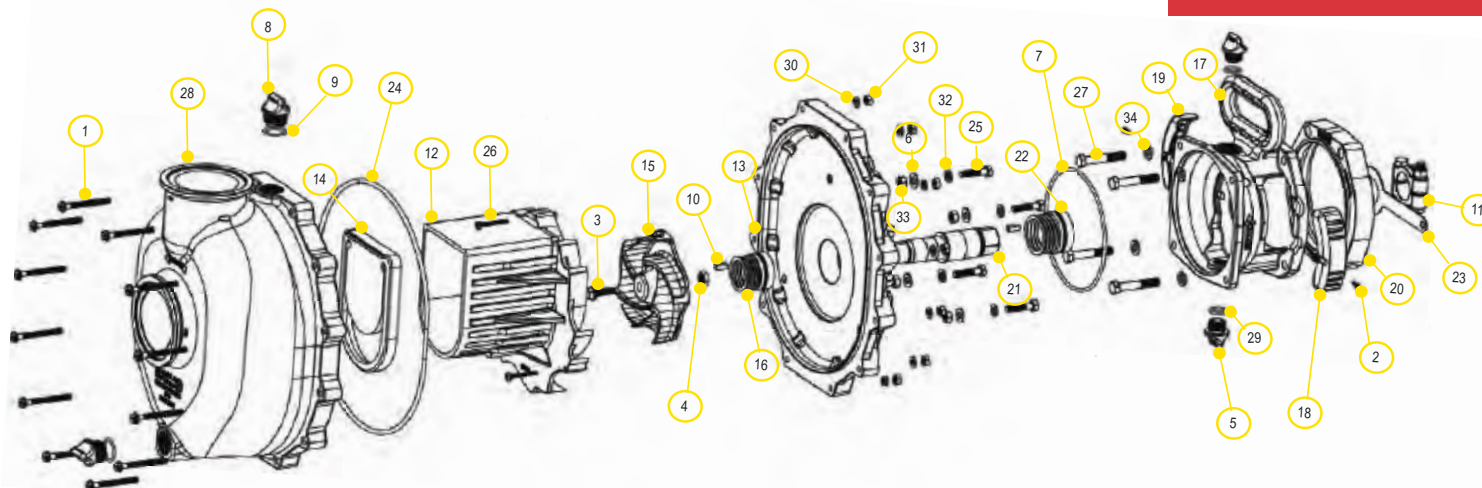
PART NO	DESCRIPTION	LOT QTY
M300400A	3" Manifold x 4" Male Coupler	1
M300400BRB	3" Manifold x 4" Hose Barb	1

OPTIMIZE FLOW WITH 4" SUCTION



# CENTRIFUGAL PUMPS

## 3" POLY M350 MANIFOLD WET SEAL PUMPS



### REPLACEMENT PARTS M350 PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	12720	1/4-20 X 2 1/2" SL IND HEX WASHER HEAD SCREW	12
2	12725	#6 X 1/2" PPH SMS	2
3	12765A	5/16-24 X 1 1/8" HFS	1
4	12775A	7/16-14 HEX NUT	1
5	12777	1/2" DRAIN PLUG	2
6	12901	5/16" FLAT WASHER	8 (4 SHOWN)
7	13719	AS568A -256 O-RING, EPDM, BLACK	1
8	13777	3/4" DRAIN PLUG, MOLDED	2
9	13778	AS568A -119 O-RING, EPDM, BLACK	2
10	16901SS	1/4" SQ. X 5/8" KEY 18-8 SS	2
11	18029	SS CLAMP	1
12	35002	M350 DIFFUSER	1
13	35004	M350 REAR BRACKET	1
14	35005	3" WET SEAL POLY PUMP CHECK VALVE	1
15	35073	M350 5-VANE IMPELLER	1
16	35113E	1.125" MECHANICAL SEAL, EPDM, BULK	1
17	35201	M350 WET SEAL RESERVOIR	1
18	35246GL	LEFT SHAFT GUARD FOR M350P	1
19	35246GR	RIGHT SHAFT GUARD FOR M350P	1
20	35248	M350 ENGINE SPACER	1
21	35255A	3" WET SEAL POLY PUMP SHAFT ADAPTER FOR BEM15-100	1
22	35313E	1.375" MECHANICAL SEAL, EPDM, BULK	1
23	35901	350 PUMP SEAL SPACING TOOL	1
24	A380E	AS568 #380 EPDM O-RING	1
25	B0516138	5/16-18 X 1 3/8" HHCS	4
26	B1014150TS	#10 X 1 1/2" THREAD FORMING SCREW, 18-8 SS	3
27	BF207	3/8-16 X 2 1/4" HHCS	4
28	M35012	M350 MANIFOLD BODY	1
29	UV15163	AS568A -114 O-RING, EPDM, BLACK	2
30	V07018	1/4" LOCKWASHER	12
31	V07019	1/4"-20 S.S. HEX NUT	12
32	V10118	5/16" SS LOCKWASHER	8 (4 SHOWN)
33	V10119	5/16"-18 SS NUT	8 (4 SHOWN)

### REPLACEMENT PARTS M350 PUMPS

ITEM	PART NO	DESCRIPTION	QTY
34	V20018	3/8" Lockwasher, SS	4
35	17034	5/16-18 X 1-1/2" HHCS	1
36	35033	Z-RAIL FOR M350PH13W	1
NS	355800	BEARING PEDESTAL ASSEMBLY	1
NS	35000	REPAIR KIT REPAIR KIT(CONSIST OF ITEMS 7, 9, 10, 12, 14, 15, 16, 22, 23, 24, 26, 29)	1

## 1½" - 2" CAST IRON PUMPS

## 1½" - 2" CAST IRON PUMPS

### FEATURES

- Cast iron construction for rugged dependable service
- Stainless steel shaft sleeve to protect engine shaft
- Carbon ceramic seal with stainless steel cup and spring with FKM rubber
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Pump only packs complete and ready for attachment to gasoline engine
- Pedestal pump for long coupling to electric motor
- Recommendation for 5/8" shaft: 56C frame size, 3 HP, 3450 RPM & 5" max impeller for close coupling to electric motors
- Recommendation for 7/8" shaft: 145TC frame size, 3 HP, 3450 RPM & 5" max impeller for close coupling to electric motors
- Engine warranty service available at authorized dealers



### 2" CAST IRON PUMP W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
200PI-3	2" CAST IRON PUMP W/3.5 HP BRIGGS & STRATTON® ENGINE	3.5	1	8
200PI6PRO	2" CAST IRON PUMP W/6.5 HP BRIGGS & STRATTON® ENGINE PRO SERIES	6.5	1	8
200PIH-5	2" CAST IRON PUMP W/5.5 HP HONDA® ENGINE	5.5	1	8
200PIH5E	2" CAST IRON PUMP W/5.5 HP HONDA® ENGINE W/ ELECTRIC START	5.5	1	8

### 2" CAST IRON PUMP ONLY

PART NO	DESCRIPTION	HP	QTY	SKID QTY
200POI	2" CAST IRON PUMP ONLY W/ ¾" SHAFT SLEEVE	N/A	1	27

### 1½" CAST IRON C-FLANGE PUMPS

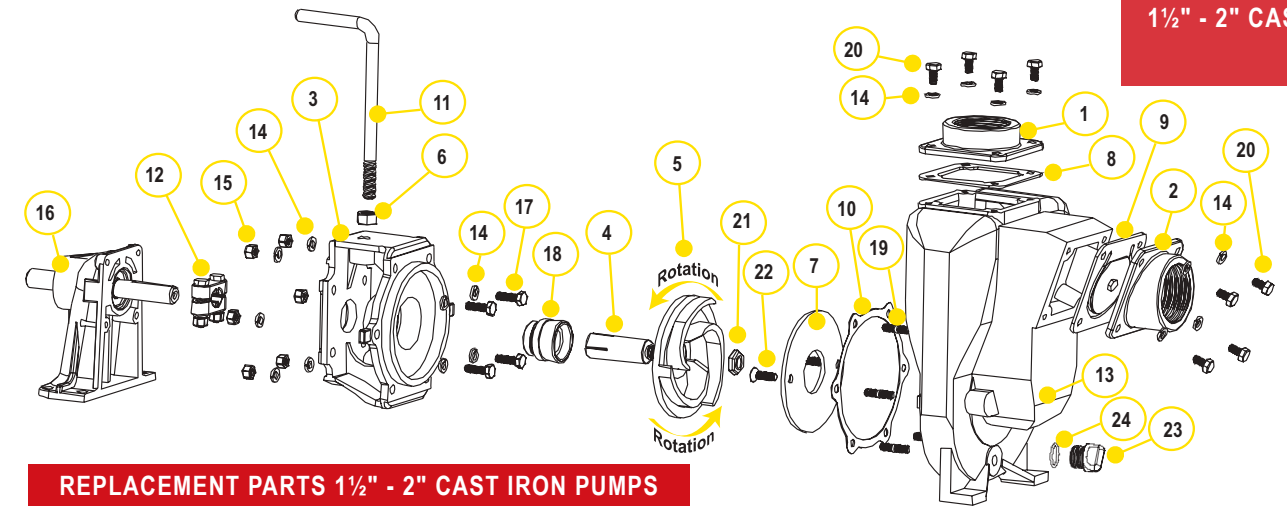
PART NO	DESCRIPTION	HP	QTY	SKID QTY
150POICF5/8-4.1	1½" CAST IRON C-FLANGE PUMP W/ 5/8" SHAFT SLEEVE & 4.1 IMPELLER	N/A	1	18

### 2" CAST IRON C-FLANGE PUMPS

PART NO	DESCRIPTION	HP	QTY	SKID QTY
200POICF5/8	2" CAST IRON C-FLANGE PUMP W/ 5/8" SHAFT SLEEVE	N/A	1	18
200POICF7/8	2" CAST IRON C-FLANGE PUMP W/ 7/8" SHAFT SLEEVE	N/A	1	18

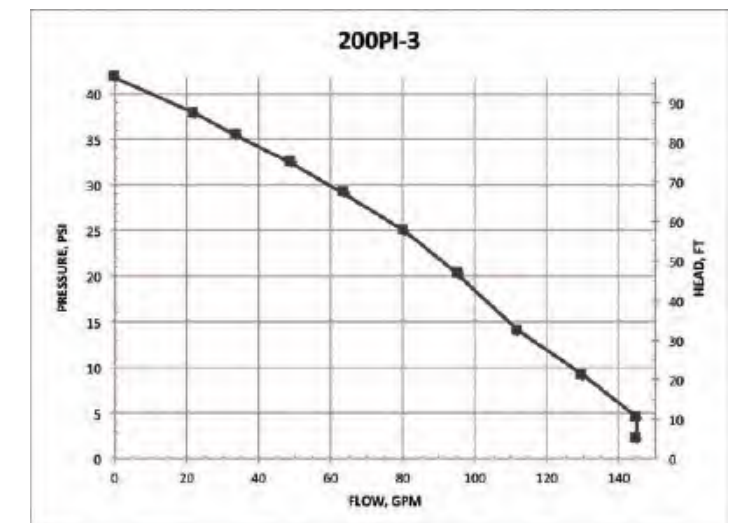
### 2" CAST IRON BEARING PEDESTAL

PART NO	DESCRIPTION	HP	QTY	SKID QTY
200PBI	2" CAST IRON BEARING PEDESTAL W/ ¾" STRAIGHT SHAFT	N/A	1	18



### REPLACEMENT PARTS 1½" - 2" CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	17001	1½" NPT OUTLET FLANGE	1
1	17000	2" NPT OUTLET FLANGE	1
2	17003	1½" NPT INLET FLANGE	1
2	17002	2" NPT INLET FLANGE	1
3	17004	ADAPTER FOR GAS ENGINE	1
3	17046	C-FACE ADAPTER	1
4	17005	5/8" SLEEVE DRIVE FOR ELECTRIC MOTOR	1
4*	17006	¾" SLEEVE DRIVE	1
4	17007	7/8" SLEEVE DRIVE FOR ELECTRIC MOTOR	1
5*	17008	5" IMPELLER	1
5	17008-4.1	4.1" TRIMMED IMPELLER	1
6	17010	½" HEX NUT	1
7*	17011	WEAR PLATE	1
8	17013	EPDM GASKET	1
9	17016	CHECK VALVE ASSEMBLY	1
10*	17018	GASKET ADAPTER	1
11	15022	HANDLE	1
12	17023	5/8" CLAMP FOR ¾" SHAFT ASSEMBLY (OLD STYLE)	1
12	17123	5/8" CLAMP FOR ¾" SHAFT ASSEMBLY (KEYED)	1
12	17024	7/8" CLAMP FOR SHAFT ASSEMBLY	1
13	17026	PUMP HOUSING	1
14	V10118	5/16" LOCK WASHER	18
15	V10119	5/16" - 18 SS HEX NUT	6
N/S	12883B	BEARINGS	1
16	12882A	COMPLETE PEDESTAL ASSEMBLY	2
17	17040	5/16" -24 X 1.00" CAP SCREW	1
18	17028	EPDM SEAL ASSEMBLY	4
18*	17035	FKM SEAL ASSEMBLY	1
18	17035SD	SEVERE DUTY SEAL	1
19	17042	STUD	6
20	17019	5/16"-18 X ¾" CAP SCREW	8
21	17009B	5/8" IMPELLER NUT	1
22	17130	5/16-18 X 1.00" FHSCS, 18-8 SS	2
23	12777	½" PLUG	1
24	UV15163	O-RING	1
N/S	17033	Z RAILS (PAIR)	1
N/S	17100	REPAIR KIT (CONSISTS OF ITEMS 4*, 5*, 7,10,18*)	1



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



## 2" CAST IRON WET SEAL PUMPS

### FEATURES

- Cast iron construction for rugged dependable service
- Stainless steel hardware
- FKM double seal contained in glycol reservoir
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Pump only packs complete and ready for attachment to gasoline engine
- Pedestal pump for long coupling to electric motor
- Due to weight and size of pumps, Banjo ships these by truck only.



### 2" CAST IRON WET SEAL PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
201PIH5W	2" CAST IRON WET SEAL PUMP W/5.5 HP HONDA® ENGINE	5.5	1	8



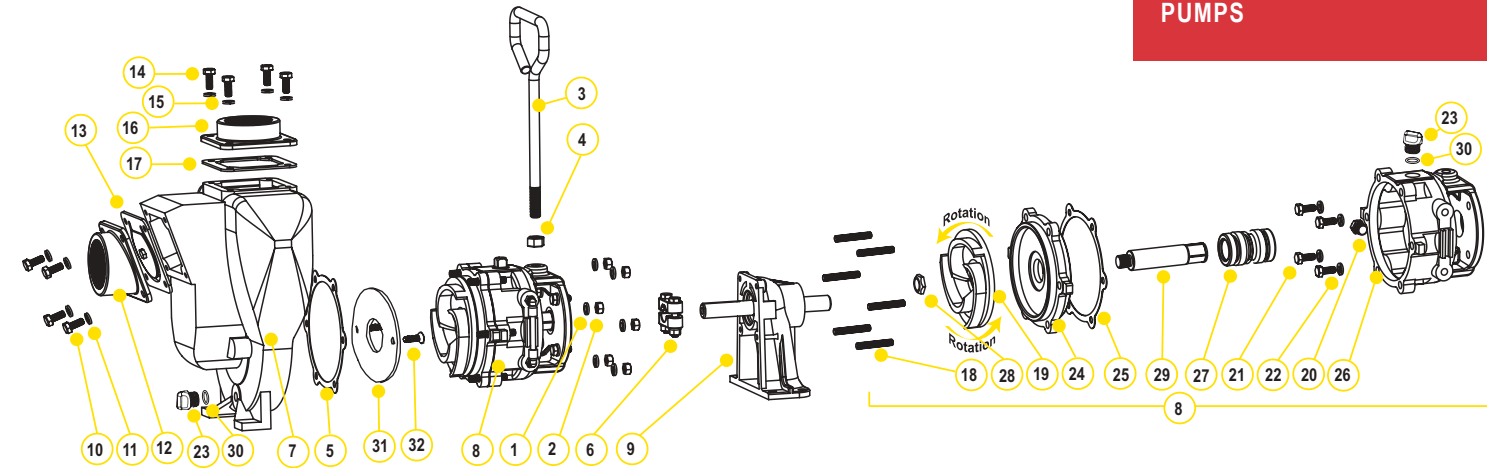
### 2" CAST IRON WET SEAL PUMP ONLY

PART NO	DESCRIPTION	HP	QTY	SKID QTY
201POIW	2" CAST IRON WET SEAL PUMP ONLY	N/A	1	18



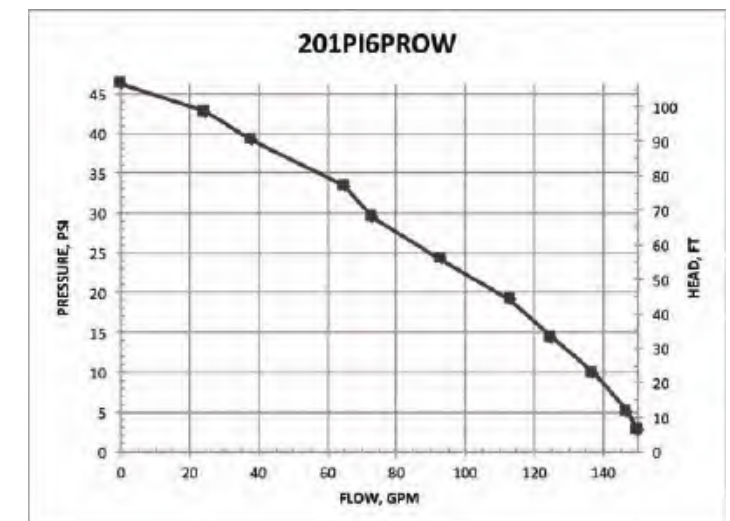
### 2" CAST IRON WET SEAL PUMP BEARING PEDESTAL

PART NO	DESCRIPTION	HP	QTY	SKID QTY
201PBIW	2" CAST IRON WET SEAL PUMP WITH BEARING PEDESTAL	N/A	1	18



### REPLACEMENT PARTS 2" CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	V10118	5/16" LOCK WASHER	6
2	V10119	5/16" -18 HEX NUT	6
3	15022	HANDLE	1
4	17010	1/2" HEX NUT	1
5	17018	GASKET ADAPTER	1
6	17123	5/8" CLAMP, 3/4" SHAFT ASSEMBLY KEYED	1
7	17226	PUMP HOUSING	1
8	N/A	WET SEAL ASSEMBLY	1
9	12882A	BEARING PEDESTAL	1
10	17019	5/16"-18 X 3/4" HHCS	4
11	V10118	5/16" LOCK WASHER	4
12	17002	2" NPT INLET FLANGE	1
13	17016	EPDM CHECK VALVE GASKET ASSEMBLY	1
14	17019	5/16" -18 X 3/4" HHCS	4
15	V10118	5/16" LOCK WASHER	4
16	17000	2" NPT OUTLET FLANGE	1
17	17013	EPDM OUTLET GASKET	1
18	17242	HOUSING STUD	6
19	17208	IMPELLER	1
20	17032	PIPE PLUG	1
21	17019	5/16"-18 X 3/4" CAP SCREW	4
22	V10118	5/16" LOCK WASHER	4
23	12777	1/2" PLUG	2
24	17202	COVER PLATE	1
25	17018	GASKET ADAPTER	1
26	17201A	RESERVOIR	1
27	17235	FKM MECHANICAL SEAL ASSEMBLY	1
28	17009B	5/8" IMPELLER NUT	1
29	17206A	ADAPTER SHAFT	1
30	UV15163	O-RING	2
31	17011	Wear Plate	1
32	17130	5/16-18 X 1.00" FHSCS, 18-8 SS	1



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS

## 2" CAST IRON PUMPS WITH ELECTRIC MOTORS

### FEATURES

- Cast iron construction for rugged dependable service
- Stainless steel shaft sleeve to protect engine shaft
- Carbon ceramic seal with stainless steel cup and spring with FKM rubber
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Pump only packs complete and ready for attachment to gasoline engine
- Due to weight and size of pumps, Banjo ships these by truck only.
- Motor warranty service available at authorized dealers
- Motor features include pressure cast aluminum end plates with ribbed design for rigidity, heavy gauge steel frame, 230 volt, with inverter spike resistance magnet wire



### 2" CAST IRON PUMPS W/ELECTRIC MOTORS

PART NO	DESCRIPTION	HP	QTY	SKID QTY
234PIE5	2" CAST IRON PUMP W/5 HP THREE PHASE ELECTRIC MOTOR	5	1	3
234PIE51	2" CAST IRON PUMP W/5 HP SINGLE PHASE ELECTRIC MOTOR	5	1	3

### 2" CAST IRON PUMP ONLY

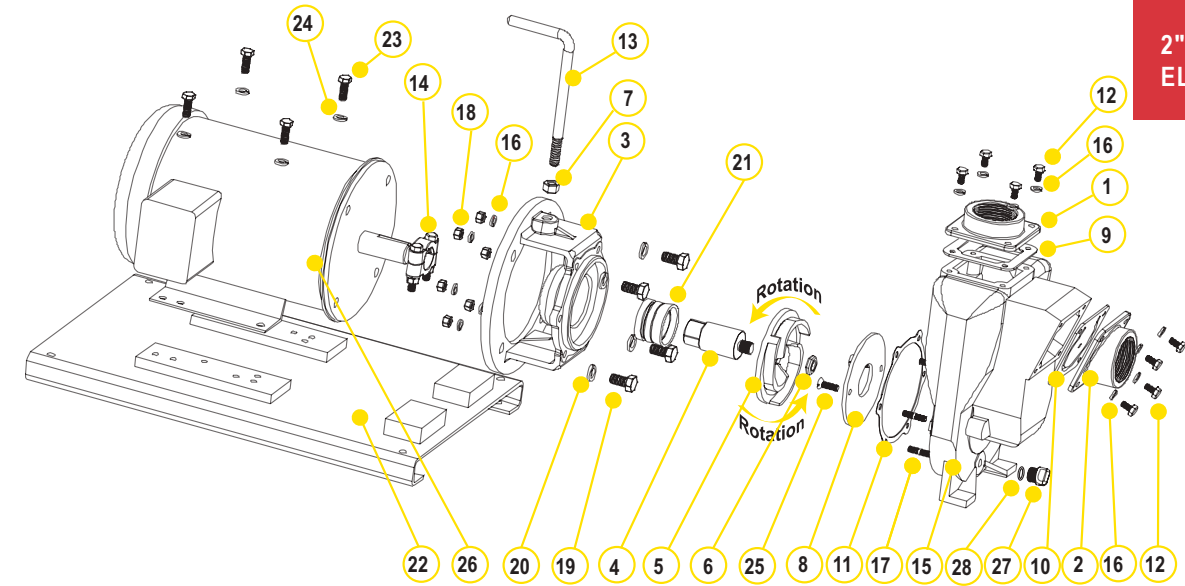
PART NO	DESCRIPTION	HP	QTY	SKID QTY
234POI	2" CAST IRON PUMP ONLY W 184TC FRAME ADAPTER	N/A	1	18



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS

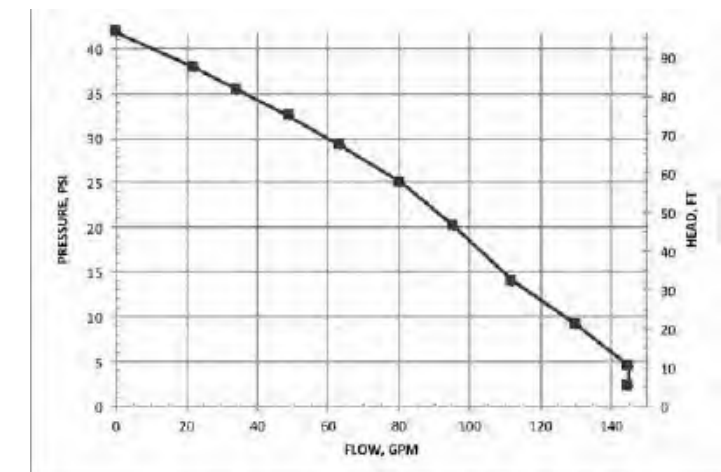


### REPLACEMENT PARTS 2" CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	17000	2" NPT OUTLET FLANGE	1
2	17002	2" NPT INLET FLANGE	1
3	17046	C-FACE ADAPTER (234PIE3)	1
3	17446	C-FACE ADAPTER	1
4	17007	IMPELLER SHAFT (234PIE3)	1
4	17406	IMPELLER SHAFT	1
5	17008	IMPELLER (234PIE3)	1
5	17408	IMPELLER	1
6	17009B	5/8" IMPELLER NUT	1
7	17010	1/2" HEX NUT	1
8	17011	WEAR PLATE	1
9	17013	OUTLET GASKET	1
10	17016	GASKET & CHECK VALVE	1
11	17018	GASKET ADAPTER	1
12	17019	BOLT	8
13	15022	HANDLE	1
14	17024	CLAMP ASSEMBLY W/KEY (234PIE3)	1
14	18129	CLAMP ASSEMBLY W/KEY	1
15	17026	PUMP HOUSING	1
16	V10118	5/16" LOCK WASHER	20
17	17042	HOUSING STUD	6
18	V10119	HEX NUT	8
19	N/A	BOLT	4
20	N/A	WASHER	4
21	17035	SEAL ASSEMBLY (234PIE3)	1
21	18025	SEAL ASSEMBLY	1
22	17701	BASE PLATE ASSEMBLY	1
23	17704	BOLT	4
24	V20018	3/8" LOCK WASHER	4
25	17130	5/16-18 X 1.00" FHSCS, 18-8 SS	2
26	N/A	ELECTRIC MOTOR	1
27	12777	1/2" PLUG	1
28	UV15163	O-RING FOR DRAIN PLUG	1

## 2" CAST IRON PUMPS WITH ELECTRIC MOTORS

234 SERIES PUMP



## 2" CAST IRON PUMPS WITH HYDRAULIC MOTORS

### FEATURES

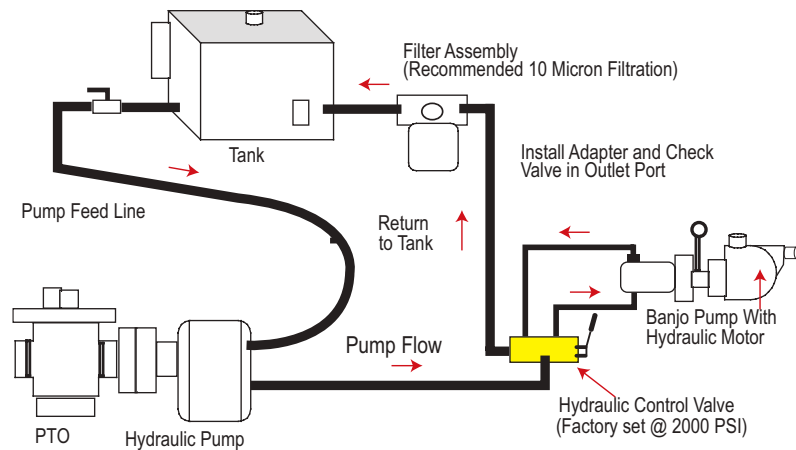
- Cast iron construction for rugged dependable service
- Stainless steel hardware
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Hydraulic fluid capacity is minimum 6 gallons and maximum 10 gallons
- Open or closed system
- 12 HP motor
- Recommendation to use the motor spool control valve or a suitable equivalent. The lack of such a valve in this circuit may cause failure to the hydraulic motor and will void warranty.



### 2" CAST IRON PUMPS WITH HYDRAULIC MOTOR

PART NO	DESCRIPTION	HP	QTY	SKID QTY
200PIHY	2" CAST IRON PUMP ONLY WITH HYDRAULIC MOTOR	12	1	18

### SPOOL VALVE ASSEMBLY DIAGRAM



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP

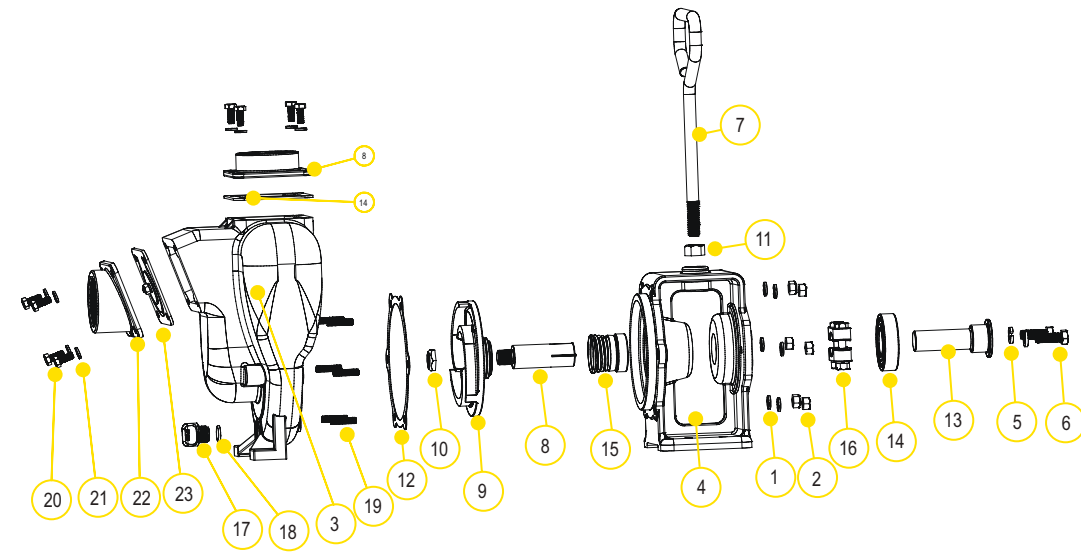


WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



### HYDRAULIC MOTOR SPOOL VALVE

PART NO	DESCRIPTION	HP	QTY
HSV1000	HYDRAULIC MOTOR SPOOL VALVE	N/A	1

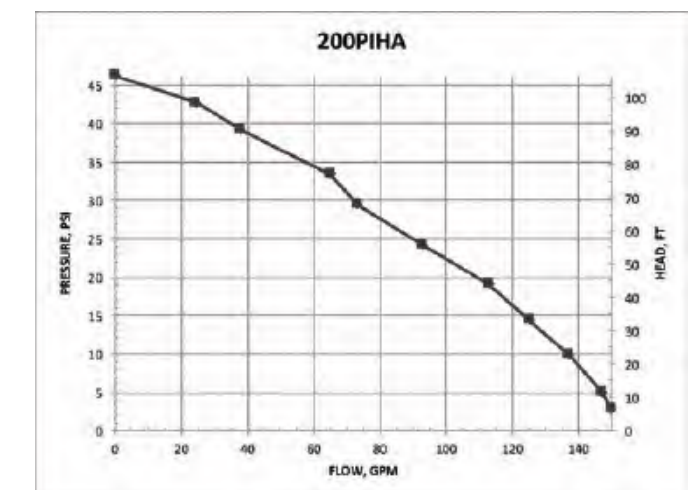
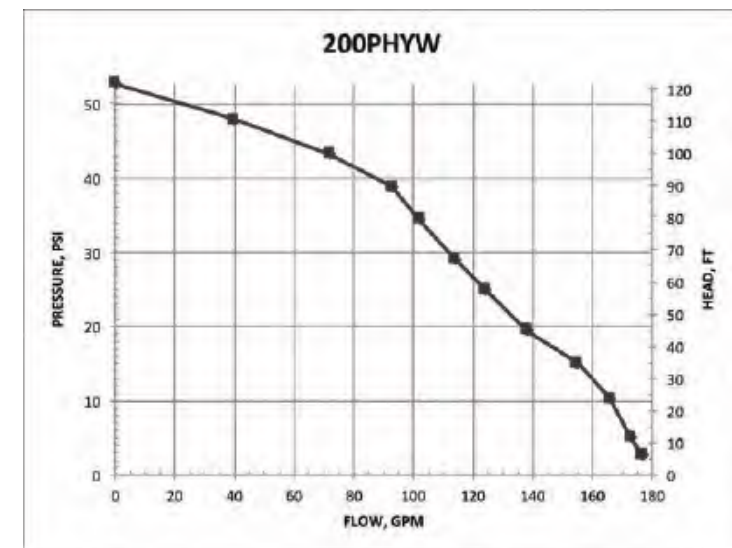


### REPLACEMENT PARTS 2" CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	V10118	5/16" SPLIT LOCK WASHER	6
2	V10119	5/16"-18 HEX NUT	6
3	17026	PUMP HOUSING	1
4	17049A	HYDRAULIC ADAPTER	1
5	V20018	3/8" LOCK WASHER	2
6	18010SS	3/8"-16 X 1.25" HHCS	2
7	15022	HANDLE	1
8	17007	7/8" SLEEVE DRIVE FOR HYDRAULIC MOTOR	1
9	17008	5" IMPELLER	1
10	17009B	5/8" IMPELLER NUT	1
11	17010	1/2" HEX NUT - 13UNF-RH	1
12	17018	GASKET ADAPTER	1
13	17055A	HYDRAULIC ADAPTER SHAFT	1
14	17056	SKF 6206-2RS1 BEARING	1
15	17035	FKM SEAL ASSEMBLY	1
16	17024	7/8" CLAMP, NO KEY	1
17	12777	1/2" PLUG	1
18	UV15163	O-RING	1

-PY1013 MOTOR ONLY

## 2" CAST IRON PUMPS WITH HYDRAULIC MOTORS



## 2" 222 SERIES CAST IRON PUMPS

### FEATURES

- Cast iron construction for rugged dependable service
- Carbon ceramic seal with stainless steel cup and spring with FKM rubber
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Heavy duty slinger seal on motor shaft
- Large weep holes between pump end and engine
- Pump only packs complete and ready for attachment to gasoline engine
- Pedestal pump for long coupling to electric motor
- Recommendation for 3/4" shaft: 5 HP, 3600 RPM
- Due to weight and size of pumps, Banjo ships these by truck only.
- Engine warranty service available at authorized dealers



222 SERIES CAST IRON PUMPS W/GAS ENGINES				
PART NO	DESCRIPTION	HP	QTY	SKID QTY
222PIH5	2" CAST IRON PUMP W/5.5 HP HONDA® ENGINE	5.5	1	8
222PIH6	2" CAST IRON PUMP W/6.5 HP HONDA® ENGINE	6.5	1	8
222PIH5E	2" CAST IRON PUMP W/5.5 HP HONDA® ENGINE W/ ELECTRIC START	5.5	1	8
222PI6PRO	2" CAST IRON PUMP W/6.5 HP BRIGGS & STRATTON® ENGINE PRO SERIES	6.5	1	8



222 SERIES CAST IRON PUMP ONLYS				
PART NO	DESCRIPTION	HP	QTY	SKID QTY
222POI	2" CAST IRON PUMP ONLY W/ FULL IMPELLER	N/A	1	18



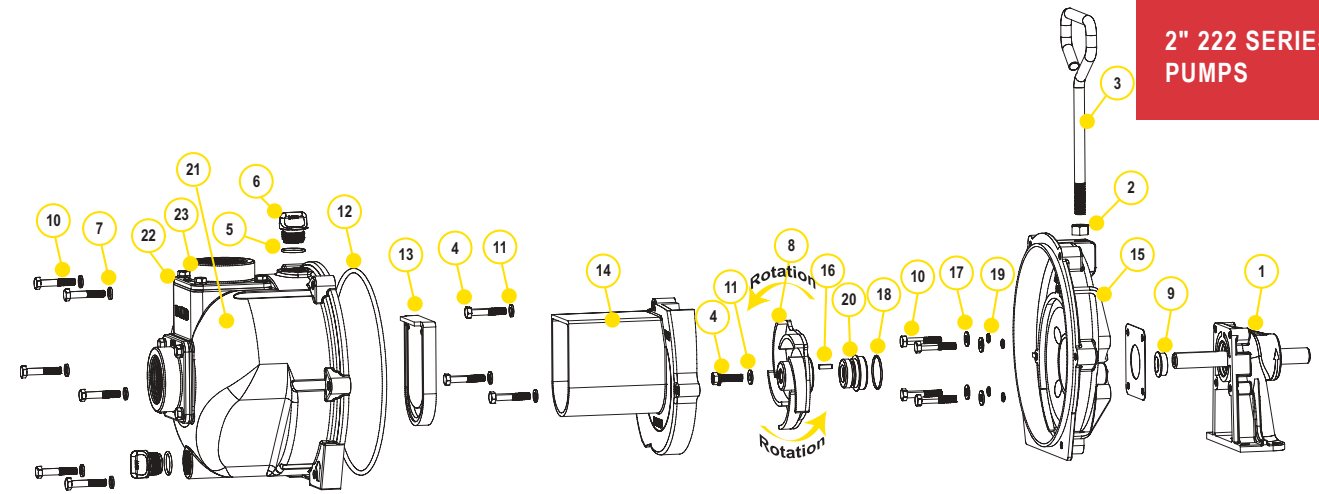
222 SERIES CAST IRON BEARING PEDESTAL				
PART NO	DESCRIPTION	HP	QTY	SKID QTY
222PBI	2" CAST IRON BEARING PEDESTAL W/ 3/4" STRAIGHT KEYED SHAFT	N/A	1	18



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



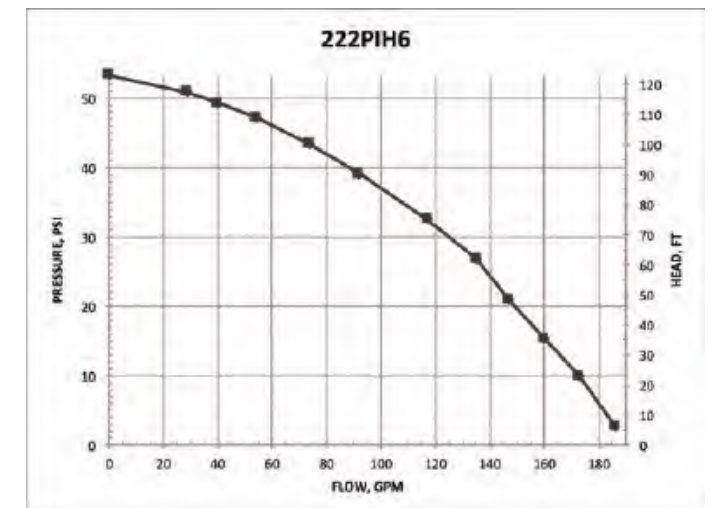
WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



REPLACEMENT PARTS 2" CAST IRON PUMPS			
ITEM	PART NO	DESCRIPTION	QTY
1	12882A	BEARING PEDESTAL ASSEMBLY	1
1	12600B	HYDRAULIC PEDESTAL ASSEMBLY	1
2	17010	1/2" JAM NUT	1
3	15022	HANDLE	1
4	12765A	5/16" - 24 X 1.12 IMPELLER BOLT	1
5	13778	O-RING	2
6	13777	3/4" PLUG	2
7	V10118	5/16" LOCK WASHER	9
8	15772	5 VANE IMPELLER	1
9	12716	PUMP SLINGER	1
10	12715A	5/16" - 24 X 1.75 HHCS	13
11	A204	O-RING	1
12	12719A	BODY O-RING	1
13	12705	CHECK VALVE	1
14	15702	VOLUTE	1
15	15703	REAR BRACKET	1
16	12902A	3/16" SQ X 5/8" KEY	1
17	12901	5/16" FLAT WASHER	4
18	12710	O-RING	1
19	12717	O-RING	4
20	12713V	SEAL ASSEMBLY	1
20	N/A	SEVERE DUTY SEAL	1
21	15712	BODY	1
22	17013	FLANGE GASKET	2
23	17000	2" NPT THREADED FLANGE	2
24	17019	5/16" - 18 X 0.75 HHCS	8
25	V10118	5/16" LOCK WASHER	8
N/S	12099	7/16"-14 X 1.25" HHCS	1
N/S	15751	BRACKET SHIM	1
N/S	15752	IMPELLER SHIM	1
N/S	17033	Z-RAILS	1 PAIR
N/S	N/A	5/16" - 18 X 1 3/4" ZINC PLATED	4
N/S	V10119	5/16" - 18 HEX NUT	4
N/S	V10118	5/16" LOCK WASHER	4
N/S	15000	REPAIR KIT (ITEMS 5, 8, 11-12, 18-20, 12099, 15751 & 15752)	1
N/S	15000V	FKM REPAIR KIT	1
N/S	15999	SEAL KIT (ITEMS 5, 11-12, 18-20, 12099, 15751 & 15752)	1
N/S	15999V	FKM SEAL KIT	1

## 2" 222 SERIES CAST IRON PUMPS

KITS 222 CAST IRON PUMPS				
PART NO	EPDM REPAIR KIT NO	FKM REPAIR KIT NO	EPDM SEAL KIT NO	FKM SEAL KIT NO
222PIH5	15000	15000V	15999	15999V
222PIH6	15000	15000V	15999	15999V
222PIH5E	15000	15000V	15999	15999V
222PI6PRO	15000	15000V	15999	15999V
222POI	15000	15000V	15999	15999V
222PBI	15000	15000V	15999	15999V



## 2" 222 SERIES CAST IRON PUMPS WITH ELECTRIC MOTORS

### FEATURES

- Cast iron construction for rugged dependable service
- Carbon ceramic seal with stainless steel cup and spring with FKM rubber
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Heavy duty slinger seal on motor shaft
- Large weep holes between pump end and engine
- Motor features include pressure cast aluminum end plates with ribbed design for rigidity, heavy gauge steel frame, 230 volt, with inverter spike resistance magnet wire
- Due to weight and size of pumps, Banjo ships these by truck only.



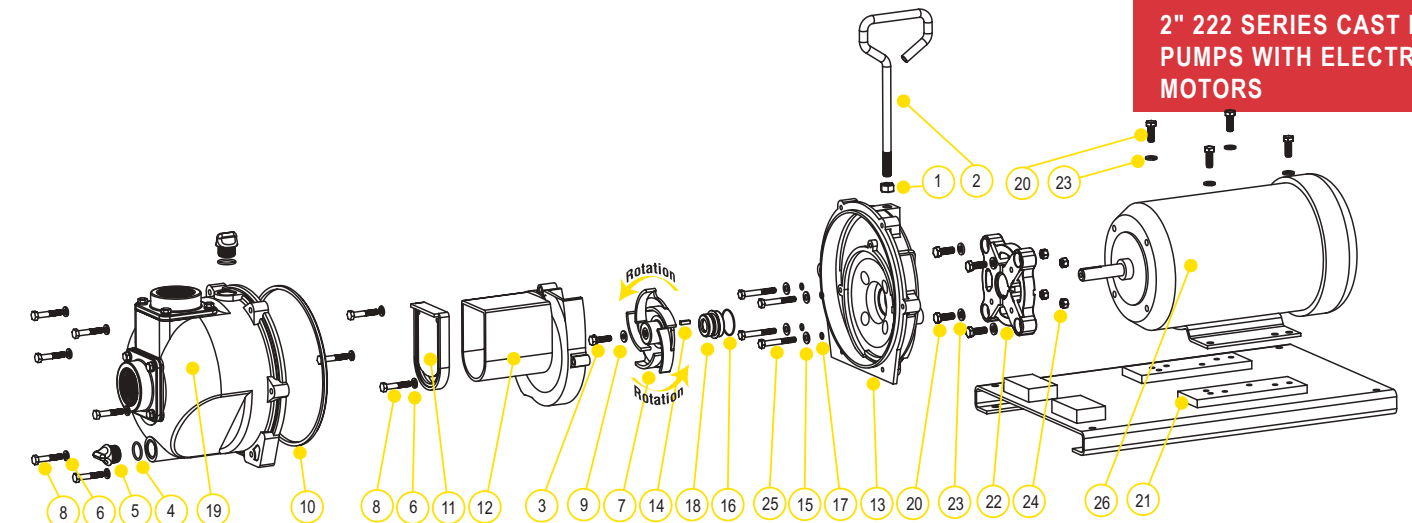
222 SERIES CAST IRON PUMPS W/ELECTRIC MOTORS				
PART NO	DESCRIPTION	HP	QTY	SKID QTY
222PIE5	2" CAST IRON PUMP W/5 HP THREE PHASE ELECTRIC MOTOR	5	1	3
222PIE51	2" CAST IRON PUMP W/5 HP SINGLE PHASE ELECTRIC MOTOR	5	1	3



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



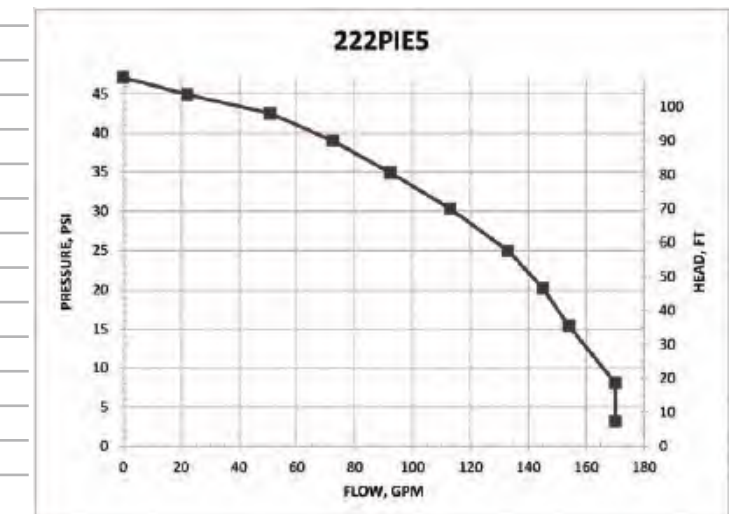
## 2" 222 SERIES CAST IRON PUMPS WITH ELECTRIC MOTORS

### REPLACEMENT PARTS 222 SERIES CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	17010	1/2" JAM NUT	1
2	15022	HANDLE	1
3	12765A	5/16" - 24 X 1.12 IMPELLER BOLT	1
4	13778	O-RING	2
5	13777	3/4" PLUG	2
6	V10118	5/16" LOCK WASHER	9
7	15772	5 VANE IMPELLER	1
8	12715A	5/16" - 24 X 1.75 HHCS	13
9	A204	O-RING	1
10	12719A	BODY O-RING	1
11	12705	CHECK VALVE	1
12	15702	VOLUTE	1
13	15703	REAR BRACKET	1
14	12902A	3/16" SQ. X 5/8" KEY	1
15	12901	5/16" FLAT WASHER	1
16	12710	O-RING	4
17	12717	O-RING	1
18	12713V	SEAL ASSEMBLY	4
18	N/A	SEVERE DUTY SEAL	1
19	15712	BODY	1
20	17704	3/16" - 16 X 1.25 HHCS BOLT	8
21	17701	C-FACED BASE PLATE	1
22	12046	56C ADAPTER	1
23	V20018	3/8" LOCK WASHER	8
24	V20019	3/8" 16 SS HEX NUT	4
25	N/A	5/16" - 18 X 2 1/4" HHCS BOLT	4
26	BEM5-182CZ	5 HP 3450 RPM THREE PHASE MOTOR	1
26	BEM51-182CZ	5 HP 3450 RPM SINGLE PHASE MOTOR	1
N/S	12099	7/16"-14 X 1.25" HHCS	1
N/S	15751	BRACKET SHIM	1
N/S	15752	IMPELLER SHIM	1
N/S	12756	ADAPTER KIT (ITEMS 14, 20, 22, 23, 12052, 12053, 15751, 15752, 17029)	1
N/S	15000	REPAIR KIT (ITEMS 4,7,9-11,14,16-18,12099,15751 & 15752)	1
N/S	15000V	FKM REPAIR KIT	1
N/S	15999	SEAL KIT (ITEMS 4, 9-11, 14,16-18,12099,15751 & 15752)	1
N/S	15999V	FKM SEAL KIT	1

### KITS 222 CAST IRON PUMPS

PART NO	EPDM REPAIR KIT NO	FKM REPAIR KIT NO	EPDM SEAL KIT NO	ADAPTER KIT NO
222PIE5	15000	15000V	15999	12756
222PIE51	15000	15000V	15999	12756



## 3" CAST IRON PUMPS

### FEATURES

- Cast iron construction for rugged dependable service
- Stainless steel shaft sleeve to protect engine shaft
- Carbon ceramic seal with stainless steel cup and spring with FKM rubber
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Pump only packs complete and ready for attachment to gasoline engine
- Bearing pedestal pump for long coupling to electric motor
- Recommendation for 1" shaft: 184TC frame size, 7½ HP, 3450 RPM for close coupling to electric motors
- Engine warranty service available at authorized dealers
- Due to weight and size of pumps, Banjo ships these by truck only.



### 3" CAST IRON PUMP W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
300PIH13	3" CAST IRON PUMP W/13 HP HONDA® ENGINE W/ELECTRIC START & PULL ROPE	13	1	6



### 3" CAST IRON PUMP ONLY

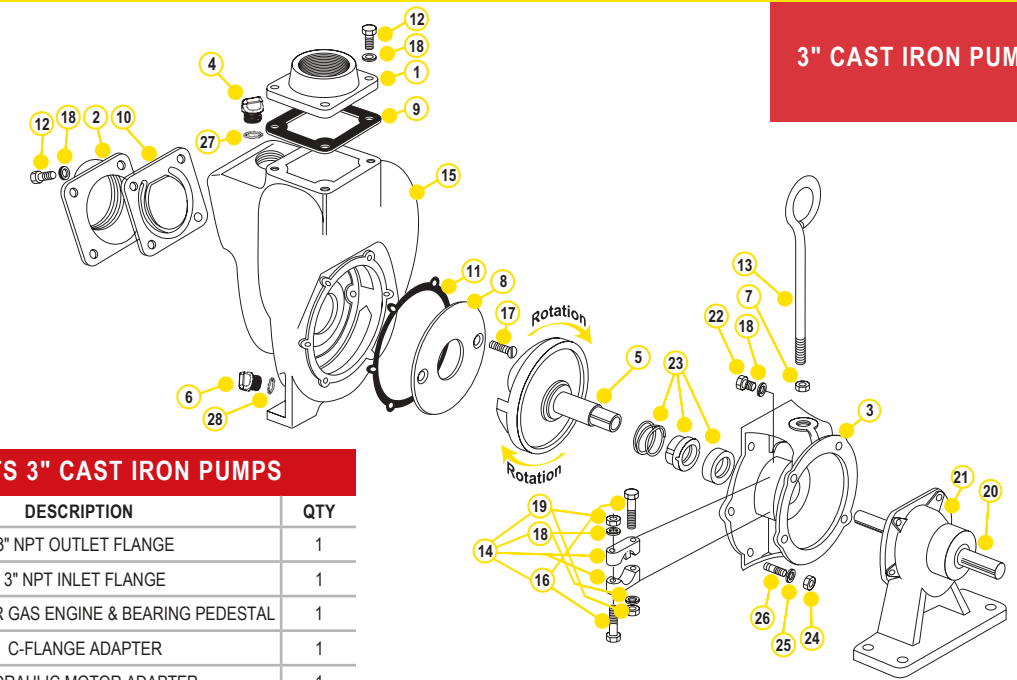
PART NO	DESCRIPTION	HP	QTY	SKID QTY
300POI	3" CAST IRON PUMP ONLY W/ 1" SHAFT SLEEVE	N/A	1	8
300POICF	3" CAST IRON PUMP WITH C-FLANGE	N/A	1	8
300POICF55	3" CAST IRON PUMP WITH C-FACE W/5 ½" IMPELLER	N/A	1	8

WILL FIT A 184TC FRAME SIZE



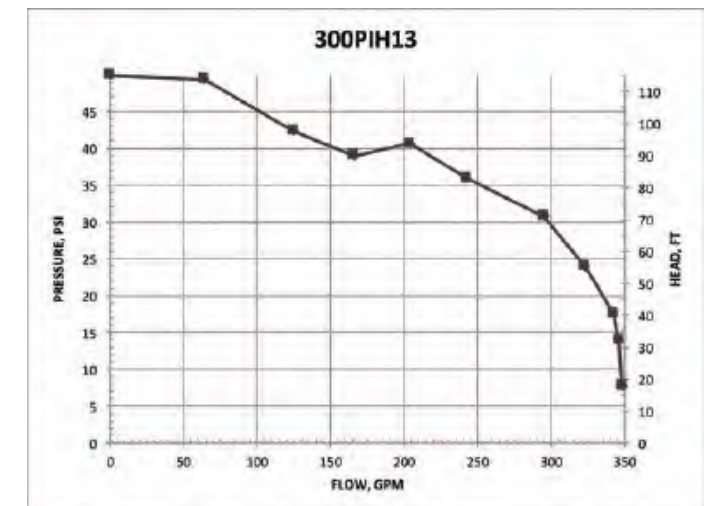
### 3" CAST IRON BEARING PEDESTAL

PART NO	DESCRIPTION	HP	QTY	SKID QTY
300PBI	3" CAST IRON BEARING PEDESTAL W/ 1" STRAIGHT SHAFT	N/A	1	8



### REPLACEMENT PARTS 3" CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	18008	3" NPT OUTLET FLANGE	1
2	18012	3" NPT INLET FLANGE	1
3	18026	ADAPTER FOR GAS ENGINE & BEARING PEDESTAL	1
3	18048	C-FLANGE ADAPTER	1
3	18049	HYDRAULIC MOTOR ADAPTER	1
N/S	18055	HYDRAULIC ADAPTER SHAFT	1
4	13777	¾" PLUG	1
5*	18023SS	1" IMPELLER & DRIVE SHAFT FOR GAS ENGINE	1
5	18023-1.125SS	1½" IMPELLER & DRIVE SHAFT FOR ELECTRIC MOTOR	1
6	12777	½" PLUG	1
7	18034	⅝" SS JAM NUT	1
8	18004	WEAR PLATE	1
9	18009	EPDM OUTLET GASKET	1
10	18013	GASKET CHECK VALVE ASSEMBLY	1
11	18021	ADAPTER GASKET	1
12	18010SS	⅜" - 16 X 1½" SS CAP SCREW HXHD	8
13	18033	HANDLE	1
14	18029	CLAMP ASSEMBLY (OLD STYLE)	1
14	18129	CLAMP ASSEMBLY (NEW STYLE)	1
15	18001	PUMP HOUSING	1
16	N/A	⅜" -24 X 2¼" BOLT	2
17	18106	WEAR PLATE FLAT HEAD SCREW	2
18	V20018	⅜" LOCK WASHER	8
19	N/A	⅜" X 24 SS HEX NUT	2
20	18504	1" SHAFT	1
21	18500	BEARING PEDESTAL	1
N/S	18502	BEARING SKF 66306-2RS1/C3	2
22	17704	BOLT	4
23*	18025	FKM SEAL ASSEMBLY	1
23	18025SD	SEVERE DUTY SEAL	1
24	V20019	⅜" 16 SS HEX NUT	6
25	V20018	⅜" SS LOCK WASHER	6
26	18218	⅜" -16 X 24 X 2½" SS STUD	6
27	13778	O-RING	1
28	UV15163	O-RING	1
N/S	18035	Z-RAIL MOUNTING BRACKET (PAIR)	1
N/S	18100	REPAIR KIT (CONSIST OF ITEMS 5*, 8,11,17, 23*)	1



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS

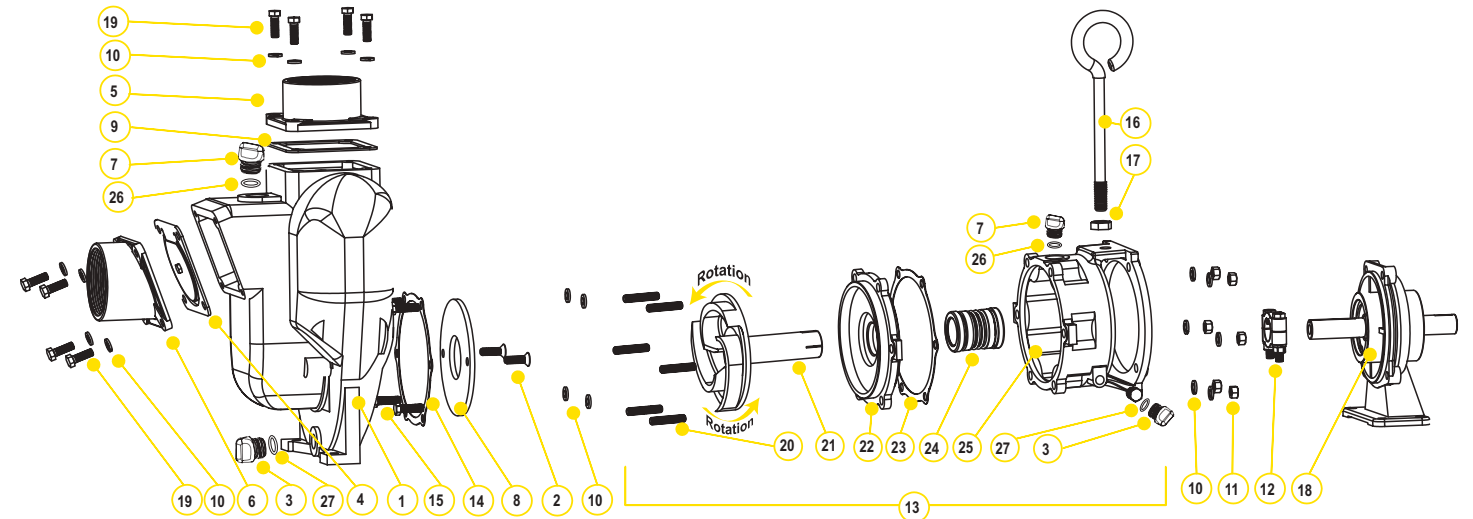
## 3" CAST IRON WET SEAL PUMPS

### FEATURES

- Cast iron construction for rugged dependable service
- Run dry capability
- Stainless steel hardware
- Double seal contained in ethylene glycol reservoir
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Pump only packs complete and ready for attachment to gasoline engine
- Pedestal pump for long coupling to electric motor
- Due to weight and size of pumps, Banjo ships these by truck only.



3" CAST IRON WET SEAL PUMPS W/GAS ENGINES				
PART NO	DESCRIPTION	HP	QTY	SKID QTY
301PIH13W	3" CAST IRON WET SEAL PUMP W/13 HP HONDA® ENGINE W/ ELECTRIC START & PULL ROPE	13	1	6



## 3" CAST IRON WET SEAL PUMPS

### 3" CAST IRON WET SEAL PUMP ONLY

PART NO	DESCRIPTION	HP	QTY	SKID QTY
301POIW	3" CAST IRON WET SEAL PUMP ONLY	N/A	1	8

### REPLACEMENT PARTS 3" CAST IRON PUMPS

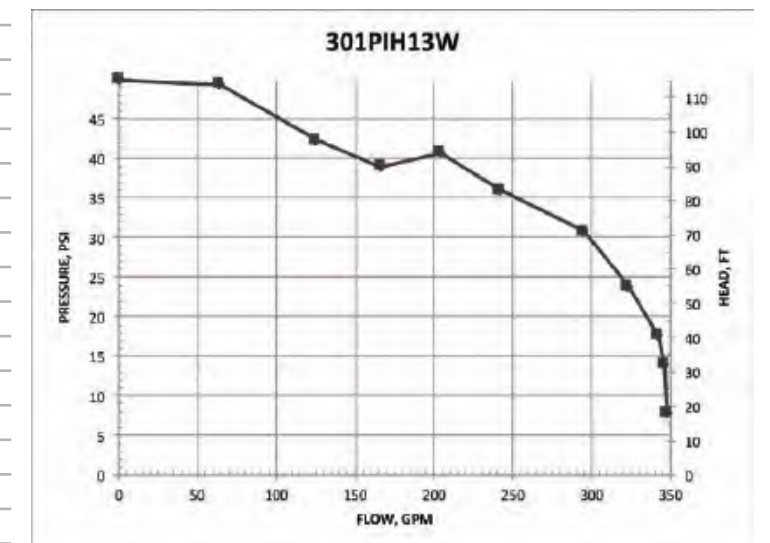
ITEM	PART NO	DESCRIPTION	QTY
1	18001	PUMP HOUSING	1
2	18106	FLAT HEAD SOCKET CAP SCREW	2
3	12777	1/2" PLUG	2
4	18013	INLET/CHECK EPDM GASKET	1
5	18008	3" NPT OUTLET FLANGE	1
6	18012	3" NPT INLET FLANGE	1
7	13777	3/4" PLUG	2
8	18004	WEAR PLATE	1
9	18009	EPDM OUTLET GASKET	1
10	V20018	3/8" LOCK WASHER	18
11	V20019	3/8" 16 SS HEX NUT	6
12	18129	CLAMP ASSEMBLY KEYED	1
13	18200A	WET SEAL ASSEMBLY	1
14	18021	ADAPTER GASKET	1
15	17704	3/8" -16 X 1 1/4" HHCS	4
16	18033	HANDLE	1
17	18034	5/8" -11 JAM NUT	1
18	18500	BEARING PEDESTAL	1
19	18010SS	3/8" -16 X 1 1/8" HHCS	8
20	18218	3/8" -16 X 24 X 2 1/8" SS STUD	6
21	18206	IMPELLER	1
22	18202A	COVER PLATE	1
23	18021	ADAPTER GASKET	1
24	15035E	EPDM MECHANICAL SEAL ASSEMBLY	1
25	18203A	WET SEAL RESERVOIR	1
26	13778	O-RING	2
27	UV15163	O-RING	2

### 3" CAST IRON WET SEAL PUMP BEARING PEDESTAL

PART NO	DESCRIPTION	HP	QTY	SKID QTY
301PBIW	3" CAST IRON WET SEAL PUMP WITH BEARING PEDESTAL	N/A	1	8



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



# CENTRIFUGAL PUMPS

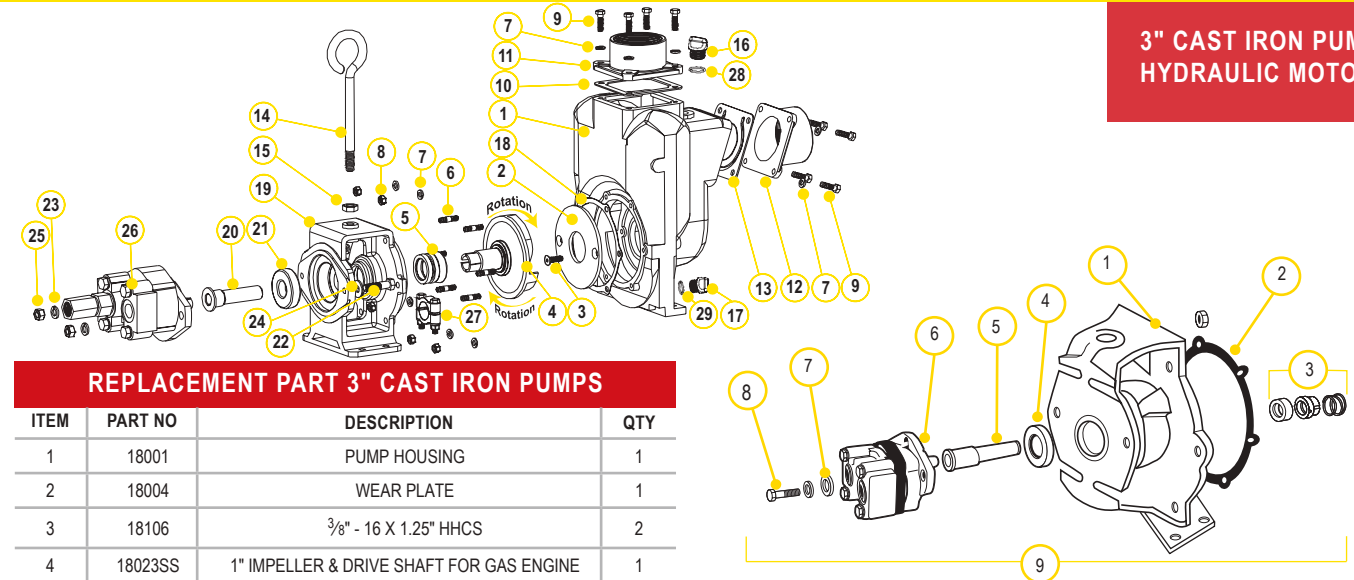
# CENTRIFUGAL PUMPS

## 3" CAST IRON PUMPS WITH HYDRAULIC MOTORS

## 3" CAST IRON PUMPS WITH HYDRAULIC MOTORS

### FEATURES

- Cast iron construction for rugged dependable service
- Stainless steel hardware
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Hydraulic fluid capacity is minimum 9 gallons and maximum 13 gallons
- Open or closed system
- 21 HP motor
- Recommendation to use the motor spool control valve or a suitable equivalent. The lack of such a valve in this circuit may cause failure to the hydraulic motor and will void warranty.



### REPLACEMENT PART 3" CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	18001	PUMP HOUSING	1
2	18004	WEAR PLATE	1
3	18106	3/8" - 16 X 1.25" HHCS	2
4	18023SS	1" IMPELLER & DRIVE SHAFT FOR GAS ENGINE	1
5	18025	FKM MECHANICAL SEAL	1
5	18025SD	SEVERE DUTY SEAL	1
6	18218	3/8" -16 X 24 X 2 1/8" SS STUD	6
7	V20018	3/8" LOCK WASHER	14
8	V20019	3/8" 16 SS HEX NUT	6
9	18010SS	3/8" - 16 X 1.25" HHCS	8
10	18009	EPDM OUTLET GASKET	1
11	18008	3" NPT OUTLET FLANGE	1
12	18012	3" NPT INLET FLANGE	1
13	18013	INLET/CHECK EPDM GASKET	1
14	18033	HANDLE	1
15	18034	5/8" -11 HEX NUT	1
16	13777	3/4" PLUG	1
17	12777	1/2" PLUG	1
18	18021	ADAPTER GASKET	1
19	18049	HYDRAULIC MOTOR ADAPTER	1
20	18055	HYDRAULIC ADAPTER SHAFT	1
21	18502	BEARING SKF 66306-2RS1/C3	1
22	18056	1/2" -13 X 2" HHCS	2
23	N/A	1/2" SPLIT WASHER	2
24	N/A	1/2" FLAT WASHER	2
25	17010	1/2" - 13 HEX NUT	2
26	HY1012	UM16-45A-HX HYDRAULIC MOTOR ASSEMBLY	1
27	18029	CLAMP ASSEMBLY UNKEYED	1
28	13778	O-RING	1
29	UV15163	O-RING	1
KIT	18100	REPAIR KIT (CONSIST OF 2, 3, 4, 5, 18)	1

### REPLACEMENT PARTS 3" HYDRAULIC ADAPTER

ITEM	PART NO	DESCRIPTION	QTY
1	18049	C-FACE HYDRAULIC MOTOR ADAPTER	1
2	18021	GASKET ADAPTER	1
3	18025	SEAL ASSEMBLY	1
4	18502	SKF 63306-2RS1/C3 BEARING	1
5	18055	HYDRAULIC ADAPTER SHAFT SLEEVE	1
6	HY1012	TYRONE® UM16 HYDRAULIC MOTOR	1
7	N/A	1/2" FLAT WASHER	2
8	N/A	1/2" SPLIT LOCK WASHER	2
9	18056	1/2" - 13" X 2" HHCS BOLT	2
10	17010	1/2" HEX NUT	2
11	18600	HYDRAULIC MOTOR ADAPTER ASSEMBLY	1
KIT	HY1001	REPAIR KIT	1

### HYDRAULIC MOTOR DATA

U.S. GALLONS/REV.	0.0038
CUBIC INCHES/REV.	0.878
LITERS/REV.	0.0144
MAX HYDRAULIC PRESSURE	3000 PSI
MIN HYDRAULIC PRESSURE	600 PSI
INLET PORT	1-1/16-12UN-2B
OUTLET PORT	1-5/16-12UN-2B
MINIMUM GPM REQUIRED	9 GPM 2370 RPM
MAXIMUM GPM REQUIRED	13 GPM 3450 RPM
IDEAL GPM REQUIRED	9 GPM 3600 RPM

### CONNECTION INFORMATION

INLET	"A" PORT
OUTLET	"B" PORT

SUPPLIED CHECK VALVE IS TO ENSURE PROPER ROTATION OF THE BANJO PUMP. PLACE CHECK VALVE IN OUTLET PORT (MARKED "B") FOR PROPER RIGHT HAND ROTATION. IT IS RECOMMENDED THAT A MINIMUM 1/2" INLET LINE & A MINIMUM 1" OUTLET LINE BE USED. THE OUTLET PORT MUST BE CONNECTED DIRECTLY BACK TO THE HYDRAULIC FLUID RESERVOIR & NOT TO ANY VALVING, REGULATORS OR FLOW DIVERTERS. THE OUTLET PORT/RETURN LINE BACK PRESSURE MUST NOT EXCEED 250 PSI.

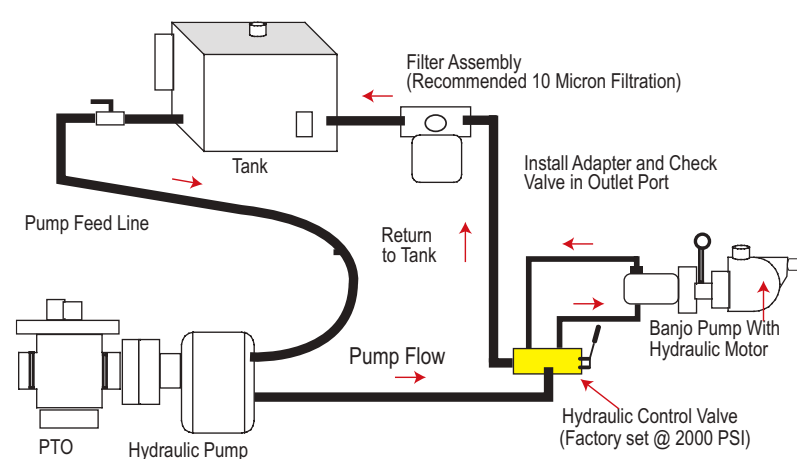
### SPOOL VALVE INFORMATION

REQUIRED OUTLET FLOW	MIN 9 GPM / MAX 13 GPM
REQUIRED SYSTEM PRESSURE	MIN 600 PSI / MAX 3000 PSI

### 3" CAST IRON PUMPS W/ HYDRAULIC MOTORS

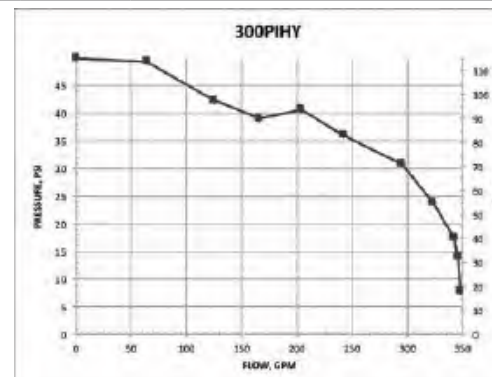
PART NO	DESCRIPTION	HP	QTY	SKID QTY
300PIHY	3" CAST IRON PUMP W/ 21 HP HYDRAULIC MOTOR	21	1	8

### SPOOL VALVE ASSEMBLY DIAGRAM



### HYDRAULIC MOTOR SPOOL VALVE

PART NO	DESCRIPTION	HP	QTY
HSV1000	HYDRAULIC MOTOR SPOOL VALVE	N/A	1



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



## 3" 333 SERIES CAST IRON PUMPS

POWERED by **HONDA**



### FEATURES

- Cast iron construction for rugged dependable service
- Carbon ceramic seal with stainless steel cup and spring with FKM rubber
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Heavy duty slinger seal on motor shaft
- Large weep holes between pump end and engine
- Pedestal pump for long coupling to electric motor
- Due to weight and size of pumps, Banjo ships these by truck only.
- Engine warranty service available at authorized dealers



### 333 SERIES CAST IRON PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
333PIH13	3" CAST IRON PUMP W/13 HP HONDA® ENGINE W/ ELECTRIC START & PULL ROPE	13	1	1

### 333 SERIES CAST IRON PUMP ONLYS

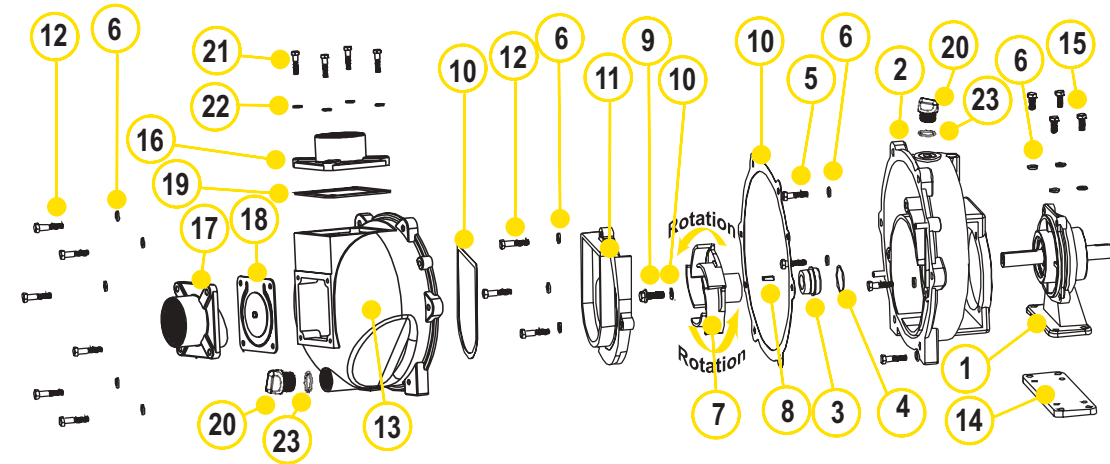
PART NO	DESCRIPTION	HP	QTY	SKID QTY
333POI	3" CAST IRON PUMP ONLY W/1" SHAFT & 5 VANE IMPELLER UNASSEMBLED	N/A	1	6
333POICF	3" CAST IRON PUMP ONLY W/ ELECTRIC MOTOR ADAPTER	N/A	1	6

### 333 SERIES CAST IRON BEARING PEDESTAL

PART NO	DESCRIPTION	HP	QTY	SKID QTY
333PBI	3" CAST IRON BEARING PEDESTAL W/ 1" SHAFT	N/A	1	6

### 333 SERIES CAST IRON HYDRAULIC PUMPS

PART NO	DESCRIPTION	HP	QTY	SKID QTY
333PIE15	3" CAST IRON PUMP W/15 HP THREE PHASE ELECTRIC MOTOR	15	1	1



## 3" 333 SERIES CAST IRON PUMPS

### REPLACEMENT PARTS 3" CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
N/S	16099	IMPELLER REMOVAL BOLT	1
1	18500	BEARING PEDESTAL (333PBI)	1
2	16704	REAR BRACKET	1
3	16713	MECHANICAL SEAL	1
4	16710	O-RING	1
5	17704	3/8" - 16 X 1.25" SS CAP SCREW (333PBI)	4
6	V20018	3/8" SS LOCK WASHER	17
7	16773	3" IMPELLER (333PBI)	1
7	16774	3" IMPELLER (333PIH13 & 333POI)	1
7	16774A	3" IMPELLER (333PIE15)	1
8	16901	1/4" SQ. 3/4" KEY STOCK	1
9	16765	IMPELLER BOLT (333PBI)	1
9	13765	IMPELLER BOLT (333PIH13)	1
10	16019	GASKET SET	1
11	16702	VOLUTE	1
12	N/A	3/8" - 16 X 1.75" SS BOLT	9
13	16733	BODY	1
14	18511	ADAPTER PLATE (333PBI)	1
15	18512	3/8" - 16 X 0.875" SS HHCS (333PBI)	4
N/S	16751	BRACKET SHIM SET	1
N/S	16752	IMPELLER SHIM	1
N/S	18033	HANDLE	1
N/S	18034	5/8" SS JAM NUT	1
16	16001	3" NPT OUTLET FLANGE	1
17	16003	3" NPT INLET FLANGE	1
18	16706	FKM INLET GASKET W/ CHECK	1
19	16011	FKM OUTLET GASKET	1
20	13777	3/4" PLUG	2
21	18027	3/8" - 16 X 1.50" HHCS (333PIH13)	8
22	V20018	3/8" SS LOCK WASHER	8
23	13778	O-RING	2
NS	16100	REPAIR KIT (CONSIST OF ITEMS 3, 4, 8, 10, 16751, 16752, 16099, 23)	1

### REPLACEMENT PARTS 333PIE15

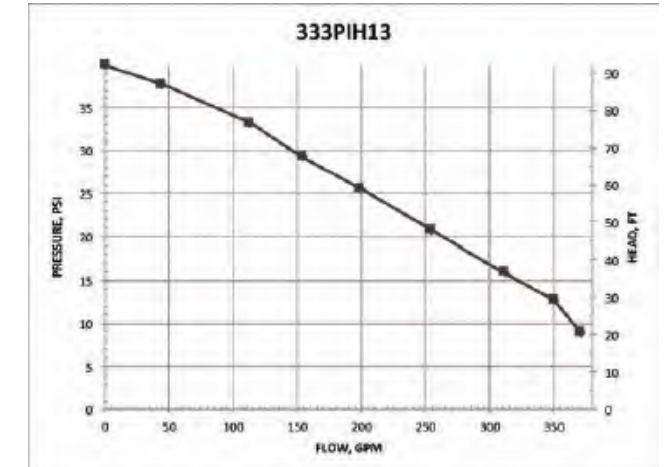
ITEM	PART NO	DESCRIPTION	QTY
N/S	16099	IMPELLER REMOVAL BOLT	1
2	16704A	REAR BRACKET W/C-FACE ADAPTER	1
3	15025	MECHANICAL SEAL	1
6	V20018	3/8" SS LOCK WASHER	8
7	N/A	3" IMPELLER - 5 VANE	1
8	N/A	1/4" SQ. 3/4" KEY STOCK	1
9	16765	7/16-20 1/4" HFS	1
10	16019	GASKET SET	1
11	16702	VOLUTE	1
12	N/A	3/8" - 16 X 1.75" SS BOLT	9
13	16733	BODY	1
N/S	16751	BRACKET SHIM SET	1
N/S	16752	IMPELLER SHIM	1
N/S	18033	HANDLE	1
N/S	18034	5/8" SS JAM NUT	1
16	16001	OUTLET FLANGE	1
17	16003	INLET FLANGE	1
18	16706	FKM INLET GASKET W/ CHECK	1
19	16011	FKM OUTLET GASKET	1
20	13777	3/4" PLUG	2
21	18027	3/8" - 16 X 1.50" HHCS	8
22	V20018	3/8" SS LOCK WASHER	4
23	13778	O-RING	2



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



## 3" M332 SERIES CAST IRON MANIFOLD WET SEAL PUMPS

## 3" M332 SERIES CAST IRON MANIFOLD WET SEAL PUMPS

### FEATURES

- Run dry capability
- Cast iron construction for rugged dependable service
- Carbon ceramic seal with stainless steel cup and spring with EPDM rubber
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Heavy duty slinger seal on motor shaft
- Due to weight and size of pumps, Banjo ships these by truck only.
- Engine warranty service available at authorized dealers
- See pages 43-49 on manifold fittings for easy plumbing.



**M332 SERIES CAST IRON WET SEAL PUMPS W/GAS ENGINES**

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M332PIH13W	3" MANIFOLD CAST IRON WET SEAL PUMP W/13 HP HONDA® ENGINE W/ELECTRIC START & PULL ROPE	13	1	6

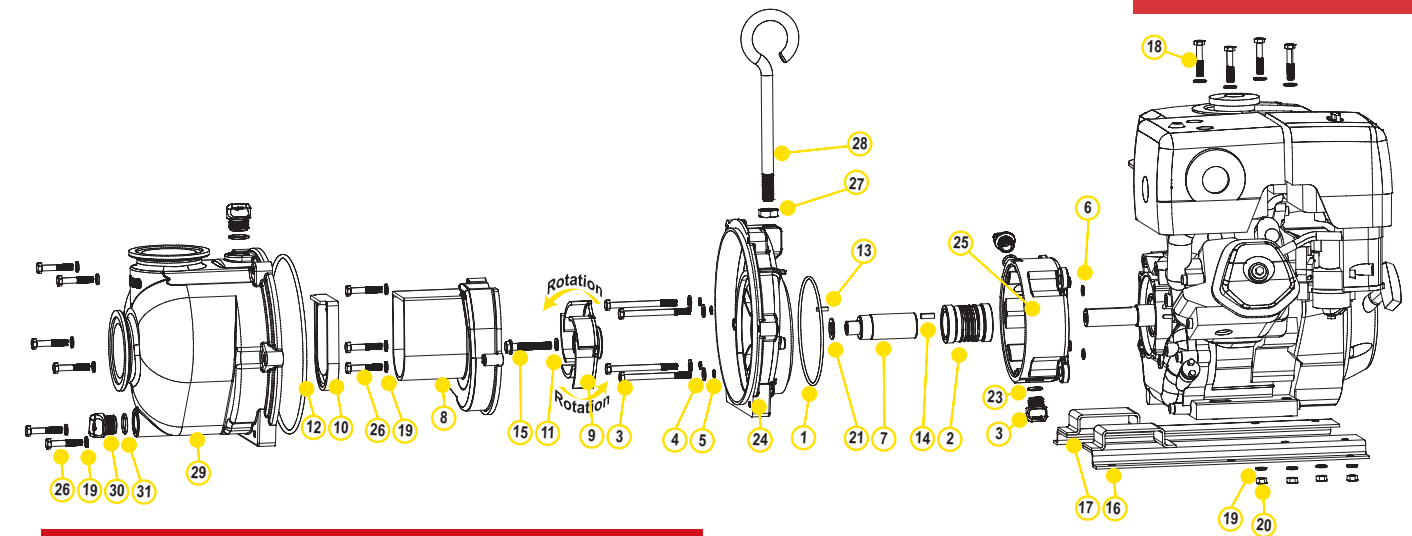


**M332 SERIES CAST IRON WET SEAL PUMPS W/ELECTRIC MOTORS**

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M332PIE10W	3" MANIFOLD CAST IRON WET SEAL PUMP W/10HP THREE PHASE ELECTRIC MOTOR	10	1	3
M332PIE101W	3" MANIFOLD CAST IRON WET SEAL PUMP W/10HP SINGLE PHASE ELECTRIC MOTOR	10	1	1

**M332 SERIES CAST IRON WET SEAL PUMP ONLY**

PART NO	DESCRIPTION	HP	QTY	SKID QTY
M332POIW	3" MANIFOLD CAST IRON WET SEAL PUMP ONLY	N/A	1	6

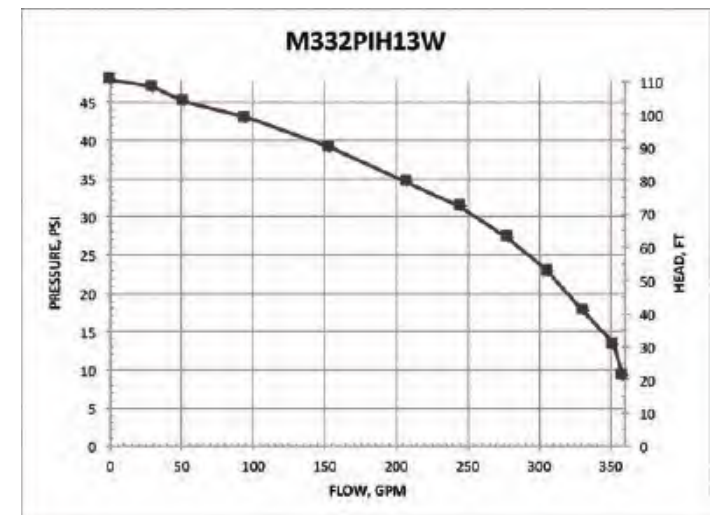


**REPLACEMENT PARTS M332 SERIES CAST IRON PUMPS**

ITEM	PART NO	DESCRIPTION	QTY
1	13719	O-RING	1
2	15035E	EPDM MECHANICAL SEAL ASSEMBLY	1
3	13034	5/16" - 24 X 3/4" HHCS	1
4	12901	5/16" FLAT WASHER	4
5	12717	O-RING FOR BRACKET SCREW	8
6	12709	O-RING	4
7	13055	ADAPTER SHAFT	4
8	19702	VOLUTE	1
9	19772SS	5 VANE IMPELLER	1
9	15772	IMPELLER (M332PBIW)	1
10	12705	CHECK VALVE	1
11	A204	O-RING	1
12	12719A	BODY O-RING	1
13	12902A	IMPELLER KEY	1
14	16901	1/4" SQ X 3/4" KEY STOCK	1
15	13766	3/8" - 24 X 2 1/4" HFS	1
16	N/A	Z-RAIL	1
17	N/A	Z-RAIL	1
18	N/A	5/16" - 18 X 1 1/4" HHCS	4
19	V10118	5/16" LOCK WASHER	13
20	V10119	5/16" HEX NUT	4
21	CV10175	GASKET	2
22	12777	1/2" PLUG	2
23	UV15163	O-RING	2
24	19703W	REAR BRACKET	1
25	19201W	WET SEAL RESERVOIR	1
26	12715A	5/16" - 24 X 1 3/4" HHCS	9
27	18034	5/8"-11 JAM NUT	1
28	18033	PUMP HANDLE	1
29	M19712X	PUMP BODY	1
30	13777	3/4" PLUG	2
31	13778	O-RING	2
NS	BEM10-100	10 HP, 215TC, 3 PH, 1" SHAFT	1
NS	BEM101-100	10HP, 215TC, 1 PH, 1" SHAFT	1



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



## 3" M332 SERIES CAST IRON MANIFOLD WET SEAL PUMPS WITH HYDRAULIC MOTORS

## 3" M332 SERIES CAST IRON MANIFOLD WET SEAL PUMPS WITH HYDRAULIC MOTORS

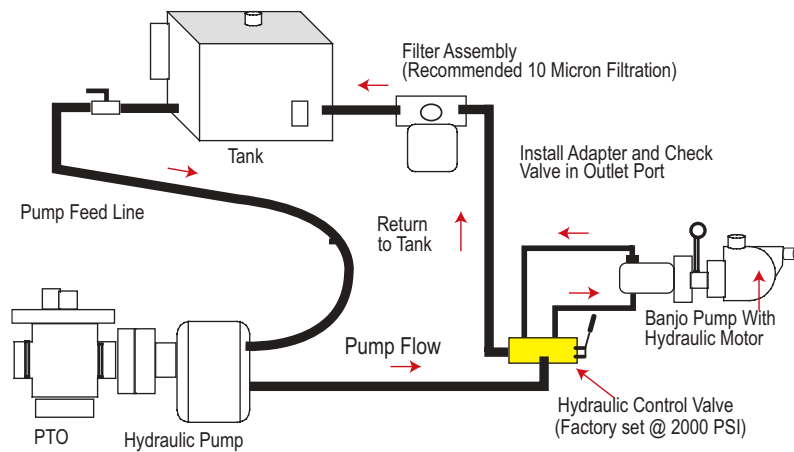
### FEATURES

- Run dry capability
- Cast iron construction for rugged dependable service
- Carbon ceramic seal with stainless steel cup and spring with EPDM rubber
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Heavy duty slinger seal on motor shaft
- Hydraulic fluid capacity is minimum 9 gallons and maximum 13 gallons
- Open or closed system
- 3600 R.P.M.
- Recommendation to use the motor spool control valve or a suitable equivalent. The lack of such a valve in this circuit may cause failure to the hydraulic motor and will void warranty.
- See pages 43-49 on manifold fittings for easy plumbing.



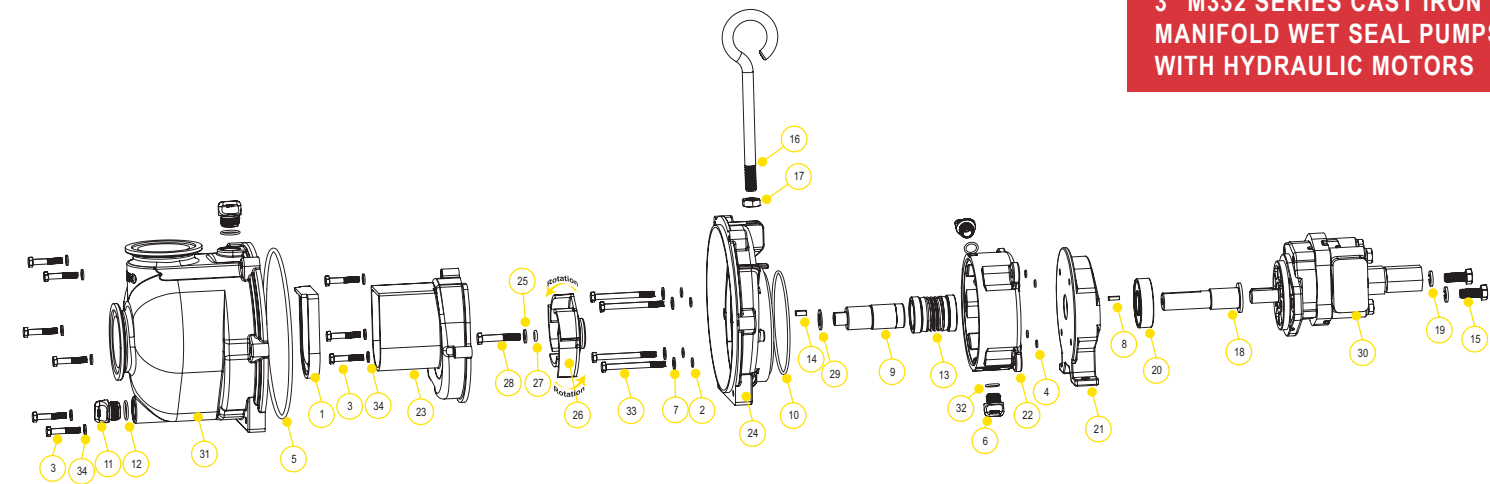
M332 SERIES CAST IRON MANIFOLD WET SEAL PUMPS W/O HYDRAULIC MOTOR				
PART NO	DESCRIPTION	HP	QTY	SKID QTY
M332PIHW	3" MANIFOLD CAST IRON WET SEAL PUMP W/ HYDRAULIC MOTOR	21	1	8
M332PIHAW	3" MANIFOLD CI WET SEAL PUMP WITHOUT HYDRAULIC MOTOR	N/A	1	1

### SPOOL VALVE ASSEMBLY DIAGRAM



### HYDRAULIC MOTOR SPOOL VALVE

PART NO	DESCRIPTION	HP	QTY
HSV1000	HYDRAULIC MOTOR SPOOL VALVE	N/A	1



### REPLACEMENT PARTS M332 SERIES CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	12705	CHECK VALVE	1
2	12709	O-RING	4
3	12715A	SS BRACKET SCREWS-	9
4	12717	O-RING FOR SCREW HEAD	4
5	12719A	BODY O-RING	1
6	12777	1/2" PLUG	2
7	12901	SS REAR BRACKET WASHER	4
8	12902A	IMPELLER KEY	1
9	13055	ADAPTER SHAFT	1
10	13719	O-RING	1
11	13777	3/4" PLUG	2
12	13778	O-RING	2
13	15035E	EPDM MECHANICAL SEAL ASSEMBLY	1
14	16901	1/2" SQ. 3/4" KEY STOCK	1
15	N/A	BOLT	2
16	18033	HANDLE	1
17	18034	5/8" SS JAM NUT	1
18	18055H	HYDRAULIC MOTOR ADAPTER SHAFT	1
19	N/A	1/2" SPLIT LOCK WASHER	2
20	18502	SKF 63306-2RS1/C3 BEARING	1
21	19001H	RESERVOIR BACKING PLATE	1
22	19201W	WET SEAL RESERVOIR	1
23	19702	VOLUTE	1
24	19703W	REAR BRACKET	1
25	N/A	3/8" FLAT WASHER	1
26	19772SS	5 VANE IMPELLER	1
27	A204	O-RING	1
28	BF311	3/8" - 16 X 3" HHCS	1
29	CV10175	GASKET	1
30	HY1012	TYRONE® UM16 HYDRAULIC MOTOR	1
31	M19712X	PUMP BODY	1
32	UV15163	PRIME/DRAIN PLUG O-RING	2
33	V10118	5/16" SS LOCK WASHER	4
34	V10117	5/16" X 3 1/2" SS BODY BOLT	9

### HYDRAULIC MOTOR DATA

U.S. GALLONS/REV.	0.0038
CUBIC INCHES/REV.	0.878
LITERS/REV.	0.0144
MAX HYDRAULIC PRESSURE	3000 PSI
MIN HYDRAULIC PRESSURE	600 PSI
INLET PORT	1-1/16-12UN-2B
OUTLET PORT	1-5/16-12UN-2B
MINIMUM GPM REQUIRED	9 GPM 2370 RPM
MAXIMUM GPM REQUIRED	13 GPM 3450 RPM
IDEAL GPM REQUIRED	9 GPM 3600 RPM

### CONNECTION INFORMATION

INLET	"A" PORT
OUTLET	"B" PORT

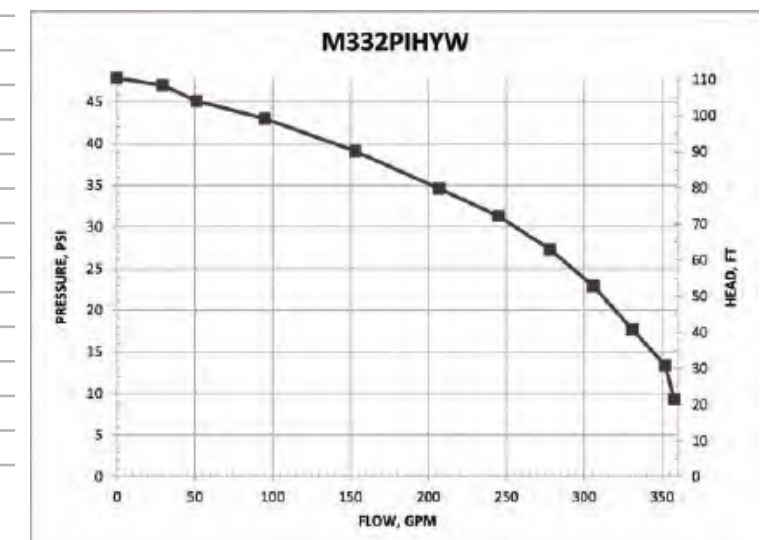
SUPPLIED CHECK VALVE IS TO ENSURE PROPER ROTATION OF THE BANJO PUMP. PLACE CHECK VALVE IN OUTLET PORT (MARKED "B") FOR PROPER RIGHT HAND ROTATION. IT IS RECOMMENDED THAT A MINIMUM 3/4" INLET LINE & A MINIMUM 1" OUTLET LINE BE USED. THE OUTLET PORT MUST BE CONNECTED DIRECTLY BACK TO THE HYDRAULIC FLUID RESERVOIR & NOT TO ANY VALVING, REGULATORS OR FLOW DIVERTERS. THE OUTLET PORT/RETURN LINE BACK PRESSURE MUST NOT EXCEED 250 PSI.

### SPOOL VALVE INFORMATION

REQUIRED OUTLET FLOW	MIN 9 GPM / MAX 13 GPM
REQUIRED SYSTEM PRESSURE	MIN 600 PSI / MAX 3000 PSI



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



## 4" 444 SERIES CAST IRON PUMPS

### FEATURES

- Cast iron construction for rugged dependable service
- Carbon ceramic seal with stainless steel cup and spring with FKM rubber
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Heavy duty slinger seal on motor shaft
- Large weep holes between pump end and engine
- Recommendation for 444POI: use with 10 pound per gallon material or more
- Due to weight and size of pumps, Banjo ships these by truck only.
- Engine warranty service available at authorized dealers



### 444 SERIES CAST IRON PUMPS W/GAS ENGINES

PART NO	DESCRIPTION	HP	QTY	SKID QTY
444PIH24	4" CAST IRON PUMP W/24 HP HONDA® ENGINE	24	1	1



### 444 SERIES CAST IRON PUMP BEARING PEDESTAL

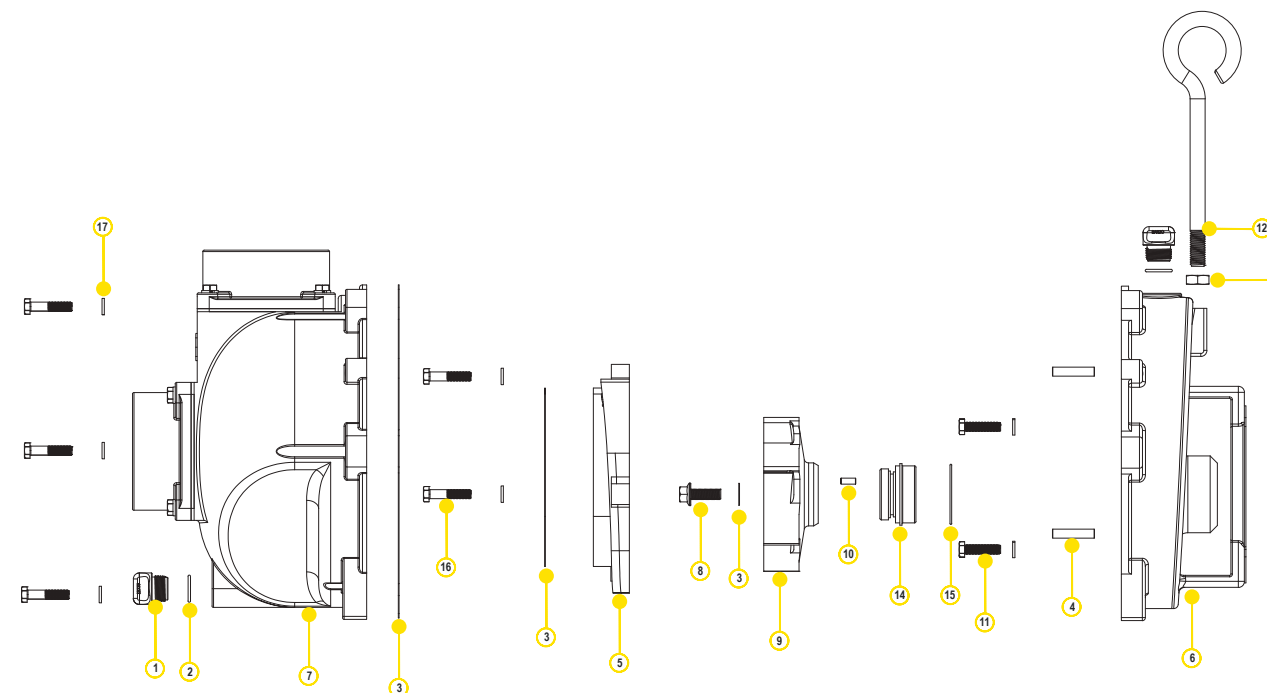
PART NO	DESCRIPTION	HP	QTY	SKID QTY
444PBI	4" CAST IRON PUMP W/BEARING PEDESTAL W/ 1" SHAFT & 5 VANE IMPELLER	N/A	1	6



### 444 SERIES CAST IRON PUMP ONLYS

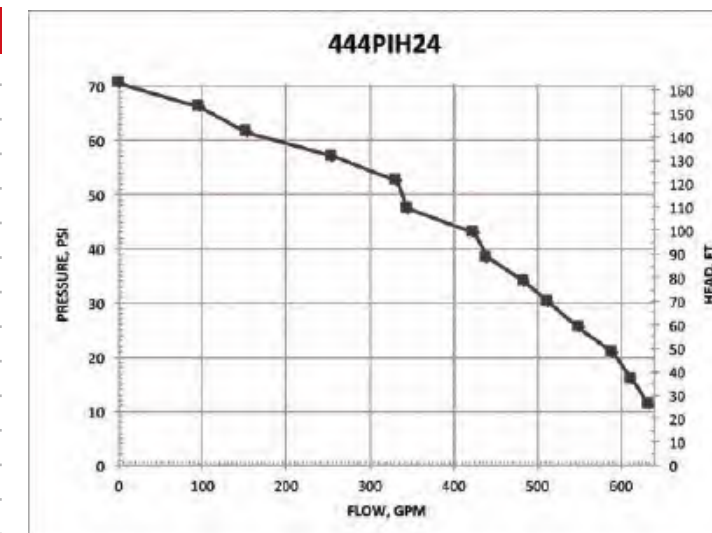
PART NO	DESCRIPTION	HP	QTY	SKID QTY
444POI	4" CAST IRON PUMP ONLY W/ 1 1/2" X 3 1/2" SHAFT & 6 VANE IMPELLER UNASSEMBLED	N/A	1	6

## 4" 444 SERIES CAST IRON PUMPS



### REPLACEMENT PARTS 4" CAST IRON PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	13777	3/4" PLUG	2
2	13778	O-RING	2
3	16019	GASKET	1
4	N/A	3/8" X 1 1/4" DOWELL PIN	2
5	16702	VOLUTE	1
6	16707	REAR BRACKET	1
7	16712	BODY	1
8	16765	IMPELLER BOLT	1
9	16775	4" IMPELLER	1
10	16901	1/4" SQ. 3/4" KEY STOCK	1
11	18027	3/8" - 16 X 1.50" HHCS	4
12	18033	HANDLE	1
13	18034	5/8" SS JAM NUT	1
14	18435	MECHANICAL SEAL	1
15	V10264	O-RING	1
16	N/A	3/8"-16 X 1 1/4" HHCS	9
17	V20018	3/8" SS LOCK WASHER	13



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS

Note: Please see repair parts list for 444PBI on our website.

## 2" STAINLESS STEEL PUMPS

### FEATURES

- ALL FKM SEALS
- 316 stainless steel housing and wettable internal components including impeller, sleeve, wear plate and fasteners
- Carbon ceramic seal with 316 stainless steel cup and spring with FKM elastomer
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Pump only packs complete and ready for attachment to gasoline engine
- Pedestal pump for long coupling to electric motor
- Recommendation for 5/8" shaft: 56C frame size, 3 HP, 3450 RPM & 5" max impeller for close coupling to electric motors
- Recommendation for 7/8" shaft: 145TC frame size, 3 HP, 3450 RPM & 5" max impeller for close coupling to electric motors
- Engine warranty service available at authorized dealers
- Due to weight and size of pumps, Banjo ships these by truck only.



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



2" STAINLESS STEEL PUMPS W/GAS ENGINES					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
200PH5-SS	2" SS PUMP W/5.5 HP HONDA® ENGINE W/ PULL ROPE ONLY	5.5	1	8	



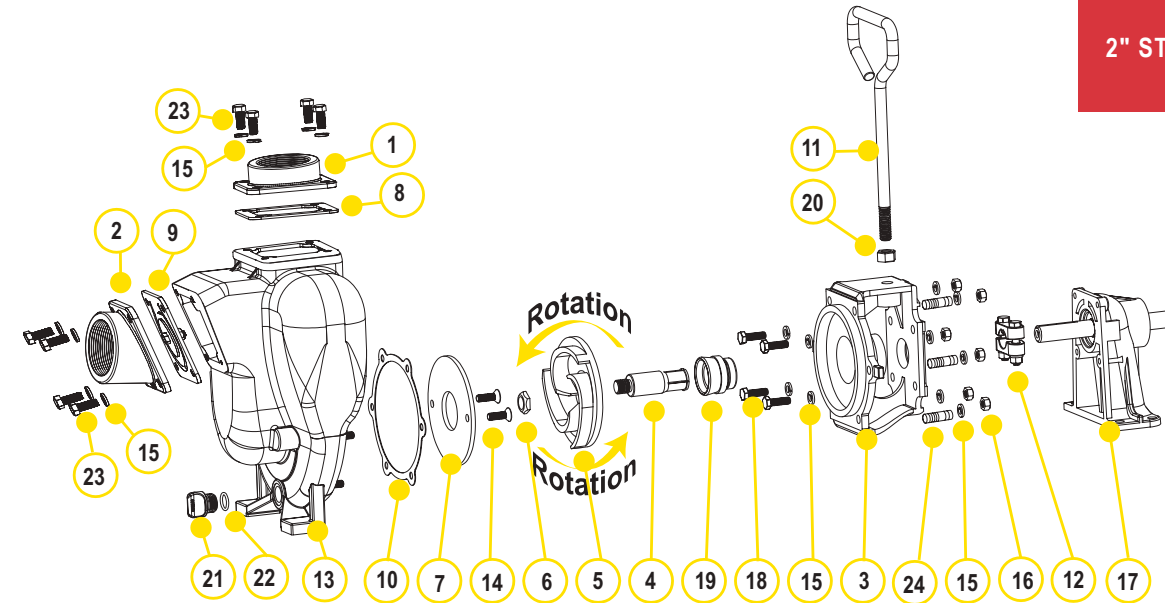
2" STAINLESS STEEL PUMP ONLY					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
200PO-SS	2" SS PUMP ONLY W/ 3/4" SHAFT SLEEVE	N/A	1	27	



2" STAINLESS STEEL C-FACE PUMPS					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
200POSSCF5/8	2" SS C-FACE PUMP W/ 5/8" SHAFT SLEEVE	N/A	1	18	



2" STAINLESS STEEL BEARING PEDESTAL					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
200PB-SS	2" SS BEARING PEDESTAL W/ 3/4" STRAIGHT SHAFT*	N/A	1	18	



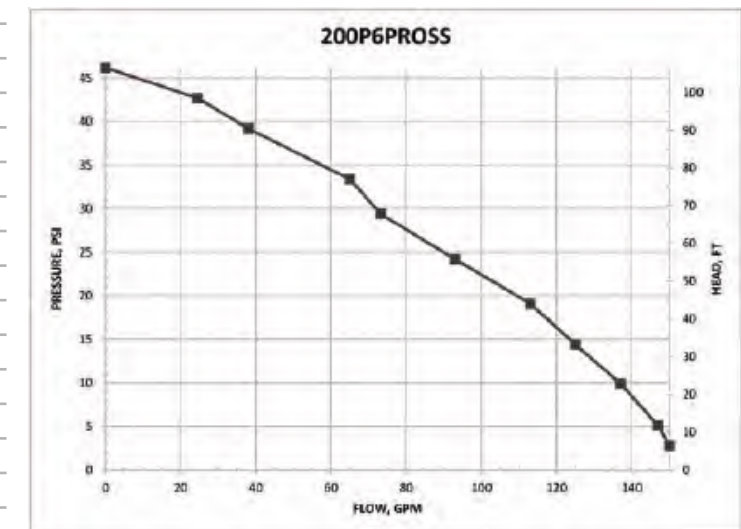
## 2" STAINLESS STEEL PUMPS

### REPLACEMENT PARTS 2" STAINLESS STEEL PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	17000SS	2" NPT SS OUTLET FLANGE	1
2	17002SS	2" NPT SS INLET FLANGE	1
3	17004SS	SS ADAPTER FOR GAS ENGINE	1
3	17046SS	CF ADAPTER FOR ELECTRIC MOTOR	1
4	17005	5/8" SS SLEEVE DRIVE	1
4	17006	3/4" SS SLEEVE DRIVE	1
4	17007	7/8" SS SLEEVE DRIVE	1
5	17008SS	SS IMPELLER	1
5	N/A	4.1" SS IMPELLER	1
5	N/A	4.6" SS IMPELLER	1
6	17009B	5/8" IMPELLER NUT	1
7	17011SS	SS WEAR PLATE	1
8	17014	FKM OUTLET GASKET	1
9	17017	FKM CHECK VALVE ASSEMBLY GASKET	1
10	17018	ADAPTER GASKET	1
11	15022	HANDLE	1
12	17023	5/8" CLAMP, 3/4" SS SHAFT (OLD STYLE)	1
12	17123	5/8" CLAMP, 3/4" SS SHAFT (KEYED CLAMP)	1
12	17024	7/8" CLAMP, 3/4" SS SHAFT	1
13	17026SS	SS PUMP HOUSING	1
14	17130SS	5/16-18 X 1.00" FHSCS, 316 SS	2
15	V10118	5/16" LOCK WASHER	18
16	V10119	5/16" -18 SS HEX NUT	6
17	12882A	BEARING PEDESTAL ASSEMBLY W/ 3/4" SHAFT	1
18	17040	BOLT	4
19	17035SS	FKM SS SEAL ASSEMBLY	1
20	17010	1/2" - 24 X 1" HHCS	1
21	12777SS	1/2" STAINLESS STEEL PLUG	1
22	UV15163V	O-RING FKM	1
23	17019	5/16" - 18 X 3/4" CAP SCREW	8
24	17042	STUD	6
KIT	17100SS	PUMP REPAIR KIT(CONSISTS OF 4,5,7,10,14,19)	1

### KITS 2" SS PUMPS

PART NO	FKM REPAIR KIT NO
200PH5-SS	17100SS
200PB-SS	17100SS
200PO-SS	17100SS



## 2" STAINLESS STEEL PUMPS WITH ELECTRIC MOTORS

### FEATURES

- Stainless steel construction for rugged dependable service
- Stainless steel shaft sleeve to protect engine shaft
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Due to weight and size of pumps, Banjo ships these by truck only.
- Motor warranty service available at authorized dealers
- Motor features include pressure cast aluminum end plates with ribbed design for rigidity, heavy gauge steel frame, 230 volt, with inverter spike resistance magnet wire



### 2" STAINLESS STEEL PUMPS W/ELECTRIC MOTORS

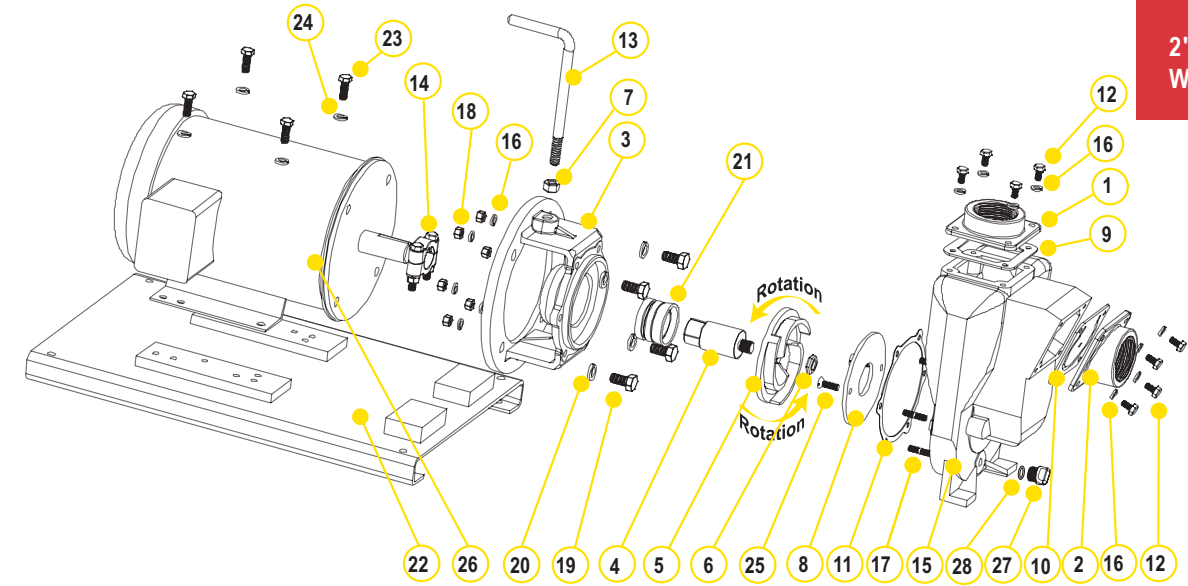
PART NO	DESCRIPTION	HP	QTY	SKID QTY
234PE5SS	2" STAINLESS STEEL PUMP W/5 HP THREE PHASE ELECTRIC MOTOR	5	1	3



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



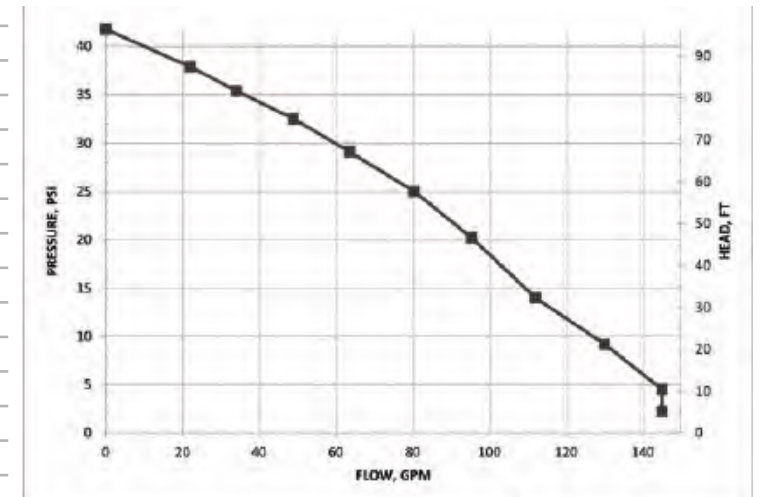
WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



## 2" STAINLESS STEEL PUMPS WITH ELECTRIC MOTORS

### REPLACEMENT PARTS 2" STAINLESS STEEL PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	17000SS	2" NPT OUTLET FLANGE	1
2	17002SS	2" NPT INLET FLANGE	1
3	17446SS	C-FACE ADAPTER	1
4	17406	IMPELLER SHAFT	1
5	17408SS	IMPELLER	1
6	17009B	5/8" IMPELLER NUT	1
7	17010	1/2" HEX NUT	1
8	17011SS	WEAR PLATE	1
9	17014	FKM OUTLET GASKET	1
10	17017	FKM GASKET & CHECK VALVE	1
11	17018	ADAPTER GASKET	1
12	17019	BOLT	8
13	15022	HANDLE	1
14	18129	CLAMP ASSEMBLY	1
15	17026SS	PUMP HOUSING	1
16	V10118	5/16" LOCK WASHER	20
17	17042	HOUSING STUD	6
18	V10119	HEX NUT	8
19	N/A	BOLT	4
20	N/A	WASHER	4
21	18025SS	SEAL ASSEMBLY	1
22	17701	BASE PLATE ASSEMBLY	1
23	17704	BOLT	4
24	V20018	3/8" LOCK WASHER	4
25	17130SS	5/16-18 X 1.00" FHSCS, 316 SS	2
26	N/A	ELECTRIC MOTOR	1
27	12777SS	1/2" STAINLESS STEEL PLUG	1
28	UV15163V	FKM O-RING	1



# CENTRIFUGAL PUMPS

# CENTRIFUGAL PUMPS

## 2" STAINLESS STEEL PUMPS WITH HYDRAULIC MOTORS

### FEATURES

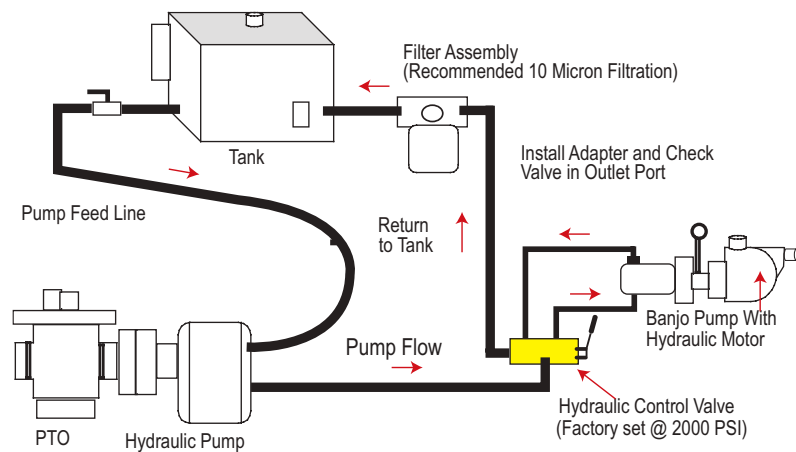
- Cast iron construction for rugged dependable service
- Stainless steel hardware
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Hydraulic fluid capacity is minimum 6 gallons and maximum 10 gallons
- Open or closed system
- 12 HP motor
- Recommendation to use the motor spool control valve or a suitable equivalent. The lack of such a valve in this circuit may cause failure to the hydraulic motor and will void warranty.



### 2" STAINLESS STEEL PUMPS W/ HYDRAULIC MOTORS

PART NO	DESCRIPTION	HP	QTY	SKID QTY
200PHYSS	2" STAINLESS STEEL PUMP W/ 12 HP HYDRAULIC MOTOR	12	1	18

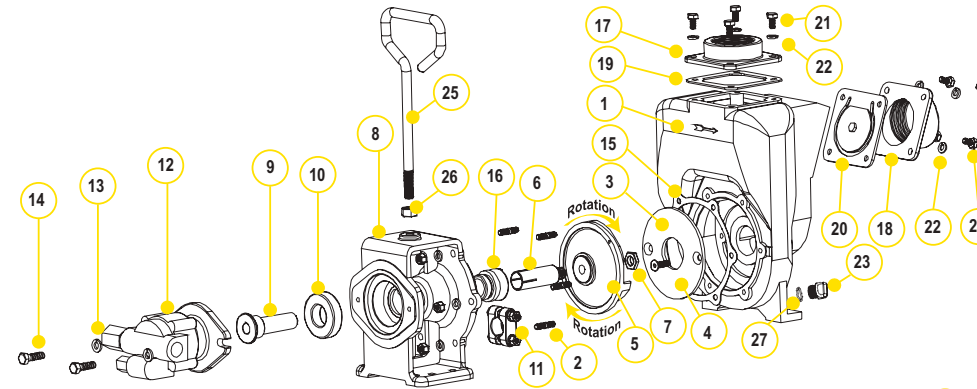
### SPOOL VALVE ASSEMBLY DIAGRAM



### HYDRAULIC MOTOR SPOOL VALVE

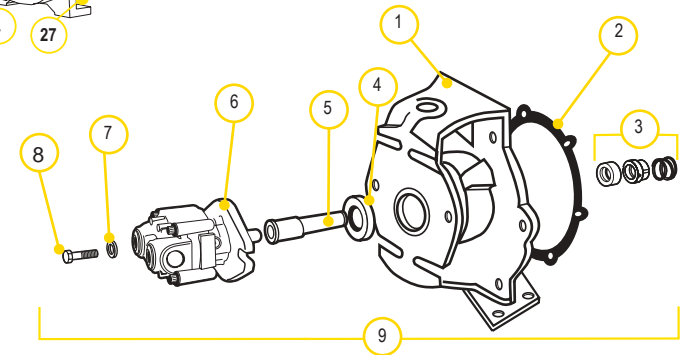
PART NO	DESCRIPTION	HP	QTY
HSV1000	HYDRAULIC MOTOR SPOOL VALVE	N/A	1

## 2" STAINLESS STEEL PUMPS WITH HYDRAULIC MOTORS



### REPLACEMENT PARTS 2" STAINLESS STEEL PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	17026SS	PUMP HOUSING	1
2	17042	PUMP HOUSING STUD	6
3	17011SS	WEAR PLATE	1
4	17130SS	5/16-18 X 1.00" FHSCS, 316 SS	2
5	17008SS	5" IMPELLER	1
6	17007	7/8" SLEEVE DRIVE FOR ELECTRIC MOTOR	1
7	17009B	5/8" IMPELLER NUT	1
8	17049ASS	HYDRAULIC ADAPTER	1
9	17055A	HYDRAULIC ADAPTER SHAFT	1
10	17056	SKF 6206-2RS1 BEARING	1
11	17024	7/8" CLAMP, NO KEY	1
12	HY1013	MGG20025BC1D3 HYDRAULIC MOTOR ASSEMBLY	1
13	V20018	3/8" LOCK WASHER	2
14	18010SS	3/8" - 16 X 1.25" HHC	2
15	17018	GASKET ADAPTER	1
16	17035SS	FKM SEAL ASSEMBLY	1
17	17000SS	2" NPT OUTLET FLANGE	1
18	17002SS	2" NPT INLET FLANGE	1
19	17014	FKM GASKET	1
20	17017	GASKET CHECK VALVE ASSEMBLY	1
21	17019	5/16"-18 X 0.75" CAP SCREW	8
22	V10118	5/16" SPLIT LOCK WASHER	14
23	12777SS	1/2" STAINLESS STEEL PLUG	1
24	V10119	5/16"-18 HEX NUT	6
25	15022	HANDLE	1
26	17010	1/2" HEX NUT -13UNF-RH	1
27	UV15163V	O-RING FKM	1



### HYDRAULIC MOTOR DATA

U.S. GALLONS/REV.	0.0025
CUBIC INCHES/REV.	0.580
LITERS/REV.	0.0097
MAX HYDRAULIC PRESSURE	2000 PSI
MIN HYDRAULIC PRESSURE	200 PSI
INLET PORT	SAE 10 (7/8-14 UNF-2B)
OUTLET PORT	SAE 10 (7/8-14 UNF-2B)
MINIMUM GPM REQUIRED	6 GPM 2400 RPM
MAXIMUM GPM REQUIRED	10 GPM 4000 RPM
IDEAL GPM REQUIRED	9 GPM 3600 RPM

### CONNECTION INFORMATION

INLET	"A" PORT
OUTLET	"B" PORT

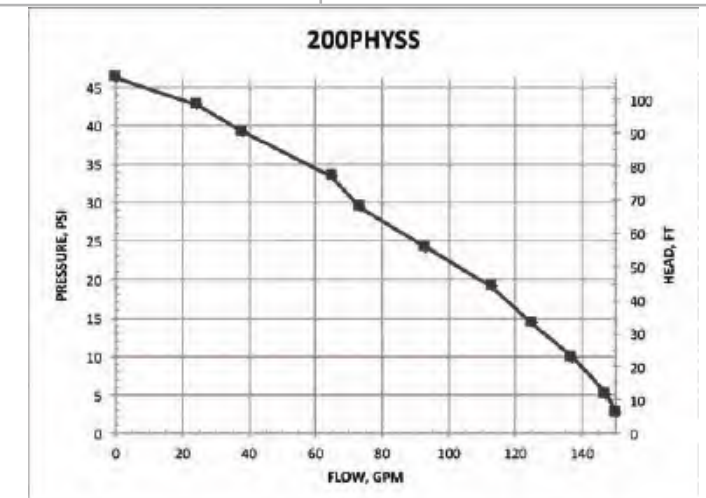
SUPPLIED CHECK VALVE IS TO ENSURE PROPER ROTATION OF THE BANJO PUMP. PLACE CHECK VALVE IN OUTLET PORT (MARKED "B") FOR PROPER RIGHT HAND ROTATION.

### SPOOL VALVE INFORMATION

REQUIRED OUTLET FLOW	MIN 6 GPM / MAX 10 GPM
REQUIRED SYSTEM PRESSURE	MIN 500 PSI / MAX 2000 PSI

### REPLACEMENT PARTS 2" HYDRAULIC ADAPTER

ITEM	PART NO	DESCRIPTION	QTY
1	17049ASS	SS HYDRAULIC MOTOR ADAPTER	1
2	17018	GASKET ADAPTER	1
3	17035SS	SEAL ASSEMBLY	1
N/S	17007	7/8" SS SHAFT SLEEVE	1
4	17056	SKF 6206-2RS1 BEARING	1
5	17055A	HYDRAULIC ADAPTER SHAFT	1
6	HY1013	GRESEN® HYDRAULIC MOTOR	1
7	V20018	LOCK WASHER	2
8	18010SS	BOLT	2



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS

## 3" STAINLESS STEEL PUMPS

### FEATURES

- 316 stainless steel housing and wettable internal components including impeller, sleeve, wear plate and fasteners
- Carbon ceramic seal with 316 stainless steel cup and spring with FKM elastomer
- Replaceable inlet and outlet flanges
- Dynamically balanced impeller
- Pump only packs complete and ready for attachment to gasoline engine
- Pedestal pump for long coupling to electric motor
- Recommendation for 5/8" shaft: 56C frame size, 3 HP, 3450 RPM & 5" max impeller for close coupling to electric motors
- Recommendation for 7/8" shaft: 145TC frame size, 3 HP, 3450 RPM & 5" max impeller for close coupling to electric motors
- Engine warranty service available at authorized dealers
- Due to weight and size of pumps, Banjo ships these by truck only.



3" STAINLESS STEEL PUMPS W/GAS ENGINES					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
300PH13SS	3" SS PUMP W/13 HP HONDA® ENGINE W/ELECTRIC START & PULL ROPE	13	1	6	



3" STAINLESS STEEL PUMP ONLY					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
300PO-SS	3" SS PUMP ONLY W/ 1" SHAFT SLEEVE	N/A	1	8	



3" STAINLESS STEEL BEARING PEDESTAL					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
300PB-SS	3" SS BEARING PEDESTAL W/ 1" STRAIGHT SHAFT	N/A	1	8	



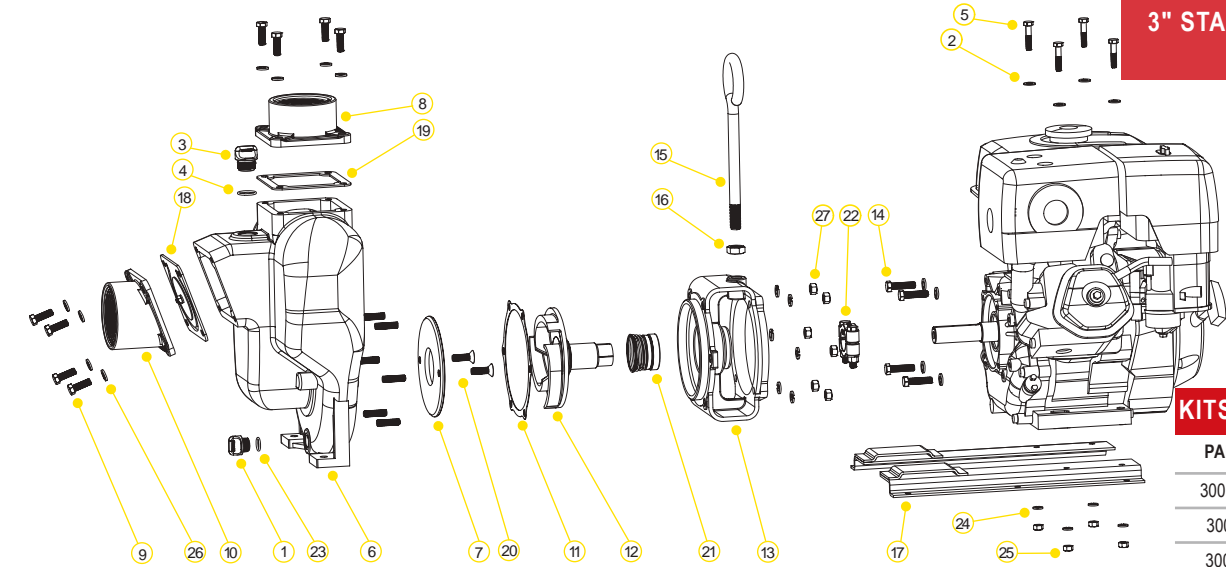
3" STAINLESS STEEL PUMPS W/ HYDRAULIC MOTOR					
PART NO	DESCRIPTION	HP	QTY	SKID QTY	
300PHYSS	3" STAINLESS STEEL PUMP W/ 21 HP HYDRAULIC MOTOR	12	1	8	



WARNING! DO NOT RUN PUMP DRY, RESTRICT OR REDUCE PORT SIZES OR DEAD HEAD PUMP



WARNING! DO NOT USE WITH FLAMMABLE LIQUIDS



## 3" STAINLESS STEEL PUMPS

### KITS 3" SS STEEL PUMPS

PART NO	FKM REPAIR KIT NO
300PH13SS	18100SS
300PB-SS	18100SS
300PO-SS	18100SS

### REPLACEMENT PARTS 3" STAINLESS STEEL PUMPS

ITEM	PART NO	DESCRIPTION	QTY
1	12777SS	1/2" STAINLESS STEEL PLUG	1
2	12901	SS REAR BRACKET WASHER	4
3	13777SS	3/4" STAINLESS STEEL PLUG	1
4	13778V	O-RING FKM	1
5	N/A	5/16" - 18 X 1 3/4" ZINC PLATED	4
6	18001SS	SS PUMP HOUSING	1
7	18004SS	SS WEAR PLATE	1
8	N/A	3" NPT OUTLET FLANGE	1
9	18010SS	3/8" - 16 X 1 1/4" SS CAP SCREW HXHD	8
10	N/A	3" NPT INLET FLANGE	1
11	18021	ADAPTER GASKET	1
12	18023SS	1" SS IMPELLER & DRIVE SHAFT FOR GAS ENGINE	1
12	18023-1.125SS	1 1/8" SS IMPELLER & DRIVE SHAFT FOR ELECTRIC MOTOR (300PO-SSCF)	1
13	18026SS	ADAPTER FOR GAS ENGINE	1
13	18049SS	ADAPTER FOR HYDRAULIC MOTOR (300PHYSS)	1
14	18027	3/8" - 16 X 1 1/2" HHCS	4
15	18033	HANDLE	1
16	18034	5/8" SS JAM NUT	1
17	18035	Z RAILS	1
18	18042	FKM GASKET CHECKVALVE ASSEMBLY	1
19	18044	FKM OUTLET GASKET	1
20	18106SS	WEAR PLATE FLAT HEAD SCREW	2
21	18025SS	FKM SEAL ASSEMBLY	1
22	18129	CLAMP ASSEMBLY	1
23	UV15163V	O-RING FKM	1
24	V10118	5/16" LOCK WASHER	4
25	V10119	5/16" - 18 SS HEX NUT	4
26	V20018	3/8" SS LOCK WASHER	18
27	V20019	3/8" 16 SS HEX NUT	6
KIT	18100SS	REPAIR KIT(CONSIST OF ITEMS 7,11,12, 20 & 21)	1

Note: Please see repair parts list for 300PHYSS on our website.

### HYDRAULIC MOTOR DATA

U.S. GALLONS/REV.	0.0038
CUBIC INCHES/REV.	0.878
LITERS/REV.	0.0144
MAX HYDRAULIC PRESSURE	3000 PSI
MIN HYDRAULIC PRESSURE	600 PSI
INLET PORT	1-1/16-12UN-2B
OUTLET PORT	1-5/16-12UN-2B
MINIMUM GPM REQUIRED	9 GPM 2370 RPM
MAXIMUM GPM REQUIRED	13 GPM 3450 RPM
IDEAL GPM REQUIRED	9 GPM 3600 RPM

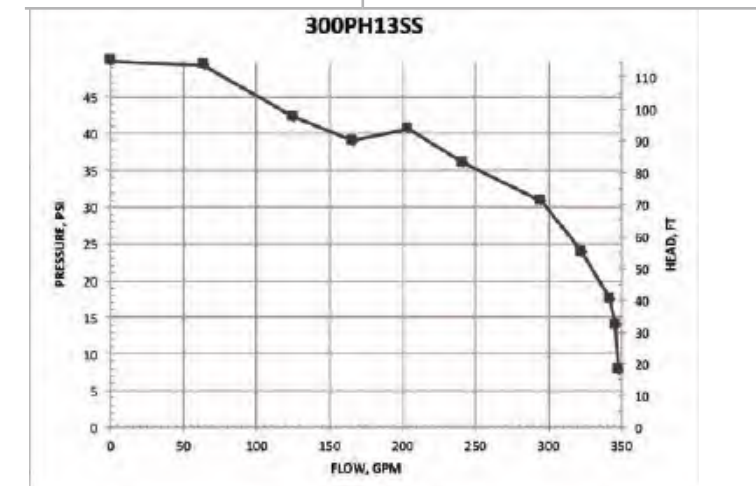
### CONNECTION INFORMATION

INLET	"A" PORT
OUTLET	"B" PORT

SUPPLIED CHECK VALVE IS TO ENSURE PROPER ROTATION OF THE BANJO PUMP. PLACE CHECK VALVE IN OUTLET PORT (MARKED "B") FOR PROPER RIGHT HAND ROTATION. IT IS RECOMMENDED THAT A MINIMUM 3/4" INLET LINE & A MINIMUM 1" OUTLET LINE BE USED. THE OUTLET PORT MUST BE CONNECTED DIRECTLY BACK TO THE HYDRAULIC FLUID RESERVOIR & NOT TO ANY VALVING, REGULATORS OR FLOW DIVERTERS. THE OUTLET PORT/RETURN LINE BACK PRESSURE MUST NOT EXCEED 250 PSI.

### SPOOL VALVE INFORMATION

REQUIRED OUTLET FLOW	MIN 9 GPM / MAX 13 GPM
REQUIRED SYSTEM PRESSURE	MIN 600 PSI / MAX 3000 PSI





TANK WALL GUIDE FOR BANJO TANK FITTINGS		
PART NO	DESCRIPTION	MAX TANK WALL THICKNESS
BF075	¾" BLIND HOLE TANK FLANGE	.250
BF075D	¾" X 1" BOTTOM DRAIN FLANGE EPDM THREAD	.250
BF100	1" BLIND HOLE BOLTED TANK FLANGE	.250
BF100BD	1" X 1" BOTTOM DRAIN FLANGE EPDM THREAD	.250
BF150	1½" BOLTED TANK FLANGE	.280
BF150BD	1½" X 2" BOTTOM DRAIN FLANGE EPDM THREAD	.220
BF200	2" BLIND HOLE BOLTED TANK FLANGE	.280
BF200BD	2" X 2" BOTTOM DRAIN FLANGE EPDM THREAD	.220
BF200V	2" X 2" THREADED FLANGE W/FKM GASKET	.280
BF220	2" FULL PORT BOLTED TANK FLANGE	.250
BF220BD	2" X 2" FULL PORT BOTTOM DRAIN FLANGE EPDM THREAD	.250
BF300	3" X 3" BOLTED TANK FLANGE	.500
BF300BD	3" X 3" BOTTOM DRAIN FLANGE EPDM THREAD	.500
MBF100	1" BOLTED MANIFOLD TANK FLANGE WITH 2¼" BOLTS	.280
MBF100BD	1" BOTTOM DRAIN MANIFOLD BOLTED TANK FLANGE EPDM THREAD	.280
MBF200	2" BOLTED MANIFOLD TANK FLANGE WITH 2½" BOLTS	.210
MBF200BD	2" BOTTOM DRAIN MANIFOLD TANK FLANGE	.500
MBF220	2" FULL PORT MANIFOLD FLANGE WITH 2½" BOLTS	.320
MBF220BD	2" FULL PORT MANIFOLD BOTTOM DRAIN FLANGE EPDM THREAD	.550
MBF300	3" BOLTED MANIFOLD TANK FLANGE EPDM THREAD	.500
MBF300BD	3" BOTTOM DRAIN MANIFOLD TANK FLANGE EPDM THREAD	.500

BRIGGS & STRATTON ENGINES						
BANJO PART NUMBER	E3	E6.5PRO	E6.5PROE	E11PROE	E11PRO100E	E14VAN
MANUFACTURER	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton	Vanguard
MODEL NUMBER	083132-1110-F1	130G32-0122-F1	130G37-0183-F1	19N137-0076-F1	2123320140B1G1016	25V337-0012-F1
RATED HP @ 3600 RPM	3.5	6.5	6.5	11	11	14
RATED TORQUE @ 2800 RPM	4.9 ft lbs	9 ft lbs	9 ft lbs	15.5 ft lbs	15.5 ft lbs	20.8 ft lbs
SHAFT SIZE	¾"	¾"	¾"	¾"	1"	1"
KEYWAY SIZE	3/16"	3/16"	3/16"	3/16"	1/4"	1/4"
SHAFT ID THREAD	5/16"-24 UNF 2B	5/16"-24 UNF 2B	5/16"-24 UNF 2B	5/16"-24 UNF 2B	3/8"-24 UNF 2B	3/8"-24 UNF 2B
ENGINE OIL REQUIRED	Synthetic 5W30	40F+30W, 30F-5W30	40F+30W,30F-5W30	Synthetic 10W30	Synthetic 10W30	Synthetic 5W30 suggested; see manual
ENGINE OIL CAPACITY	21 oz	20 oz	20 oz	28 oz	28 oz	32 oz
FUEL REQUIRED	87 (10% ethanol max)	87 (10% ethanol max)	87 (10% ethanol max)	87 (10% ethanol max)	87 (10% ethanol max)	87 (10% ethanol max)
FUEL TANK CAPACITY	1/2 gallon	1 gallon	.825 gallon	1 gallon	1 gallon	1 1/2 gallon
OIL ALERT	N	Y	Y	Y	Y	Y
ELECTRIC START	N	N	Y	Y	Y	Y
OVER HEAD VALVE	Y	Y	Y	Y	Y	Y

HONDA ENGINES						
BANJO PART NUMBER	E5H	E5HE	E6H	E8H	E11H	E13H
MANUFACTURER	HONDA	HONDA	HONDA	HONDA	HONDA	HONDA
MODEL NUMBER	GX160	GX160	GX200	GX240	GX340	GX390
RATED HP @ 3600 RPM	5.4 HP	5.4 HP	6.4 HP	8 HP	11 HP	13 HP
RATED TORQUE @ 2500 RPM	8 ft lbs	8 ft lbs	7.76 ft lbs	12.3 ft lbs	17.4 ft lbs	19.5 ft lbs
SHAFT SIZE	¾"	¾"	¾"	1"	1"	1"
KEYWAY SIZE	3/16"	3/16"	3/16"	1/4"	1/4"	1/4"
SHAFT ID THREAD	5/16"-24 UNF 2B	5/16"-24 UNF 2B	5/16"-24 UNF 2B	3/8"-24 UNF 2B	3/8"-24 UNF 2B	3/8"-24 UNF 2B
ENGINE OIL REQUIRED	10W30	10W30	10W30	10W30	10W30	10W30
ENGINE OIL CAPACITY	.63 QT	.63 QT	.63 QT	1.16 QT	1.16 QT	1.16 QT
FUEL REQUIRED	86 (10% ETHANOL MAX)	86 (10% ETHANOL MAX)	86 (10% ETHANOL MAX)	86 (10% ETHANOL MAX)	86 (10% ETHANOL MAX)	86 (10% ETHANOL MAX)
FUEL TANK CAPACITY	.95 GALLON	.95 GALLON	.95 GALLON	1.59 GALLON	1.72 GALLON	1.72 GALLON
OIL ALERT	Y	Y	Y	Y	Y	Y
ELECTRIC START	N	Y	N	Y	Y	Y
OVER HEAD VALVE	Y	Y	Y	Y	Y	Y

HYDRAULIC MOTORS				
BANJO PART NUMBER	HY1012	HY1013	HY11131	HY11141A REV 01
US GALLONS / REVOLUTION	0.0038	0.0025	0.0030	0.0029
CUBIC INCHES / REVOLUTION	0.878	0.58	0.7	0.671
LITERS / REVOLUTION	0.0144	0.0097	0.0115	0.0110
MAX HYDRAULIC PRESSURE	3000 PSI	2000 PSI	1500 PSI	3045 PSI
MIN HYDRAULIC PRESSURE	600 PSI	200 PSI		10 PSIA
INLET PORT	SAE 12 (1 1/16-12 UN)	SAE 10 (7/8-14 UNF)	SAE 10 (7/8-14 UNF)	SAE 10 (7/8-14 UNF)
OUTLET PORT	SAE 16 (1 5/16-12 UN)	SAE 10 (7/8-14 UNF)	SAE 10 (7/8-14 UNF)	SAE 12 (1 1/16-12 UN)
MINIMUM GPM REQUIRED	9.1 GPM / 2400 RPM	6 GPM / 2400 RPM	7.3 GPM / 2400 RPM	7 GPM / 2400 RPM
MAXIMUM GPM REQUIRED	15.2 GPM / 4000 RPM	10 GPM / 4000 RPM	12.1 GPM / 4000 RPM	11.6 GPM / 4000 RPM
IDEAL GPM REQUIRED	13.7 GPM / 3600 RPM	9 GPM / 3600 RPM	10.9 GPM / 3600 RPM	10.5 GPM / 3600 RPM
INLET PORT	"A" PORT	"A" PORT	"A" PORT	PORTS NOT LABELED
OUTLET PORT	"B" PORT	"B" PORT	"B" PORT	PORTS NOT LABELED
DRAIN PORT	N/A	N/A	N/A	SAE 6 (9/16-18 UNF)
SHAFT SIZE	¾"	9/16"	9/16"	5/8"

SPOOL VALVE INFO		
REQUIRED OUTLET FLOW	MIN 9 GPM / MAX 13 GPM	MIN 6 GPM / MAX 10 GPM
REQUIRED SYSTEM PRESSURE	MIN 600 PSI / MAX 3000 PSI	MIN 600 PSI / MAX 3000 PSI

# REFERENCE

PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
12046	105, 137	0.5	15752	105, 135, 137	0.002	17024	127, 131, 133, 153, 157	0.128
12049	5, 107, 117	1.1	15772	135, 137, 147	1.75	17026	127, 131, 133	21.23
12052	105, 137	N/A	15999	135, 137	0.282	17028	127	0.16
12099	101, 105, 107, 109, 113, 115, 117, 135, 137	0.07	16001	145	4.808	17032	129	0.036
12155	103, 111, 119, 121	1.19	16003	145	5.688	17033	127, 135	3.018
12705	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 135, 137, 147, 149	0.26	16011	145	0.098	17035	127, 131, 133	0.18
12709	103, 111, 119, 121, 147, 149	0.001	16019	145, 151	0.068	17040	127, 153	0.028
12710	101, 105, 107, 109, 113, 115, 117, 135, 137	0.01	16099	145	0.25	17042	127, 131, 153, 155, 157	0.02
12713	101, 105, 107, 109, 113, 115, 117	0.11	16702	145, 151	11	17046	127, 131	7.572
12716	101, 105, 109, 113, 115, 135	0.02	16704	145	41.5	17049A	5, 133	10.738
12717	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 135, 137, 147, 149	0.001	16706	145	0.888	17049ASS	57	10.46
12720	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121	0.03	16707	151	4	17056	133, 157	0.462
12723	923	0.01	16710	145	0.002	17100	127	4
12724	93	0.001	16712	151	58	17123	127, 129, 153	0.384
12725	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 125	0.002	16713	145	0.2	17130	127, 129, 131	0.022
12754	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121	0.002	16733	145	55	17202	129	3.738
12756	105, 137	1.44	16751	145	0.024	17208	129	1.802
12766	103, 111, 121	0.08	16752	145	0.004	17226	129	25.21
12772	101, 03, 105, 107, 109, 111	0.21	16765	145, 151	0.098	17235	129	0.35
12777	51, 89, 93, 101, 103, 105, 107, 111, 119, 121, 125, 127, 129, 131, 133, 139, 141, 143, 147, 149	0.018	16773	145	3.452	17242	129	0.032
12900	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121	0.008	16774	145	2.75	17406	131, 155	0.638
12901	101, 105, 107, 109, 113, 115, 117, 135, 137, 147, 149, 159	0.004	16775	151	4.242	17408	131	2
13034	103, 111, 119, 121, 147	N/A	16901	119, 121, 145, 147, 149, 151	0.01	17446	131	18
13055	119, 147, 149	0.674	16901SS	125	7.48	17701	105, 131, 137, 155	29.5
13702	113, 115, 117, 119, 121	1.479	17000	127, 129, 131, 135	1.528	17704	105, 131, 137, 139, 141, 145, 155	0.046
13712	113, 117, 119	4.018	17001	127	1.472	18001	139, 141, 143	65.65
13719	103, 111, 119, 121, 125, 147, 149	0.012	17002	127, 129, 131	1.888	18004	139, 141, 143	1.628
13765	113, 115, 145	0.05	17003	127	1.926	18008	139, 141, 143	3.802
13766	119, 147	0.084	17004	127	6.19	18009	139, 141, 143	0.036
13771	113, 115, 119	0.204	17005	127, 153	0.376	18012	139, 141, 143	3.906
13772	113, 115, 117, 119, 121	0.223	17006	127, 153	0.25	18013	139, 141, 143	0.53
13777	53, 97, 113, 115, 117, 135, 137, 139, 141, 143, 145, 147, 149, 151	0.025	17007	127, 131, 133, 153, 157	0.216	18021	139, 141, 143, 159	0.012
13778	53, 97, 113, 115, 117, 135, 137, 139, 141, 143, 145, 147, 149, 151	0.002	17008	127, 131, 133	2	18025	139, 141, 143	0.39
13999	113, 115, 117	0.266	17010	127, 129, 131, 133, 135, 137, 143, 153, 155, 157	0.036	18026	139	9.91
15000	135, 137	2.244	17011	127, 129, 131	0.866	18027	145, 151, 159	0.056
15022	127, 129, 131, 133, 135, 137, 153, 155, 157	1.124	17013	127, 129, 131, 135	0.034	18029	125, 139, 143	0.63
15025	145	N/A	17014	153, 155, 157	0.042	18033	139, 141, 143, 145, 147, 149, 151, 159	1.236
15035	119	0.35	17016	127, 129, 131	0.214	18034	139, 141, 143, 145, 147, 149, 151, 159	0.048
15702	135, 137	9.086	17017	127, 129, 131	0.262	18035	139, 159	2.73
15703	135, 137	14.978	17018	127, 129, 131, 133, 153, 155, 157	0.01	18042	159	0.584
15712	135, 137	26.082	17019	127, 129, 131, 133, 153, 155, 157	0.024	18044	159	0.056
15751	105, 113, 115, 135, 137	0.014	17023	127, 153	0.386	18048	139	12.788

# REFERENCE

PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
18049	139, 143	20.516	125A	75, 76	0.1	150A	75, 76	0.18
18055	139, 143	0.834	125B	75, 76	0.3	150A90	79	0.307
18056	14	0.1	125C	75, 76	0.29	150B	75, 76	0.57
18100	139, 143	7.2	125D	75, 76	0.31	150C	75, 76	0.57
18106	139, 141, 143	0.04	125E	75, 76	0.11	150C90	79	0.62
18129	131, 139, 141, 155, 159	0.64	125F	75, 76	0.98	150CAP	75, 76	0.54
18206	141	4.8	12600B	107, 117, 135	14	150D	75, 76	0.59
18218	139, 141, 143	1.436	12702A	101, 103, 105, 107, 109, 111	1.21	150D90	79	0.65
18435	151	1	12703A	101, 105, 107, 109, 113, 115, 117	2.37	150E	75, 76	0.21
18500	139, 141, 143	13	12703AW	119	2.79	150F	75, 76	0.21
18502	139, 141, 143, 149	0.802	12705V	101, 105, 119	0.24	150F90	79	0.267
18504	139	1.928	12707W	103, 111, 121	2.79	150G	49, 72, 78	0.015
18511	145	3.404	12709V	119	0.001	150GV	49, 72, 78	0.3
18512	145	0.036	12710V	101, 105	0.01	150PL	75, 76	0.16
18600	143	35.02	12712A	101, 103, 105, 107	3.25	150POICF5/8-4.1	126	47
18700	99	1.728	12713V	101, 105, 135, 137	0.12	150RING	78	0.026
18702	139, 141	1.794	12715A	101, 107, 109, 113, 115, 117, 135, 137, 147, 149	0.05	15999V	135, 137	0.288
050C	75	0.14	12717V	101, 105, 119	0.01	16704A	145	41.5
050D	75	0.16	12719A	101, 103, 105, 107, 109, 111, 113, 115, 117, 121, 135, 137, 147, 149	0.05	16774A	145	2.931
050E	75	0.05	12719AV	101, 105	0.05	17000SS	153, 155, 157	1.58
050F	75	0.06	12754V	101, 105, 119	0.01	17002SS	153, 155, 157	2.038
075C	75, 76	0.15	12765A	101, 105, 107, 109, 113, 115, 117, 135, 137	0.05	17008-4.1	127	1.534
075CAP	75, 76	0.13	12771A	101, 109	0.22	17008SS	153, 157	2
075D	75, 76	0.15	12775A	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 125	0.01	17009B	127, 129, 131, 133, 153, 155, 157	0.022
075E	75, 76	0.06	12777SS	153, 155, 157, 159	0.14	17011SS	153, 155, 157	0.888
075F	75, 76	0.06	12882A	101, 113, 115, 127, 129, 135, 153	7.6	17026SS	153, 155, 157	32
100125CAP	75, 76	0.27	12883B	127	0.146	17035SD	127	0.13
100125PL	75, 76	0.06	12902A	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 135, 137, 147, 149	0.006	17035SS	153, 157	0.18
100A	75, 76	0.09	12999A	101, 105, 107, 109	0.25	17046SS	153	8.804
100B	75, 76	0.29	12999AV	101, 105, 109	0.32	17055A	133, 157	1.75
100C	75, 76	0.27	13719V	119	0.019	17056E	107, 117	2
100D	75, 76	0.31	13777SS	159	0.205	17100SS	153	3.384
100E	75, 76	0.1	13778V	159	0.002	17130SS	153, 155, 157	0.02
100F	75, 76	0.11	150(200)K	78	0.134	17201A	129	8.736
100G	72, 78	0.2	15000V	135, 137	2.364	17206A	129	0.628
100GV	72, 78	0.02	150125A	75, 76	0.197	17408SS	155	2.106
100RING	78	0.01	150125B	75, 76	0.26	17446SS	155	10.818
12000A	101, 105, 107, 109, 113, 115, 117	0.75	150125C	75, 76	0.568	18001SS	159	57.5
12000AV	101, 105, 109	0.9	150125D	75, 76	0.31	18004SS	159	1.616
12055E	107, 117	0.57	150125E	75, 76	0.16	18010SS	107, 117, 133, 139, 141, 143, 157, 159	0.044
12201W	119	1.46	150125F	75, 76	0.18	18023-1.125SS	139, 159	4.322
12202W	103, 111, 119, 121	1.46	15035E	103, 111, 119, 121, 141, 147, 149	0.386	18023SS	139, 143, 159	4.32

# REFERENCE

PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
18025SD	139, 143	0.32	200P6PROE	100, 101	56.33	222PBI	134, 135	70
18025SS	155, 159	0.25	200P6PROV	100, 101	51	222PI6PRO	134, 135	100
18026SS	159	10.11	200PB	100, 101	15.786	222PIE5	134, 135	180
18055H	149	0.75	200PBI	126	48	222PIE51	134, 135	190
18100SS	159	7.5	200PB-SS	152, 153	52	222PIH5	134, 135	82
18106SS	159	0.04	200PH-5	100, 101	51	222PIH5E	134, 135	110
18200A	141	31.6	200PH-5E	100, 101	56.33	222PIH6	134, 135	110
18202A	141	4.918	200PH5-SS	152, 153	105	222POI	134, 135	60
18203A	141	4.92	200PH-5V	100, 101	48	231MPT	69	0.074
19001H	149	10.7	200PH5W	102	53	234PE5SS	154	168
19201W	147, 149	10	200PH6	100, 101	50.33	234PIE5	130, 131	160
19703W	147, 149	17.006	200PHA	106, 107	25	234PIE51	130	200
19772SS	147, 149	1.81	200PHY	106, 107	21.308	234POI	130	40.51
200150C	77	0.66	200PHYSS	156	52	234PPE5	104, 105	135
200A	77	0.3	200PHYW	106	28	234PPE51	104, 105	145.5
200A90	79	0.461	200PI-3	126	81	234PPE51V	104, 105	145
200B	77	0.64	200PI6PRO	126	81.5	234PPE5V	104, 105	123
200B90	79	0.948	200PIH-5	126	81.5	250CAP	75, 77	0.68
200C	77	0.69	200PIH5E	126	76.07	300A	75, 77	0.48
200C90	79\	0.78	200PIHA	5	40.76	300B	75, 77	1.17
200CAP	69, 77	0.6	200PIHY	132	48	300C	75, 77	1.4
200CAPSH	69, 77	0.52	200PKL	78	0.02	300CAP	75, 77	1.07
200D	77	0.66	200PL	75, 77	0.21	300D	75, 77	1.19
200D90	79	0.88	200PO	100, 101	7.286	300E	75, 77	0.78
200E	77	0.32	200POI	126	52.5	300F	75, 77	0.57
200F	77	0.31	200POICF5/8	126	47	300F200F	78	0.609
200F45	79	0.346	200POICF7/8	126	47	300FF	78	0.644
200F90	79	0.434	200PO-SS	152, 153	47	300G	49, 72, 78	0.04
200FF	78	0.331	200POSSCF5/8	152	47	300GV	49, 72, 78	0.06
200G	49, 72, 78	0.02	200PO-V	100, 101	10	300K	78	0.23
200GV	49, 72, 78	0.03	200SBS	99	0.25	300P	78	0.036
200KL	78	0.18	201B	77	0.71	300P11PRO	112, 113	81
200P	78	0.17	201CAPSH	69	0.566	300P11PROW	118, 119	67
200P6PRO	100, 101	50	201FPT	69	0.04	300PB	112, 113	20
			201PBIW	128	58	300PBI	138	125
			201PIH5W	128	94	300PB-SS	158, 159	99
			201POIW	128	59	300PBW	118	26
			202CAP	9*	0.34	300PH13SS	159, 159	150
			205PB	100, 101	16	300PH13W	118, 119	103
			205PB-V	100, 101	16	300PH-6	112, 113	50
			205POW	102	8.5	300PH6W	118, 119	56
			211FPT	69	0.03	300PHY	116, 117	26

# REFERENCE

PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
300PHYSS	158, 159	140	75GV	49, 78	0.13	BF220BD	71, 160	1.5
300PHYW	116	N/A	75PL	75, 76	0.05	BF220GE	70, 71	0.154
300PIH13	138	176	A204	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 135, 137, 147, 149	0.001	BF220GV	70, 71	0.08
300PIHY	142	140	A204V	101, 105, 119	0.002	BF300	70, 160	2.264
300PL	75, 77	0.43	AF100	74	0.304	BF300BD	71, 160	2.42
300PO	112, 113	12.005	AF100G	74	0.06	BF300GE	70, 71	0.2
300POI	138	106	AF100GV	74	0.06	BF300GFE	71	0.02
300POICF	138	N/A	AF150	74	0.43	BF300GFV	71	0.02
300POICF55	138	N/A	AF150G	74	0.08	BF300GV	70, 71	0.1
300PO-SS	158, 159	115	AF200	74	0.657	CAP038	82	0.03
300POW	118	15.3	AF200G	74	0.17	CAP050	82	0.06
300POW6	118, 119	N/A	AF200GV	74	0.17	CAP075	82	0.052
300SBS	99	0.25	AF300	74	1.175	CAP100	82	0.09
301PBIW	140	135	AF300G	74	0.17	CAP125	82	0.13
301PIH13W	140	181.37	AF300GV	74	0.17	CAP150	82	0.12
301POIW	140	130	AF400	74	1.587	CAP200	82	0.25
303B	75, 77	1.634	AF400G	74	0.45	CAP300	82	0.59
303B200A	77	1.554	AF400GV	74	0.45	CPLG025	81	0.03
303C	75, 77	1.74	AFB200	74	0.698	CPLG038	81	0.026
305PHAW	114	27.07	AFB300	74	1.42	CPLG050	81	0.09
333PBI	144, 145	185	BEM10-100	5, 147	N/A	CPLG075	81	0.11
333PIE15	144, 145	242	BEM101-100	5, 147	145	CPLG100	81	0.13
333PIH13	144, 145	285	BEM15	5	169	CPLG125	81	0.19
333POI	144, 145	90	BEM15-100	5, 125	169	CPLG150	81	0.3
333POICF	5, 144	190	BEM5	5	140	CPLG200	81	0.34
400A	75, 77	1.27	BEM5-182CZ	105, 137	95	CPLG300	81	0.836
400B	75, 77	2.03	BF075	70, 160	0.82	CR025	5, 82	0.04
400C	75, 77	2.39	BF075BD	71	0.88	CR038	5, 82	0.05
400CAP	75, 77	1.44	BF100	70, 160	0.82	CR050	82	0.13
400D	75, 77	2.07	BF100BD	71, 160	0.9	CR075	82	0.35
400E	75, 77	1.786	BF100GE	69, 71	0.07	CR100	82	0.27
400F	75, 77	1.42	BF100GRE	71	0.01	CR125	82	0.726
400G	78	0.06	BF100GRV	71	0.01	CR150	82	0.571
400PL	75, 77	1.11	BF150	70, 160	1.26	CR200	82	0.744
444PIH24	150	345	BF150BD	71, 160	1.32	CV050	19	0.27
444POI	150	120	BF200	70, 160	1.07	CV100	19	0.222
75A1/2	75	0.07	BF200BD	71, 160	1.2	CV100MT	19	0.17
75A1/4	75	0.08	BF200GE	70, 71	0.05	CV100V	5, 19	0.217
75A3/4	75, 76	0.05	BF200GFV	69	0.05	CV10175	103, 111, 119, 121, 147, 149	0.2
75B1/2	75	0.14	BF200GV	70, 71	0.05	CV10175V	119	0.003
75B3/4	75, 76	0.14	BF200V	70, 160	1.07	CV221	19	1
75G	78	0.1	BF220	70, 160	1.45	CV300	19	1.45

PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
CV301	19	1.518	DM200DCF	39	2.75	EL025-90	83	0.016
DF100A	4, 64	0.183	DM200DE	57	3	EL038-90	83	0.04
DF100D	4, 64	N/A	DM200DSS	62	6.9	EL050-90	83	0.07
DB20153M	56, 57	0.158	DM200DSST	62	6.9	EL075-90	83	0.1
DB20290	56, 57	0.004	DM200DT	5, 57	2.75	EL100-45	83	0.14
DB20295	56, 57	0.002	DM200PL	56, 57	0.49	EL100-90	83	0.15
DM100ABSS	60	3.5	DM20153F	56, 57	0.251	EL125-90	83	0.22
DM100ASS	60	3.5	DM20153M	56, 57	0.417	EL150-90	83	0.33
DM100CAP	60	0.19	DM201SS	61, 62	1.158	EL200-90	83	0.434
DM100DBSS	60	3.75	DM20200A	56, 57	0.242	EL300-90	83	1.195
DM100DSS	60	3.75	DM20200D	56, 57	0.254	EVX071	21	3.82
DM100DSSE	60	3.75	DM20294A	56, 57, 61, 62	0.016	EVX100BL	24	4.313
DM100PL	60	0.234	DM20295A	57, 61, 62	0.01	EVX100SL	24	4.313
DM101SS	60	0.346	DM20296	56, 57, 61, 62	0.125	EVX101	21	3.892
DM10294A	60	0.01	DM202SSV	61, 62	1.32	EVX121	21	3.832
DM10295A	60	0.006	DM220A	58	4.3	EVX151	21	5.103
DM10296	60	0.1	DM220ABSS	63	0.43	EVX200BL	24	4.876
DM102SSV	60	0.386	DM220ASS	63	7.8	EVX200SL	24	4.876
DM150A	56	2.64	DM220CAP	58, 63	1	EVX201	22	4.312
DM150AB	56	2.2	DM220D	58	5.482	EVX220BL	24	6.253
DM150ABSS	61	6.3	DM220DBSS	63	7	EVX220SL	24	6.253
DM150AE	56	2.75	DM220DSS	63	9.8	EVX221	22	5.052
DM150ASS	61	6.35	DM221PL	58	0.3079	EVX300	23	9.24
DM150D	56	2.64	DM221SS	63	0.206	EVXR071	21	4.411
DM150DB	56	2.2	DM222SS	63	0.216	EVXR101	21	3.96
DM150DBSS	61	6.9	DM25153M	58	0.457	EVXR151	21	4.45
DM150DE	56	2.82	DM25200	58	0.106	EVXR201	22	5.33
DM150DSS	61	6.9	DM25294	63	0.0416	EVXR221	22	5.92
DM150DSSE	61	6.9	DM25294T	63	0.048	EVXR300	23	9.24
DM200A	57	3.007	DM300ACF	39	7.72	FC100	49	0.25
DM200AB	57	2.2	DM300AFP	59	4.8	FC200	49	0.23
DM200ABSS	62	5.768	DM300CAP	59	2.82	FC220	41, 49	0.25
DM200ACAP	61, 62	1	DM300DCF	39	8.4	FC220B	49	1.364
DM200ACF	39	3.15	DM300DFP	59	8.4	FC220TB	49	0.43
DM200AE	57	2.75	DM300PL	59	0.509	FC300	41, 49	0.34
DM200APL	61, 62	0.49	DM35153F	59	0.463	FC300B	49	1.76
DM200ASS	62	6.2	DM35153M	59	0.659	FC300TB	49	0.52
DM200AT	5, 57	2.2	DM35200	59	1.23	GHFT075A	79	0.06
DM200CAP	56, 57	0.38	DMMT201A	57	2.5	GHFT075D	79	0.17
DM200D	57	2.75	DPCF100	65	0.5	GHFT075G	79	0.025
DM200DB	57	2.2	DPCM100	65	0.25	GHFT075MPT	79	0.04
DM200DBSS	62	6.9	DPCMT100	65	0.27	GHMT075B	79	0.14

PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
GHMT075F	79	0.05	HB100/075-90	84	0.06	HBT050	85	0.03
GHMT075FPT	79	0.04	HB100/125-90	84	0.1	HBT050-038	5, 85	0.02
GHMT075MPT	79	0.04	HB100-075	84	0.06	HBT050-075	85	0.03
GHN075	79	0.6	HB100-075SS	84	0.3	HBT075	85	0.05
H25053	8	0.265	HB100-125	84	0.08	HBT075-050	85	0.04
HB025	84	0.01	HB100-90	84	0.07	HBT075-050SS	83	0.246
HB025/038-90	84	0.01	HB100SS	84	0.3	HBT075-100	85	0.06
HB025/050-90	84	0.022	HB125	84	0.1	HBT100	85	0.08
HB025-038	84	0.012	HB125/100-90	84	0.09	HBT100-075	85	0.06
HB025-038SS	84	0.07	HB125/150-90	84	0.09	HBT100-100	85	0.08
HB025-050	84	0.015	HB125-075	84	0.08	HBT150-100	85	0.218
HB025-050SS	84	0.07	HB125-100	84	0.09	HBT150-150	85	0.235
HB025-90	84	0.01	HB125-150	84	0.1	HBT200	85	0.388
HB025SS	84	0.04	HB125-90	84	0.11	HBT300	85	1.161
HB038	84	0.01	HB125SS	84	0.5	HM038	85	0.03
HB038-025	5, 84	0.02	HB150	84	0.13	HM050	85	0.01
HB038-050	84	0.02	HB150/125-90	84	0.16	HM075	85	0.026
HB038-050SS	84	0.1	HB150-100	84	0.09	HM100	85	0.04
HB038-90	84	0.02	HB150-125	84	0.1	HM125	85	0.07
HB038SS	84	0.09	HB150-200	84	0.19	HM150	85	0.08
HB050	84	0.03	HB150-90	84	0.23	HM200	85	0.22
HB050/038-90	84	0.024	HB150SS	84	0.68	HM300	85	0.763
HB050/075-90	84	0.04	HB200	84	0.2	HSV1000	106, 116, 132, 142, 148, 156	11
HB050-025	84	0.03	HB200/150-90	84	0.22	HV200	40	0.58
HB050-038	84	0.02	HB200-150	84	0.18	HY1001	143	1.5
HB050-058SS	84	0.128	HB200-90	84	0.33	HY1003	107, 117	1.5
HB050-075	84	0.03	HB200SS	84	1.13	HY1012	143, 149, 161	13.2
HB050-075SS	84	0.2	HB300	84	0.703	HY1013	107, 117, 157, 161	4.5
HB050-90	84	0.03	HB300-90	84	1.078	L200B	78	0.64
HB050SS	84	0.13	HB300SS	84	3.55	L200C	78	0.7
HB075	84	0.04	HB400	84	1.64	L200CAP	78	0.62
HB075/050-90	84	0.04	HBB20012590	83	0.25	L200D	78	0.736
HB075/100-90	84	0.05	HBC050075	82	0.028	LEV038	25	0.55
HB075-038	84	0.03	HBEL100-90	83	0.06	LEV038PL	25	0.08
HB075-050	84	0.03	HBEL150/100-90	83	0.197	LEV050	25	0.6
HB075-050SS	84	0.2	HBF075	84	0.06	LS050-20	92	0.35
HB075-058	84	0.038	HBF075-100	84	0.08	LS050-40	92	0.35
HB075-100	84	0.05	HBF075-90	84	0.06	LS050-80	92	0.37
HB075-100SS	84	0.25	HBF100	84	0.09	LS050B/C1	93	0.298
HB075-90	84	0.05	HB100-90	5, 84	0.07	LS075-20	92	0.3
HB075SS	84	0.2	HBT025	5, 85	0.039	LS075-40	92	0.33
HB100	84	0.06	HBT038	85	0.03	LS075-80	92	0.35

PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
LS075B/C1	93	0.28	LS250	51, 91, 95	0.13	LSS330	97	0.368
LS075-G	93	0.004	LS250P	95	0.116	LSS350	97	0.366
LS100-20	92	0.91	LS280	51, 91, 95	0.1	LST075-100	88	0.83
LS100-40	92	0.9	LS300EC	53, 97	0.626	LST075-16	88	0.824
LS100-80	92	0.96	LS304	53, 97	0.598	LST075-30	88	0.84
LS100B/C1	93	0.872	LS308	53, 97	1.106	LST075-50	88	0.84
LS100-C1	93	0.232	LS312	53, 97	4.31	LST075-80	88	0.83
LS100-G	93	0.02	LS320	53, 97	1.03	LST075-H	89	0.516
LS100-GV	93	0.02	LS350	53, 97	0.92	LST075-HB	89	0.738
LS120	51, 93	0.07	LS720	93	0.04	LST100-100	88	0.76
LS125-20	92	0.86	LS740	93	0.04	LST100-16	88	0.78
LS125-40	92	0.84	LS780	93	0.04	LST100-30	88	0.79
LS125-80	92	0.9	LSM300-04	96	8	LST100-50	88	0.81
LS125B/C1	93	0.826	LSM300-08	96	8	LST100-80	88	0.78
LS140	51, 93	0.07	LSM300-12	96	8	LST100-B	51, 89	2.17
LS150-06	94	2.42	LSM300-20	96	8	LST100-G	51, 89	0.02
LS150-12	94	2.42	LSM300-50	96	8	LST100-GV	51, 89	0.02
LS150-120	94	2.5	LSQ150-B/C	5, 90, 91	3.8	LST100-H	89	0.472
LS150-20	94	2.42	LSQ200-06	90	4.17	LST100-HB	89	2.25
LS150-30	94	2.5	LSQ200-20	90	4.17	LST1100	51, 89	0.07
LS150-50	94	2.5	LSQ200-30	90	4.17	LST116	51, 89	0.084
LS150-80	94	2.5	LSQ200-50	90	4.17	LST125-16	88	2.032
LS150B/C	95	1.91	LSQ200-80	90	4.17	LST125-30	88	2.22
LS150-C	51, 95	0.576	LSQ200-B/C	91	3.63	LST125-50	88	2.24
LS150-G	51,95	0.03	LSQ200-C	91	1.74	LST125-80	88	2.18
LS150-GV	51, 95	0.03	LSQ200-G	91	0.05	LST125-HB	89	1.846
LS180	51, 93	2.12	LSQ200-GV	5, 91	0.162	LST130	51, 89	0.07
LS200-06	94	2.5	LSQ200-PL	50, 51, 53, 89, 91, 95	0.042	LST150	51, 89	0.07
LS200-100	94	2	LSQ200-R	50, 51, 53, 89	0.002	LST150-100	88	1.9
LS200-12	94	2.33	LSQ200R1	91	0.002	LST150-30	88	2.12
LS200-120	94	2	LSQ200-RV	91, 95	0.004	LST150-50	88	2.15
LS200-20	94	2.33	LSS300-BC	96, 97	23.88	LST150-80	88	2.13
LS200-30	94	2.42	LSS300-C	5, 96, 97	2.91	LST150-B	51, 89	0.22
LS200-50	94	2.42	LSS300-G	96, 97	0.1	LST150-G	51, 89	0.014
LS200-80	94	2.42	LSS300-GV	96, 97	0.044	LST150-GV	51, 89	0.024
LS200B/C	95	2	LSS300-H	97	1.724	LST150-HB	89	1.794
LS206	51, 91, 95	0.3	LSS300-S	96, 97	0.032	LST15100	51, 89	0.27
LS2100	95	0.09	LSS300-SV	96, 97	0.05	LST1516	51, 89	0.196
LS212	51, 91, 95	0.29	LSS306	97	0.198	LST1530	51, 89	0.17
LS2120	51, 91, 95	0.08	LSS308	97	0.256	LST1550	51, 89	0.15
LS220	51, 91, 95	0.2	LSS312	97	0.37	LST1580	51, 89	0.1
LS230	51, 91, 95	0.188	LSS320	97	0.4	LST180	51, 89	0.07

PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
LST200-10SS	90	16	LV050100MTLV	9	0.125	M100GV	49	0.02
LST200-50SS	90	16	LV050100MTV	9	0.11	M100MPT	46	0.08
LST200-B	91	1.946	LV050MTV	9	0.096	M100MPTSS	46	0.34
LST200-GV	91	0.04	LV050SLV	9	0.12	M100PA	40	0.25
LST200-HSS	91	1.614	LV050SLV	9	0.08	M100PAC	40	0.32
LST204SS	53, 91	0.416	LV050V	9	0.084	M100PAT	40	0.65
LST206SS	53, 91	0.382	LVHB038050MTV	9	0.064	M100PLG	47	0.05
LST208SS	53, 91	0.326	LVHB038V	9	0.06	M100PLG025	6, 47	0.04
LST2100SS	53	0.45	LVHB050V	9	0.06	M100PLG050	6, 47	0.04
LST210SS	53, 91	0.48	LVH075100MTLV	9	0.135	M100SWFSS	44	0.32
LST216SS	53, 91	0.27	LVHB075100MTV	9	0.13	M100SWP90	43	0.126
LST220SS	5, 91	N/A	LVHB075MTV	9	0.13	M100SWPG90	6, 43	0.13
LST230SS	53, 91	0.49	LVHB075V	9	0.118	M100TEE	45	0.2
LST250SS	53, 91	0.49	LVPL025V	9	0.06	M101CPG	6, 44	0.001
LST280SS	53, 91	0.48	LVPL038V	9	0.06	M101G	49	0.006
LST5100	87	0.016	M100050FPT	46	0.06	M101GSA	5, 44	0.07
LST530	87	0.05	M100050HBT	48	0.086	M101TEE	45	0.23
LST550	87	0.024	M100075BRB	48	0.06	M102G	49	0.01
LST580	87	0.02	M100075BRB90	48	0.06	M12712	109, 111	3.372
LSTM050-30	86	0.76	M100075FPT	46	0.05	M13712	115, 121	4.588
LSTM050-30C	86	0.324	M100075HBT	48	0.1	M19712X	147, 149	27.046
LSTM050-50	86	0.3	M100075MPT	46	0.052	M200100BRB	48	0.15
LSTM050-50C	86	0.76	M100100HBT	48	0.09	M200100BRB90	48	0.16
LSTM050-80	86	0.76	M100125BRB	48	0.08	M200100CPG	45	0.16
LSTM050-80C	86	0.316	M100125BRB90	48	0.11	M200100TEE	45	0.525
LSTM050B	87	0.103	M100125BRB90	43	0.15	M200125BRB	48	0.16
LSTM050BC	87	0.12	M100125HBT	5, 48	0.1366	M200125BRB45	48	0.18
LSTM050G	87	0.02	M100125MPT	46	0.114	M200125BRB90	48	0.21
LSTM050H	87	0.176	M100150BRB90	48	0.17	M200125MPT	46	0.2
LSTM075-30	86	0.76	M100A	57	0.07	M200125MPTSS	46	0.2
LSTM075-30C	86	0.31	M100BRB	48	0.066	M200150BRB	48	0.17
LSTM075-50	86	0.288	M100BRB45	48	0.074	M200150BRB45	48	0.17
LSTM075-50C	86	0.308	M100BRB90	48	0.08	M200150BRB90	48	0.21
LSTM075-80	86	0.76	M100BRBSWP90	43	0.145	M200150BRBSWP90	43	0.431
LSTM075-80C	86	0.302	M100BRBSWP90	6, 43	0.15	M200150FPT	46	0.344
LSTM075H	87	0.161	M100CPG	44	0.09	M200150MPT	46	0.23
LV025MTV	9	0.06	M100CPG025G	6, 44	N/A	M200150MPTSS	46	0.23
LV025V	9	0.054	M100CPG45	44	0.09	M200300TEG075	6	0.661
LV038050MTLV	9	0.07	M100CPG90	45	0.14	M200A	57	0.24
LV038050MTV	9	0.058	M100CR	47	0.24	M200BRB	48	0.24
LV038MTV	9	0.07	M100FPT	46	0.09	M200BRB45	48	0.262
LV038V	9	0.07	M100G	49	0.02	M200BRB90	48	0.34

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PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
M200CPG	44	0.43	M220BRBWP90	43	0.399	M300220SWP90	43	0.571
M200CPG025G	6, 44	N/A	M220BWASS	46	0.5	M300220WYCG	6,45	1.050
M200CPG45	44	0.31	M220CPG	44	0.21	M300300HBT	48	1.034
M200CPG90	45	0.626	M220CPG2GISO	6, 44	0.15	M300375SWFSS	44	3.2
M200CPG90SH	45	0.423	M220CPG3G	6, 44	N/A	M300400A	47, 124	0.712
M200CR	47	0.692	M220CPG45	41, 44	0.24	M300400BRB	48, 124	0.728
M200FPT	46	0.29	M220CPG6	41, 44	0.375	M300A	47	0.35
M200MPT	46	0.26	M220CPG6025G	6, 44	N/A	M300ASWP90	43	0.897
M200MPTSS	46	0.81	M220CPG90	45	0.341	M300BRB	48	0.478
M200PLG	47	0.12	M220CR	47	0.578	M300BRB45	48	0.518
M200PLG025	6, 47	0.084	M220D	47	0.73	M300BRB90	48	0.798
M200PLG038	6, 47	0.09	M220FPT	46	0.26	M300BRBWP90	43	1.184
M200PLG050	6, 47	0.09	M220MPT	46	0.21	M300BRBWP90	6, 43	1.24
M200PLG075	6, 47	0.1	M220MPTSS	46	0.62	M300CPG	44	0.417
M200PLG100	6, 47	0.11	M220MPTSWP90	43	0.331	M300CPG12	6, 42	1.01
M200SWFSS	44	0.68	M220P6PRO	108, 109	N/A	M300CPG12G	6, 44	N/A
M200SWP90	43	0.365	M220PH5	108, 109	55	M300CPG2GISO	6, 44	0.279
M200TEE	45	0.611	M220PH5W	110	55	M300CPG45	41, 44	0.518
M200THB100	5	0.507	M220PH6	108, 109	55	M300CPG55G	6, 44	0.538
M200YG45	6, 45	1.3	M220PLG	47	0.12	M300CPG7	41, 44	0.632
M201CPG	6, 44	0.001	M220PLG038	6, 47	0.1	M300CPG7025G	6, 44	N/A
M201G	49	0.05	M220PLG075	6, 47	0.11	M300CPG90	45	0.745
M201TEEV075	5	N/A	M220PO	106, 107	8.372	M300CR	47	1.215
M202G	49	0.025	M220SWFSS	44	0.58	M300FPT	46	0.514
M220100BRB	48	0.15	M220SWP038G90	6	N/A	M300MPT	46	0.437
M220100CPG	45	0.15	M220SWP050G90	6	0.292	M300MPTSS	46	1.85
M220100TEE	45	0.403	M220SWP90	5, 43	0.286	M300MPTSWP90	43	0.833
M220125BRB	48	0.16	M220SWPG90	5, 43	N/A	M300P11PRO	114, 115	61.988
M220150BRB	48	0.16	M220TEE	45	0.522	M300PB	114, 115	21.35
M220150BRB90	48	0.211	M220Y45	41, 45	1.316	M300PH6	114, 115	45.4
M220150HBT	5, 48	0.275	M220YG45	6, 47, 45	1.34	M300PH6W	120	49
M220150MPTSS	46	0.65	M221CPG	6, 44	N/A	M300PLG	47	0.25
M220200CPG	45	0.2	M221CPG6	6, 44	N/A	M300PLG075	6, 47	0.23
M220200HBT	48	0.39	M221G	41, 49	0.03	M300PLG100	6, 47	0.248
M220200SWP90	43	0.356	M221GSA	44	0.258	M300PO	114, 115	9.792
M220200TEE	45	0.567	M221SWP90	5, 6, 43	N/A	M300POW6	120	16.24
M220375SWFSS	44	1.35	M222G	49	0.03	M300SWFSS	44	1.46
M220A	47	0.2	M300200CPG	45	0.267	M300SWP050G90	6	0.699
M220ASWP90	43	0.399	M300220BRB	48	0.284	M300SWP90	43	0.675
M220BRB	48	0.19	M300220BRB90	48	0.406	M300SWPG90	6, 43	0.75
M220BRB45	48	0.225	M300220CPG	41, 45	0.245	M300TEE	45	1.111
M220BRB90	48	0.309	M300220MPTSS	46	1.332	M300Y45	41, 45	3.32

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PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
M300YG45	6, 41, 45	3.258	MEVX1014	33	19.485	MLS2100SS	53	0.54
M301CPG7	6, 44	N/A	MEVX102	33	9.073	MLS220C1	53	0.82
M301G	41, 49	0.03	MEVX103	33	14.47	MLS220G1	53	0.008
M301GSA	44	0.55	MEVX200	30	4.22	MLS220R1	53	0.417
M302G	49	0.05	MEVX200BL	32	5.751	MLS222-04	52	3.82
M303D	47	1.5	MEVX200SL	32	7.018	MLS222-10	52	3.5
M305PHYW	120	26.4	MEVX201	30	4.775	MLS222-16	52	3.7
M332PIE101W	146	270	MEVX220BL	32	6.98	MLS222-30	52	3.75
M332PIE10W	146	N/A	MEVX220SL	32	N/A	MLS222-50	52	3.75
M332PIH13W	146	155	MEVX221	30	4.775	MLS222-80	52	3.7
M332PIHAW	148	68.592	MEVX300	31	8.98	MLS222B	53	2.2
M332PIHYW	148	190	MEVX300BL	32	18.28	MLS222BC	53	3.25
M332POIW	146	70.532	MEVXR100	29	2.491	MLS250SS	53	0.6
M350PBW	124	34.1	MEVXR100SL	32	4.7	MLS280SS	53	0.57
M350PE15W	123	131.3	MEVXR101	29	3.82	MLS300-12	52	8
M350PEOW	123	17.1	MEVXR200	30	2.882	MLS300-20	52	8
M350PH13W	123	88.2	MEVXR200SL	32	3.979	MLS300-20V	52	N/A
M350PHAW	124	33.5	MEVXR220	30	3.405	MLS300-50	52	8.44
M350PHYW	123	40.9	MEVXR220SL	32	6.627	MLS300B	53	5.01
M350POW	123	17.1	MEVXR300	31	8.98	MLS300B1	97	5.357
M350PVAN14W	123	102	MFM100	42	2.75	MLS300BC	53	7.48
MBF100	54,160	0.9	MFM220	42	2.75	MLS300CAP	53, 97	1.36
MBF100BD	54,160	0.948	MFM300	41	5.4	MLS300ECG	53, 97	0.024
MBF200	54,160	1.37	MHV200	40	0.57	MLS300ECGV	53, 97	0.04
MBF200BD	54,160	1.44	MHV220A	40, 41	0.8	MLS300G	53, 97	0.03
MBF220	54,160	1.62	MIS220	41	10.175	MLST100-100	50	0.75
MBF220BD	54,160	1.62	MIS300	41	23.06	MLST100-30	50	0.75
MBF300	54,160	2.34	MLEV100	33	0.65	MLST100-50	50	0.75
MBF300BD	54,160	2.5	MLEV100A	33	1.13	MLST100-80	50	0.75
MBP200	67	0.26	MLEV100C	33	1.155	MLST100-H	51	0.467
MCV100	44	0.154	MLS100-80	50	0.88	MLST100-HB	51	0.63
MCV100V	5, 44	0.153	MLS100B	51	0.646	MLST150-100	50	2
MCV200	44	0.45	MLS100BC	51	0.896	MLST150-30	50	2
MCV221	44	0.5	MLS200-06	46	2.25	MLST150-50	50	2
MCV300	44	1.224	MLS200-12	50	2.5	MLST150-80	50	2
MCV301	44	1.26	MLS200-20	50	2.15	MLST150-80V	50	2.125
MEVX100	29	3.82	MLS200-30	46	2.15	MLST150-H	51	1.292
MEVX100BL	32	4.7	MLS200-50	50	3.9	MLST150-HB	51	1.75
MEVX100SL	32	4.7	MLS200-80	50	2.15	MLSTM100-80	5, 49	0.34
MEVX101	29	4.24	MLS200B	41	1.526	MLSTM100HB	5, 49	0.34
MEVX1012	33	9.6	MLS200BC	51	2.07	MLSTM100HBC	5, 49	0.34
MEVX1013	33	14.548	MLS200BCM	50	2.315	MPRV100-050	39	1.506

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PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
MPRV100-075	39	1.45	NIP100-SH	81	0.038	RB100-075	81	0.04
MPRV100-100	39	1.5	NIP125-4	81	0.136	RB125-038	5, 81	0.1
MPRV100-125	39	1.54	NIP125-6	81	0.22	RB125-075	81	0.09
MSUV100FP	18	0.46	NIP125-SH	81	0.06	RB125-100	81	0.06
MSW220	44	0.4	NIP150-3	81	0.14	RB150-075	81	0.12
MTF100BD	5, 54	0.42	NIP150-4	81	0.22	RB150-100	81	0.1
MTF220BD	54	0.75	NIP150-5	81	0.26	RB150-125	81	0.1
MTF300BD	54	2.092	NIP150-6	81	0.34	RB200-075	81	0.18
MV100BL	12, 38	1.2	NIP150-SH	81	0.12	RB200-100	79	0.17
MV100CF	5, 12, 34	0.75	NIP200-4	81	0.25	RB200-125	81	0.14
MV100SL	38	1.13	NIP200-6	81	0.38	RB200-150	81	0.12
MV200BL	13, 38	2	NIP200-SH	81	0.14	RB300-150	81	0.415
MV200CF	34	2.024	NIP2101	67	0.3	RB300-200	81	0.359
MV200SL	38	2	NIP300-4	81	0.434	RB400-300	81	1.032
MV220BL	13, 38	4.63	NIP300-6	81	0.696	RC100-075	81	0.15
MV220CF	34	2.798	NIP300-SH	81	0.307	RC150-100	81	0.2
MV220SL	38	2.75	NIP400-SH	5, 81	1.558	RC150-125	81	0.206
MV225CF	34	7.3	PLUG025	82	0.03	RC200-050	81	0.28
MV300	34	3.9	PLUG038	82	0.02	RC200-100	81	0.26
MV300BL	38	6.68	PLUG050	82	0.02	RC200-125	81	0.26
MV300CF	34	5.866	PLUG075	41, 82	0.04	RC200-150	81	0.26
MV301CF	41	6	PLUG100	82	0.06	RC300-200	81	0.624
MVS220CF	35, 41	1.744	PLUG125	82	0.09	RN050-038	81	0.018
MVS220FP	35	1.804	PLUG150	82	0.1	RN075-050	81	0.03
MVS300CF	5, 36	3.046	PLUG200	82	0.152	RN100-050	81	0.06
MVS300CFPP	36	3.75	PLUG300	82	0.445	RN100-075	81	0.06
MVS300HSFP	37	6.32	PV075	19	0.53	RN125-075	81	0.086
MVSF220FP	35	1.78	PV100	19	0.52	RN125-100	81	0.08
MVSF300	36	3.29	PV100-075	19	0.64	RN150-100	81	0.122
MVSF300FP	36	4	PV100-075V	19	0.35	RN150-125	81	0.14
MVSMT220FP	35	1.75	PV10265	19	0.07	RN200-125	81	0.16
MVSMT300	36	3.192	PV10265V	19	0.2	RN200-150	81	0.17
MVSMT300HSFP	37	6.44	RB038-025	81	0.01	RN300-200	81	0.365
NIP025-SH	81	0.01	RB050-018	5, 81	0.02	RS21	85	0.756
NIP038-SH	81	0.02	RB050-025	81	0.02	RSTB	85	0.704
NIP050-3	81	0.04	RB050-038	81	0.01	SL025-90	83	0.02
NIP050-SH	81	0.02	RB075-025	81	0.04	SL038-90	83	0.03
NIP075-4	81	0.074	RB075-038	81	0.03	SL050-90	83	0.06
NIP075-6	81	0.12	RB075-050	81	0.03	SL075-45	83	0.07
NIP075-SH	81	0.03	RB100-018	5, 81	0.60	SL075-90	83	0.08
NIP100-4	81	0.09	RB100-025	81	0.07	SL100-45	83	0.1
NIP100-6	81	0.14	RB100-050	81	0.05	SL100-90	83	0.13

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PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
SL125-45	83	0.14	TEE075	82	0.14	TL652E	68	0.64
SL125-90	83	0.14	TEE100	82	0.21	TL652S	68	0.63
SL150-45	83	0.22	TEE125	82	0.32	TL6531	69	0.084
SL150-90	83	0.25	TEE150	83	0.445	TLVA10	68	2.25
SL200-45	83	0.34	TEE200	83	0.584	TM075/050	6, 85	0.16
SL200-90	83	0.41	TEE300	83	1.594	UB100	45	0.24
SL300-45	83	0.833	TEG075	6, 83	0.14	UB202	45	0.26
SL300-90	83	1.054	TEG100	6, 83	0.22	UB220	45	0.32
ST200	68	0.809	TF038SS	72	0.25	UV050FP	18	0.25
ST300	68	1.332	TF050	72	0.25	UV075FP	18	0.25
SUV050FP	18	0.25	TF050SS	72	0.8	UV100FP	18	0.37
SUV075FP	18	0.4	TF075	72	0.2	UV125FP	18	1
SUV100FP	18	0.4	TF075SS	72	1.15	UV150FP	18	1
SUV125FP	18	0.88	TF075V	72	0.22	UV15163	51, 89, 93, 101, 103, 105, 107, 111, 119, 121, 125, 127, 129, 131, 133, 139, 141, 143, 147, 149, 153, 155, 157, 159	0.002
SUV150FP	18	0.88	TF100	72	0.35	UV15163V	93, 101, 105, 119, 153, 155, 157, 159	0.002
SUV200FP	18	1.45	TF100AV	73	0.44	UV200FP	18	1.5
SW100	85	0.16	TF100G	5, 72	0.02	UV204FFPD	67	1.58
SW150	85	0.36	TF100GV	5, 72	0.035	V050	10	0.75
SW220	85	0.52	TF100SS	72	2.85	V07018	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 125	0.1
TA283	69	0.2	TF125	72	0.35	V07019	101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 125	0.008
TA283QD	69	0.3	TF125AV	73	0.386	V075	10	0.75
TC120	80	0.1	TF125SS	72	1.92	V075BL	16	1.35
TC130	80	0.1	TF138GV	72	0.1	V075SL	16	1.35
TC150	80	0.11	TF150	72	0.63	V100	10	0.682
TC162	80	0.12	TF150AV	73	0.68	V100BL	13, 16	1.25
TC181	80	0.14	TF150SS	72	4.88	V100FP	10	1.16
TC193	80	0.12	TF200	72	0.55	V100SL	16	1.31
TC206	80	0.14	TF200AV	73	0.596	V10117	149	0.1
TC218	80	0.13	TF200SS	72	3.6	V10118	125, 127, 129, 131, 133, 135, 137, 147, 149, 153, 155, 157, 159	0.004
TC224	80	0.14	TF200V	72	0.56	V10119	105, 125, 127, 129, 131, 133, 135, 147, 153, 155, 157, 159	0.1
TC231	80	0.15	TF220	72	0.82	V10153138	12	0.07
TC250	80	0.16	TF220G	72	0.038	V10161	17	0.176
TC287	80	0.17	TF220SS	72	5.27	V10200	5, 10, 2, 34	0.143
TC312	80	0.16	TF300	72	2	V10264	151	0.002
TC331	80	0.17	TF300G	72	0.094	V10270	12	0.138
TC343	80	0.17	TF300SS	72	7.9	V10271	12	0.14
TC425	80	0.18	TF400	72	4.5	V125	10	1.25
TC438	80	0.36	TF400G	72	0.7	V125BL	13, 16	2.126
TC456	80	0.38	TF400GV	72	0.752	V125FP	10	1.91
TEE025	82	0.02	TL600C	68	0.46	V125SL	16	2.07
TEE038	82	0.05	TL650S	68	0.5	V150	10	1.87
TEE050	82	0.1	TL651S	68	0.7	V150BL	13, 16	2

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PART NO	PAGE NO(S)	WEIGHT	PART NO	PAGE NO(S)	WEIGHT
V150SL	16	2	VSF200	13	1.25
V200	10	1.88	VSF200CF	35	1.49
V20018	105, 107, 117, 125, 131, 133, 137, 139, 141, 143, 145, 151, 155, 157, 159	0.004	VSF200FFAF	11	3.05
V20019	137, 139, 141, 143, 159	0.016	VSF204FP	14	1.82
V200BL	13, 16	2.8	VSF300	15	3.424
V200FP	5, 11, 12	3.25	VSFHB200	13	1.52
V200SL	16	2.75	VSFMT200	13	1.562
V20153138	12	0.176	VSFMT204FP	14	1.862
V20207	69, 78	0.006	VSFMT204HSFP	14	2.95
V204FP	10	2.74	VSFMT300	15	3.374
V20200	5, 10, 17, 34	0.206	VSFMT300FP	15	4.29
V20353TS	5, 17	0.002	VSFMT300HSFP	15	6.63
V25153138	12	0.16	VSMT200	13	1.35
V25200	5, 10, 11, 17, 34	0.577	VSMT200CF	35	1.432
V25200BL	5, 16, 38	N/A	VSMT204FP	14	1.874
V25270	12	0.194	VSMT300	15	3.27
V25271	12	0.356	VSS025	19	0.634
V300	5, 11, 12	3.75	VSS038	19	0.59
V300FP	5, 11, 12	5.67	VSS050	19	0.7
V30200	5, 11, 34	N/A	VSS075	19	1.298
V35200	5, 11, 34	1.52	VSS100	19	2.094
V400	5, 11, 12	8.5	VSS150	19	3.996
V40200	5, 11	4.2	VSS200	19	6.808
VA150	17	2.592	VSS300	19	18.43
VA200	17	2.8	W230237	66	1.07
VA200/150	5, 17	4.62	W230238	66	1.17
VA200FP	17	3.958	W230239	66	1.07
VC200	73	0.219	W230240	66	1.1
VC230	73	0.26	WSF210FSA	66	1.2
VC300	73	0.54	WSF210FSAV	66	1
VC330	73	0.68	WSMT210FSA	66	1.07
VFMT200FP	5, 11, 12	3.368	WSMT210FSAV	66	1
VFMT204FP	10	3.33			
VL20153	12	0.35			
VL25153	12	0.41			
VN100	17	0.712			
VS204FP	14	1.834			
VS30200	5, 15, 36	0.622			
VSBHB204FP	8	2.675			
VSBHB205FP	8	2.965			
VSBHB304FP	8	5.1			
VSBHB305FP	8	5.52			



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