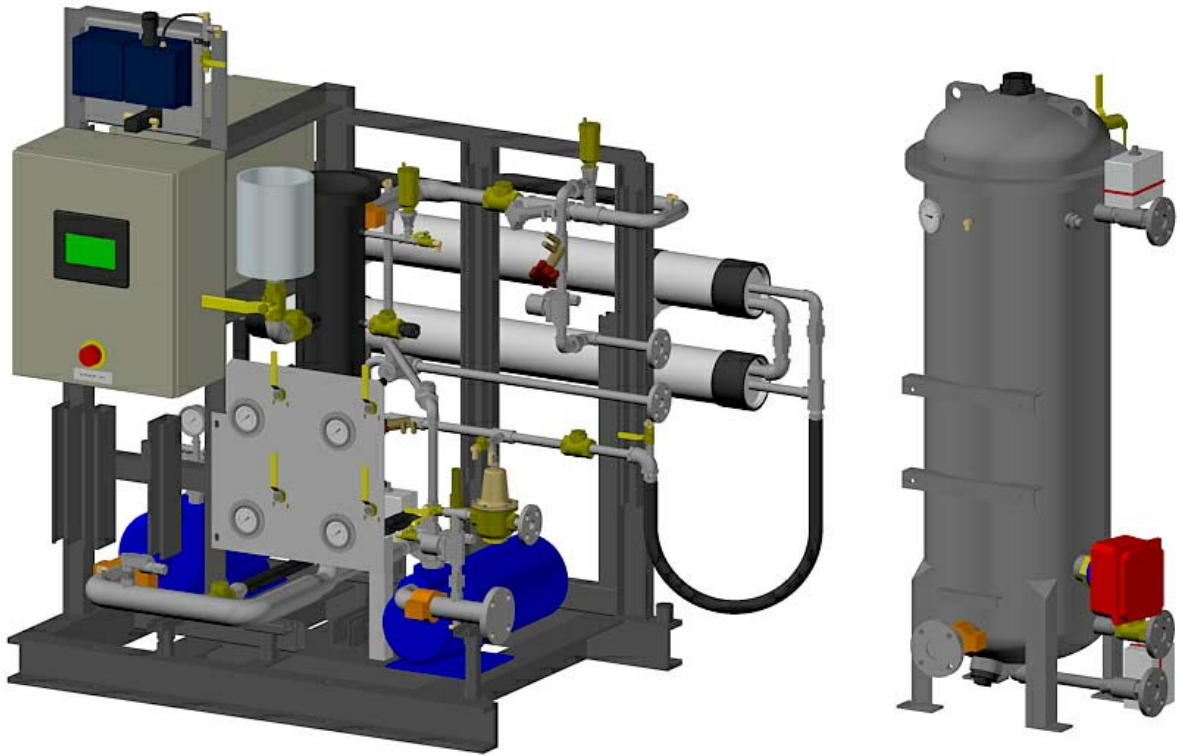


May 2016

**PARTS CATALOG  
OIL WATER SEPARATOR  
ULTRA-SEP MODEL 1000-MD-IHB-AC**



**Compass**  
water solutions

15542 Mosher Ave. Tustin, CA 92780 U.S.A.

WEB: [compasswater.com](http://compasswater.com)

TEL: (949) 222-5777

FAX: (949) 222-5770



This parts catalog is a reference for all of the following Model numbers manufactured prior to the date of this document.

When ordering parts, be certain to include serial number and voltage of the Ultra-Sep model.

| <b>Model Number</b> | <b>Description</b>             |
|---------------------|--------------------------------|
| USBWS1000-J435      | ULTRA-SEP OILY WATER SEPARATOR |
| USBWS1000-J538      | ULTRA-SEP OILY WATER SEPARATOR |

For Electrical Control Panel and Motor Control Center,  
Refer to your Operation and Maintenance Manual.

For assistance contact COMPASS at [parts@compasswater.com](mailto:parts@compasswater.com)

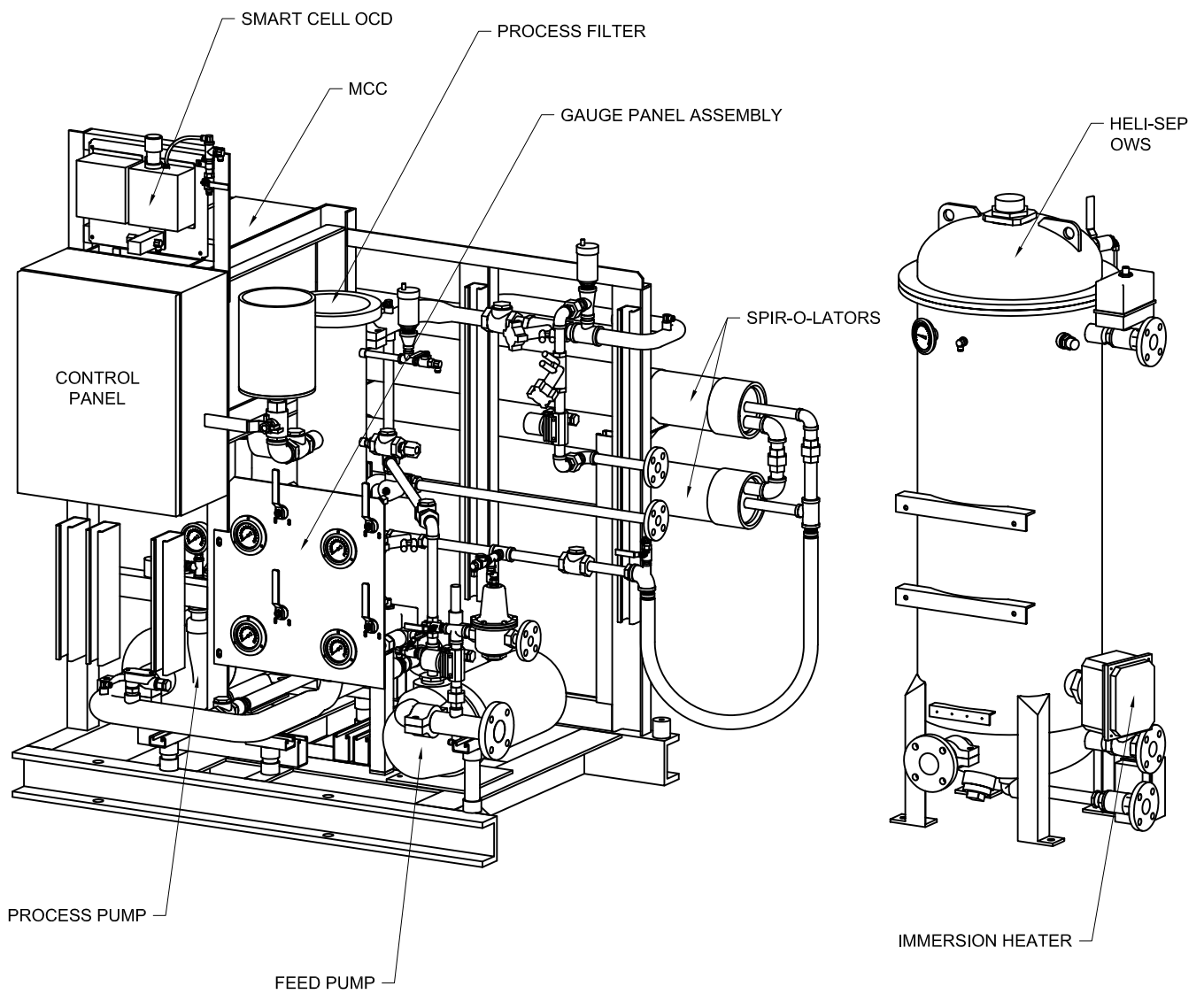
This parts book will cover all  
Ultra-Sep system Serial numbers:

|       |       |       |
|-------|-------|-------|
| 47435 | 47538 | 47539 |
|-------|-------|-------|

Some custom items may not be shown, refer to the  
Installation and Operation Manual for your specific system

# **TABLE OF CONTENTS**

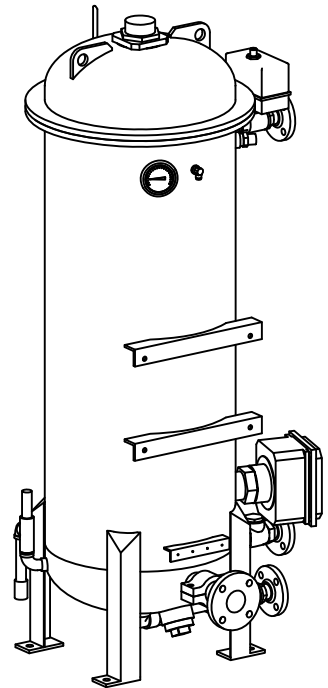
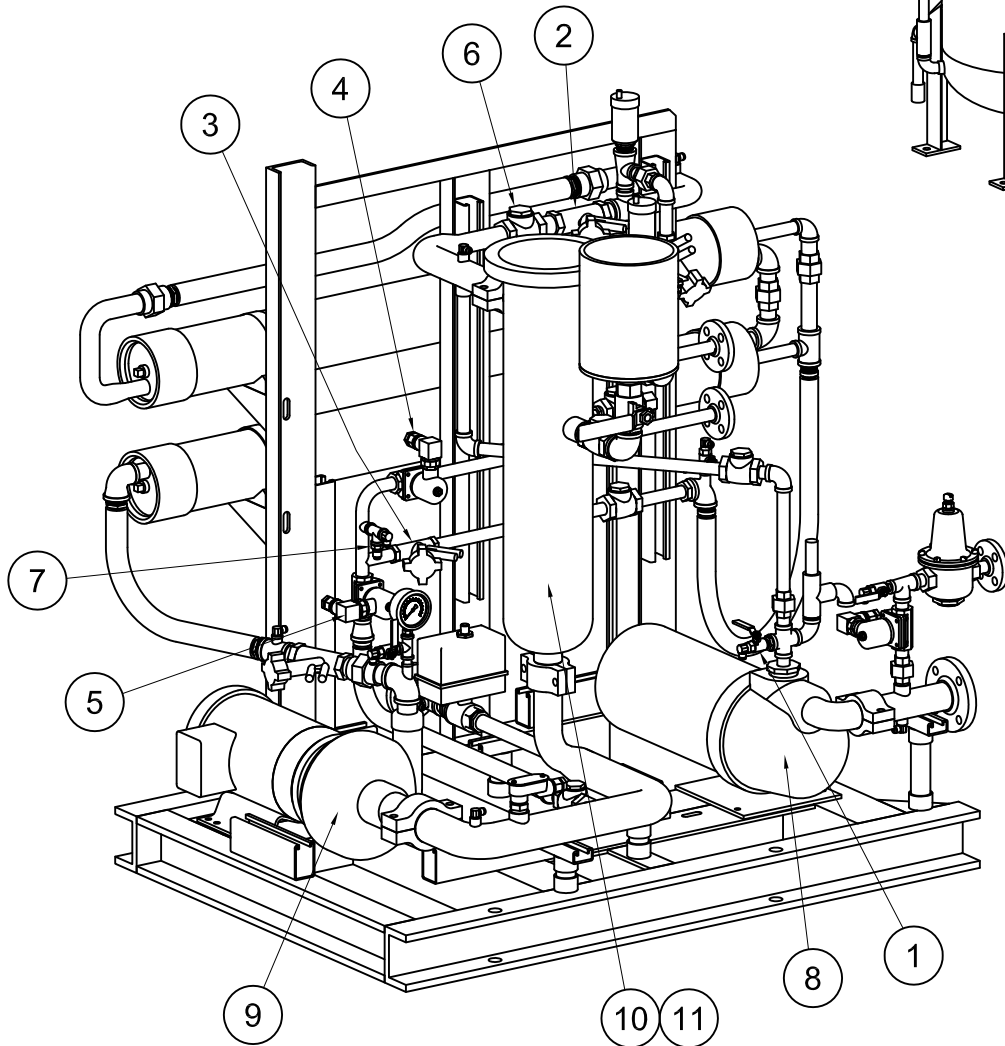
|  |           |
|--|-----------|
| <b>OVERVIEW .....</b>                    | <b>4</b>  |
| <b>PARTS VIEW 1 .....</b>                | <b>5</b>  |
| <b>PARTS VIEW 2 .....</b>                | <b>6</b>  |
| <b>PARTS VIEW 3 .....</b>                | <b>7</b>  |
| <b>GAUGE PANEL .....</b>                 | <b>8</b>  |
| <b>SPIR-O-LATOR HOUSING .....</b>        | <b>9</b>  |
| <b>SPIR-O-LATOR END CAPS .....</b>       | <b>10</b> |
| <b>HELI-SEP DETAILS .....</b>            | <b>11</b> |
| <b>PUMP 1 (PU1) 60Hz PARTS .....</b>     | <b>12</b> |
| <b>PUMP 2 (PU2) 60Hz PARTS .....</b>     | <b>13</b> |
| <b>SMART BILGE ALARM PARTS .....</b>     | <b>14</b> |
| <b>DEPTH FILTER .....</b>                | <b>15</b> |
| <b>AUTOCLEANING RACK .....</b>           | <b>16</b> |
| <b>RECOMMENDED ON BOARD SPARES .....</b> | <b>17</b> |



# PARTS LIST

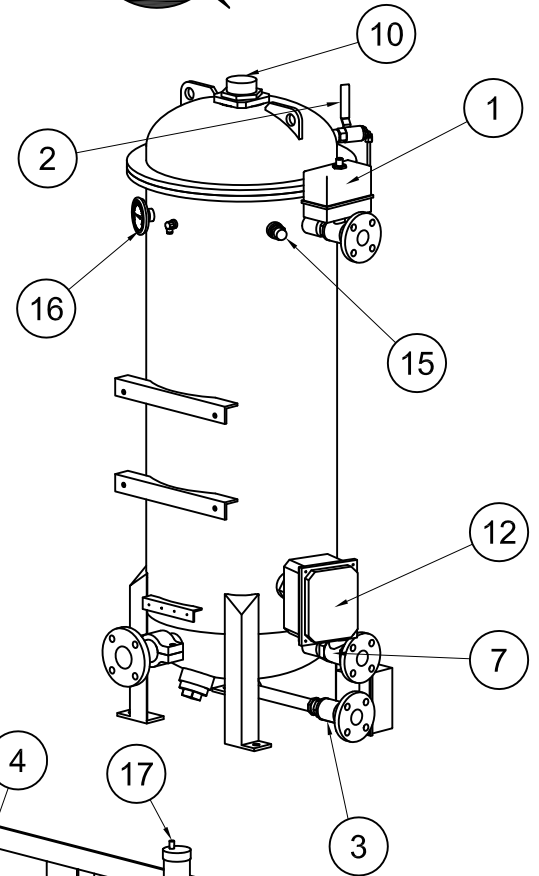


| ITEM NO. | PART & ID # | CWS PART NO. | NOMENCLATURE OR DESCRIPTION        |
|----------|-------------|--------------|------------------------------------|
| 1        | BV8         | VBLB0400     | BALL VALVE, 1/4" (SAMPLE)          |
| 2        | GV2         | VCTB1600     | CONTROL VALVE, 1", CBV             |
| 3        | GV3         | VCTB0800     | CONTROL VALVE, 1/2", CBV           |
| 4        | SV1         | VSDB0850     | 240V - SOLENOID VALVE, 1/2"        |
| 5        | SV2         | VSDB0850     | 240V - SOLENOID VALVE, 1/2"        |
| 6        | CV3         | VSCB1600     | CHECK VALVE, SWING, 1"             |
| 7        | CV8         | VLCB0408     | CHECK VALVE, LIFT, 1/4"            |
| 8        | PU1         | PMGI7413007  | 440V / 60Hz - FEED PUMP / MOTOR    |
| 9        | PU2         | PMGI271305   | 440V / 60Hz - PROCESS PUMP / MOTOR |
| 10       | FIL1        | FHGB1610-US  | PROCESS FILTER HOUSING             |
| 11       | FIL1        | ORGN6000     | PROCESS FILTER HOUSING O RING      |

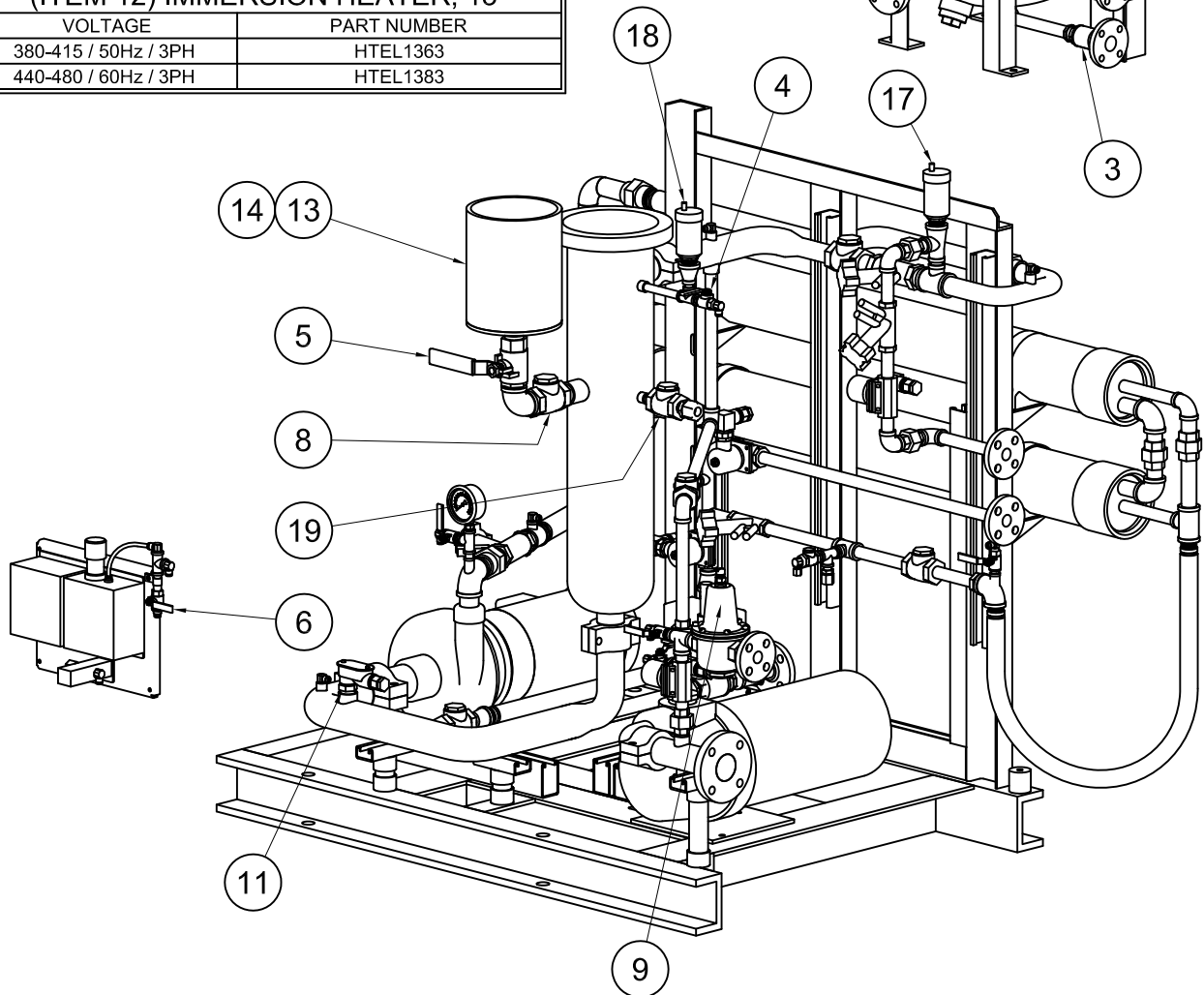


# PARTS LIST

| ITEM NO. | PART & ID # | CWS PART NO. | NOMENCLATURE OR DESCRIPTION   |
|----------|-------------|--------------|-------------------------------|
| 1        | MV1         | VBEB1655     | 240V - EA BALL VALVE, 1"      |
| 2        | BV2         | VBLB0800     | BALL VALVE, 1/2" (VENT)       |
| 3        | MV3         | VBEB1655     | 240V - EA BALL VALVE, 1"      |
| 4        | BV4         | VBLB0400     | BALL VALVE, 1/4" (VENT)       |
| 5        | BV6         | VBLB1600     | BALL VALVE, 1"                |
| 6        | BV7         | VBLB0400     | BALL VALVE, 1/4" (DRAIN)      |
| 7        | CV1         | VSCB1600     | CHECK VALVE, SWING, 1"        |
| 8        | CV9         | VSCB1600     | CHECK VALVE, SWING, 1"        |
| 9        | RV1         | VRGB0823     | REGULATOR VALVE, 1/2"         |
| 10       | OSP         | OSPB0074     | OIL SENSING PROBE "B", US1000 |
| 11       | TSH1        | SWAT0806     | TEMP. SWITCH, 1/2"            |
| 12       | HTR         | SEE TABLE    | HEATER, 13"                   |
| 13       |             | USCC0570     | US CLEANING CANISTER          |
| 14       |             | USCL0570     | US CLEANING CANISTER LID      |
| 15       | TSH3        | SWAT0806     | TEMP. SWITCH, 1/2"            |
| 16       | TG          | GATK0832     | TEMP. GAUGE, 0-250 F          |
| 17       | AE1         | AVFV1004     | AIR VENT / FLOAT VALVE, 3/4"  |
| 18       | AE2         | AVFV1004     | AIR VENT / FLOAT VALVE, 3/4"  |
| 19       | CV6         | VSCB0800     | CHECK VALVE, SWING, 1/2"      |



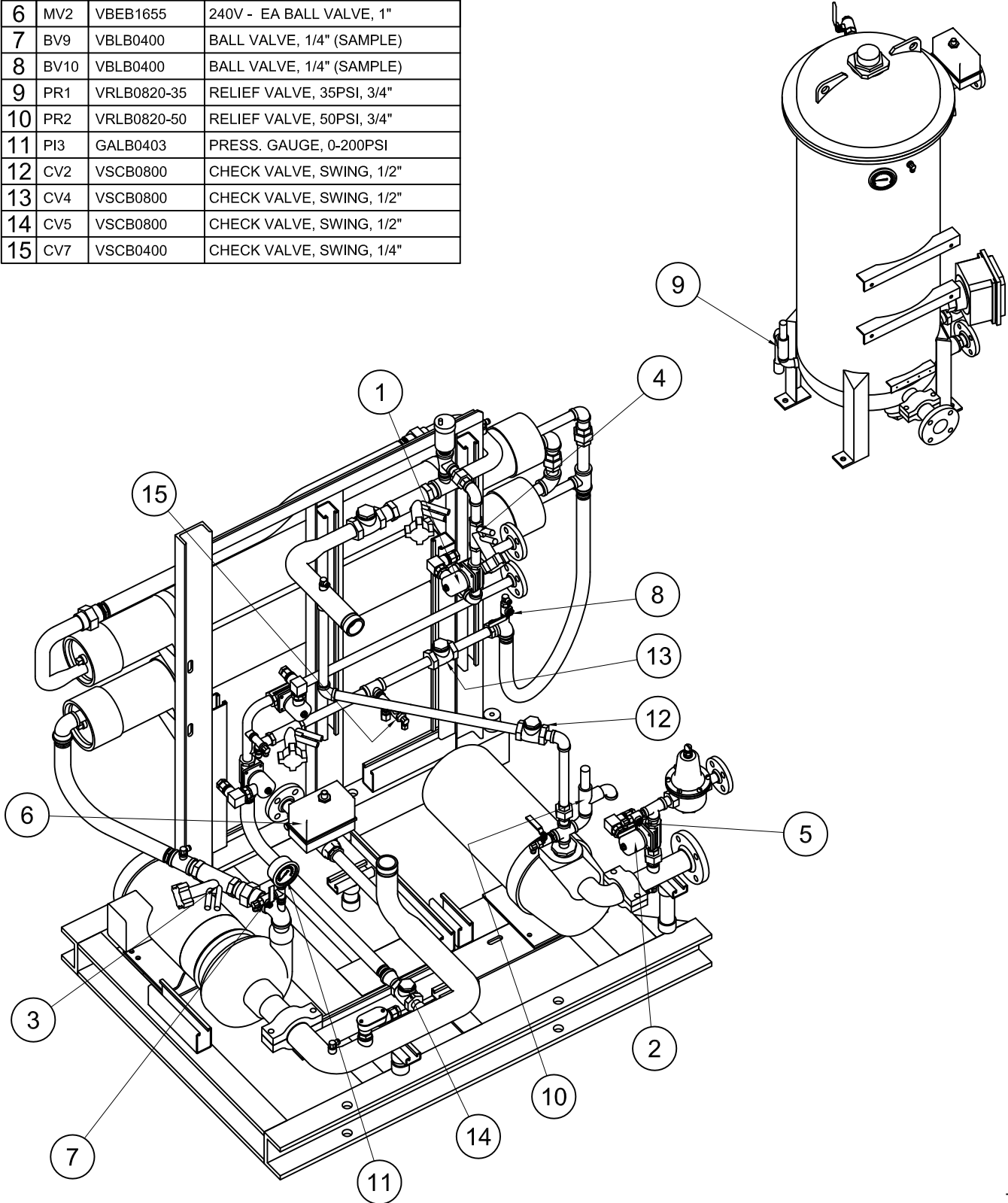
| (ITEM 12) IMMERSION HEATER, 13" |             |
|---------------------------------|-------------|
| VOLTAGE                         | PART NUMBER |
| 380-415 / 50Hz / 3PH            | HTEL1363    |
| 440-480 / 60Hz / 3PH            | HTEL1383    |



# PARTS LIST



| ITEM NO. | PART & ID # | CWS PART NO. | NOMENCLATURE OR DESCRIPTION |
|----------|-------------|--------------|-----------------------------|
| 1        | SV3         | VSDB0850     | 240V - SOLENOID VALVE, 1/2" |
| 2        | SV4         | VSDB0850     | 240V - SOLENOID VALVE, 1/2" |
| 3        | GV1         | VCTB1600     | CONTROL VALVE, 1", CBV      |
| 4        | GV4         | VCTB0800     | CONTROL VALVE, 1/2", CBV    |
| 5        | BV1         | VBLB0400     | BALL VALVE, 1/4"            |
| 6        | MV2         | VBEB1655     | 240V - EA BALL VALVE, 1"    |
| 7        | BV9         | VBLB0400     | BALL VALVE, 1/4" (SAMPLE)   |
| 8        | BV10        | VBLB0400     | BALL VALVE, 1/4" (SAMPLE)   |
| 9        | PR1         | VRLB0820-35  | RELIEF VALVE, 35PSI, 3/4"   |
| 10       | PR2         | VRLB0820-50  | RELIEF VALVE, 50PSI, 3/4"   |
| 11       | PI3         | GALB0403     | PRESS. GAUGE, 0-200PSI      |
| 12       | CV2         | VSCB0800     | CHECK VALVE, SWING, 1/2"    |
| 13       | CV4         | VSCB0800     | CHECK VALVE, SWING, 1/2"    |
| 14       | CV5         | VSCB0800     | CHECK VALVE, SWING, 1/2"    |
| 15       | CV7         | VSCB0400     | CHECK VALVE, SWING, 1/4"    |



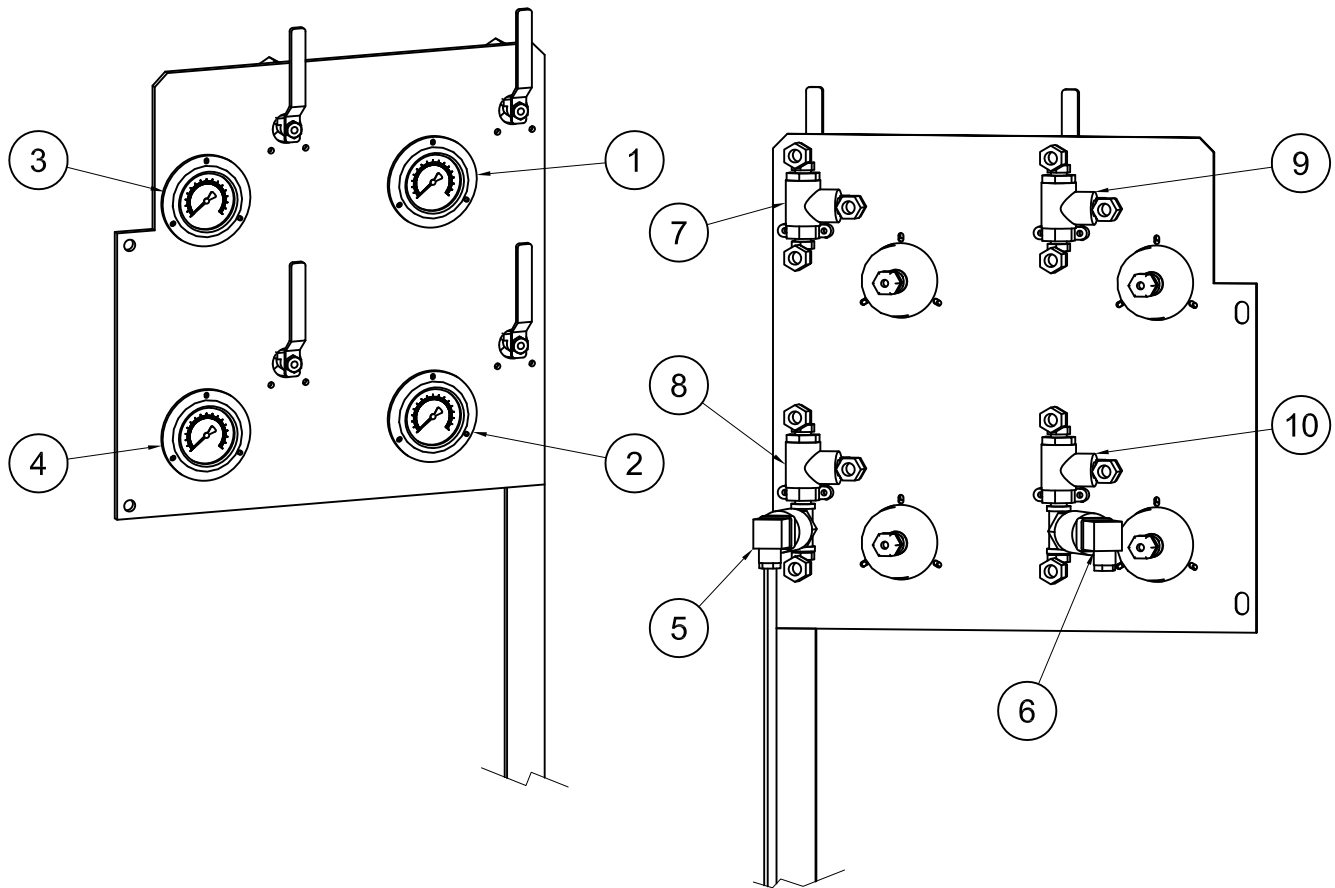
# PARTS LIST

| ITEM NO. | PART & ID # | CWS PART NO. | NOMENCLATURE OR DESCRIPTION           |
|----------|-------------|--------------|---------------------------------------|
| 1        | PI1         | GALK0462     | GAUGE, V/P 30-0-60, 2 1/2" D, FF      |
| 2        | PI2         | GALK0463     | GAUGE, PSI 0-100, 2 1/2" D, FF        |
| 3        | PI4         | GALK0464     | GAUGE, PSI 0-160, 2 1/2" D, FF        |
| 4        | PI5         | GALK0464     | GAUGE, PSI 0-160, 2 1/2" D, FF        |
| 5        | PSL1        | SWVB0430     | SWITCH VACUUM, 1/4" PRESET @ 5"Hg     |
| 6        | PSL2        | SWMB0030     | SWITCH, LOW PRESS., 1/4" SET @ 30 PSI |
| 7        | BV11        | VBTB0401     | VALVE, BALL, THREE WAY, 1/4" NPT      |
| 8        | BV12        | VBTB0401     | VALVE, BALL, THREE WAY, 1/4" NPT      |
| 9        | BV13        | VBTB0401     | VALVE, BALL, THREE WAY, 1/4" NPT      |
| 10       | BV14        | VBTB0401     | VALVE, BALL, THREE WAY, 1/4" NPT      |
| 11       | 30'         | TUPE0400     | TUBING, 1/4" BLACK POLYETHYLENE       |
| 12       | 10'         | TUPE0401     | TUBING, 1/4" RED POLYETHYLENE         |
| 13       | 10'         | TUPE0402     | TUBING, 1/4" BLUE POLYETHYLENE        |



## NOTES

- ITEMS 11, 12, & 13 ARE NOT SHOWN
- BLACK TUBING IS FOR CONNECTING PRESSURE GAUGES & SWITCHES TO THE FIELD PIPING LOCATIONS.
- BLUE AND RED TUBING ARE FOR OCD CONNECTIONS.



FRONT VIEW

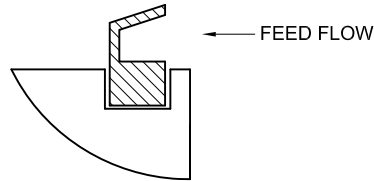
REAR VIEW

## ULTRA-SEP GAUGE PANEL



# PARTS LIST

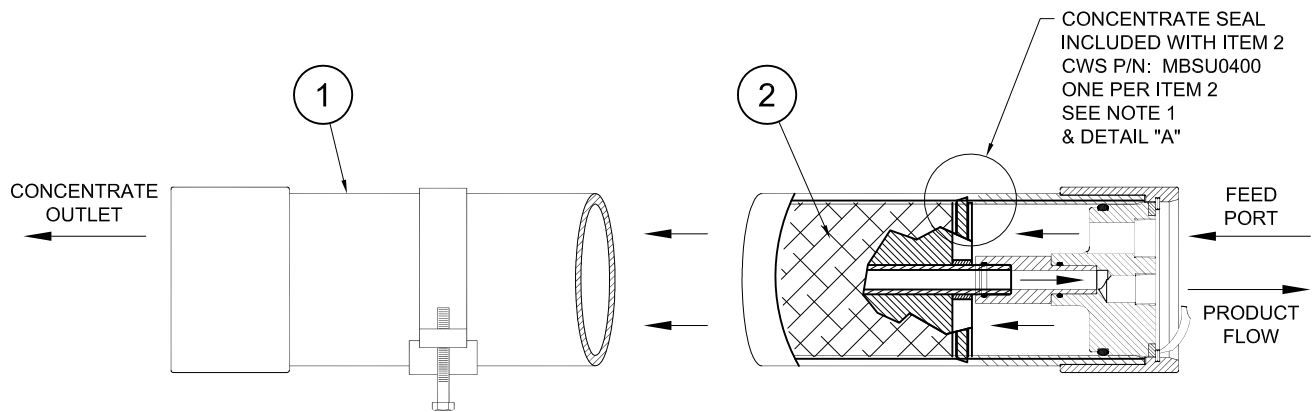
| ITEM NO. | QTY. REQD. | CWS PART NO. | NOMENCLATURE OR DESCRIPTION            |
|----------|------------|--------------|--|
| 1        | 1          | MHUP1440     | MEMBRANE HSG, 4" X 1L, END PORT DESIGN |
| 2        | 1          | MUFO0449     | SPIR-O-LATOR, UF OWS 4" x 40"          |



## DETAIL

(A)

IMPORTANT, NOTE  
CONCENTRATE SEAL  
ORIENTATION



## 4" SPIR-O-LATOR HOUSING - SINGLE ELEMENT

### NOTE

1. THE CONCENTRATE SEAL END OF THE SPIR-O-LATOR MUST BE INSTALLED TOWARD THE HOUSING FEED PORT AS SHOWN. SEE DETAIL "A".

# PARTS LIST

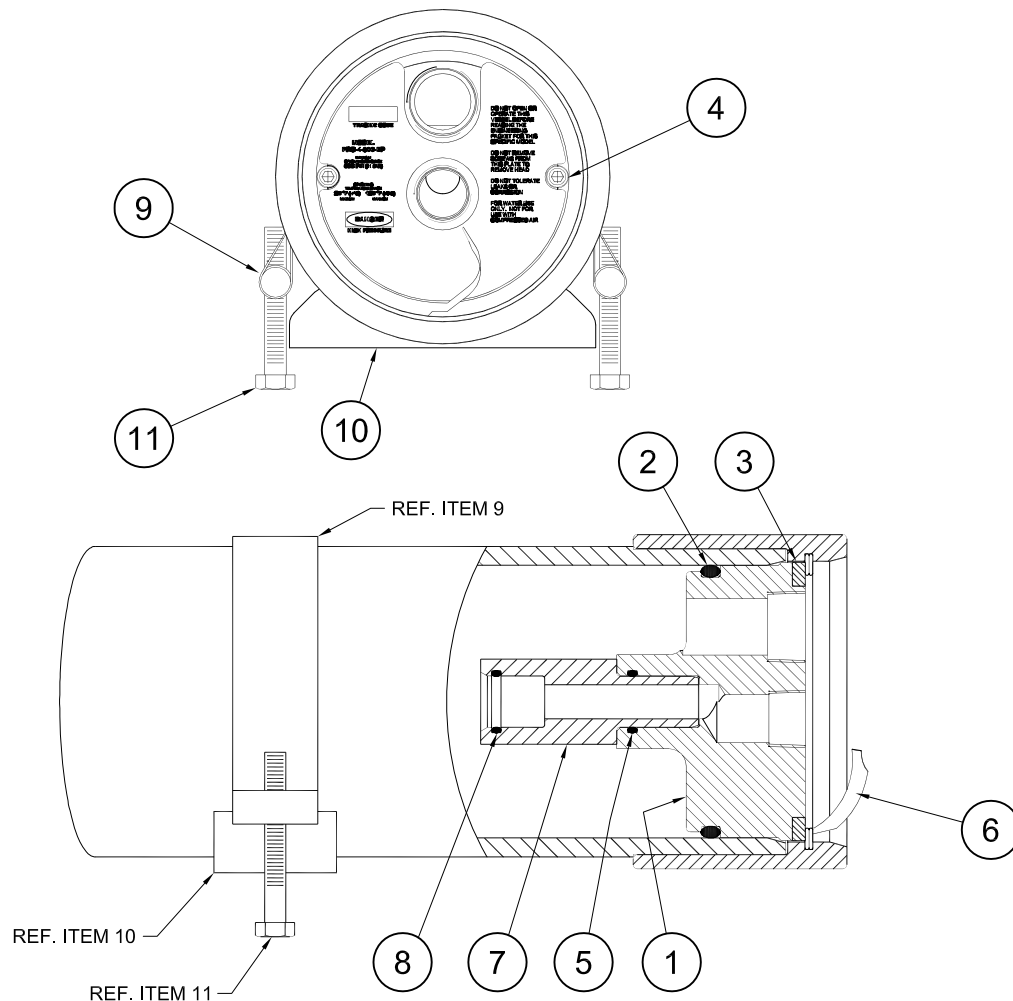


| ITEM NO. | QTY. REQD. | CWS PART NO. | NOMENCLATURE OR DESCRIPTION              |
|----------|------------|--------------|--|
| 1        | 2          | SEE TABLE    | END PLUG - (COMES IN HEAD ASSEMBLY ONLY) |
| 2        | 2          | ORGN2116     | HEAD SEAL                                |
| 3        | 2          | MHBR0415     | BEARING RING                             |
| 4        | 2          | MHBS0415     | SCREW, BEARING RING                      |
| 5        | 2          | ORGN2116     | ADAPTER SEAL                             |
| 6        | 2          | MHRR0415     | RETAINING RING W/ FINGER PULL            |
| 7        | 2          | MADP0415     | ADAPTER                                  |
| 8        | 2          | ORGN2014     | PWT SEAL                                 |
| 9        | 2          | MHSP0415     | STRAP ASSEMBLY                           |
| 10       | 2          | MHSD0415     | SUPPORT SADDLE                           |
| 11       | 2          | MHSP80137-1  | STRAP SCREW                              |

## NOTES

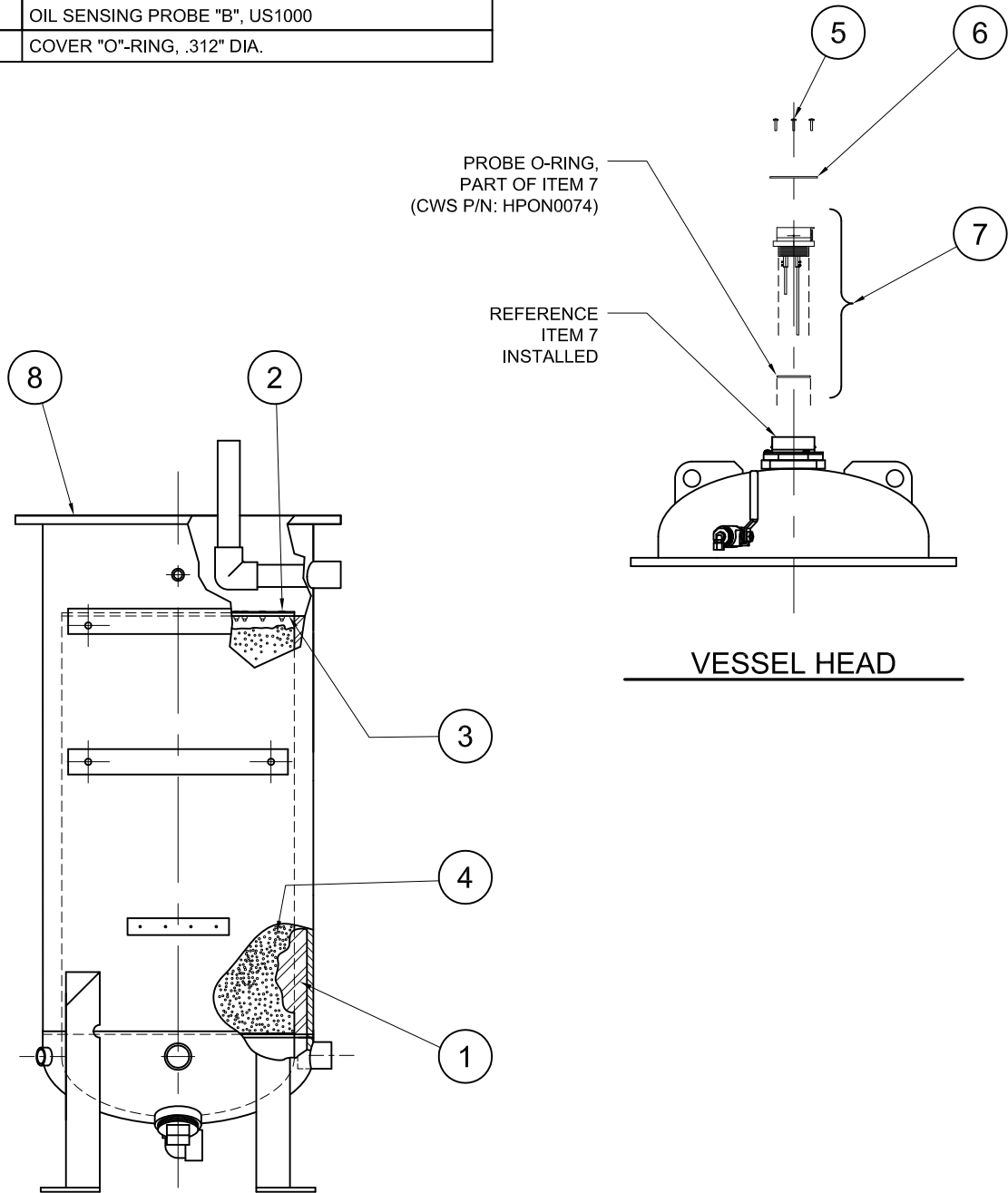
- BOTH ENDS OF HOUSING ARE THE SAME.
- QUANTITIES LISTED ARE FOR BOTH ENDS OF HOUSING.

| KIT           | ITEMS CONTAINED     | CWS PART NUMBER |
|---------------|---------------------|-----------------|
| HEAD ASSEMBLY | ITEMS 1, 2, 3, 4, 5 | MHEC0415        |
| SEAL KIT      | ITEMS 2, 5, 8       | MHSK0415        |



# PARTS LIST

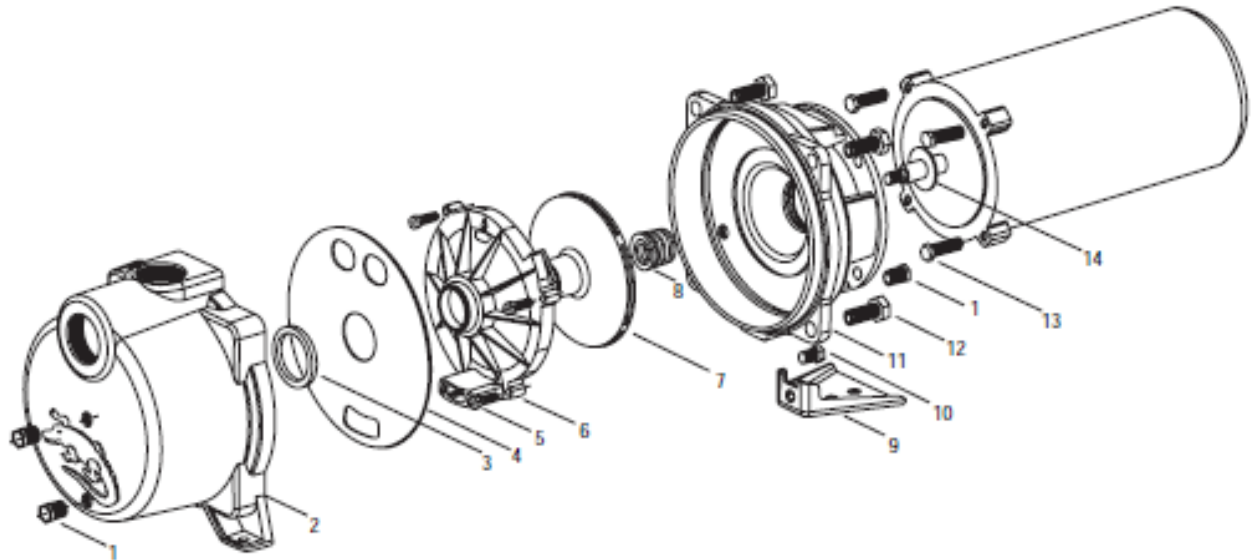
| ITEM NO. | QTY. REQD. | CWS PART NO. | NOMENCLATURE OR DESCRIPTION                   |
|----------|------------|--------------|---|
| 1        | 1          | HSPP1067     | OILY WATER PLATE PACK, MODEL 1000             |
| 2        | 14         | RVTS0306     | 3/16" RIVET SS                                |
| 3        | 1          | HSSB0563     | SCREEN -B                                     |
| 4        | 15 LBS     | FMPB0001     | FILTER BEADS                                  |
| 5        | 3          | STCS0812     | SCREWS 8/32 X 3/4 SS                          |
| 6        | 1          | HSPP0075     | (OSP) OIL SENSING PROBE PLATE - (AS REQUIRED) |
| 7        | 1          | OSPB0074     | OIL SENSING PROBE "B", US1000                 |
| 8        | 1          | HCON0054     | COVER "O"-RING, .312" DIA.                    |



LOWER VESSEL

HELI-SEP 1000 SUB-ASSEMBLY

## ULTRA-SEP™ 500 thru 3000 60HZ FEED PUMP (PU1) BREAKDOWN

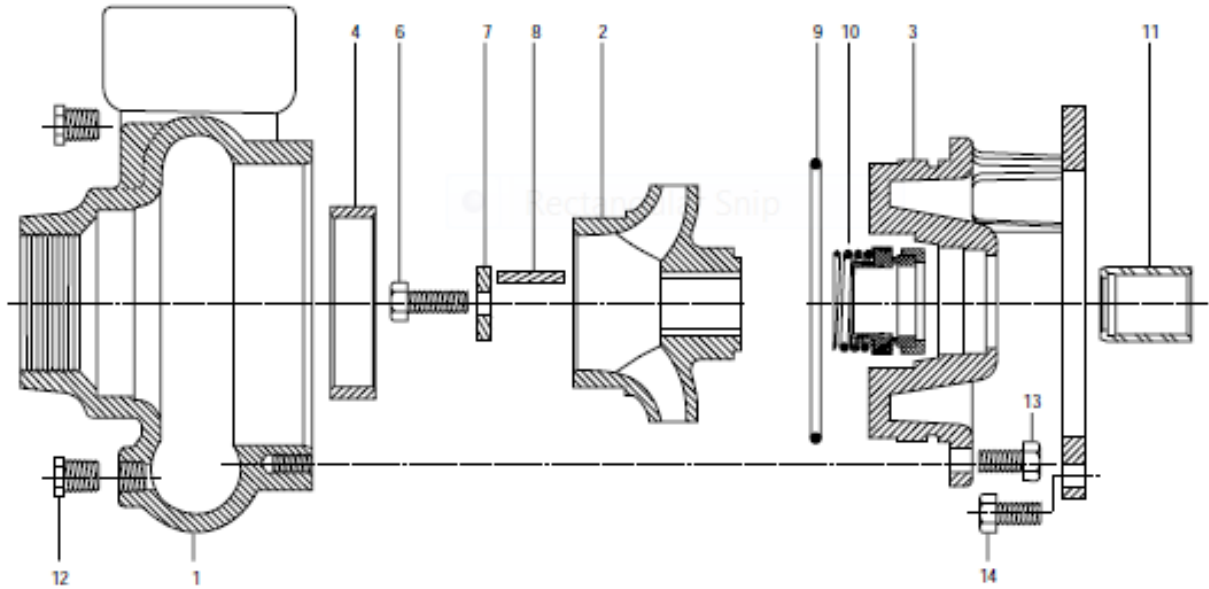


| ITEM NO. | QTY | DESCRIPTION                       | MATERIAL               | CWS P/N    |
|----------|-----|-----------------------------------|------------------------|------------|
| 1        | 4   | Drain Plug - 1/4" NPT             | Zinc Plated Steel      | PPTG0400   |
| 2        | 1   | Casing                            | Cast Iron              | PPCI1324   |
| 3        | 1   | Guide Vane Seal Ring              | BUNA-N                 | PPGN5231   |
| 4        | 1   | Diaphragm                         | Neoprene               | PPGN5256   |
| 5        | 3   | Screw Phillip Head 1/4"-20UNC     | Stainless Steel        | BTCS0403-1 |
| 6        | 1   | Guidevane                         | Lexan 10% G.F.         | PPGY7406   |
| 7        | 1   | Impeller                          | Noryl 20% G.F.         | IMGY2715   |
| 8        | 1   | Mechanical Seal                   | Carbon/Ceramic<br>Buna | MSG51010   |
| 9        | 1   | Pump Foot                         | Steel                  | PPPF4408   |
| 10       | 1   | Pump Foot Bolt                    | Steel                  | BHCP0603   |
| 11       | 1   | Motor Adapter                     | Cast Iron              | PPMA1310   |
| 12       | 4   | Hex Head Bolt (adapter to casing) | Zinc Plated Steel      | BHCP0805   |
| 13       | 4   | Hex Head Bolt (adapter to motor)  |                        | BHCP0604   |
| 14       | 1   | Deflector                         | BUNA-N                 | PPGS2700   |

**NOTE: Reference Model GT07/GT073**

# ULTRA-SEP™ 1000

## 60HZ PROCESS PUMP (PU2) BREAKDOWN



| ITEM NO. | QTY | DESCRIPTION                       | MATERIAL                       | CWS P/N  |
|----------|-----|-----------------------------------|--------------------------------|----------|
| 1        | 1   | Casing                            | Cast Iron                      | PPCI1612 |
| 2        | 1   | Impeller (7.00)                   | Bronze                         | IMGB2759 |
| 3        | 1   | Adapter                           | Cast Iron                      | PPMA1114 |
| 4        | 1   | Wear Ring (casing)                | Bronze                         | PPGB0468 |
| 5        | n/a | Wear Ring (seal housing)          | -                              | -        |
| 6        | 1   | Impeller Bolt                     | AISI 303<br>Stainless<br>Steel | PPGS1343 |
| 7        | 1   | Impeller Washer                   |                                | PPGS1339 |
| 8        | 1   | Impeller Key                      |                                | PPGS0411 |
| 9        | 1   | Seal Housing O-Ring               | BUNA-N                         | PPGN0574 |
| 10       | 1   | Mechanical Seal                   | Carbon/Ceramic<br>Buna         | MSGS1013 |
| 11       | 1   | Shaft Sleeve                      | AISI 300 SS                    | PPGS0466 |
| 12       | 4   | Drain Plug - 1/4" NPT             | Zinc<br>Plated<br>Steel        | PPTG0400 |
| 13       | 8   | Hex Head Bolt (adapter to casing) |                                | BHCP0604 |
| 14       | 4   | Hex Head Bolt (adapter to motor)  |                                | BHCP0604 |

## **SMART CELL OIL CONTENT DETECTOR SPARE PARTS**

When ordering spares, it is important to supply details of the type of monitor, serial number of monitor, part number of each spare required, its description and any other relevant information.

### **RECOMMENDED ON-BOARD SPARES**

| <b>Item</b>  | <b>Qty</b> | <b>Part Number</b>       |
|--|------------|--------------------------|
| Cell wiper ring                                      | 1          | SBWR9039                 |
| Fuse 1.25A   | 1          | SBFU9089                 |
| Solenoid valve (230V)<br>or<br>Solenoid valve (115V) | 1          | SBSV9059<br><br>SBSV9060 |

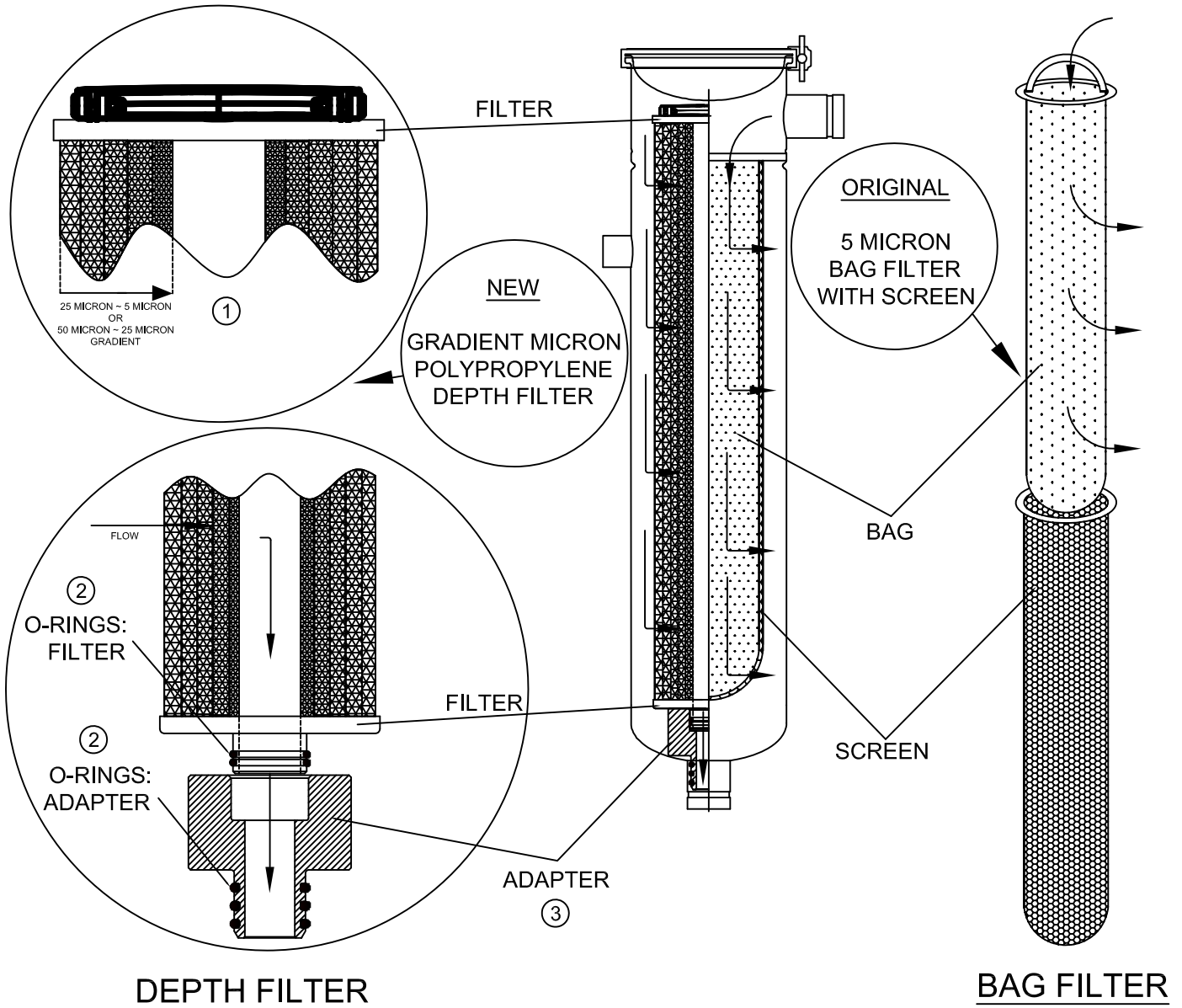
### **OTHER SPARES**

| <b>Item</b>                                    | <b>Qty</b> | <b>Part Number</b> |
|--|------------|--------------------|
| Spare Smart Cell Assy Bilge                    | 1          | SBSC9171           |
| Spare 110/240V Programmed Smart Bilge PCB Assy | 1          | SBBA9019           |
| Membrane overlay                               | 1          | SBMO9030           |
| LCD display module                             | 1          | SBDM9068           |
| Smart Bilge Download Cable / Kit               | 1          | SBDK0958           |
| Calibration Verification Kit                   | 1          | SBVK0900           |





## DEPTH FILTER REPLACING BAG FILTER



DEPTH FILTER

BAG FILTER

| ITEM              | 5 MICRON FITS ULTRA-SEP MODELS |             |              | 25 MICRON DUPLEX PRE-FILTERS |              |
|-------------------|--------------------------------|-------------|--------------|------------------------------|--------------|
|                   | US500C-1000C                   | US2000-5000 | US7500&10000 | ALL-US5000                   | US7500&10000 |
| DEPTH FILTER      | FCCU0520                       | FCCU0530    | FCCU0540     | FCCU2530                     | FCCU2540     |
| ③ INITIAL ADAPTER | FHAB1610-US                    | FHAB1720-US | FHAB1730-US  | FHAB1720-US                  | FHAB1730-US  |
| O-RINGS: FILTER   | DRGN2225                       | DRGN2225    | DRGN2225     | DRGN2225                     | DRGN2225     |
| O-RINGS: ADAPTER  | DRGN2322                       | DRGN2326    | DRGN2334     | DRGN2326                     | DRGN2334     |

① THESE FILTERS WILL NOT FIT IN ASME HOUSINGS.

② ADAPTERS AND FILTERS INCLUDE O-RINGS.

③ ADAPTERS REQUIRED FOR INITIAL RETROFIT ONLY.

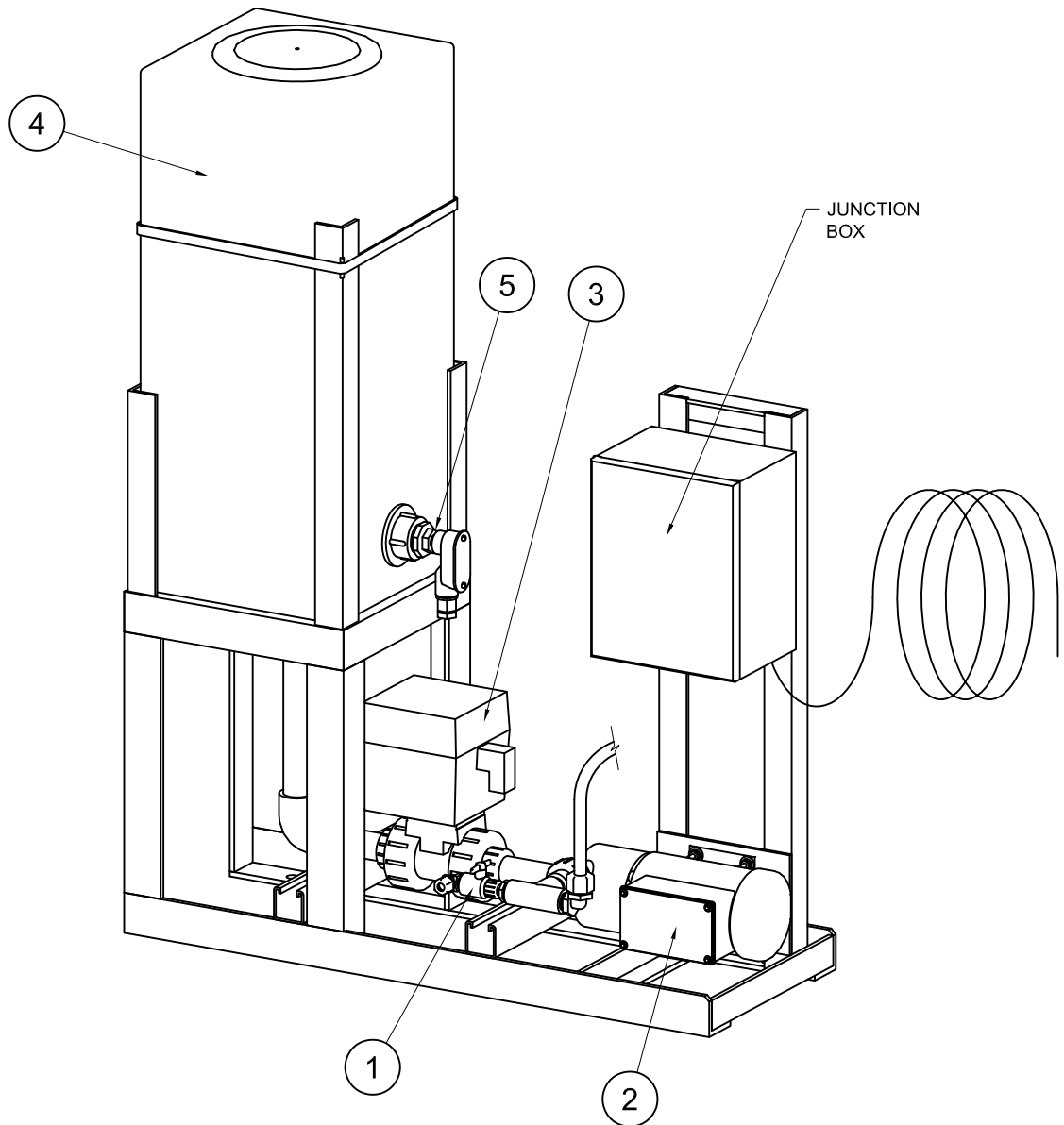
### BENEFITS (DEPTH FILTER)

- REDUCED SPIR-O-LATOR CLEANING
- IMPROVED SPIR-O-LATOR PERFORMANCE
- ABSORBS OIL
- MORE DIRT/OIL LOADING CAPACITY
- LESS BY-PASS POTENTIAL

# PARTS LIST



| ITEM NO. | PART & ID # | CWS PART NO. | NOMENCLATURE OR DESCRIPTION |
|----------|-------------|--------------|-----------------------------|
| 1        | BV5         | VBLX0400     | BALL VALVE, 1/4" (VENT)     |
| 2        | PU4         | PMAC0001-US  | CHEMICAL INJECTION PUMP     |
| 3        | MV4         | VBEX1600     | MOTORIZED BALL VALVE, 1"    |
| 4        | TK1         | USCT2075     | CHEMICAL TANK, 10 GAL.      |
| 5        | LSL1        | FLTS0808     | LIQUID LEVEL SWITCH, 1/2"   |





## RECOMMENDED ON BOARD SPARES

| ITEM NO. | QTY. REQD. | CWS PART NO. | DESCRIPTION                            |
|----------|------------|--------------|--|
| 1        | 1          | VRKD0800     | SOLENOID VALVE, REPAIR KIT 1/2"        |
| 2        | 2          | VCLD0050     | SOLENOID VALVE, REPLACEMENT COIL, 240V |
| 3        | 12         | FCCU0520     | DEPTH FILTER, 5 MICRON                 |
| 4        | 1          | FHAB1610-US  | DEPTH FILTER ADAPTER                   |
| 5        | 2          | MCLN1511     | SPIR-O-LATOR CLEANER, 4 GAL. / CASE    |
| 6        | 6          | ASMS0000     | SPIR-O-LATOR PRESERVATIVE, 2lbs EA.    |
| 7        | 1          | MSGS1010     | PU1, MECHANICAL SEAL                   |
| 8        | 1          | MSGS1013     | PU2, MECHANICAL SEAL                   |
| 9        | 1          | SWVB0430     | SWITCH, VAC. / LOW PRESS., 1/4"        |
| 10       | 1          | SWMB0030     | SWITCH, LOW PRESS., 1/4" 30PSI         |
| 11       | 1          | SWAT0806     | SWITCH, TEMP-NC 1/2"MNPT @ 125F        |
| 12       | 2          | MHSK0415     | SPIR-O-LATOR HOUSING SEAL KIT          |
| 13       | 2          | MHEC0415     | SPIR-O-LATOR HOUSING HEAD ASSEMBLY     |
| 14       | 1          | OSPB0074     | OIL SENSING PROBE, "B" US1000          |