



SANI-MATIC®

## Clean-Out-of-Place (COP) Parts Washer

Technical Datasheet



Cleaning Confidence

# Model Number Key

Example Model #: RW06-431NP2S-ASV-413010

1, 2	Tank Series	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	UW 20" W x 18" D RW 24" W x 22" D PW 24" W x 30" D TW 30" W x 24" D																				
3, 4	<b>Tank Length</b> 04 4' L 06 6' L 08 8' L 10 10' L 12 12' L																				
5	<b>Wetted Materials of Construction</b> 4 304 Stainless Steel (Standard)																				
6	<b>Tank Interior Surface Finish</b> 3 32 Ra with Welds Ground (Standard)																				
7	<b>Tank Cover</b> 0 No Cover (Standard) 1 Hinged Cover																				
8	<b>Drain Board / Pipe Racks</b> N No Drain Board or Pipe Racks (Standard) D Drain Board with Pipe Racks																				
9	<b>Stationary / Portable</b> S Stationary with Adjustable Feet (Standard) P Portable with Casters																				
10	<b>Jet Manifolds</b> 1 Side Jet Manifolds (Standard) 2 Side Jet & End Jet Manifolds 3 Side Jet & Hose Cleaning Manifolds 4 Side Jet, End Jet, & Hose Cleaning Manifolds																				
11	<b>Heating</b> S In-Tank Steam Sparger (Standard) E Electric Heater to Maintain Temperature N No Heating Method																				
12	<b>Pump Type</b> A Ampco (Standard) F Fristam W Waukesha																				
13	<b>Motor Type</b> T TEFC (Standard) W Washdown Duty S Stainless Steel Washdown																				
14	<b>Valve Type</b> V VNE Butterfly (Standard)																				
15	<b>Electrical Utility</b> 4 460V AC, 3PH, 60 Hz (Standard)																				
16	<b>Controls</b> 0 No Controls (Standard) 1 Disconnect with Start / Stop Buttons 2 Disconnect with Start / Stop Buttons and Electric Heater Controller																				
17	<b>Conduit</b> 0 No Conduit (Standard) 1 PVC Conduit 2 PVC Conduit - For Electric Heater 3 Stainless Steel Conduit 4 Stainless Steel Conduit - For Electric Heater																				
18	<b>Chemical Monitoring</b> 0 No Chemical Monitoring (Standard) 1 Conductivity Analyzer																				
19	<b>Chart Recorder</b> 0 No Chart Recorder (Standard) 1 1-Pen Chart Recorder, Temperature Recording 2 2-Pen Chart Recorder, Temperature & Conductivity Recording																				
20	<b>Fill Ports</b> 0 No Fill Ports (Standard) 1 Water and Chemical Fill Port																				

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# 1. Introduction

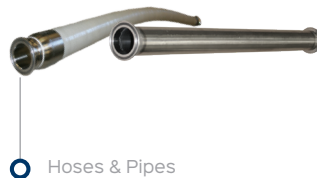
Technical information provided within this document is for Sani-Matic's Clean-Out-of-Place (COP) Parts Washer Configured Design Offering (CDO) serving the food and beverage industry.

Alternative Design Requests (ADR) for variations in construction, options, orientation, or other technical requirements should be directed to the Sani-Matic sales team for custom quoting and engineering.

The system details described in *Sections 2 through 9* apply to all models and their standard options, which are designated with "(Standard)" in the model key. The selectable product options within the model key are described in *Section 10*. Accessories such as chemical pumps and COP Parts Baskets are described in *Section 11*.

## 2. Applications

Sani-Matic's Clean-Out-of-Place (COP) Parts Washers clean food & beverage industry process parts that cannot be cleaned in place and require disassembly for thorough cleaning. Typical process parts cleaned include pipes, hoses, fittings, clamps, gaskets and valves.



## 3. Construction

### 3.1 Certifications and Classifications

- **Electrical Area Classification:** Non-hazardous
- **Electrical Certification:** UL 508A
- **Seismic Design:** None
- **Industry Standards:** Authorized to provide Canadian Registratioin Numbers (CRN), helps meet FSMA and HACCP Sanitation Preventive Controls.
- **System Certifications:** None

### 3.2 Structural Framing

- **Material:** 304ss round tubing
- **Surface Finish:** Bead blasted
- Fully welded, single-piece construction
- Feet for locating the equipment at a fixed location in the facility. The feet are adjustable allowing the equipment to be leveled on uneven or sloped surfaces. Models with lengths 8' and less have (4) feet, while models 10' and longer have (6) feet.

### 3.3 Sanitary Piping

- **Material:** 304ss sanitary tube & fittings
- **Surface Finish:** 32 µin Ra ID
- **Weld Finish:** As welded ID / weld color removed OD (bead blast as part of tank construction)
- **Welding:** Welds are performed manually per AWS D18.1/D18.1M standards (latest edition). The weld interior is argon gas purged.
- **Slope:** None
- **Connections:** Tri-clamp fittings with single hinged heavy-duty clamps with wing nuts.
- **Gasket Material:** EPDM
- **Valves:** Butterfly type with 304ss body, EPDM seat, and manual actuator.

### 3.4 Steam Piping

- **Material:** Stainless steel pipe
- **Connections:** NPT

## 4. Utility Requirements

The minimum required utilities for the proper operation of the equipment are listed in Table 1. If these utilities are not available, an Alternative Design Requests may be required.

Table 1: Utility Requirements

Tank Series and Length	Potable Water	Drain	Steam Supply			Electrical	
	Tank Fill (gallons)	Connection Size / Type	Load @ 50 psi (lbs/hr)	Approximate Time (min) for Full Tank Heat Up (55 °F to 140 °F)	Connection Size / Type	Amps @ 230V AC	Amps @ 460V AC
UW04	62	2.0" TC	341	9	0.50" FNPT	7.0	3.5
UW06	91	2.0" TC	341	13	0.50" FNPT	7.0	3.5
UW08	120	2.5" TC	604	10	0.75" FNPT	12.0	6.0
UW10	149	2.5" TC	604	12	0.75" FNPT	12.0	6.0
UW12	178	2.5" TC	604	14	0.75" FNPT	18.0	9.0
RW04	95	2.5" TC	341	13	0.50" FNPT	12.0	6.0
RW06	140	2.5" TC	604	11	0.75" FNPT	12.0	6.0
RW08	185	2.5" TC	604	15	0.75" FNPT	18.0	9.0
RW10	230	3.0" TC	1,444	8	1.00" FNPT	36.0	18.0
RW12	275	3.0" TC	1,444	9	1.00" FNPT	36.0	18.0
PW04	138	2.5" TC	604	11	0.75" FNPT	12.0	6.0
PW06	203	2.5" TC	604	16	0.75" FNPT	18.0	9.0
PW08	267	3.0" TC	1,444	9	1.00" FNPT	36.0	18.0
PW10	332	3.0" TC	1,444	11	1.00" FNPT	36.0	18.0
PW12	397	3.0" TC	1,444	13	1.00" FNPT	36.0	18.0
TW04	132	2.5" TC	604	11	0.75" FNPT	12.0	6.0
TW06	195	2.5" TC	604	16	0.75" FNPT	18.0	9.0
TW08	257	3.0" TC	1,444	9	1.00" FNPT	36.0	18.0
TW10	319	3.0" TC	1,444	11	1.00" FNPT	36.0	18.0
TW12	382	3.0" TC	1,444	13	1.00" FNPT	36.0	18.0

### NOTE:

- Listed amp draws are for Ampco supply pumps. Other manufacturers may vary slightly. See Table 4 for all pump and HP values. All pumps are 230/460V AC dual rated. See Section 10.8 (Table 6) for disconnect size when selecting a controls package.
- Drain temperature is variable based on COP cycle.
- Steam Supply requirement is based on selection of the standard in-tank steam sparger.
- Chemical requirement is dependent on cleaning process.

# 5. Physical Size

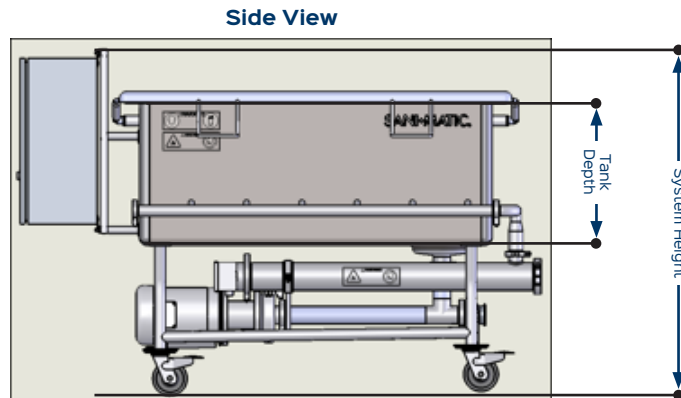
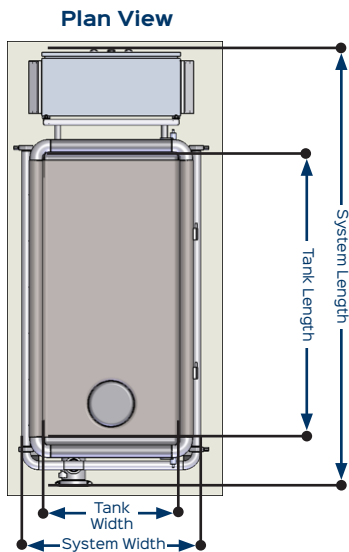
The approximate overall size of the equipment is listed in Table 2. Both overall system dimensions and tank dimensions are listed, as well as the nominal tank volume.

**Table 2: System and Tank Size**

Tank Series and Length	System Dimensions (inches)			Tank Dimensions (inches)			Nominal Tank Volume (gallons)
	Width	Height	Length	Width	Height	Length	
UW04	30	39	64	20	18	51	75
UW06	30	39	88	20	18	75	100
UW08	30	39	112	20	18	99	150
UW10	30	39	136	20	18	123	175
UW12	30	39	160	20	18	147	200
RW04	34	43	64	24	22	51	100
RW06	34	43	88	24	22	75	150
RW08	34	43	112	24	22	99	200
RW10	34	43	136	24	22	123	250
RW12	34	43	160	24	22	147	300
PW04	34	51	64	24	30	51	150
PW06	34	51	88	24	30	75	225
PW08	34	51	112	24	30	99	300
PW10	34	51	136	24	30	123	375
PW12	34	51	160	24	30	147	450
TW04	40	45	64	30	24	51	150
TW06	40	45	88	30	24	75	225
TW08	40	45	112	30	24	99	300
TW10	40	45	136	30	24	123	375
TW12	40	45	160	30	24	147	450

**NOTE:**

- System dimensions listed are for standard options. The below images detail what the referenced dimensions are for an example configured design COP Parts Washer. Some product options add additional length, width or height. See individual Product Options (*Section 10*) for more details.
- Design documents are sent for customer reference only. System piping and component configuration and tank layout are predetermined. If a custom layout or configuration is required, contact the Sani-Matic sales team for an Alternative Design Request COP Parts Washer quote.



## 6. Component Manufacturers

The following are the manufacturers and models of the components used in the assembly of this equipment. Note that inclusion of certain components is dependent on the type of model options selected.

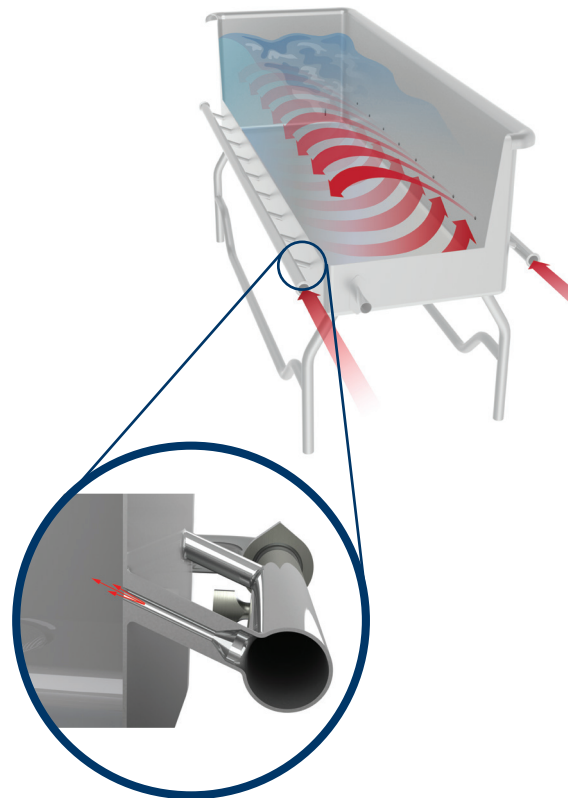
Table 3: Component Manufacturers

Component	Manufacturer	Model
Tank	Sani-Matic	-
Pump / Motor	Ampco / Baldor	AC+316
Pump / Motor	Fristam / Baldor	FPX
Pump / Motor	Waukesha / Baldor	200
Valve, Butterfly	VNE	51C
Valve, Control (steam)	Powers	#11
Conductivity Sensor	Rosemount	225
Conductivity Analyzer	Rosemount	1056
Chart Recorder	Anderson	AJ-300
RTD	ifm Efector	TM4901
Electric Heater	ASB	PFSU
Chemical Pump	Wilden	P1

## 7. General Equipment Description

### 7.1 Tank

- The tank is used to hold chemical wash solutions. All wash solutions are supplied to the tank's jets or manifolds from the circulation system which draws the wash solutions from the tank. A sump strainer (bead blast finish) with 1/8" perforations is located at the outlet of the tank to protect the pump and jets. The components being washed are placed in the tank, either loose or in baskets, and submerged in the wash solutions.
- **Design Features:**
  - **Sides:** 12 ga.
  - **Bottom Head:** 12 ga.
  - **Insulation:** None
  - **Overflow:** None
  - **Design:** Atmospheric
  - **Material:** 304ss wetted surfaces
  - **Interior Finish:** 32  $\mu$ m Ra with welds ground smooth
  - **Exterior Finish:** 32  $\mu$ m Ra material with welds color cleaned or bead blast
- Standard equipped side jet manifolds create rolling agitation within the tank and are best for washing small parts and fittings. The jets are of a sanitary design being fully welded to the tank and the supply manifold.
- The UW, RW and TW series tanks have dual side jets, while the deeper PW series tanks have quad side jets.



## 7.2 Circulation System

Utilizing a recirculated design, the circulation system draws wash solutions from the tank and supplies solution back to the tank through tank jets or manifolds.

- One (1) Manual butterfly valve for drain. See “Drain - Connection Size / Type” within Table 1 for valve size.
- One (1) Centrifugal pump:
  - See Table 4 for ratings
  - 316Lss wetted materials with EPDM elastomers
  - 3500 rpm motor
  - TEFC Motor (standard)

Table 4: Pump Data					
Tank Series and Length	HP			Pump Rating	
	Ampco	Fristam	Waukesha	gpm	psi
UW04	3.0	3.0	3.0	53	27
UW06	3.0	3.0	3.0	77	25
UW08	5.0	5.0	5.0	102	25
UW10	5.0	5.0	5.0	127	21
UW12	7.5	7.5	7.5	151	30
RW04	5.0	5.0	5.0	81	27
RW06	5.0	5.0	5.0	119	23
RW08	7.5	7.5	7.5	157	28
RW10	15.0	10.0	10.0	196	45
RW12	15.0	10.0	10.0	234	36
PW04	5.0	5.0	5.0	117	23
PW06	7.5	7.5	7.5	173	24
PW08	15.0	10.0	10.0	227	37
PW10	15.0	15.0	15.0	282	38
PW12	15.0	15.0	15.0	337	33
TW04	5.0	5.0	5.0	112	23
TW06	7.5	7.5	7.5	166	25
TW08	15.0	10.0	10.0	218	41
TW10	15.0	15.0	15.0	271	39
TW12	15.0	15.0	15.0	325	34

### NOTE:

- Pump rating data is based on Ampco pumps – ratings may change for other pump manufacturers.

## 7.3 Heating System

Steam is directly injected into the wash solution to elevate its temperature. See Table 1 for load requirements, approximate heat up time, and connection size and type.

- **Steam supply manifold:**
  - One (1) Self-regulating control valve that is single seated and has a bronze body. The valve can control the wash solution temperature to a setting between 110°–170 °F. Its thermobulb is mounted in a thermowell located in the tank’s sidewall. The thermowell has a bead blast, wetted finish.
  - One (1) Steam mixer located in the tank.

The mixer has a bead blast ID / color cleaned OD finish.



## 8. Testing

The equipment will be factory tested to confirm its proper operation. Included in this are the below testing methods.

- Confirm that the equipment is complete and conforms to the drawings.
- Confirm that the safety systems operate correctly (if applicable).
- Verify controls are wired properly (if applicable).
- Functional testing of the control system (if applicable).
- Wet testing of the pump.

## 9. Documentation

The equipment is provided with one (1) electronic copy of the documentation package. The documentation is provided in the English language and includes the following information:

- Warranty information
- Recommended spare parts (RSP) list
- Device settings (if different than the vendor's standard)
- Piping & Instrumentation Diagram (P&ID) and Mechanical Bill of Material (BOM)
- General Assembly (GA) drawing
- Electrical panel layout drawing (if applicable)
- Electrical schematics drawing (if applicable)
- Component manuals (as provided by the vendor)

## 10. Product Options

The following are detailed descriptions of the available product options selectable for the COP Parts Washer Configured Design Offering.

### 10.1 Tank Cover

The **Hinged Cover** option provides operator protection from the wash solutions in the tank, helping to contain vapors in the tank. The cover is hinged in the back and opens approximately 80°. For 4'- to 8'-length tanks, lift assist cylinders help reduce the effort to open the cover as well as hold it in the open position. On 10'- and 12'-length tanks, a counterweighted cover provides the same benefits. Both cover types are made of 304ss with weld color removed.

#### NOTE:

- This option cannot be used with the **Drain Board with Pipe Racks** option (see *Section 10.2*) or the **End Mounted Drain Table** accessory (see *Section 11.2*) when the cover is closed.
- This option adds height (open cover) and width (cover hinge) to the system dimensions.



**Hinged Cover** with Counterweight



**Hinged Cover** with Lift Assist Cylinders

## 10.2 Drain Board / Pipe Racks

Adding the **Drain Board with Pipe Racks** option allows for component draining and drying. The pipe racks are mounted to a drain board located along the rear edge of the tank. The drain board has upturned lips to contain residual wash solutions and is sloped to drain back to the tank. The pipe racks include four levels of rod supports to place long items (such as piping, hoses, or shafts) for draining or drying. Tanks 6' and less have two (2) pipe racks, 8' tanks have three (3) pipe racks, and 10' and longer tanks have four (4) pipe racks. The drain board is integral to the tank while the pipe racks are capable of being removed. They are made of 304ss with weld color removed.



### NOTE:

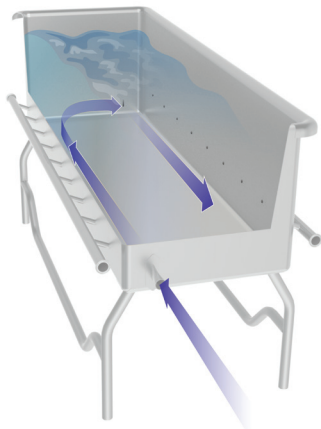
- This option cannot be used with the **Hinged Cover** product option (see *Section 10.1*).
- This option adds approximately 28" in height and 3" in width to the system dimensions.

## 10.3 Stationary / Portable

Selection of the **Portable with Casters** option replaces the adjustable feet with casters allowing the equipment to be moved through the facility. The casters have 5" diameter non-marking polyurethane wheels, stainless steel swivel hardware, and foot brakes.

## 10.4 Jet Manifolds

The selection of adding **End Jet Manifolds** and/or a **Hose Cleaning Manifold** to the standard side jets adds additional cleaning actions as described below. Addition of the options adds the required manual butterfly valves to direct wash solutions to either the side jet manifolds, end jet manifolds, or hose cleaning manifold. Systems are sized to operate only one zone at a time and should not be run simultaneously. The standard side jet manifold is included when selecting either or both of these options.



- **End Jet Manifolds** create agitation lengthwise within the tank and are best for washing piping, hoses, and other long hollow items.



- The **Hose Cleaning Manifold** provides four (4) 1.5" tri-clamp connections (UW model tanks) or four (4) 2.0" tri-clamp connections (RW, PW, TW model tanks) internal to the tank, submerged in the fluid. Hoses and/or tubing can be attached to these connections providing flow of wash solutions through their interior.

### NOTE:

- The **End Jet Manifolds** option adds approximately 3" in length to the system dimension.

## 10.5 Heating

The direct steam injection heating system can be removed to provide **No Heating Method** or can be replaced with an **Electric Heater to Maintain Temperature**.

- The **Electric Heater to Maintain Temperature** is sized to maintain temperature only (up to 170 °F) and is dependent on the system being filled with water already at this temperature. This does not include heat loss due to parts loading or room environment conditions.
  - See Table 5 for kW & amperage ratings
  - Temperature control with an integral thermostat
  - 316Lss wetted materials

Table 5: Electric Heater Data		
Tank Series and Length	Electric Heater Sizing	
	kW	Amp Draw (460V AC)
UW04	9.0	12
UW06	9.0	12
UW08	9.0	12
UW10	9.0	12
UW12	9.0	12
RW04	9.0	12
RW06	9.0	12
RW08	9.0	12
RW10	12.0	16
RW12	12.0	16
PW04	9.0	12
PW06	9.0	12
PW08	12.0	16
PW10	12.0	16
PW12	12.0	16
TW04	9.0	12
TW06	9.0	12
TW08	12.0	16
TW10	12.0	16
TW12	12.0	16

### NOTE:

- It is strongly recommended when adding the **Electric Heater to Maintain Temperature** option to add the **Disconnect with Start / Stop Buttons and Electric Heater Controller** option, which adds the proper heater to pump safety interlocks. Without the controls package selected, it is the responsibility of the end-user to install the proper interlocks – failing to install and test an interlocking method between the pump and the heating element could lead to serious safety hazards and voids any warranty.

## 10.6 Pump Type

These options replace the standard Ampco recirculation pump with a different manufacturer.

- **Fristam**
- **Waukesha**

## 10.7 Motor Type

These options replace the recirculation pump's standard TEFC motor with an upgraded rating.

- **Washdown Duty**
- **Stainless Steel Washdown**

## 10.8 Controls

Adding a controls package to the base system allows for start/stop control of the pump and heater control if selected with the **Electric Heater to Maintain Temperature** option. An enclosure houses the components used to control the system and is equipment mounted.

- The **Disconnect with Start / Stop Buttons** option package includes the following components:
  - NEMA 4X rated control enclosure constructed of 304ss with a painted carbon steel back plate
  - Two (2) Push buttons to start and stop the system
  - One (1) Motor starter/disconnect for the circulation pump
  - One (1) Transformer to convert the incoming 3PH power to other needed voltages
  - 20-ft. SO cord for the incoming electrical connection -- a plug is not included
  - Conduit (see *Section 10.9* for options)
- The **Disconnect with Start / Stop Buttons and Electric Heater Controller** option package includes all the above components as well as:
  - One (1) Fused disconnect switch (see Table 6 for disconnect sizes)
  - One (1) Heater controller
  - One (1) Heater thermocouple amplifier for high temperature shutoff
  - One (1) Selector switch for auto / off heater control

Table 6: Disconnect Size (Amps)

Tank Series and Length	460V AC	
	No Electric Heat	Electric Heat
UW04	15	30
UW06	15	30
UW08	15	30
UW10	15	30
UW12	15	30
RW04	15	30
RW06	15	30
RW08	15	30
RW10	30	60
RW12	30	60
PW04	15	30
PW06	15	30
PW08	30	60
PW10	30	60
PW12	30	60
TW04	15	30
TW06	15	30
TW08	30	60
TW10	30	60
TW12	30	60

### NOTE:

- Both options require selection of a conduit option (see *Section 10.9*).
- **Disconnect with Start / Stop Buttons and Electric Heater Controller** option requires selection of **Electric Heater to Maintain Temperature** option.
- Both options add length (for control enclosure) to the system dimensions.

## 10.9 Conduit

The standard system has no controls associated with it and therefore no conduit type. When a controls package is selected, a selection of conduit type is then made. The “For Electric Heater” options are used when conduit is selected in addition to the **Electric Heater to Maintain Temperature**.

- **PVC Conduit or PVC Conduit – For Electric Heater:**
  - **Rigid conduit:** Schedule 40 nonmetallic PVC
  - **Flexible conduit and fittings:** UL listed nonmetallic PVC with nylon fittings
- **Stainless Steel Conduit or Stainless Steel Conduit – For Electric Heater:**
  - **Rigid conduit:** Schedule 40 stainless steel
  - **Flexible conduit and fittings:** UL listed PVC coated steel with stainless steel fittings

With either conduit selection, instruments requiring calibration will include a minimum of 3 ft. of cable or flexible conduit allowing the device to be moved to a calibration cart without being unwired.

### NOTE:

- All conduit options require selection of a controls package (see *Section 10.8*).
- **PVC Conduit – For Electric Heater** and **Stainless Steel Conduit – For Electric Heater** options require selection of the **Electric Heater to Maintain Temperature** option (see *Section 10.5*).

## 10.10 Chemical Monitoring

Selection of the **Conductivity Analyzer** option provides the opportunity for implementation of varying levels of chemical monitoring for the COP Parts Washer. The analyzer displays the chemical concentration of the wash solutions either by conductivity or percent concentration. It includes outputs that can be used by a chart recorder or a chemical dosing pump. When used with a chemical dosing pump, the chemical concentration is programmable energizing the pump when additional chemical is needed (wiring by others). The included components are:

- One (1) Rosemount 1056 series conductivity analyzer mounted to the equipment.
- One (1) Rosemount 225 series conductivity sensor mounted in the sidewall of the tank.

## 10.11 Chart Recorder

Chart recorders utilize circular paper charts to record certain cleaning parameters of the COP Parts Washer over a 24-hour period. Two types of chart recorder options are available:

- **1-Pen Chart Recorder, Temperature Recording**
  - One (1) Anderson AJ-300 1-Pen chart recorder for recording temperature is mounted to the equipment.
  - One (1) ifm Efector TM-series RTD mounted in the sidewall of the tank.
- **2-Pen Chart Recorder, Temperature & Conductivity Recording**
  - One (1) Anderson AJ-300 2-Pen chart recorder for recording temperature and conductivity is mounted to the equipment.
  - One (1) ifm Efector TM-series RTD mounted in the sidewall of the tank.

### NOTE:

- The **2-Pen Chart Recorder, Temperature & Conductivity Recording** option requires addition of the **Conductivity Analyzer** option (see *Section 10.10*).
- Both options add length (for chart recorder) to the system dimensions.

## 10.12 Fill Ports

Selection of the **Water and Chemical Fill Port** option adds one (1) tri-clamp water fill port and one (1) 0.25" FNPT chemical fill port in the upper sidewall of the tank body. The fill port size is 1.5" TC for tanks with nominal volume  $\leq$  200 gallons, and 2.0" TC for nominal tank volumes  $>$  200 gallons.

### NOTE:

- Backflow prevention for the water fill port is by others (if required by the water supply).

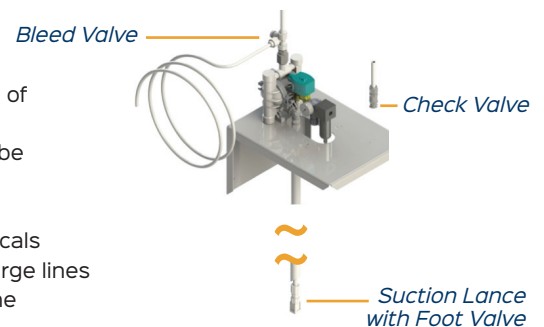
# 11. Accessories

The following are detailed descriptions of the available accessories selectable to accompany the COP Parts Washer Configured Design Offering. Multiple accessories can be selected for a single system.

## 11.1 Chemical Pump Assembly, Wilden P1

The chemical delivery system doses the cleaning chemicals into the tank. If the **Conductivity Analyzer** option is selected, the analyzer's output can be tied into the air solenoid valve for dosing and maintaining a chemical concentration. For manual control, the air solenoid valve would be wired to an on/off switch. The below listed components of the assembly are loose shipped for installation by others.

- One (1) PVC Suction lance (43") with foot valve for placement into a 55-gallon drum (drum by others).
- One (1) Wilden P1 series air operated diaphragm pump
  - **Duty:** 4 gpm @ 65 psi
  - **Instrument air requirement:** 6 scfm @ 80 psi
  - Polypropylene body with PTFE diaphragms
  - One (1) 0.25" Solenoid valve (120V AC) with filter / regulator for control of the pump. The pneumatic components and piping are made of brass
  - One (1) 304ss wall mounting bracket allowing the pump assembly to be placed near the chemical drum
- One (1) Manual bleed valve to aid in priming the pump
- One (1) 0.25" Check valve to prevent the siphoning of the cleaning chemicals
- One (1) 30 ft., 0.5" Polyethylene tubing for the pump's suction and discharge lines
- One (1) 8 ft., 0.375" Polyethylene tubing for the pump's bypass/priming line



### NOTE:

- It is recommended to add the **Water and Chemical Fill Port** option when using the chemical pump for a tie-in point for chemical injection.

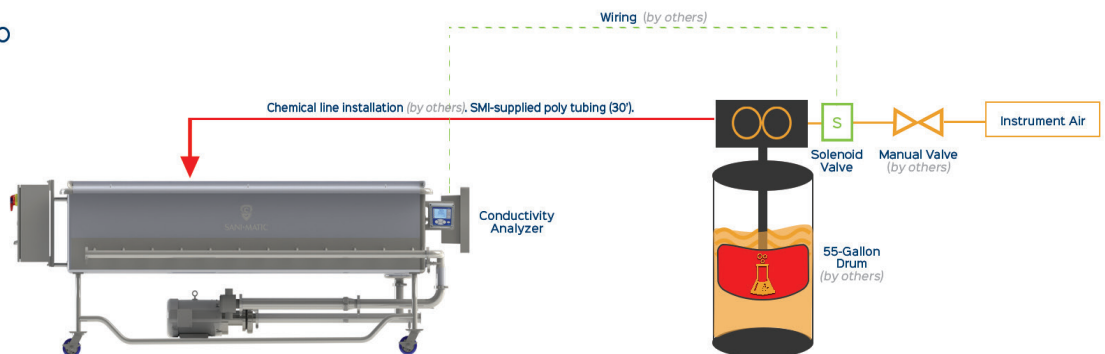
### Functional Specification for Chemical Pump Assembly & Conductivity Analyzer

**ON**

- COP Tank Full
- Power On
- Instrument Air Valve (by others) is **OPEN**

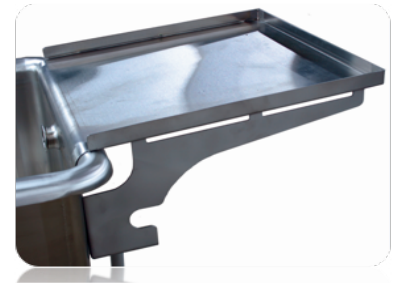
**OFF**

- COP Tank Full
- Power On
- Instrument Air Valve (by others) is **CLOSED**



## 11.2 End Mounted Drain Table

The drain table provides a location for the washed components to dry or be reassembled. It has upturned lips to contain residual wash solutions and a downturn lip to drain back to the tank. The drain table is removable and can be placed anywhere along the perimeter of the tank. The base plate is 22" wide by 23" long. It is made of 304ss with weld color removed.



### NOTE:

- This accessory cannot be used with the **Hinged Cover** option when the cover is closed (see *Section 10.1*).
- This accessory must be mounted on the front or back of UW model tanks to accommodate its width.

## 11.3 Additional Turn Over Package (TOP) - Hard Copy

A hard copy of the equipment Turn Over Package (TOP) will be printed and provided in a series of books (binders). All Documentation materials listed in *Section 9* are included in the hard copy package.

## 11.4 COP Parts Baskets

Table 7: COP Parts Baskets

Model	Description	SMI Part #	Basket Dimensions (inches)	Handle Height (inches)	COP Without Cover				COP With Cover			
					UW	RW	PW	TW	UW	RW	PW	TW
URWB-1	<b>Placement:</b> Tank bottom, non-stacking <b>Construction:</b> 316L sheet, 3/8" diameter perforations, bead blast finish	460030	19.00 x 15.00 x 3.50	17.50	✓	✓	✓	✓	✓	✓	✓	✓
URWB-2	<b>Placement:</b> Tank bottom, non-stacking <b>Common Uses:</b> Fittings <b>Construction:</b> 316L sheet, 3/8" diameter perforations, bead blast finish	020132	19.75 x 15.00 x 4.00	15.75	✓	✓	✓	✓	✓	✓	✓	✓
URWB-5-17 (Standard)	<b>Placement:</b> Edge of tank (hanger style) <b>Common Uses:</b> Small parts <b>Construction:</b> 316L sheet, 3/16" diameter perforations, electropolished finish	020139	12.00 x 6.00 x 10.00	17.63	✓	✓	✓	✓	✓	✓	✓	✓
URWB-5-19	<b>Placement:</b> Edge of tank (hanger style) <b>Common Uses:</b> Small parts <b>Construction:</b> 316L sheet, 3/16" diameter perforations, electropolished finish	221298	12.00 x 6.00 x 10.00	19.00	✓	✓	✓	✓	N/A	✓	✓	✓
URWB-6-24 (Standard)	<b>Placement:</b> Tank bottom, non-stacking <b>Common Uses:</b> Small parts <b>Construction:</b> 316L round bar, 1" spacing electropolished finish)	020136	22.00 x 10.50 x 10.00	24.00	✓	✓	✓	✓	N/A	N/A	N/A	✓
URWB-6-15	<b>Placement:</b> Tank bottom, non-stacking <b>Common Uses:</b> Small parts <b>Construction:</b> 316L round bar, 1" spacing electropolished finish	218495	22.00 x 10.50 x 10.00	15.00	✓	✓	✓	✓	✓	✓	✓	✓
URWB-6-19	<b>Placement:</b> Tank bottom, non-stacking <b>Common Uses:</b> Small parts <b>Construction:</b> 316L round bar, 1" spacing electropolished finish	218496	22.00 x 10.50 x 10.00	19.00	✓	✓	✓	✓	N/A	✓	✓	✓
URWB-7-29 (Standard)	<b>Placement:</b> Tank bottom, non-stacking <b>Common Uses:</b> Large parts <b>Construction:</b> 316L round bar, 1" spacing, electropolished finish	440021	22.00 x 22.00 x 18.00	29.00	N/A	✓	✓	✓	N/A	N/A	✓	N/A
URWB-7-18	<b>Placement:</b> Tank bottom, non-stacking <b>Common Uses:</b> Large parts <b>Construction:</b> 316L round bar, 1" spacing, electropolished finish	221293	22.00 x 22.00 x 18.00	18.00	N/A	✓	✓	✓	N/A	✓	✓	✓



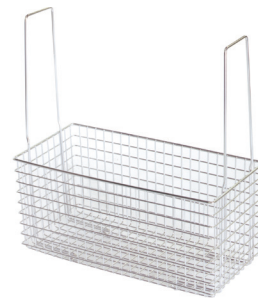
URWB-1



URWB-2



URWB-5-17



URWB-6-24



URWB-7-29

### NOTE:

- The second number listed in the model designates the basket's handle height (e.g., URWB-7-18 has an 18" handle height).