

Optima® Flushometers

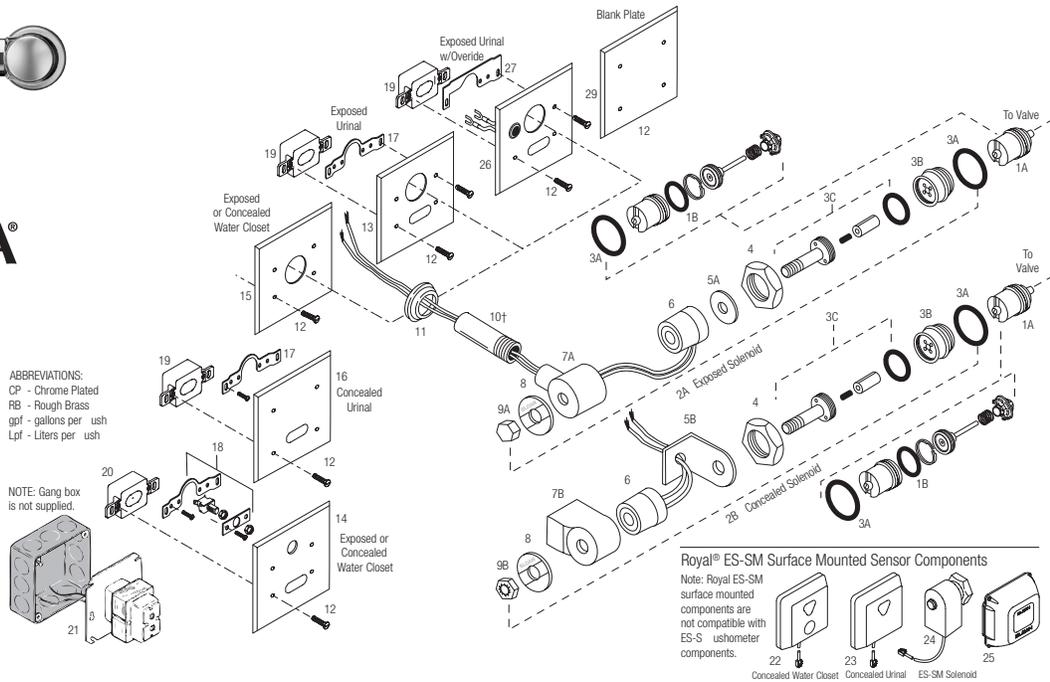
Old Royal® until 05/09, current Sloan/Regal®



OPTIMA®

ABBREVIATIONS:
CP - Chrome Plated
RB - Rough Brass
gpf - gallons per flush
Lpf - Liters per flush

NOTE: Gang box is not supplied.



SOLENOID/SENSOR PARTS AND ASSEMBLIES LIST

Item				Item			
No.	Code No.	Part No.	Description	No.	Code No.	Part No.	Description
1A.	3305043	EL-128-A	Actuator Cartridge Assembly Repair Kit Includes Spring, Plunger Guide, Solenoid Valve Seat, Valve Piston Assembly, and O-Ring (also available for ES-SM flushometers)	9A.	0305125	EL-101	CP Nut for Solenoid (exposed installation)
1B.	0305135	EL-110	O-Ring	9B.	0305167	EL-166	Housing Nut for Solenoid (concealed installation)
2A.	0305328	EL-124-1	120V only (no sensor)	10.	0306249	F-15	Tail †
	3305044	EL-1029-A	CP Cartridge/Solenoid Kit EL-124-1 (120V) and EL128-A		0305145	EL-123-A	Old Style ESS 24V course thread (120V also)
	0305329	EL-124-2	24 VAC Solenoid Assembly (exposed installation) Includes Handle Coupling, 24 VAC Coil, Face Plate for 24 VAC Solenoid, Solenoid Adapter, Solenoid Shaft Assembly, Nut for Solenoid, Solenoid Housing, Solenoid Flux Plate, and O-Ring		0305337PK	EL-226	1-1/4" Extension for EL-123-A course thread
	3305045	EL-1028-A	CP Cartridge/Solenoid Kit EL-124-2 (24V) and EL128-A	11.	0345150	EL-431-A	CP Flange Assembly (exposed installation)
2B.	0305330	EL-138-1	120V only (no sensor)		0305139	EL-176-A	Old Style ESS 24V course thread (120V also)
	0305331	EL-138-2	24 VAC Solenoid Assembly (concealed installation) Includes Handle Coupling, 24 VAC Coil, Face Plate for 24 VAC Solenoid, Solenoid Adapter, Solenoid Shaft Assembly, Nut for Solenoid, Solenoid Base Plate and Solenoid Cover Assembly	12.	0305152	EL-152	CP Screws (requires four screws per cover plate)
3A.	0337086	DO-22	O-Ring	13.	0305151	EL-151	CP Cover Plate for Sensor and Solenoid Operator (Urinal only) (L/L Variation-0305150)
3B.	0305132	EL-104	RB Adapter for Solenoid	14.	0305219	EL-201	CP Cover Plate for Sensor and Override Button (Closet only)
3C.	0305165	EL-163-A	Solenoid Shaft Assembly Includes Gasket, Plunger, Plunger Spring, and Solenoid Shaft	15.	0318066	HY-66	CP Cover Plate for Solenoid Operator (Closet only)
4.	0301082	A-6	CP Handle Coupling (exposed installation)	16.	0305161	EL-161	CP Cover Plate for Sensor
5A.	0305166	EL-164	Solenoid Flux Plate (exposed installation) fine thread	17.	0305323	EL-168-A	Yoke Assembly (Urinal only)
5B.	—	EL-542	N/A Separately	18.	0305324	EL-141-A	Override Switch and Yoke Assembly (Closet only)
6.	0305119	EL-165-1	120 V Coil	19.	3305620	EL-1500	Urinal Sensor Replacement Kit (Urinal only)
	0305118	EL-165-2	24 VAC Coil	20.	3305621	EL-1500-L	Closet Sensor Replacement Kit (Closet only)
7A.	0345120	EL-162-2	CP Solenoid Housing (exposed installation) fine thread	21.	0345154	EL-154	Transformer (120 VAC) (also available for ES-SM flushometers) 50 VA plate mount
	0305164	EL-162-1	CP Solenoid Housing (120V) course thread also used on pre-2001 24 V		0345999	EL-342	Transformer (240 VAC) (also available for ES-SM flushometers) 50 VA plate mount
7B.	0305336	EL-541-A	Solenoid Cover Assembly (Includes Flux Plate)	22.	3345047	EL-461	Surface Mounted Sensor and Override Button Assembly (closet only)
8.	0305127	EL-102-2	Face Plate for 24 VAC Solenoid (exposed installation)	23.	3345048	EL-497	Surface Mounted Sensor Assembly (urinal only)
				24.	0305802	EL-297	Solenoid Assembly
				25.	3365003	ETF-492-A	Control Module
				26.	0345266	EL-566-A	Exposed Plate with Override Button (Urinal only)
				27.	0345267	EL-567-A	Yoke Assembly for EL-566-A
				28.	3345080	EL-1026-A	ESS to TMO Retrofit Kit (Exposed)*
				—	0305148	EL-227	Repair Tool Kit for EL-163-A Repair Kit
				—	0345016	EL-387-A	Override Button Replacement for EL-566-A
				—	3345021	EL-1010-A	O-ring Repair Kit*
				29.	0305186PK	EL-139	Blank Plate

† NOTE: For exposed & concealed solenoids manufactured before 2001 or not shown here, consult factory for individual part assembly.

* Not Shown

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TROUBLESHOOTING GUIDE

ATTENTION INSTALLERS: With the exception of the control stop inlet, DO NOT USE pipe sealant or plumbing grease on any valve component or coupling! To protect the chrome or special finish of Sloan flushometers, DO NOT USE toothed tools to install or service these valves. Use our A-50 Super-Wrench™ or other smooth-jawed wrench to secure couplings. Regulations for low consumption fixtures (1.6 gpf/6.0 Lpf closets and 1.0 gpf/3.8 Lpf urinals) prohibit use of higher flush volumes.

Urinals (EL-1500 Sensor)

When the sensor detects a user, a slow flashing red light appears in the sensor window. After eight (8) to ten (10) seconds, the light flashes rapidly to indicate that the sensor is armed. When the sensor no longer detects a user, the sensor immediately activates the solenoid valve after a 0.5 second delay.

Water Closets (EL-1500-L Sensor)

Detection and activation are the same as for the urinal EL-1500 sensor (ABOVE) except when the sensor no longer detects an user, the sensor activates the solenoid valve after a three (3) second delay.

The EL-1500 urinal and EL-1500-L closet self-adaptive sensors are equipped with a "Sentinel Flush" feature. These units automatically activate the solenoid every twenty-four (24) hours after the last user.

1. Valve does not function (red light does not flash when user steps in front of sensor).

- No power is being supplied to sensor. Ensure that the main power is turned "ON". Check transformer, leads and connections. Repair or replace as necessary.
- EL-1500/EL-1500-L sensor is not operating. Replace sensor.

2. Valve does not function (red light flashes when user steps in front of sensor).

INDICATOR: The red light stops flashing when user steps away and the valve makes a "clicking" sound but does not flush.

- No water is being supplied to the valve. Make certain that water supply is turned "ON" and the control stop is open.
- EL-128-A cartridge is fouled or jammed. Turn electronic power to valve "OFF" (failure to do so could result in damage to the solenoid coil). Remove the solenoid operator from the valve and remove the EL-128-A cartridge. Clean and/or repair as necessary.

INDICATOR: The red light stops flashing when user steps away but the valve does NOT make a "clicking" sound and does NOT flush.

- EL-163-A solenoid shaft assembly is fouled or jammed. Turn electronic power to valve "OFF" (failure to do so could result in damage to the solenoid coil). Remove EL-101 or EL-166 nut from the solenoid operator. Remove the coil from the solenoid operator. Use a spanner wrench or pliers to remove the EL-163-A solenoid shaft assembly from valve. Clean and/or replace as necessary. Be sure to replace plunger spring when reassembling solenoid shaft assembly.

INDICATOR: The red light flashes three (3) fast flashes, three (3) slow flashes then three (3) fast flashes ("S-O-S") and continues to repeat this cycle even when user steps out of the sensor's detection range.

- EL-1500/EL-1500-L sensor wiring connections are incorrect. Rewire sensor to valve. One solenoid lead connects to the "TO VALVE" connection on sensor. One transformer lead connects to the "24 VAC IN" connection on sensor. Second solenoid lead and second transformer lead connect together.
- Wiring to sensor is ground shorted. Find short in wiring circuit and correct.
- EL-165-2 solenoid coil is burnt out or coil is not connected to solenoid plunger shaft. Reinstall or replace coil as necessary.

3. Range too short.

- Power down unit for 30 seconds. Power up. Wait six minutes for calibration.
- If reset does not work, replace.

4. Volume of water is insufficient to adequately siphon fixture.

- Control stop is not open wide enough. Adjust control stop for desired water delivery.
- Low consumption unit is installed on water saver or conventional fixture. Replace diaphragm component parts of valve with kit that corresponds to appropriate flush volume of fixture.
- Inadequate water volume or pressure available from supply. Increase pressure or supply (flow rate) to the valve. Consult factory for assistance.

5. Length of flush is too long (long flushing) or valve fails to shut off.

- Water saver valve is installed on low consumption fixture. Replace diaphragm component parts of valve with kit that corresponds to appropriate flush volume of fixture.
- Relief valve in diaphragm is not seated properly or by-pass hole in diaphragm is clogged. Disassemble inside diaphragm component parts and wash parts thoroughly. Replace worn parts if necessary.

6. Water splashes from fixture.

- Supply flow rate is more than necessary. Adjust control stop to meet flow rate required for proper cleansing of the fixture.
- Closet valve is installed on urinal fixture. Replace closet diaphragm component parts with proper urinal kit (inside diaphragm assembly or inside parts kit).

CARE AND CLEANING INSTRUCTIONS

DO NOT USE abrasive or chemical cleaners to clean flushometers or sensor that may dull the luster and attack the chrome or special decorative finishes. Use **ONLY** mild soap and water, then wipe dry with a clean towel or cloth.

When cleaning the bathroom tile, protect the flushometer from any splattering of cleaner. Acids and cleaning fluids can discolor or remove chrome plating.

**When assistance is required, please contact
Sloan Technical Support at: 1-888-SLOAN-14 (1-888-756-2614).**