

**CODE NUMBER**

3451689

**DESCRIPTION**

1.6 gpf, Rough Brass Finish, Single Flush, 2-10.75 L Dimension, True Mechanical Override, Hardwired, Sensor-Operated, Royal® Concealed Sensor Hardwired Water Closet Flushometer.

**DETAILS**

- Flush Volume: 1.6 gpf (6.0 Lpf)
- Finish: Rough Brass (RB)
- Power Type: Hardwired (HW)
- Valve: Diaphragm
- Valve Body Material: Semi-red Brass
- Fixture Type: Water Closet
- Fixture Connection: Top spud
- Rough-In Dimension: 24" (610mm)
- Spud Coupling: 1 ½" (38mm)
- Supply Pipe: 1" (25mm)
- L Dimension: 2" - 10 ¾" (51-273mm) (2-10-3/4-LDIM)
- Override: True Mechanical (TMO)

**FEATURES**

- PERMEX® Synthetic Rubber Diaphragm with Dual Filtered Fixed Bypass
- Handle Packing, Main Seat, Stop Seat and Vacuum Breaker Molded from PERMEX® Rubber Compound for Chloramine resistance
- User friendly three (3) second Flush Delay
- OPTIMA® EL-1500 Self-Adaptive Infrared Sensor with Indicator Light
- "Walk By" Delay of Eight (8) Seconds Prevents Unintentional Flushes
- Die Cast Sensor Plate with no visible Fasteners (for 2-gang Electrical Box)
- Non-Hold-Open Integral Solenoid Operator, Fixed Metering Bypass and No External Volume Adjustment to Ensure Water Conservation
- Courtesy Flush® Non-Hold-Open True Mechanical Override
- Hydraulic Metal Push Button Assembly for True Mechanical Override
- High Back Pressure Vacuum Breaker Flush Connection with Hex Coupling Nut, Spud Coupling, and Flanges for 1½" Exposed Top Spud
- 1" I.P.S. Wheel Handle Bak-Chek® Angle Stop

**VIDEOS**

- ▶ [ESS Flushometer](#)



**COMPLIANCES & CERTIFICATIONS**



(UL Certified, ADA Compliant, cUPC Certified, BAA Compliant)

**RECOMMENDED SPECIFICATION**

Valve Body, Cover, Tailpiece and Control Stop shall be in conformance with ASTM Alloy Classification for Semi- Red Brass. Valve shall be in compliance with the applicable sections of ASSE 1037 and ANSI/ASME 112.19.2.

**ELECTRICAL SPECIFICATIONS**

- Arming Delay: 16 seconds
- Control Circuit: Solid State/24 VAC Input/24 VAC Output
- Flush Delay: 3s
- Self-Adaptive Window: ±10
- Sensor Range: 22"-42" (559-1,067mm)
- Solenoid Operator: 24 VAC
- Transformers:
  - 0345154
  - 0345999

**VALVE OPERATING PRESSURE (FLOWING)**

15-80 PSI (103-552 kPa). Specific fixtures may require greater minimum flowing pressure - consult manufacturer requirements.

**DOWNLOADS**

- [Optima Sensor Activated Royal Installation Instructions](#)
- [Royal 140/152/153/195 ESS TMO SWB Installation Instructions](#)
- [Control Stop Repair and Maintenance Guide](#)
- [Flush Connections Flanges Repair and Maintenance Guide](#)
- [Tail Piece Repair and Maintenance Guide](#)
- [Concealed Flushometers Repair and Maintenance Guide](#)
- [Optima ESS Repair and Maintenance Guide](#)
- [Additional Downloads](#)

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**NOTES**

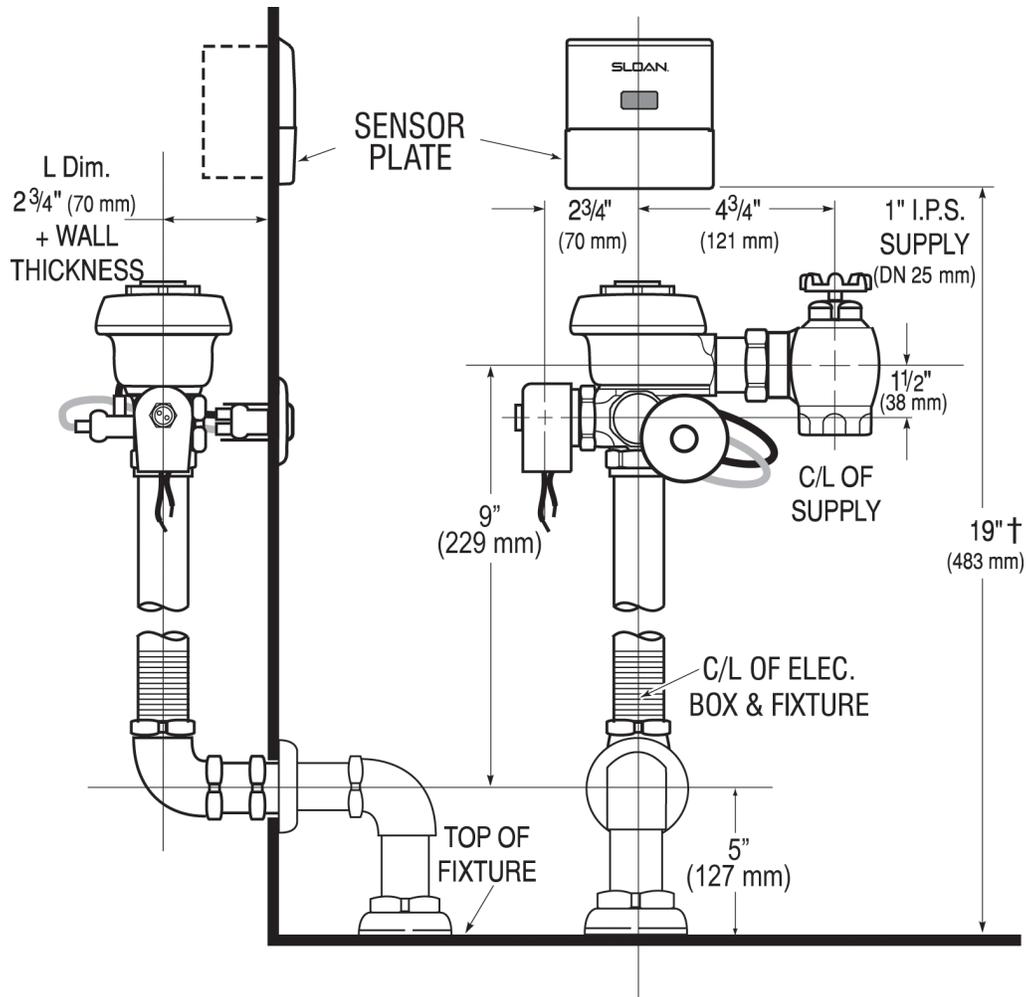
All information contained within this document subject to change without notice.

Looking for other variations of the ROYAL 153 ESS product?  
[View the general spec sheet with all options.](#)

[Find a compatible urinal](#) for this flushometer.

[Find a compatible water closet](#) for this flushometer.

**ROUGH-IN**



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