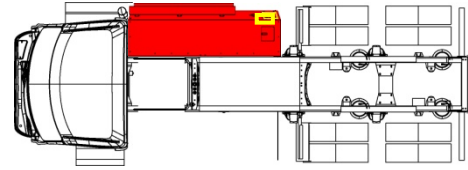


Part Number: 114233 (U.S. Destination)

Part Description: Fuel Storage Module (FSM)



Product Technical Specifications

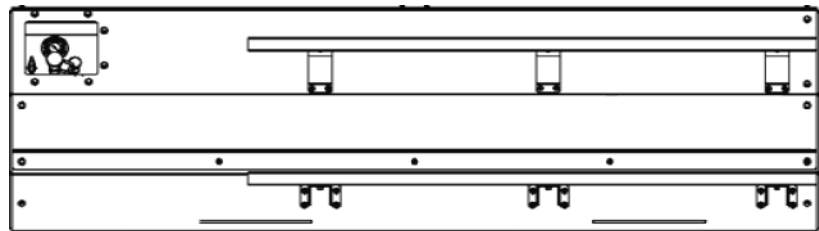
General Specifications

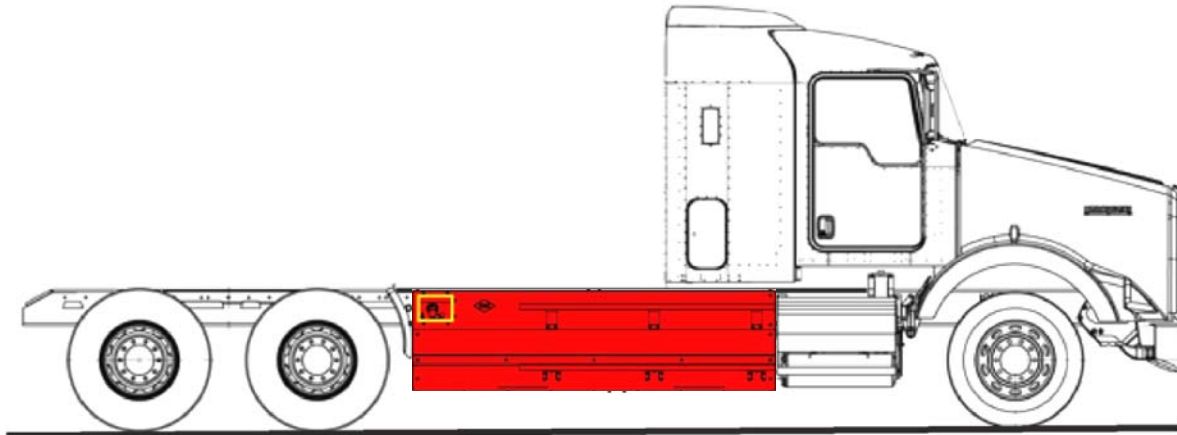
Designed Location	Frame-Mount, RH
Gasoline Gallon Equivalency (IA)	52.9 GGE
Gasoline Gallon Equivalency (NIST)	45.0 GGE
Diesel Gallon Equivalency (IA)	46.5 DGE
Module Weight (Empty)	748 lb (339 kg)
Module Weight (Full)	1003 lb (455 kg)
Internal Volume	159.3 Gallons (603 L)
Fill Panel Location	Left Side (See Yellow Box in Illustration)
Cylinder Certifications	Refer to Data Sheet 113899
Service Pressure	3,600 psi (24.8 MPa) @ 70°F (21°C)
Minimum Working Pressure	290 psi (2 MPa)
Module Temperature Range	-40°F (-40°C) to 185°F (85°C)

* Contact Quantum for additional information.

Standard Equipment:

- Standard Flow Fill Valve
- High Flow Fill Valve
- System Pressure Gauge
- Coalescent Filter
- Vent Valve
- Entry Steps





⚠ CAUTION

The FSM has been approved to be installed with the cylinder valve positioned at the rear of the module. Always install the assembly according to the installation instructions. Failure to install the FSM in the correct position may result in minor or moderate injury.

General Vehicle Requirements

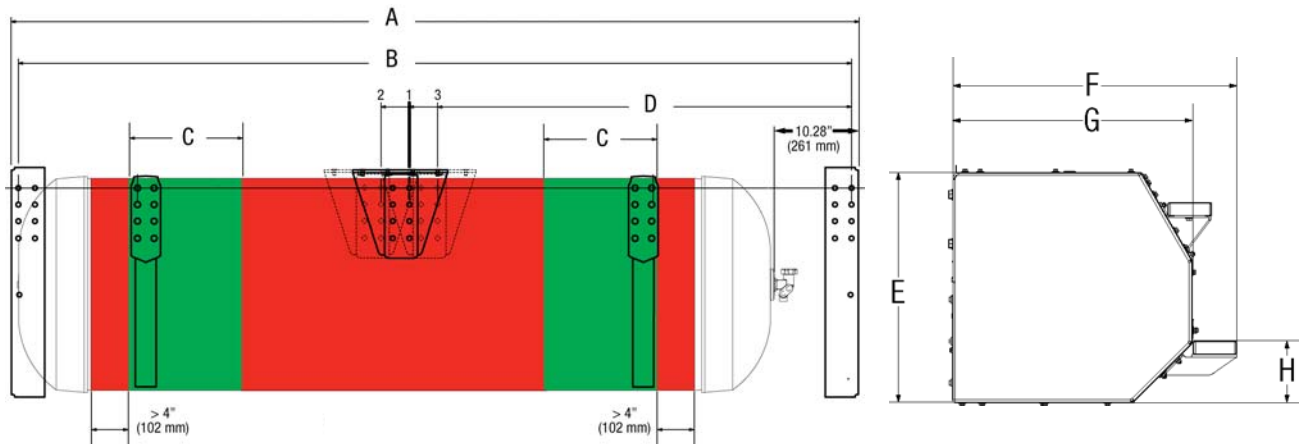
Minimum Ground Clearance (FSM Installed) for a wheel base ≤ 125" (3175mm)	7" (175mm)
Minimum Ground Clearance (FSM Installed) for a wheel base > 125" (3175mm)	9" (225mm)
Maximum Vehicle Width (FSM Installed)	102" (2.6m)
Minimum Distance Between Heat Source and Cover	4" (102mm)
Minimum Distance Between Heat Source and Cylinder	8" (204mm)
Minimum Frame Mount Area	Overall FSM Length +2"

Electrical Requirements

Voltage Range	N/A
Nominal Current Draw	N/A
Peak Current Draw	N/A
Electrical Interface Connector	N/A

Fluid Specifications

Hydraulic Oil Type	N/A
Hydraulic Oil Volume	N/A
Coolant Type	N/A
Coolant Volume	N/A
Coolant Concentration	N/A



FSM Dimensions

Overall Length (A)	101.1" (2568 mm)
Distance Between Cover End Cap Bolt Centers (B)	98.6" (2504 mm)
Recommended Mounting Area for Cylinder Straps (C) [*]	13.5" (343 mm)
Distance Between Cover End Cap Bolt Center and Cover Support Bracket (D) ²	52.4" (1330 mm)
Distance Between Cover End Cap Bolt Center and Cover Support Bracket (D) ¹	49.4" (1254 mm)
Distance Between Cover End Cap Bolt Center and Cover Support Bracket (D) ³	46.4" (1178 mm)
Approximate Fuel Storage Module Weight	748 lb (339 kg)
Approximate Fuel Storage Module Weight (W/Fuel)	1003 lb (455 kg)
Overall Height (E)	27.6" (701 mm)
Overall Depth (Frame to Step) - (F)	33.9" (861 mm)
Overall Depth (Frame to Cover) - (G)	28.6" (726 mm)
Distance From Bottom of Assembly to Top of Bottom Step (H)	6.7" (169 mm)

FSM Vehicle Interface

Hydraulic Oil Connection N/A
 Coolant Connection N/A
 Fuel Outlet Connection 3/8" Swagelok Fitting

Cylinder Information

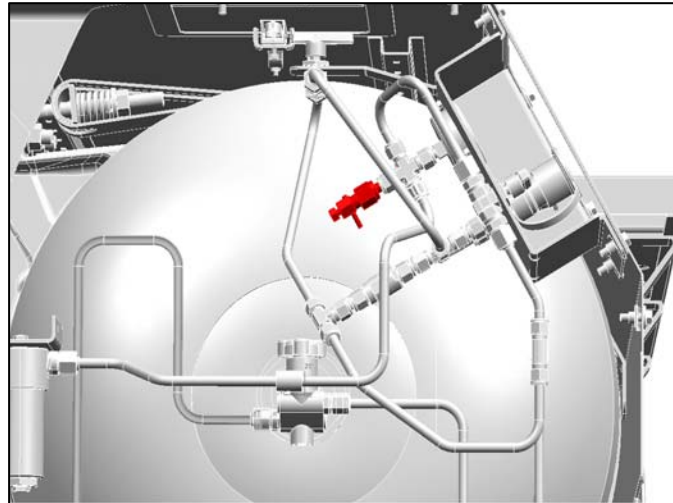
CNG Cylinder Service Life..... See Cylinder Labels
 Recommended Minimum CNG Fuel Quality SAE J1616
 Approved Service Gas Compressed Natural Gas (CNG)
 Cylinder Construction Type IV
 Cylinder Temperature Range -40°F (-40°C) to 185°F (85°C)
 Cylinder Manufacturer Quantum Technologies

Shipping Information

Shipping Height 40" ±6" (1016 mm ±152 mm)
 Shipping Width 61" (1549 mm)
 Shipping Length 110" (2794 mm)
 Shipping Weight 870 lbs ±25 lbs (395 kg ±11 kg)

Kit Contents

Part Number	Quantity	Description
114321	1	Cylinder Bracket Assembly
114004	1	Cylinder Expiration Label
116493	2	Support Bracket, Back Cover
115553-175	12	Bolt, 5/8-11 x 1.75", Class 8.8
116421-008	12	Flanged LockNut, 5/8"-11
114325-001	12	Flat Washer, 5/8"-18
114334-001	3	Flanged LockNut, 5/16"-18
116138	49	Conical Cap Screw, 5/16-18x1, Grade 5
114254	2	CNG label
116329-001	1	Cylinder Assembly, 25"x90"
116154	1	PRD Assembly
116256	1	End Cover, Rear
116112	1	End Cover, Front
114330	1	Back Cover Assembly
114063	1	Top Cover Assembly
114317	1	Bottom Cover Assembly
116494	1	Center Support Bracket



Vent Valve Information

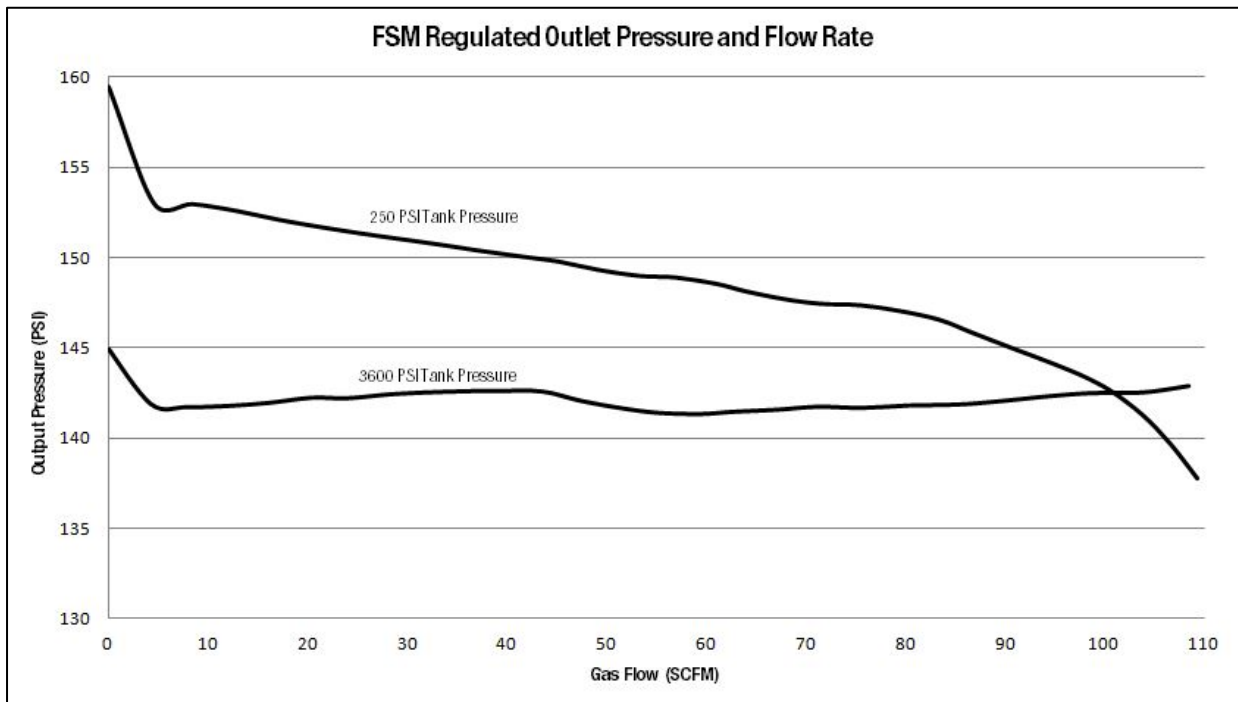
Location Behind Fill Panel
 Ssystem Vent Valve Type Bleed Valve
 Vent Valve Flow Rate (Approximate) 15 GGE/hr
 Vent Port Interface Hose Bib

Fuel Flow Data

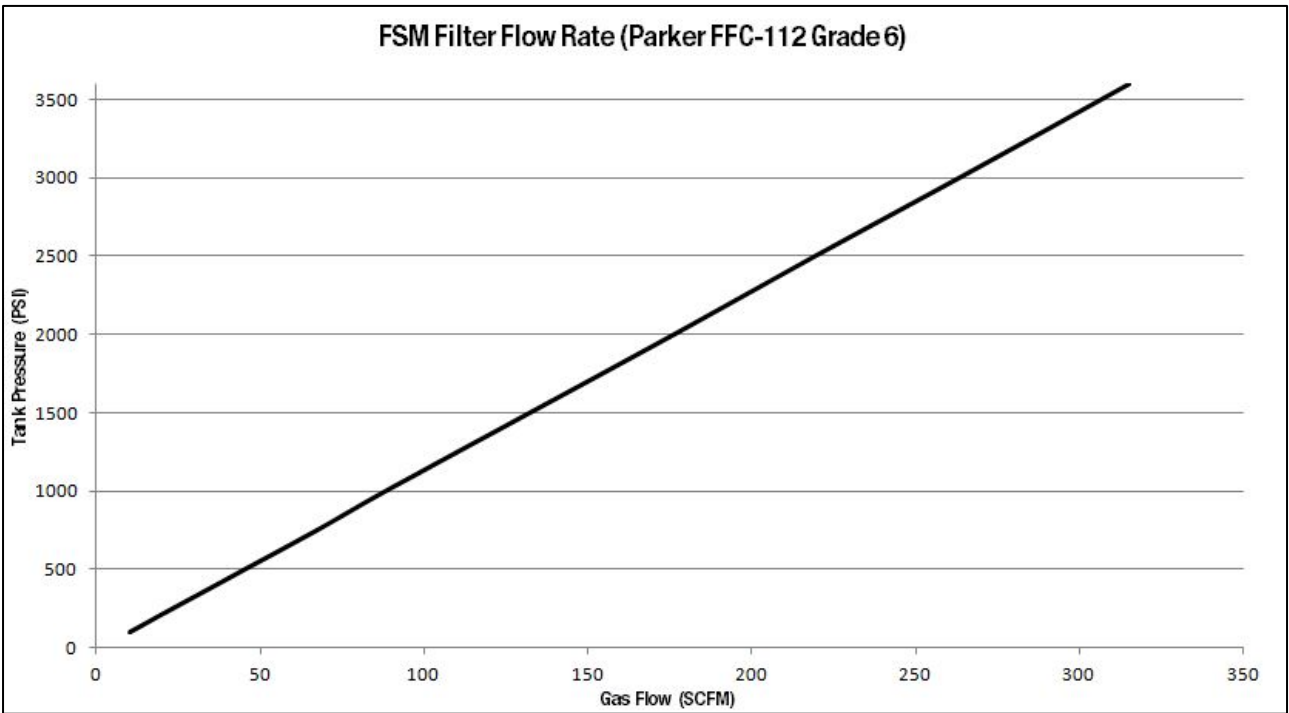
Regulator Outlet Pressure 150 psi (-10/+18 psi)
 Maximum Regulator Flow @ 250 psi (Inlet) 100 SCFM*

* Refer to the FSM Regulated Outlet Pressure and Flow Rate on the next page for additional information.

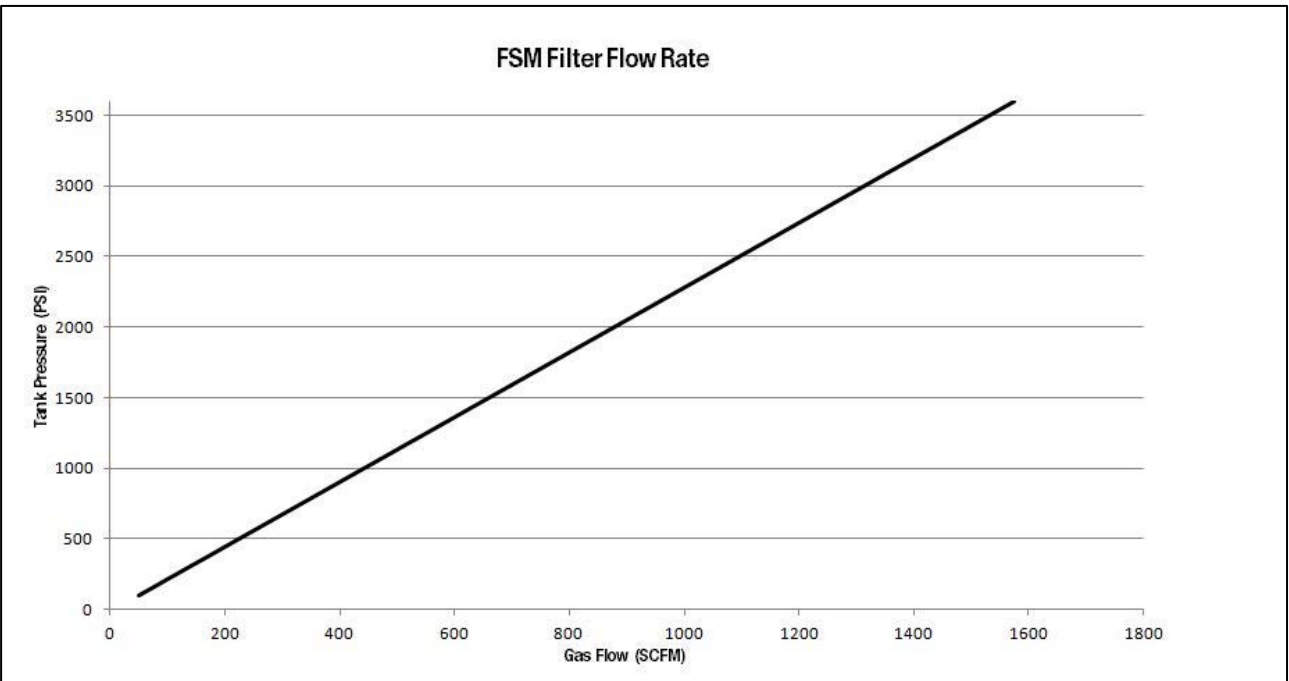
FSM Regulated Outlet Pressure and Flow Rate



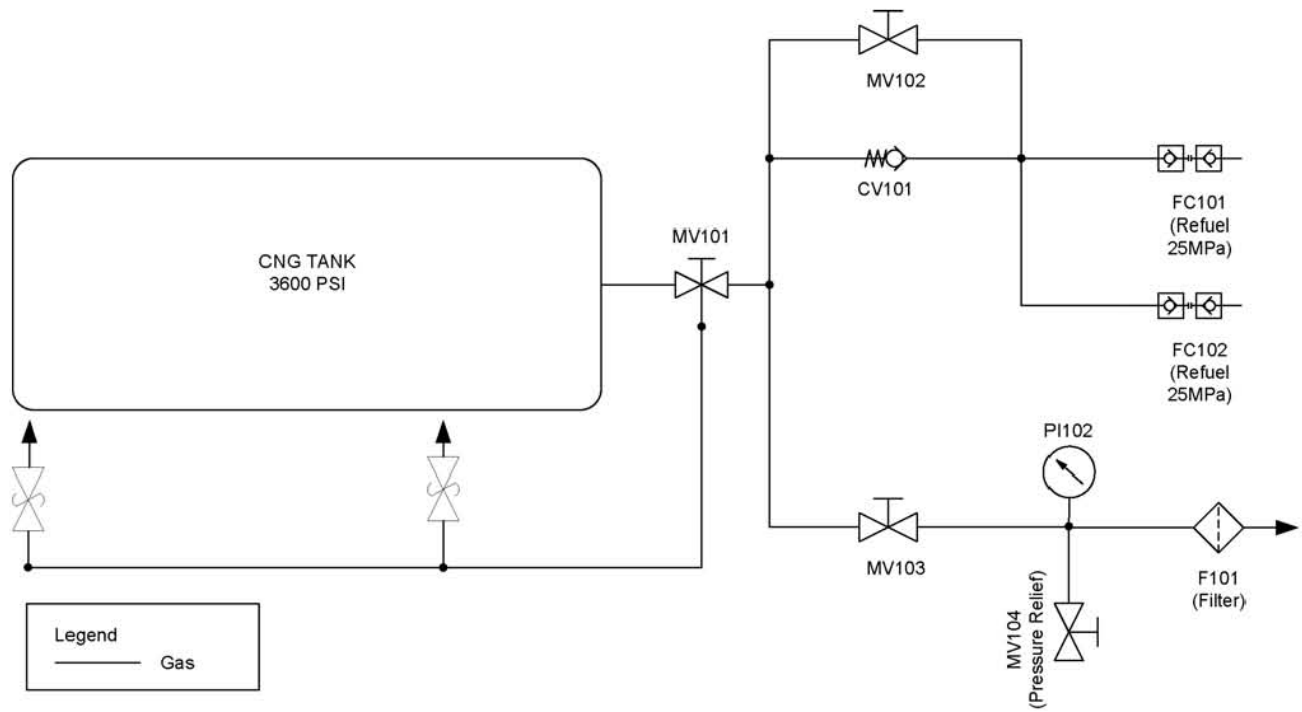
FSM Filter Flow Rate (Parker)



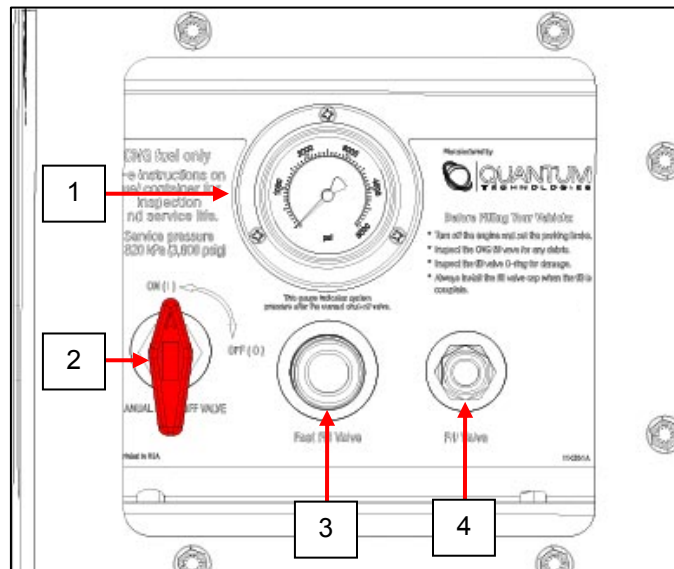
FSM Filter Flow Rate (Omnitek)



System Mechanization



Fill Panel



1. Pressure Gauge with a 63 mm face. The gauge features a dual display of 0 to 5000 psi and 0 to 340 bar. It also has a liquid filled display and made from stainless steel.
2. 1/4 turn manual shut off valve is used to isolate the fuel storage module from down-stream components.
3. High flow fill valve that is ISO 14469-2 compliant to 3600 psi.
4. Standard fill valve that is NGV 1 compliant to 3600 psi.

Accessories

Description	Part Number
Spacer Kit, 1"	114949
Spacer Kit, 2"	114954
Heat Shield Kit, 14"x48"	116544

Interface Harness Options

Description	Part Number	MFR Application
N/A	N/A	N/A

General Maintenance

Inspect the CNG cylinder and brackets every 3 years or 36,000 miles (60,000 km), whichever comes first. The frequency and level of inspection may vary based on state and local requirements.

For additional information, refer to the *Type IV Compressed Natural Gas (CNG) Cylinder Installation and Maintenance Guide* available at www.qtw.com.