



FLUID MANAGEMENT SYSTEMS

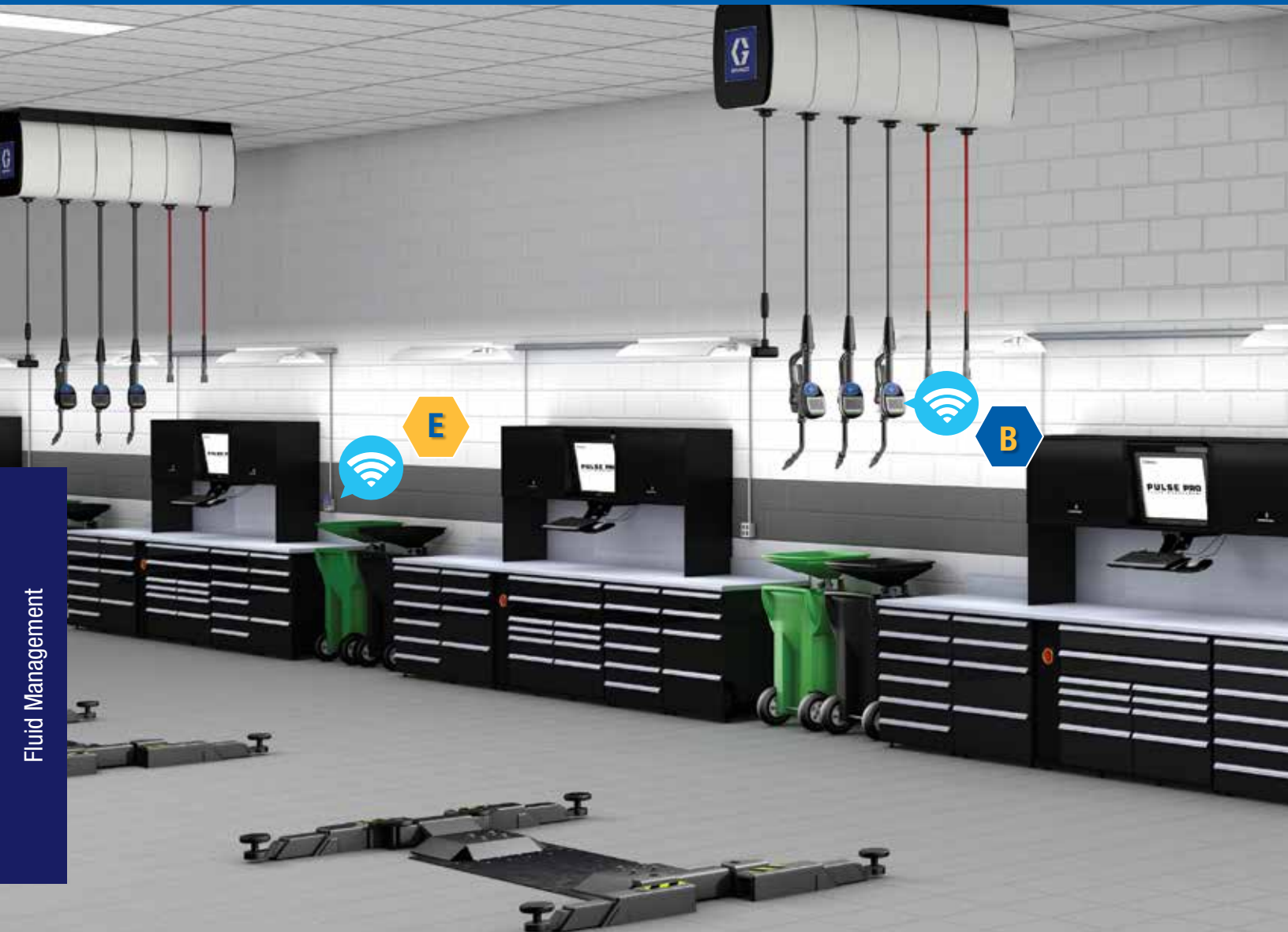
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Choosing a Graco Fluid Management Solution

FEATURE	Traditional Box	Pulse FC	Pulse Pro
Control. Regulate the amount of fluid that's dispensed to reduce spillage and waste.			
Allow control of dispenses	✓	✓	✓
Restrict the quantity of fluid	✓	✓	✓
Ensure correct amount of fluid	✓	✓	✓
Meters. Put control into the hands of your technicians so they can be more productive, accurate and accountable.			
Works with petroleum, synthetic based oils, antifreeze	✓	✓	✓
Works with windshield wash solvent	✓		✓
Meter displays quantity dispensed		✓	✓
Fluid measured at dispense point (highly accurate)		✓	✓
Installation. Seamless integration simplifies dispenses without compromising workflows or productivity.			
Works with oil bar	✓	✓	✓
Wire-free installation		✓	✓
Wireless communication			✓
Pump air control (PAC)	✓		✓
Flexibility. Accommodate emerging demands to maintain or expand productivity and profitability.			
Works with mobile roll-around packages		✓	✓
Easy expansion with additional fluids		✓	✓
Easy upgrade to comprehensive fluid management		✓	N/A
User Interface. Access the information necessary to make more informed decisions quickly.			
Simple PC-based software		✓	
No software to install			✓
Accessible from any PC, phone or tablet			✓
Fluid Management. Improve accountability for your entire operations.			
Track dispenses by invoice or work order			✓
Track dispenses by technician			✓
Record fluid type and quantity dispensed			✓
Keeps technician in service bay			✓
Fluid Inventory. Simplify how you re-order and store inventory to minimize delays.			
Monitor tank levels (TLM)			✓
Dealer Management Solution (DMS) integration			✓
Reporting. Capture critical information and insights to simplify decision-making.			
Print on dispense			✓
Automated customizable reports			✓
Automated alerts to simplify inventory tasks			✓
Software updates		✓	✓
Permanent record of all dispenses or authorizations		✓	✓

Pulse® Pro Fluid Management simplifies how forward-thinking shops track and manage bulk fluids in real time – adding more transparency and accountability to drive productivity and profitability.



Fluid Management



Benefits of Pulse Pro Fluid Management



Transparency. Monitor every drop, every time – automatically – and minimize shrinkage, rounding and discrepancies.



Accountability. Track issues to the source via advanced technology, including automated alerts and customizable reports.



Integration. Capture data, integrate it with popular DMSs and share it with other stakeholders quickly.



Portability. Pair with mobile dispense units and drums easily to reduce extra steps and hassles for technicians.



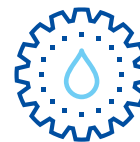
Scalability. Add Pulse into almost any environment quickly, and even retrofit applications or multiple buildings within the same facility.



Accurate billing. Automatically assign every ounce of fluid directly to a work order to simplify billing and maximize profit margins.



Simplicity. Avoid surprises, interruptions and delays. Fluids are tracked and recorded instantly and automatically.



Inventory management. Monitor fluid inventory and schedule refills to minimize delays and excessive costs.



Steps to Build Your Pulse Pro System:

A Hub with Software

1 REQUIRED

B Add Meters

MINIMUM 1 REQUIRED

Add Accessories

C Tank Level Monitor (TLM)

Tank Level Monitor can be used as a standalone product.

OPTIONAL

D Pump Air Controller (PAC)

OPTIONAL

E Pulse Extender and Pulse Remote Extender

OPTIONAL

F Roll Around Package

OPTIONAL

G Oil Bar Dispenser

OPTIONAL



Pulse Hub

Simply connect the Pulse Hub to a power source and access your local network to get started. The self-contained device includes everything necessary for users to access monitoring and reporting tools instantly from any network-connected PC, tablet or smartphone.

**2 Year
Warranty!**

Pulse Software

Pulse Pro Fluid Management software is pre-installed on the Pulse HUB and focused on simple intuitive design with powerful information at your fingertips. Get a quick consolidated view of all dispenses for the entire shop via specifically designed web page and easy-to-use software. Track tank levels at a glance. Generate customizable reports and automated e-mail alerts to share critical information with other key decision-makers. For further efficiency and automation, Pulse software can be integrated with your DMS through Pulse standard integrations or our generic third-party interface.

No PC Software to Install

Pulse software delivered via web pages to any PC, tablet or phone.

Status Lights

Quickly verify Hub status.

Ethernet and Wi-Fi

LAN connection for flexible installations.

Built-In Backup

Includes SD card for database backup and restore.

Wireless Communication

Communicates with Pulse devices.

Built-In Computer

Runs custom operating system to eliminate common PC operating system issues.

Universal Power Connections

Facilitates installation using 100–240 VAC electrical outlets.

Easily Updates

Automatic updates through internet connection.



Features and Benefits

- No PC software to install – Pulse Hub generates a local web page
- Responsive web design – Use any-size screen, from a PC to a phone
- Consolidated dispense queue – Find everything you need in one convenient table
- Advanced reporting – Create and schedule automated reports to track history and fluid usage
- Informative and preventive alerts – The software offers over two dozen alert activities
- Automatic software updates – Software notifies you when updates are ready to install

Technical Specifications

Weight	1.0 lb (454 gm)
Power Supply	
Input Power	100–240 VAC line voltage (0.05 A)
To Hub	5 VDC (0.5 amps)
Warranty	Two years electronics



Ordering Information

Part Number	Description
24Z978	Hub for non-European installation with global power adapter

DMS Integration Options for Pulse Pro

An integration, put simply, is the communication between two separate business systems. Pulse uses integrations to provide enhanced control and monitoring for fluid dispenses.

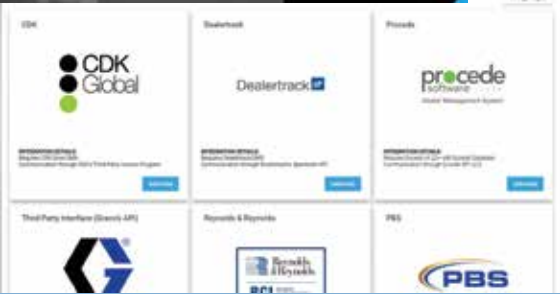
Option 1 – Partner Integrations

- AssetWORKS**
 - Requires FleetFocus: FA or M5 with FluidFocus Module
 - Communication through Enterprise Asset Management System
- CDK Global**
 - Requires CDK Drive DMS
 - Communication through CDK's Third-Party Access Program
- Dealertrack**
 - Requires Dealertrack DMS
 - Communication through Dealertrack's Opentrack API
- procede software**
 - Requires Excede v9.22+ with Excede Database
 - Communication through Excede API v2.0
- PBS**
 - Requires PBS DMS
 - Communication through PBS Partner Hub
- Reynolds & Reynolds RCI**
 - Requires ERA
 - Communication through RCI Web Service

Option 2 – Communication through Graco Third Party Interface



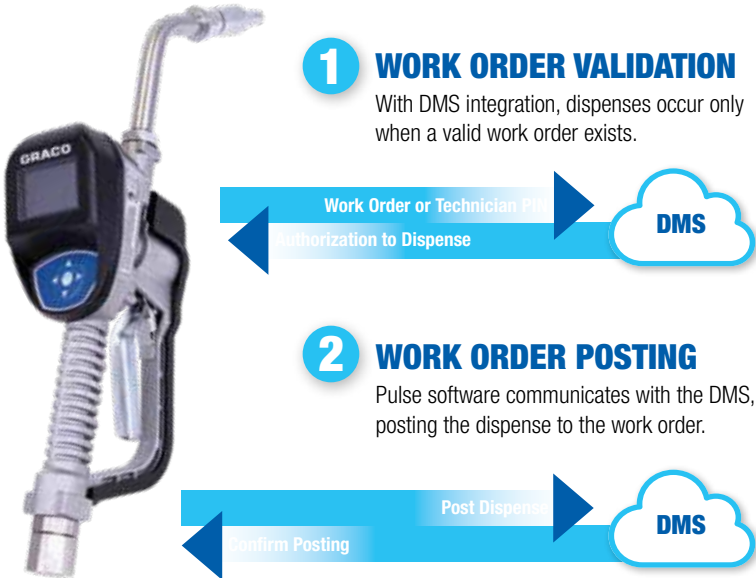
- Requires End-user developed integration for non-supported DMS



Fluid Management

How It Works

The interface to business systems or DMS provides two important basic functions:



Ordering Information

Interface Activation Codes

Part Number	Description
25R975	Pulse software with CDK Global Drive
25R976	Pulse software with Dealertrack
25R977	Pulse software with AssetWORKS
25R978	Pulse software with Reynolds & Reynolds
25R979	Pulse software with Procede Software – 2nd site
25R980	Pulse software with Procede Software
25R981	Pulse software with PBS



B

Pulse Dispense Meter

The dispense meter is durable and easy to use, giving technicians everything they need at their fingertips. PINs and other data can be entered in moments via a larger, more intuitive display. NFC tags can be used for immediate PIN entry and faster access to work orders.

**5 Year
Warranty!**

Large, Intuitive Display

High-contrast display for low- and bright-light conditions.

Faster PIN Entry

Built-in NFC reader and simple, efficient controls.

Wireless Communication

Communicates dispense information with Hub.

Ergonomic Design

Lower button placement.

Fluid Extension Kits

Choose from rigid, flexible or gear lube extensions with automatic flush-mount nozzle design.

Long Battery Life

Uses four off-the-shelf AA batteries – easy to replace.

Long-Life Valve Design

Cartridge design for long life and easier repair.

Protective Trigger Guard

Prevents accidental dispenses.



Technical Specifications

Flow Range*	0.25 to 18 gpm (0.9 to 68 lpm)
Maximum Working Pressure	1,500 psi (103.4 bar)
Units of Measure (factory set to quarts)	Pints, quarts, gallons, liters
Weight	5.3 lbs (2.4 kg)
Inlet	1/2 in NPT or 3/4 in NPT
Outlet	3/4 in straight thread O-ring boss
Dimensions (without extension)	
Length	13 in (33 cm)
Width	3.75 in (9.5 cm)
Height	5.75 in (14.6 cm)
Maximum Recorded Dispense	999.99 units
Operating Temperature Range	4°F to 158°F (-16°C to 70°C)
Storage Temperature Range	-40°F to 158°F (-40°C to 70°C)
Battery**	4 AA alkaline or lithium batteries
RF Frequency Band	2,400 to 2,483.5 MHz
Maximum RF Transmit Power	8 dBm
Wetted Parts	Aluminum, stainless steel, PBT, nitrile rubber, zinc-plated carbon steel, nickel-plated carbon steel
Fluid Compatibility	Antifreeze, gear oil, crankcase oil, ATF, windshield wash (up to 50% alcohol-based solutions)
Meter Accuracy†	+/- 0.5 percent
Warranty	Five year structural, 3 years electronics, 1 year wear components

*Tested in 10W motor oil. Flow rates vary with fluid pressure, temperature and viscosity.

**Battery required to meet life expectancy: Energizer® Alkaline E91.

†At 2.5 gpm (9.5 lpm), at 70°F (21°C), with 10W oil and 1 gallon dispensed. May require calibration; out-of-box accuracy is +/- 1.25 percent.



B Ordering Information

8 gpm (30 lpm) Meters

Fluid	Extension	Nozzle	Size (in)	Part Number
Oil	Flexible	Automatic Quick-Close	1/2	25M319
	Rigid			25M317
Antifreeze	Flexible	Manual Antifreeze		25M320
	Rigid			25M318
Gear Lube	Gear Lube	Manual		25M326
Windshield Wash	Rigid	None		25M328

18 gpm (68 lpm) Meters

Fluid	Extension	Nozzle	Size (in)	Part Number
Oil / Antifreeze	Flexible	Manual High-Flow	1/2	25M324
	Rigid			25M323
	Flexible	Manual High-Flow	3/4	25M330
	Rigid			25M329

Accessories

Nozzle and Extension Kits

	Extension	Fluid	Nozzle Description	Part Number	Compatible Meters
	Rigid	Oil	Automatic, non-drip, quick-close	255852	Pulse 8 gpm
		Antifreeze	Non-drip, quick-close	26C267	Pulse 8 gpm
		Oil/Antifreeze	High-flow, non-drip, quick-close	255857	Pulse 18 gpm
	Rigid	Gear lube	Non-drip, quick-close	255854	Pulse 8 gpm
	Flexible	Oil	Automatic, non-drip, quick-close	255853	Pulse 8 gpm
		Antifreeze	Non-drip, quick-close	26C268	Pulse 8 gpm
		Oil/Antifreeze	High-flow, non-drip, quick-close	255858	Pulse 18 gpm
	Nozzle Only	Oil	Automatic, non-drip, quick-close	17R220	Pulse 8 gpm
		Antifreeze	Non-drip, quick-close	17T207	Pulse 8 gpm
		Oil/Antifreeze	High-flow, non-drip, quick-close	255461	Pulse 18 gpm
	Nozzle Only	Gear lube	Non-drip, quick-close	255470	Pulse 8 gpm
	Flexible	Oil/Antifreeze	Extension only, 2 ft length	131733	Pulse 8 gpm
	Rigid	Windshield wash	Extension, nozzle	273079	Pulse 8 gpm

NFC Tags

	Part Number	Description
	131462	NFC tags for user identification with meter. 25-pack, blue.

Hose Identification Wraps

Vinyl hose wrap for easy identification of meter fluid.

	Part Number	Description
	17S659	Red
	17S660	Blue
	17S661	Green
	17S662	Yellow
	17S663	White

Swivel Covers / Impact Protection

	Part Number	Description
	15T366	Black swivel cover (standard color with meter)
	15T367	Red swivel cover
	15T368	Blue swivel cover
	15T369	Green swivel cover
	15T370	Yellow swivel cover
	131226	Pulse / SD meter boot

Pulse Meter Filter Kits

Part Number	Description
25D906	Filter kit includes filters/strainers (15M308) and O-rings (155332)

Fluid Management

C

Pulse Tank Level Monitor (TLM)

Measure your largest tanks accurately with minimal effort. The monitor's ultrasonic sensor records the tank level and can be configured to e-mail a daily report to key stakeholders detailing tank volumes, low- or high-level warnings and more.

**2 Year
Warranty!**

Simple Wireless Setup

Automatic network identification.

Long Battery Life

Allows for remote installations. Uses four off-the-shelf AA batteries – easy to replace.

Built-In Display

Real-time level visible from built-in display.

Supports Multiple Tank Shapes

Ability to input strapping table for any tank shape.

Tough Exterior

Sealed enclosure to accommodate outdoor usage.

Compact Design

Easily fits into more spaces.

On-Demand Readings

Ability to take reading at any time.



C Ordering Information

Part Number	Description
25M449	Tank Level Monitor (TLM)

Technical Specifications

Ultrasonic Tank Depth Measurement range (Not for use in pressurized tanks)	5 in to 30 ft (12.7 cm to 9.14 m)
Fluid Level Measurement Accuracy	+/- 1.8 in (4.57 cm)
Mounting	1.5 in and 2 in threaded NPT connector (Adapter for BSPP and BSPT thread options available)
Weight (with batteries installed)	1.25 lb (567 g)
RF Frequency Band	2,400 to 2,483.5 MHz
Operating Temperature Range (Display will not function below 32°F [0°C])	-22°F to 185°F (-30°C to 85°C)
Storage Temperature Range	-40°F to 185°F (-40°C to 85°C)
Batteries	Four AA alkaline
Enclosure	IPX5
RF Communication	2,400 to 2,483.5 MHz
Vertical Tanks	
Maximum Volume	999,999 gal (999,999 l)
Maximum Height	30 ft (9.14 m)
Cylindrical Tanks	
Maximum Volume	999,999 gal (999,999 l)
Maximum Height	30 ft (9.14 m)
Maximum Length	30 ft (9.14 m)
Maximum Width	30 ft (9.14 m)
Fluid Compatibility	Automatic transmission fluid, antifreeze, window wash, coolant, waste water
Warranty	Two years electronics

D

Pulse Pump Air Control (PAC)

Prevent unauthorized access to fluid inventory. Pump air supply is shut off automatically after the dispense, preventing spills and expensive cleanup if a broken line occurs. Pump operation is enabled only when a dispense has been activated from the meter.

**2 Year
Warranty!**

Easy Installation

Built-in mounting bracket.

Simple Wireless Setup

Automatic network identification.

High-Volume Air Valve

Supports a variety of pumps.

Multiple Thread Options

NPT and BSPP air valve options.



Compact Design

Allows for mounting directly on pump or in tight spaces.

Rugged Exterior

Sealed enclosure to protect internal components.

Multiple Wiring Options

NEMA 5-15 plug or flying leads.

D Ordering Information

Part Number	Description
24Z728	NPT with NEMA 5-15 plug

Technical Specifications

Minimum Operating Pressure	36 psi (0.25 MPa, 2.5 bar)
Maximum Operating Pressure	145 psi (1.0 MPa, 10 bar)
Maximum Air Flow	93 SCFM (2.6 m ³ /min)
Power Supply	100–240 VAC line voltage, 24 VDC solenoid
Power Cord	
Model 24Z676, 24Z677	6 ft SJOOW, 3-wire, 18-gauge cable with flying leads
Model 24Z728	Power cord with integrated NEMA 5-15 plug
Current	25 to 60 mA
RF Frequency Band	2,400–2,483.5 MHz
Connection Ports Size (inlet, outlet, exhaust)	
Model 24Z676, 24Z728	3/8 in NPT
Model 24Z677	3/8 BSPP
Operating Temperature Range	14°F to 122°F (-10°C to 50°C)
Storage Temperature Range	-40°F to 185°F (-40°C to 85°C)
Weight	2.44 lbs (1.11 kg)
Dimensions	
Length	9.5 in (241.3 mm)
Width	2.25 in (57.2 mm)
Height	3.75 in (95.3 mm)
Warranty	Two years electronics

E

**2 Year
Warranty!**

Pulse Extender

The Pulse wireless network can easily be expanded to accommodate large shops or a large number of devices. Simply plug the Extender into wall power to extend the network.

Expands Pulse Network

Supports 20 devices and extends the network range.

Simple Wireless Setup

Automatic network identification.

Integrated Electrical Plug

Simply plugs into wall.

Compact Design

Place conveniently in standard electrical outlet locations.



Technical Specifications

Operating Temperature	32°F to 140°F (0°C to 60°C)
Power Input	Universal AC input (100 - 240 VAC)
Length	2.31 in (5.87 cm)
Width	1.27 in (3.23 cm)
Height	3.28 in (8.33 cm)
Weight	0.5 lb (0.25 kg)
Warranty	Two years electronics

E

Ordering Information

Part Number	Description
20A058	Pulse Pro Extender

Pulse Remote Extender

The Pulse wireless network can easily be expanded to accommodate devices in secondary on-site buildings. Connect the Remote Extender to wall power and local network via Ethernet or Wi-Fi to extend the network.

Expands Pulse Network

Supports 20 devices and extends the network range.

Simple Wireless Setup

Automatic network identification.

Multiple Network Connection Options

Utilizes local network Ethernet or Wi-Fi to communicate back to Hub.

Compact Design

Easy to place even in tight spaces.

Electrical Power

Includes plug-in power adapter.



**2 Year
Warranty!**

Technical Specifications

Connections	Ethernet or Wi-Fi
Ethernet	10/100Base-T
Wi-Fi	802.11 b/g/n
Operating Temperature	32°F to 104°F (0°C to 40°C)
Length	3 in (7.62 cm)
Width	3 in (7.62 cm)
Height	1 in (2.54 cm)
Warranty	Two years electronics

E

Ordering Information

Part Number	Description
17F878	Remote Extender with global power adapter

F

Roll Around Package

Pulse Pro Fluid Management wireless technology allows you to control your mobile drums and dispenses by providing security for expensive drums of synthetic and semi-synthetic fluids. Each package contains everything you need to manage your drums in existing Pulse installations. Drum not included.



Proven Durability

Graco LD® Series 3:1 pump is a durable, high performance pump solution.

Ease-of-Use

The battery-powered meter means only an air connection is needed to pump and manage fluid dispenses.

Ready to Roll

Packages include everything you need to set up the pump and meter system on your 55-gallon oil drum.

Mobile Productivity

Dispense fluids anywhere in your shop without compromising security or productivity.

F

Ordering Information

Package Number	Extensions	Package Includes					
		Meter	Pump	Downtube	Drum Cart	Air Regulator	Hose
25D948	8 GPM, Rigid	25M317	24G576	16F878	24F915	24H420	24H865
25D952	8 GPM, Flexible	25M319					
25D953	8 GPM, Gear Lube	25M326					

G

Ordering Information

Oil Bar


Part Number	Description
25D121	Oil Bar Console
25D130	Oil Bar Dispense Kit
25N415	Oil Bar Pulse Dispense Meter



Oil Bar


Components ordered separately. For complete unit, order console (25D121), dispense kit (25D130) (one per meter) and Pulse meters (25N415) as needed.

Accessories

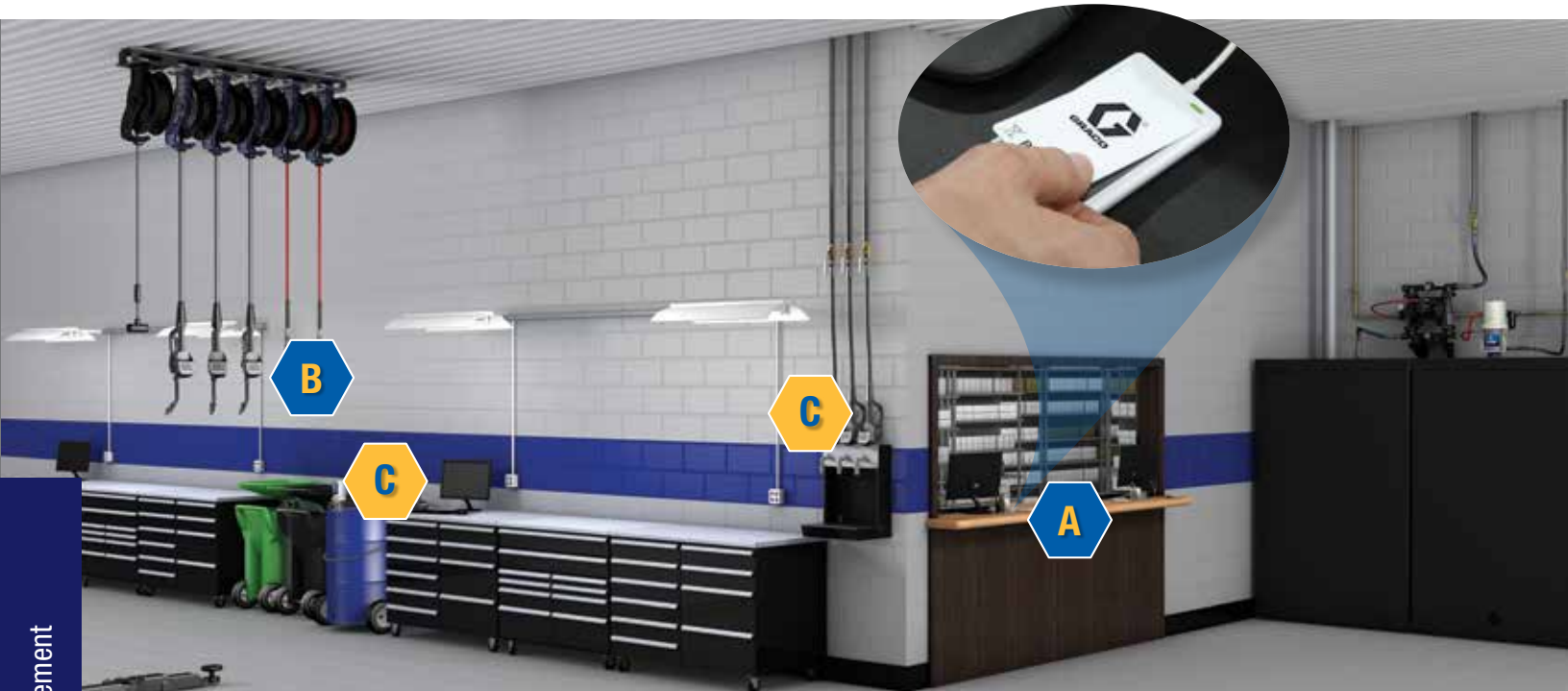
	Part Number	Description
	249440	Console bracket

Pulse Pro Demo Kit

Pulse Pro demo case with everything needed to show customers how Pulse Pro will save them time, gain them more billable hours and maximize their fixed operation's profitability.

	Part Number	Description
	25D625	Includes Pulse Hub (24Z978), Pulse Dispense Meter, Pulse TLM (25M449), Pulse PAC (24Z728), Pulse Extender (20A058), Pulse Remote Extender (17F878), Pulse NFC Tag, case and protective foam

Pulse® FC is wire-free, so installation and configurations are easier and cheaper. We've replaced the big box console with fast, reliable and convenient fluid cards scanned at easy-to-handle meters, so users can employ the same type of familiar technologies they use elsewhere.



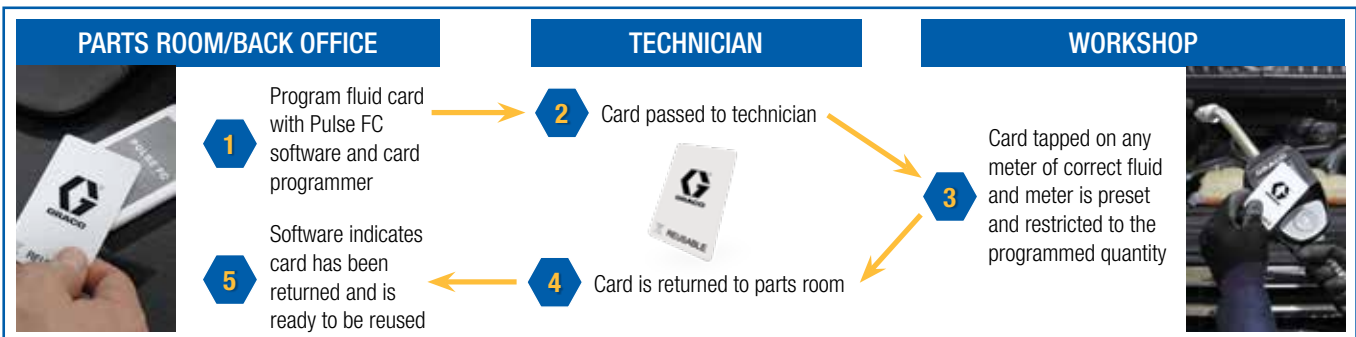
Fluid Management

Steps to Build Your Pulse FC System:



HOW IT WORKS

Pulse FC is a fluid control system that utilizes SD Preset meters. When put into Pulse FC mode, SD Preset meters will only dispense fluid when authorized with Fluid Cards. These included cards are programmed using the Pulse FC Software and Card Programmer. Once programmed, the cards are simply tapped to the meter which will be preset for the authorized amount of fluid and will not dispense any more than authorized.





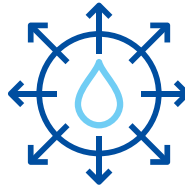
GAIN INSIGHT INTO AND CONTROL OF YOUR BULK FLUIDS



Simplicity. Avoid surprises, interruptions and delays. Fluids are easily controlled so technicians can spend more time serving more customers.



Accountability. Be assured every vehicle or machine receives the appropriate amount of fluid for more accurate billing.



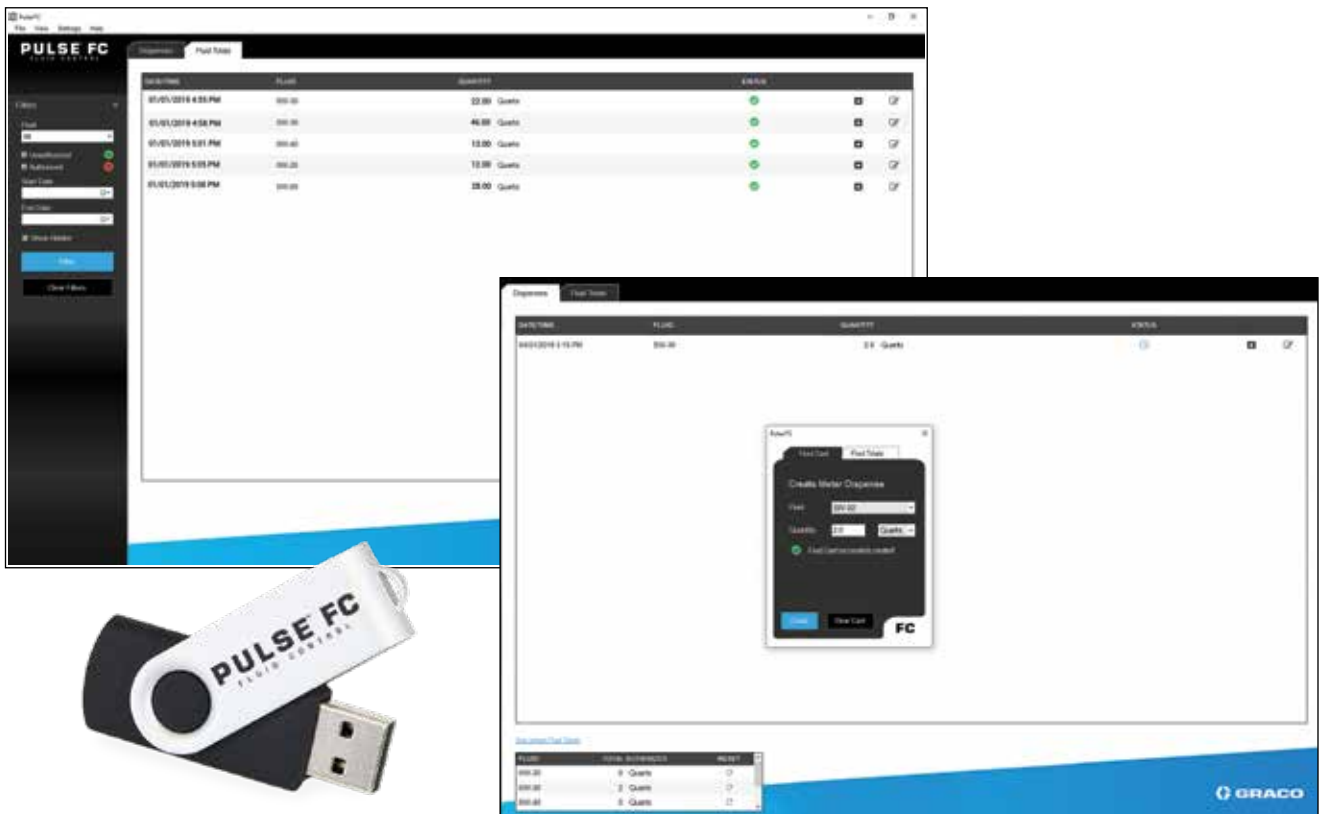
Scalability. Add Pulse FC into almost any environment quickly, even retrofit applications and avoid excessive installation costs and delays. You can also easily upgrade to Graco's Pulse Pro.



Mobility. Pair with mobile dispense units and drums quickly so your team can conveniently dispense without delays, hassles or extra steps.

Pulse FC Software

Pulse FC is a Windows PC-based software. Paired with the card programmer it allows setup and operation of the system. Cards can be utilized to authorize dispenses, totalize all fluids dispensed, as well as setup and calibrate SD™ Preset meters.



A Pulse FC Starter Kit

Enjoy an easy-to-use, easy-to-install, out-of-the-box fluid control system designed for fast wire-free setup and configuration. Pulse FC integrates into existing or new environments quickly and cost-effectively without interrupting daily operations.

Fluid Management

Pulse FC Programmer

Easily program cards for dispense or fluid totals.

Pulse FC Fluid Cards

Reusable fluid cards can be scanned directly on the SD preset meter's built-in NFC reader.



Pulse FC Software Quick Start

Easy-to-follow instructions for quick system setup.

Pulse FC Software

Simple PC-based software is used in conjunction with Pulse FC Programmer.

A Ordering Information

Part Number	Description
26C401	Pulse FC Starter Kit – Includes Software, Card Programmer, Software Quick Start and 50-Pack of Fluid Cards



B

SD™ Preset Dispense Meters

With Pulse FC, dispense only precise volumes to create efficiencies for your entire shop operation. Monitor how much fluid you're using. Choose the amount of fluid each technician can dispense in order to maintain accurate inventory.

Up to
18 gpm
(68 lpm)

Large LCD High-Contrast Display

High-contrast screen for reading in all lighting conditions with easy setup and navigation. See what fluid the meter is setup for and exactly how much you are dispensing.

Upgrade Option

Compatible with Pulse™ FC and upgradeable to Pulse™ Pro.

High Flow

Available in two models – 8 gpm (30 lpm) or 18 gpm (68 lpm).

Durable Cast Body

Designed for heavy duty and harsh applications.

Automatic Quick-Close Nozzle

Choose from rigid or flexible extensions with non-drip performance.

Long-Life Valve Design

Cartridge design for fewer and easier repairs.

Ergonomic Handle Design

Four-finger trigger and easy-to-use button pad reduce worker fatigue.



Typical Applications

- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops
- In-plant
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils (motor gear, and ATF)
- Antifreeze

Technical Specifications

Flow Range*	0.25 gpm to 18 gpm (0.9 lpm to 68 lpm)
Maximum Working Pressure	1,500 psi (103.4 bar)
Units of Measure	Pints, quarts, gallons, liters (factory set to quarts)
Metered Dispense Valve Accuracy**	+/- 0.5%
Inlet	1/2 in–14 NPT or 3/4 in–14 NPT
Outlet	3/4 in–16 straight thread O-ring Boss
Maximum Recorded Dispense	9999 units (factory set in quarts)
Operating Temperature Range	4°F to 158°F (-20°C to 70°C)
Storage Temperature Range	-40°F to 158°F (-40°C to 70°C)
Wetted Parts	Aluminum, stainless steel, PBT, nitrile rubber, zinc plated carbon steel, nickel plated carbon steel
Dimensions (without extension)	13 in L x 3.75 in W x 5.75 in H (33 cm x 9.5 cm x 14.6 cm)
Weight	5.3 lb (2.4 kg)
Warranty	Five years overall, three years electronics
Instruction Manual	3A6711 and 3A6673

*Tested in 10W motor oil. Flow rates vary with fluid pressure, temperature and viscosity.

**At 2.5 gpm (9.5 lpm), at 70°F (21°C), with 10-weight oil and 1 gallon dispensed. May require calibration.

***Battery required to meet life expectancy: Energizer® Alkaline E91.

Fluid Management

B Ordering Information

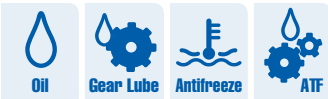
SD™ Preset Electronic Meters



	Dispense Type	Flow Range gpm (lpm)	Fluid	Extension	Inlet in (NPT)	Part Number
SDP8	Preset (Pulse FC enabled)	0.25–8 (1–30)	Oil	Rigid	1/2	26C384
				Flexible	1/2	26C354
			Antifreeze	Rigid	1/2	26C385
				Flexible	1/2	26C355
			Gear lube	Rigid	1/2	26C358
SDP18	Preset (Pulse FC enabled)	0.25–18 (1–68)	Oil	Rigid	1/2	26C356
				Flexible	1/2	26C357
				Rigid	3/4	26C360
				Flexible	3/4	26C361

Nozzle and Extension Kits


	Extension	Fluid	Nozzle Description	Part Number	Compatible Meters
	Rigid	Oil	Automatic, non-drip, quick-close	255852	SDP8
		Antifreeze	Non-drip, manual open/close	26C267	SDP8
		Oil/Antifreeze	High-flow, non-drip, quick-close	255857	SDP18
	Rigid	Gear lube	Non-drip, quick-close	255854	SDP8
	Flexible	Oil	Automatic, non-drip, quick-close	255853	SDP8
		Antifreeze	Non-drip, manual open/close	26C268	SDP8
		Oil/Antifreeze	High-flow, non-drip, quick-close	255858	SDP18
	Nozzle Only	Oil	Automatic, non-drip, quick-close	17R220	SDP8
	Nozzle Only	Gear lube	Non-drip, quick-close	255470	SDP8
	Nozzle Only	Oil/Antifreeze	Non-drip, manual open/close	17T207	SDP8
	Flexible	Oil/Antifreeze	Extension only, 2 ft length	131733	SDP8



C Ordering Information

Roll Around Package

Pulse FC wire-free technology allows you to control your mobile drums and dispenses by providing security for expensive drums of synthetic and semi-synthetic fluids. Each package contains everything you need to manage your drums in existing installations. Drum not included.

	Package Number	Extensions	Package Includes					
			Meter	Pump	Downtube	Drum Cart	Air Regulator	Hose
	26C366	8 GPM, Gear Lube	26C358	24G576	16F878	24F915	24H420	24H865
	26C367	8 GPM, Flexible	26C354					
	26C409	8 GPM, Rigid	26C384					

Oil Bar


Part Number	Description
25D121	Oil Bar Console
25D130	Oil Bar Dispense Kit
25N771	Oil Bar SD Preset Dispense Meter




Oil Bar
 Components ordered separately.
 For complete unit, order console (25D121), dispense kit (25D130) (one per meter) and Pulse FC meters (25N771) as needed.

Accessories

Pulse FC Fluid Cards

	Part Number	Description
	130783	Pulse FC Fluid Cards – 50-Pack, White

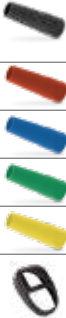
Pulse FC Demo Kit

	Part Number	Description
	26C399	Includes Pulse FC Dispense Meter, Software, Card Programmer and 5-Pack of Fluid Cards

SD Meter Filter Kits


Part Number	Description
25D906	Filter kit includes filters/strainers (15M308) and O-rings (155332)

Swivel Covers / Impact Protection

	Part Number	Description
	15T366	Black swivel cover (standard color with meter)
	15T367	Red swivel cover
	15T368	Blue swivel cover
	15T369	Green swivel cover
	15T370	Yellow swivel cover
	131226	Pulse / SD meter boot

Hose Identification Wraps

Vinyl hose wrap for easy identification of meter fluid.

	Part Number	Description
	17S659	Red
	17S660	Blue
	17S661	Green
	17S662	Yellow
	17S663	White

Fluid Management

Graco Pulse® Level offers highly intuitive tank-level-visibility options to help you optimize deliveries, margins and customer service. Choose from multiple tank-level-monitoring technologies, including a system that can run entirely on Wi-Fi. Track tank levels, capture and apply data, and assign distribution routes quickly, accurately and confidently from the industry's leading fluid management expert.



Choose Your Pulse Level System:



25T460

Ultrasonic Wi-Fi

There are other TLM solutions on the market – but none of them are designed for Wi-Fi configuration. When connected to a reliable network, marketers and their customers can avoid service fees or contracts entirely.



25T461

Ultrasonic Cellular

No need to worry about obsolete cellular network, we use a long term data solution. Versatile multi-thread adapter allows for installation on all different tank types.



25T462

Pressure Cellular

No need to worry about obsolete cellular network, we use a long term data solution. Our pressure unit is approved for hazardous locations and measures tanks up to 30 feet tall.

Typical Fluids Handled

- Petroleum- and synthetic-based oils (motor, gear and ATF)
- Fuel (diesel/gasoline/kerosene)
- Water/waste water
- Antifreeze
- Windshield washer fluid
- Waste oil
- DEF

Typical Applications

- Heavy-duty truck dealers
- Fleet maintenance
- Mining maintenance
- Public works garage
- Construction vehicle maintenance
- Heavy-duty mobile service trucks
- Mining
- Remote job sites

Part Number	25T460	25T461	25T462
No Monthly Fees	•		
No Maintenance Contract	•	•	•
Easy-to-Use Software for Monitoring Data	•	•	•
Easily Replaceable Batteries	•	•	•
NPT Thread for Easy Installation	•	•	•
Viewable Data with Other Models of Pulse Level	•	•	•
LTE Cellular Coverage		•	•
Works in Remote Locations		•	•
30 ft Tanks			•
Hazardous Environment Approved			•

Ultrasonic Wi-Fi



No Ongoing Fees

Wi-Fi connection.

Long Battery Life

7-year battery life with replaceable C batteries.

On-Demand Reading

Ability to take reading at any time.

Ultrasonic Sensor

Measure tanks 10 ft tall.

Ultrasonic Cellular



Cellular Communication

No need for local network connection.

Long Battery Life

5-year battery life with replaceable C batteries.

On-Demand Reading

Ability to take reading at any time.

Ultrasonic Sensor

Measure tanks 13 ft tall.

Pressure Cellular



Cellular Communication

No need for local network connection.

Long Battery Life

Up to 10-year battery life.

Submersible Pressure Sensor

Measure tanks up to 30 ft tall.

Hazardous-Location Rating

Approved for use with flammable fluids such as gasoline.



Technical Specifications

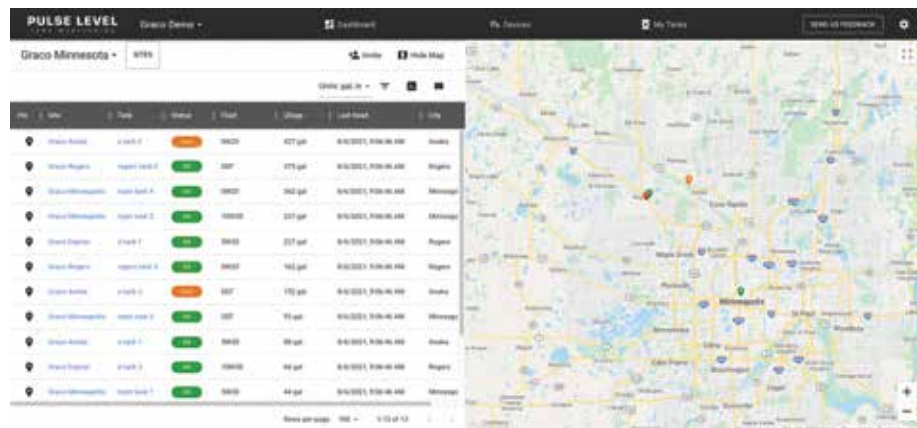
	Ultrasonic Wi-Fi TLM	Ultrasonic Cellular TLM	Pressure Cellular TLM
Compatible Fluids	Oil, kerosene, diesel, lubricants, additives, DEF/AdBlue, coolants, water, waste oil, waste water	Oil, kerosene, diesel, lubricants, additives, DEF/AdBlue, coolants, water, waste oil, waste water	Oil, kerosene, diesel, lubricants, additives, DEF/AdBlue, coolants, water, waste oil, waste water, gasoline
Tank Depth Measurement Range	5.0 in to 9 ft-7 in	5.0 in to 13 ft	30 ft
Fluid Level Measurement Accuracy	+/- 1.0 in	+/- 1.0 in	+/- 1.0 in
Mounting	1.25 in, 1.5 in and 2.0 in threaded NPT connector	1.25 in, 1.5 in and 2.0 in threaded NPT connector	1 in threaded NPT connector with wall-mounted logger
Clearance Height Above Tank for TLM	7.5 in	7.5 in	N/A
Weight	0.5 lb	1.17 lb with batteries	0.75 lb
RF Frequency Band	2.412 GHz - 2.462 GHz	LTE CAT-M1	LTE CAT-M1
Maximum RF Transmit Power	18 dBm	23 dBm	23 dBm
Operating Temperature Range	0°F to 122°F	0°F to 122°F	-4°F to 131°F
Batteries	Li-SOC12 Size R14, 3.6V C-cell	4 x Alkaline C-cell	Graco Part Number 19D216
Battery Life	7.5 years* from activation	5 years*	10 years* from activation
Enclosure (Ingress Protection)	IP67	IP67	IP68
Tanks			
Maximum Volume	999,999 gallons	999,999 gallons	999,999 gallons
Maximum Height	9 ft-7 in	13 ft	30 ft
Altitude	<6,000 ft	<6,000 ft	<6,000 ft

*The battery life is based upon four (4) measurements per day and one (1) data drop per day from a location with adequate coverage, and a normal distribution over the operating temperature range centered at +25°C (77°F).

Pulse Level Software

Pulse Level software has a simple intuitive design and gives you powerful information at your fingertips. Get a quick consolidated view of key sites via a specifically designed web page. Track tank levels at a glance, generate customizable reports and automated email alerts, and share critical information with other key decision makers.

- Intuitive alerts ensure your customers never run out of products
- See the status of each customer site on an easy-to-view map
- Advanced reporting – create and schedule automated reports to track history and see usage trends
- Expand the capabilities of your existing software systems with tank data from Pulse Level's API
- Simple annual and monthly billing options, or avoid charges altogether with Wi-Fi
- Allow customer to find insights on their own tanks by sharing Pulse Level data
- Use customers' existing Pulse Pro hardware to avoid the cost of additional monitors





Ordering Information

In-Line Meters

Part Number	Description
236763	Electronic pulse output meter (quarts)
236764	Electronic pulse output meter (liters)
215474	Mechanical pulse output meter (quarts)
244342	Meter pulse converter, used when upgrading old-style modular fluid commander to electronic allows use of 215474/215475 with the EFC.

Air Solenoid Valves

Part Number	Description
215407	Air solenoid valve, 150 psi (10 bar) (1/2 npsm (f) conduit ports for wiring; 1/4 in NPT(F) air ports, adapted to 3/8 (f) IN, 3/8 (m) OUT) operates on 24V DC and 110 VAC. Automatically shuts-off air inlet to pump when pre-set dispensed amount is reached. Materials of construction: brass, SST, Buna.
105474	Air solenoid valve (bare) 150 psi (10 bar), same as 215407 but without wire connectors or adapters. 1/2 in npsm (f) conduit ports for wiring; 1/4 in NPT(F) air ports. 150 psi (10.3 bar) max. working pressure.

Fluid Solenoid Valves

Part Number	Description
215487	Fluid solenoid valve, 1/2 in NPT(F) 3,000 psi (207 bar) operates on 24V DC. Automatically shuts-off fluid when pre-set dispensed amount is reached. Includes tube, valve, pin connector, wire plug connector and adapter.
514150	Fluid solenoid valve for antifreeze, 150 psi max. (10 bar), 1/2 in NPT(F), same as features as 215487.
110025	Bare fluid solenoid valve, 1/2 in NPT(F) 3,000 psi, same features as 215487 above, but without wiring connectors or adapters.

Ready-Light Kits

Part Number	Description
218588	Ready-light kit, signals operator when dispensing can begin. Includes "ready to dispense" indicator light (239019), strainer (240417), fluid solenoid valve (215487) and hardware.
238996	Ready-light with junction box (no solenoid or strainer)
239019	Ready-to-dispense indicator light only
113859	Lamp for indicator only

Installation Components

Part Number	Description
111620	Check valve
223179	Fluid filter kit (for bare electronic meter)
186472	Wall-mounting bracket
108458	Fluid shut-off valve
237893	Thermal relief kit for 900 psi (62 bar), relieves excess heat-induced pressure from dispense system. Male and female ends allow for simple installation.

Connecting Cables for Connecting Solenoids and Consoles, 90-volt, 2-wire, 18-gauge

Part Number	Description
215481	100 ft (30.5 m) pre-connected at both ends