



Digital filling machine for
liquid petroleum gases
Technical Specification

DESCRIPTION

The advanced, intrinsically safe, R217Ex digital filling machine from Avery Weigh-Tronix is ideal for filling petroleum gas cylinders such as butane or propane and suits all gas bottle sizes.

The robust scale measures gas bottle capacities of up to 150 kg in increments of 0.05 kg with legal for trade system approval. The system supports a wide range of filling heads, including pneumatically operated and manual attachment heads. There is also a filling head counterbalance feature with pre-set adjustable stops for various bottle heights.

Rugged design

The system's rugged design and heavy-duty construction is ideal for the harsh environments of LPG filling plants and comprises strong stainless-steel weigh plates and a robust flip down table for filling smaller gas bottles.

Simple data capture

The easy to use indicator can store up to 20 bottle tare weights in its memory, saving valuable operator time. The bottle tare weight self-cancels when the bottle is removed from the scale, ensuring that the operator enters the correct tare for the next bottle, an important safety feature as bottle tare weights can often differ from one to another. The indicator's automatic dosing

routing ensures an optimum fill on every bottle. The indicator collects data which can be transferred in real time by an optional serial output to PC via a safe area transceiver. Data capture includes: total net weight of gas filled, fill time, residue, tare weight, date and time.

Product adaptability

The IT3000Ex indicator, trip output control and LPG filling valve are integral to the scale, providing a simple connection between the AC mains and compressed air services. The system can be adapted for carousel mounted and chain/roller conveyor fillers and can be installed as a pit mounted system with an optional pit frame, or surface mounted.

Safety features

The R217Ex has an emergency stop button to cut off the LPG flow in the event of a gas leak from the filling head to the cylinder.



SPECIFICATIONS

GENERAL

Platform size	500 mm x 500 mm. Working height 170 mm (surface mounted), floor level when pit mounted. The small bottle table measures 400 mm x 400 mm with a working height of 530 mm above the main platform.
Capacity	150 kg x 50 g (3000d)
Finish	Stainless steel (indicator, small bottle table and main platform plate). Mild steel control cabinet.

ENVIRONMENT

Resistance to dirt and moisture	The electronic components are protected to IP65 rating.
Electrical disturbance	Immune to electrical disturbance, including RFI emissions and susceptibility as detailed in EN45501: 1992. Complies with EC regulations.
Storage temperature range	- 40° C to +70° C
Service temperature range	-10° C to +40° C
Operating temperature range	-10° C to + 40° C
Relative humidity	0% to 95% non-condensing

SYSTEM INPUTS

Electrical inputs	AC mains powered. Configured for 230 V / 110 V single phase as standard. <ul style="list-style-type: none"> › Tolerance: Voltage -15% to +10% › Frequency ±10% › Power consumption 18VA › Protection: It is recommended that the machine is connected to a clean AC mains supply
Indicator	The intrinsically safe, ATEX approved, IT30000Ex indicator with tactile keyboard. <ul style="list-style-type: none"> › Self cancelling tare - helps avoid repeat tare entry › Flashing bottle icon - confirms fill is complete and valve is closed › Bottle memory store - store up to 20 bottles and target values in the indicator memory (password protected)
Compressed air input	<ul style="list-style-type: none"> › Pipe size 6 mm od › Max working pressure 8 bar (dry, clean, non-lubricated and regulated) › Minimum working pressure 5.5 bar › Volume - 40 cm³/cycle (manual filling head version). › - 200 cm³/cycle (pneumatic filling head version)
Liquid gas input	1.5 m long, ½ inch BSP flexible pipe to BS4089:1989 with BSP male tapered adapter. LPG pressure 20 bar maximum.
Liquid gas flexible filling hoses	½ inch BSP hoses to BS4089: 1989 with BSP tapered adapter at the filling head end.
Liquid gas filling control valve	Pneumatically operated ½ inch BSP piston valve. The valve is fitted with a fail safe, spring return.

DATA CAPTURE AND REPORTING

Data capture software	The optional Gas Filling Data PC Capture Programme enables accurate analysis of the performance of both plant and individual machines.
Available reports	The Gas filling data capture software can report on the following information: <ul style="list-style-type: none"> › Totals by product – e.g. butane/propane/CAP/etc. › Totals by machine › Totals by bottle size › Totals by residue % and weight report of residue (stock gain) › Search by time & date › Search by product › Search by machine › Search by bottle size › Trend graphs › Total under / over filled › % and weight of overfill (giveaway) › % and weight of under fill › Cylinders per hour
Connectivity	Data is transferred from the system to PC via RS232 safe area interface.

APPROVALS

Weighing	150 kg x 50 g (300 kg load cell) 60 kg x 20 g (150 kg load cell)
Hazardous areas	Indicator approval: TUV 05 ATEX 7230X Ex 11 2 (2) G Exe ib mb [ib] IIC T4 Gb

SHIPPING

Dimensions	<ul style="list-style-type: none">› Overall product dimensions: 880 mm deep x 500 mm wide (platform), 785 mm wide (platform & indicator overhang) x 2035 mm high (top of column from platform plate)› Height when free standing: 2205 mm› Indicator display from platform plate: 1830 mm high› Platform plate: 500 mm wide x 540 mm deep› Platform plate height from floor (surface mounted machine): 170 mm› Small bottle table: 400 mm wide x 400 mm long x 550 mm high from platform plate› Pit frame aperture: 896 mm long x 512 mm wide x 171 mm deep› Overall pit frame size including curb flange: 992 mm long x 608 mm wide x 171 mm deep› Hole in floor to take frame (including anchor bars): 1100 mm long x 720 mm wide x 175 mm deep
Weight	Net product weight 146 kg
Shipping Specification	<ul style="list-style-type: none">› Gross weight: 180 kg› Package dimensions: 1000 mm x 600 mm x 2200 mm› Harmonised commodity codes: 842382910 / 842390000

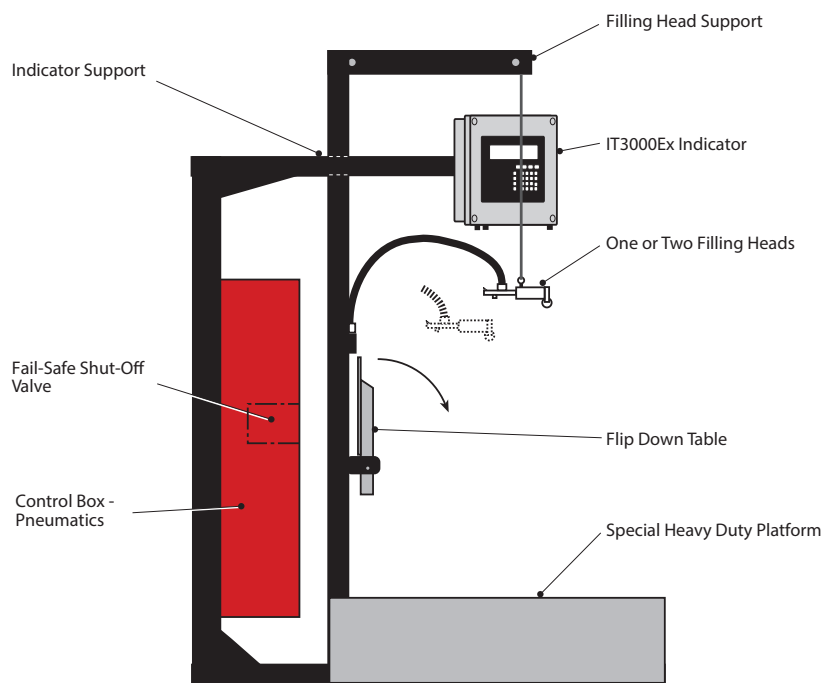
OPTIONS

Optional extras	The R217Ex liquid filling machine comes with a range of options to suit your facility, including: <ul style="list-style-type: none">› Carousel mount› Surface mount› Pit mount› Chain/roller conveyor mount
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IT3000Ex indicator

STANDARD CONFIGURATION



Avery Weigh-Tronix

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R217Ex LGF Spec_indd
V1 _10/2019