

R217Ex

LPG filling machine

Description

General

Advanced, intrinsically safe digital filling machine for liquid petroleum gases i.e. Propane and Butane. Suits all gas bottle sizes.

Capacity 150 kg x 0.05 kg.
Uses 300 kg capacity T110 CENELEC load cell for increased strength.

Approved static trade filling without a separate checkweigher.

Rugged design and heavy duty construction to cater for the harsh environments of LPG filling plants. Strong stainless steel weigh plate and robust flip down table used for filling small bottles.

Carousel mounted options.
Pit mounted (with optional pit frame).
Surface mounted with low or high indicator positions, allowing made up floors to be used.
Chain/roller conveyor version.

Filling head counter balance feature with pre-set adjustable stops for various bottle sizes.

Dual filling heads for different bottle valve types as required. e.g. POL and fork truck types. Both pneumatically operated filling heads and manual attachment types supported.

Single or dual fuel versions available.

Wide range of filling heads available as options.
Customer supplied filling heads may also be supported.



Tactile keyboard.

Power supply, trip output control, pneumatic control and LPG filling valve are all integral to the scale. Simply connect to the AC mains, LPG and compressed air services.

Easy to use L217Ex, featuring fast bottle tare weight entry, 100 bottle target weight memories and on screen flashing gas bottle full indication. Optional filling in progress lamp.

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.

This is an important safety feature, as bottle tare weights cannot be guaranteed to be identical from one bottle to another.

Automatic dosing routine ensures optimum LPG fill.

Mounted at eye level, the L217Ex indicator features backlit display as standard and is fitted with simple, fast-entry software developed specially for the LPG industry.

Totalling of net weight of gas filled and tally count of the number of bottles filled for each bottle size.

Data output (via optional serial output) - data is sent from the L217Ex indicator via fibre optic cables and safe area transceiver and may be input to computer-based spread sheets and databases, etc.

Data includes bottle fill time, residue, net weight, tare weight, net fill error, trip values, date, time, etc.

Specification

Platform Size

Main Platform

500 mm x 500 mm
Working height 170 mm (surface mounted), (floor level when pit mounted).

Small Bottle Table

400 mm x 400 mm
Working height 530 mm above main platform.

Capacity

150 kg x 50 g (3000d)

Finish

Stainless steel indicator, small bottle table and main platform plate.

Black stove enamelled mild steel weigh frame and base frame.

Red stove enamelled mild steel control cabinet.



On screen flashing gas bottle full indication.



Optional filling in progress lamp.



Totalising feature.

Environment

Resistance to dirt and Moisture

The electronic components have been certified to give IP65, IP66, IP67 & NEMA 4X rating. (DEMKO Certificate No. 116258-1) (NEMA 4X ETL Certificate No. 564592).

Electrical Disturbance

Immune to electrical disturbance, including RFI emissions and susceptibility as detailed in EN45501: 1992.

(RFI test certificates: Emissions RFI/EMCB1/ RP08793A, Susceptibility RFI/ EMCB2/RP09793B).

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 100% non-condensing.

Warm Up Time

The R217Ex meets accuracy specifications immediately self-test routines are completed following power switch on.

Electrical Input

AC mains powered.

Configured for 230 V single phase as standard. May be configured for 110 V single phase and 55-0-55 V two phase if required.

Tolerance:

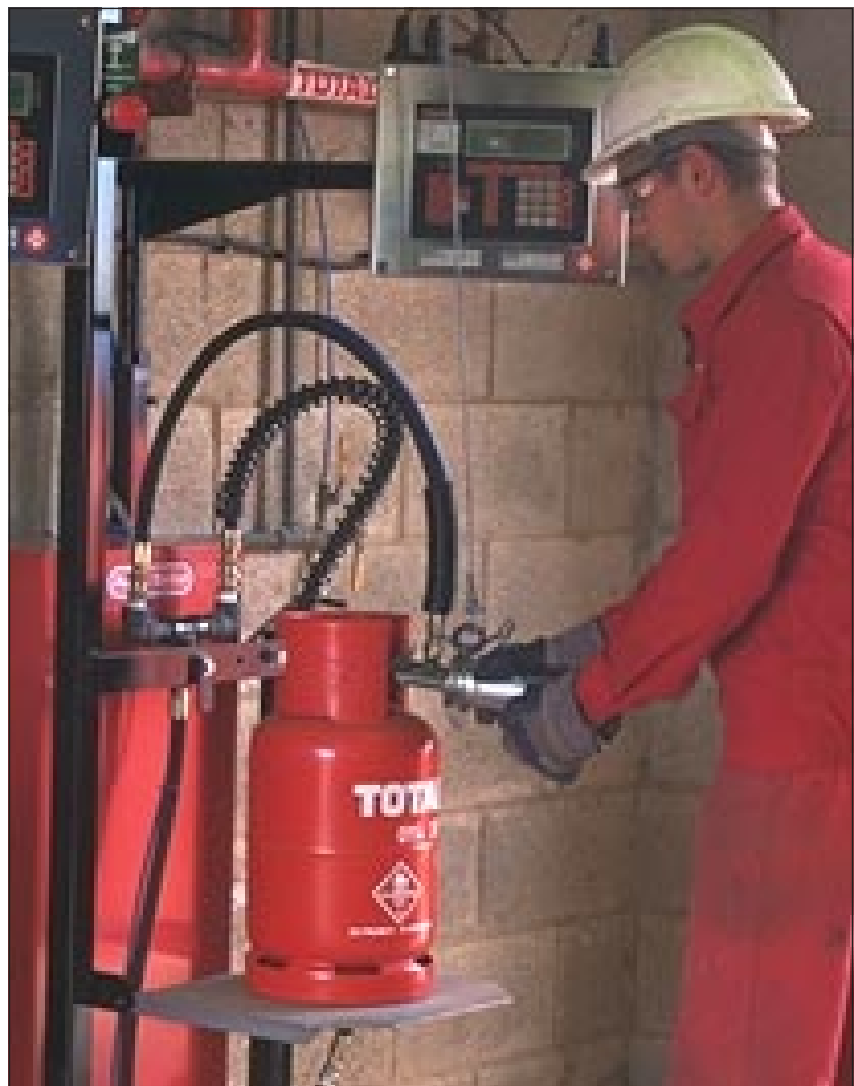
Voltage -15% to +10%

Frequency $\pm 10\%$.

Power consumption 18VA.

Protection:

It is recommended that the machine is connected to a clean AC mains supply.



Compressed Air Input

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).

LPG Input

1.5 m long 1/2" BSP flexible pipe to BS4089: 1989 with BSP male tapered adapter.
 LPG pressure 20 bar maximum.

LPG Flexible Filling Hoses

1/2" BSP hoses to BS4089: 1989 with BSP tapered adapter at the filling head end. Optionally, fitted with 3/4" procoil protector to protect against chaffing in service.

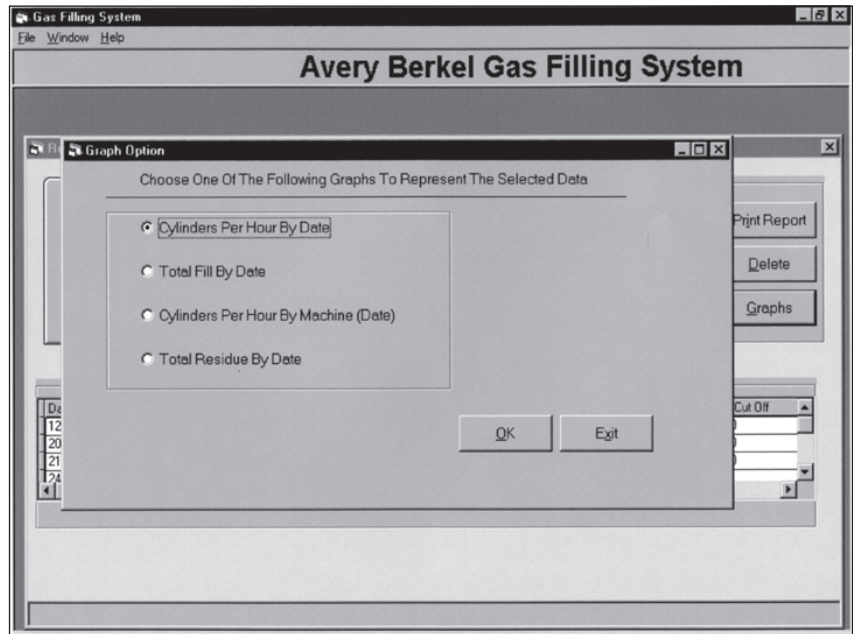
LPG Filling Control Valve

Pneumatically operated 1/2" BSP full bore bronze ball valve with stainless steel ball and cavity pressure relief hole.
 Valve is fitted with a fail safe, spring return unit.

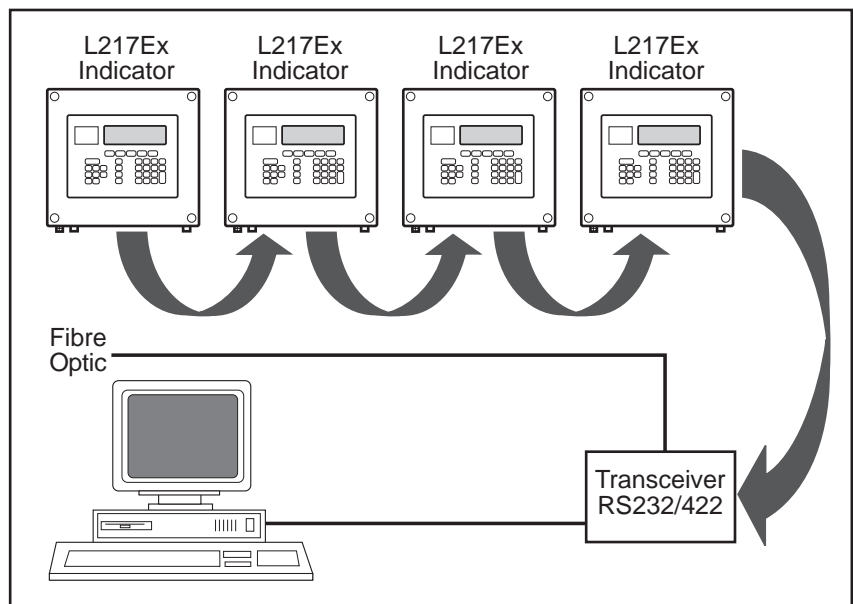
Management Information

The optional *Gas Filling Data PC Capture Program*, enables accurate analysis of the performance of both the plant and individual machines.

The following reports are available:



Gas Filling Data PC Capture Program.



Flexible data transmission.

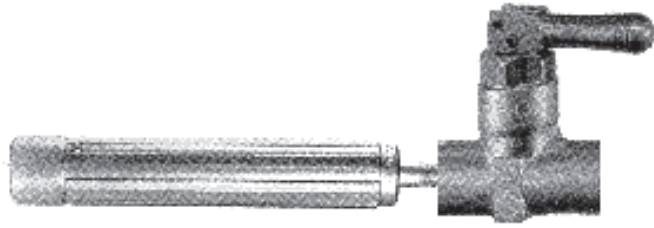
- Totals by Product – e.g. butane/ propane/CAP/etc.
- Totals by Machine.
- Totals by Bottle Size.
- Totals by Residue % & weight report of residue (stock gain).
- Search by Time & Date.
- Search by Product.
- Search by Machine.
- Search by Bottle Size.
- Trend graphs.
- Total under / over filled.
- % & weight of overfill (giveaway).
- % & weight of under fill.
- Cylinders per hour.

Filling Heads

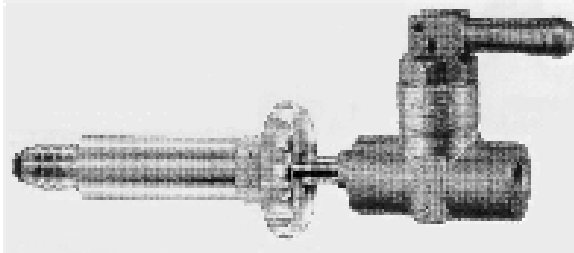
All types of manual and pneumatic filling heads may be fitted. Avery Berkel can supply a variety of filling heads:

Propane

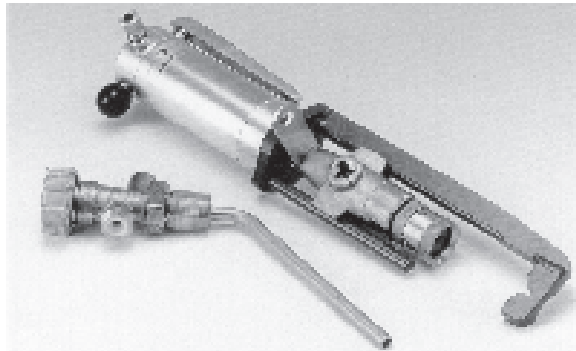
1. Rego manual screw on head type 7193L-10A for fork truck cylinders, fitted with a 7901TB quick acting valve. (Option 1)
2. Rego manual screw on head type 7193D-10 for inside threaded cylinder valves (POL type), fitted with a 7901TB quick acting valve. (Option 2)
3. Kosan Crisplant pneumatically operated designed for outside thread cylinder valves. Type PI. (Option 3)
4. Kosan Crisplant pneumatically operated designed for inside thread cylinder valves (POL type). Type PU. (Option 4)
5. Cavagna pneumatically operated type 501350, designed for inside thread cylinder valves (POL type). (Option 5)



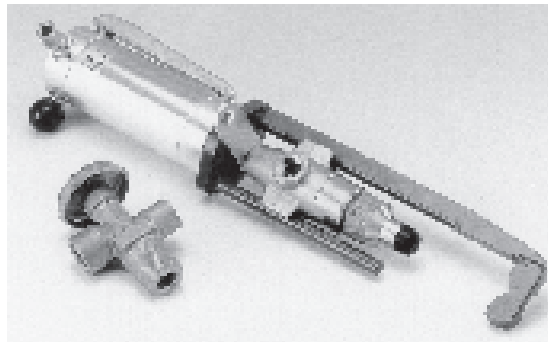
Option 1.



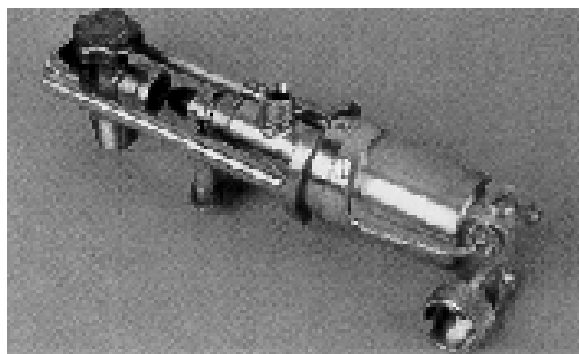
Option 2.



Option 3.



Option 4.



Option 5.

Butane

1. Kosan Crisplant pneumatically operated. Type SAC. (Option 6)
2. Kosan Crisplant manually operated. Type MFC. (Option 7)

Approvals

Weighing

All data relating to the performance of the machine meets and exceeds requirements of EN45501: 1992 approval ('E' approval) Accuracy class III machines. Up to 3000 divisions. Certificate No. DK 0199.8. Stamped for trade use, without the need for a separate checkweigher.

Hazardous Areas

Approved to CENELEC standards.

Indicator, power supply and Y809 coded EEx ib IIC T4.

Indicator & power supply apparatus certificate DEMKO Ex 95D.116260.

Y809 apparatus certificate DEMKO Ex 95D.118436.

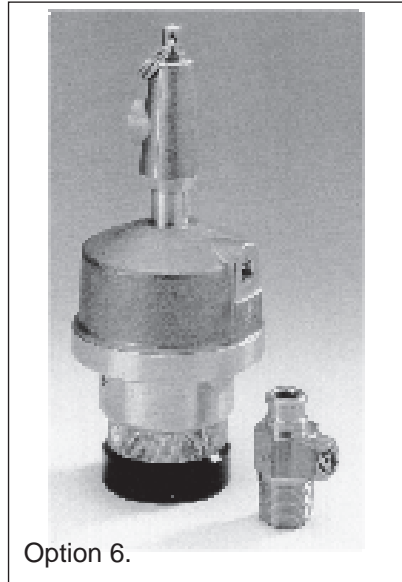
T110 load cell apparatus certificate DEMKO Ex 96D.120445.

Solenoid valve apparatus certificate BASEEFA Ex 822147.

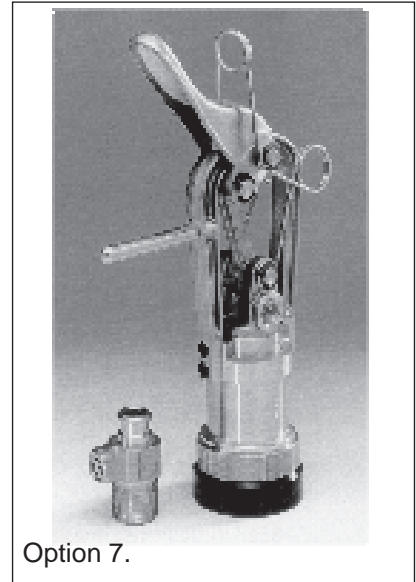
System certificate DEMKO Ex 95D.116258.

IEC 144/BS520 classification IP65, IP66, IP67 protection against ingress of dust and moisture for L217Ex and Y809. DEMKO 116258-1.

Note: May be maintained 'live' i.e. without declaring the area safe.



Option 6.



Option 7.

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.

L217Ex 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

146 kg

Shipping Specification

Net

146 kg

Gross

180 kg

Measurement

1000 mm x 600 mm x 2200 mm

Harmonised Commodity Codes

842382910

842390000

Options

1. **Dual Fuel Version**
2. **Filling in Progress Lamp** (1 & 2 cannot be supplied together).
3. **Carousel Mount**
4. **Surface Mount**
5. **Pit Mount**
6. **Chain/Roller Conveyor Mount**
7. **Procoil Hose Protection**

Ordering Codes

Description (300 kg strength) Right Hand Mounted, Backlit with LPG Hoses	Version	UPC
Single speed, pit mounted, single filling head	1	R217000BA0AAAA
Two speed, pit mounted, single filling head	2	R217000BA0BAAA
☆ Single speed, surface mounted, single filling head	3	R217000BA0ABAA
Two speed, surface mounted, single filling head	4	R217000BA0BBAA
Single speed, surface mounted, high head, single filling head	5	R217000BA0AEAA
Two speed, surface mounted, high head, single filling head	6	R217000BA0BEAA
◆ Single speed, pit mounted, two filling heads	7	R217000BA0AABA
Two speed, pit mounted, two filling heads	8	R217000BA0BABA
Single speed, surface mounted, two filling heads	9	R217000BA0ABBA
Two speed, surface mounted, two filling heads	10	R217000BA0BBBA
Single speed, surface mounted, high head, two filling heads	11	R217000BA0AEBA
Two speed, surface mounted, high head, two filling heads	12	R217000BA0BEBA
Single speed, pit mounted, dual fuel	13	R217000BA0AACA
Two speed, pit mounted, dual fuel	14	R217000BA0BACA
Single speed, surface mounted, dual fuel	15	R217000BA0ABCA
Two speed, surface mounted, dual fuel	16	R217000BA0BBCA
Single speed, surface mounted, high head, dual fuel	17	R217000BA0AECA
Two speed, surface mounted, high head, dual fuel	18	R217000BA0BECA

☆ *Standard butane machine*

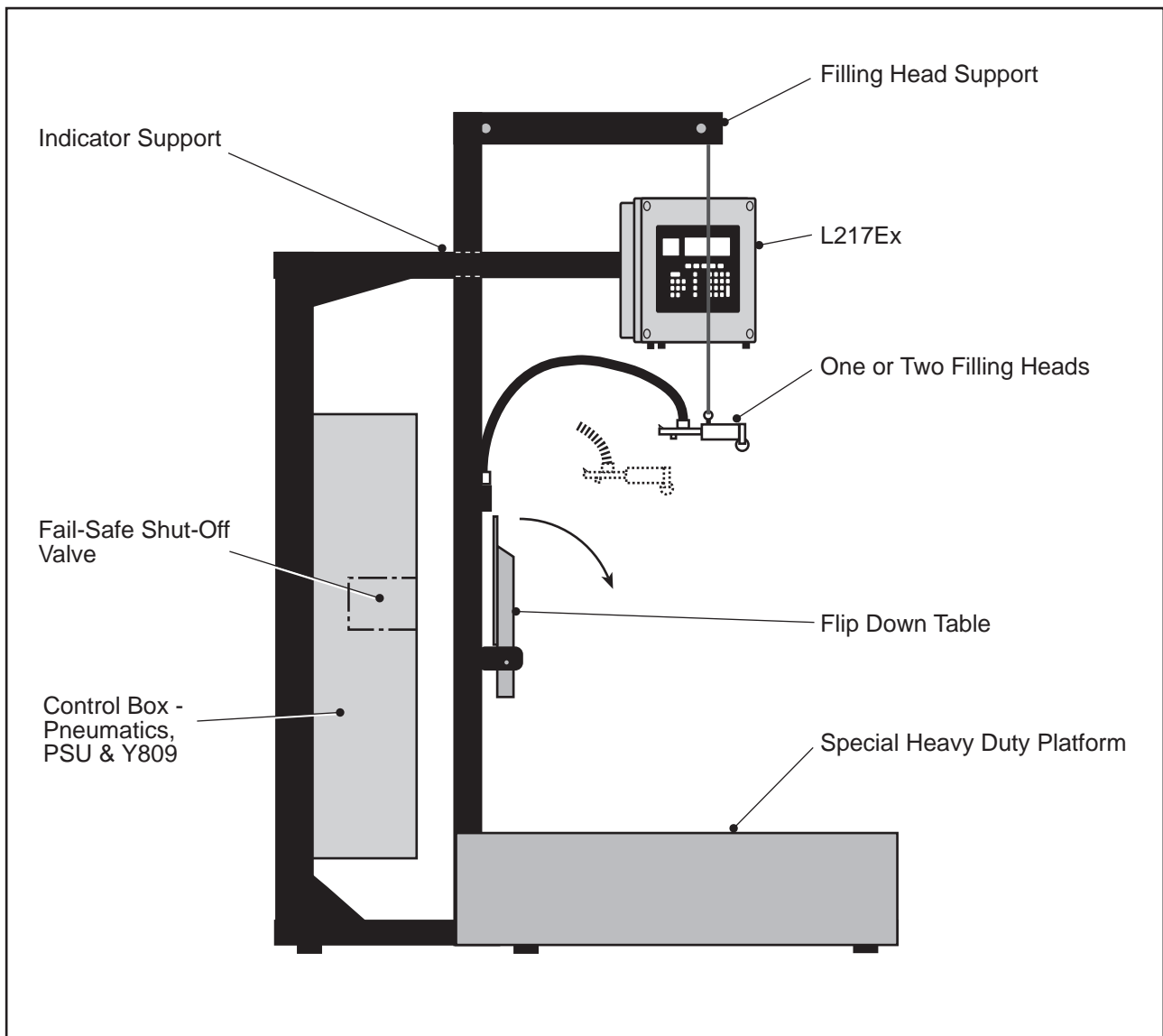
◆ *Standard propane machine*

* For other options, eg. left hand mounted, filling in progress lamp, consult Head Office.

Filling Head Option Kits

Description	Option	UPC
Rego propane manual filling head for fork truck valves	1	R217BA0000AA00
Rego propane manual filling head for pol valves	2	R217BA0000AB00
Kosan Crisplant propane pneumatic filling head for europe valves	3	R217BB0000AC00
Kosan Crisplant propane pneumatic filling head for pol valves	4	R217BB0000AD00
Cavagna propane pneumatic filling head for pol valves	5	R217BC0000AE00
Kosan Crisplant butane pneumatic filling head	6	R217BE0000AG00
Kosan Crisplant butane manual filling head	7	R217BE0000AH00

Schematic System Diagram



This brochure contains a general guide only of the product and shall not form part of any contract unless specifically agreed by Avery Berkel in writing in each case on the Order Acknowledgement. The specification of the products described herein may vary from time to time and may be altered without notice.

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