# Lubrication, Refueling and Spill Control LUBRICATION AND REFUELING EQUIPMENT

## PRODUCT INDEX

The range of lubrication and refuelling equipment covers a wide range of industrial and commercial applications for the automotive, industrial, agricultural and marine markets to satisfy the requirements of the most exacting customers.

Over the last few years we has developed a range of lubrication and refuelling products with the aim of giving professional users a safer, cleaner and more exacting way of dispensing fuel, oils and lubricants. From hand pumps to complex fuel management systems, We can offer solution to meet your requirements. We have established a particular specialisation in fluid transfer pumps, meters, nozzles and greasing equipment which meet the demanding commercial applications and environmental requirements.



UK: 0800 38 24 38 ROI: 1800 74 78 35

J1710002

JDT10001

JDT10001

J1785702

566

567

567

Commercial

Oil Drainer

Digital Oil

Oil Control

Control Valve



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Lubrication Equipment

## 1:1 Air-Operated Oil Pumps

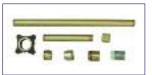
### **Features**

- · Precision machined to ensure stability and long life
- · Easy to operate and maintain
- · Perfect for high volume transfer of oil below SAE 120
- · Supplied with adjustable 2" bung adaptor
- · Low noise level Quiet, efficient and reliable.

Part Number		
J100	with 940mm Suction Tube	
J100S	Stubby Pump	
JWB10000	Wall Mounted Oil Transfer Kit	
JET10000	Suction Tube Kit	



Wall Mounted Oil Transfer Kit



Suction Tube Kit

## Grease Pump Kits

(Shown with optional trolley)

### **Features**

- Precision machined to ensure stability and long life
- Supplied complete with: 4mtrs hose; booster gun; 'z' swivel; lid; follower Plate
- 360 deg 'z' swivel for easy access
- Optional trolley available Part Number J1708001.

Part Number

J1700512 for 12.5kg kegs for 50kg kegs J1700524







## 3:1 Air-Operated Oil Pumps

(Suitable for use with hose reels)

## **Features**

- · Precision machined to ensure stability and long life
- · Easy to operate and maintain
- · Perfect for high volume transfer of oil below
- · Supplied with adjustable 2" bung adaptor
- · Low noise level Quiet, efficient and reliable.

**J300** with 940mm Suction Tube

J300S Stubby Pump



## Air Operated Waste Oil **Drainers**

## **Features**

- · Air operated oil drainer with centre mounted adjustable collecting bowl
- Adjustable collecting bowl height to work with jack, lift or servicing cock
- · Equipped with a valve for collecting bowl to inspect drained oil before it enters the
- Equipped with a special support to allow filters to drain.

Part Number

**JAOD3090** 



## 5:1 Air-Operated Oil Pumps (Suitable for use with hose reels over longer distances) **Features** Precision machined to ensure stability and long life

- Easy to operate and maintain
- Perfect for high volume transfer of oil below SAE 250
- Supplied with adjustable 2" bung adaptor
- Low noise level Quiet, efficient and reliable.

Part Number
-------------

**J500** with 940mm Suction Tube J500S Stubby Pump





## Lubrication Equipment - continued

## Air Operated Oil Suction Drainer

## **Features**

- Extract used oil and other fluids from any vehicle using this venturi-vacuum extracting system
- Includes six suction probes (metal & flexible) equipped with quick-disconnect couplers for fluid extraction
- Self-evacuating feature makes emptying clean & easy.

Part Number JAOE1090



## Mobile Pneumatic Oil Dispensers

The JP0030 is suitable for filling and topping up of oil, once charged the unit can be used without being connected to the air supply, and is equipped with a level gauge delivery gun and flexible hose. Will dispense all automotive engine and gearbox oils.



## 2-in-1 Waste Oil Drainer

## Features

- Combination suction and waste oil drainer unit
- Extracts used oil from any vehicle using the venture / vacuum extraction system, suitable for draining oil by gravity from engines, gearboxes, and differentials on all vehicles
- Includes six suction probes (metal & flexible) equipped with quick couplers for fluid extraction
- · Adjustable collection bowl height
- Self-evacuating feature makes emptying clean and simple.



## Commercial Oil Drainer

## FEATURES

- · Low level wheel mounted oil drainer
- Suitable for gravity draining of engine gearbox and differential oils for vehicles not using a pit or ramp
- · Ideal for commercial vehicle applications.



## LUBRICATION AND REFUELING EQUIPMENT

## Lubrication Equipment - Continued

## Digital Oil Control Valve

## **Features**

- Oil gun with ½" female swivel
- +/- 0.5% precision
- Weight: 1.4kg (3 pounds)
- Maximum flow rate 30 l/min (8GPM)
- · 5-digit LCD display powered by 3V batteries
- · Optional drip tray available.

Part Number		
JDT10001	drip tray	
J1781801	rigid tube	
J1781802	flexible tube	



## **Features**

- ¾" inlet with 1" spout
- Suitable for use with Petrol or Diesel Fuel
- Plastic coated body and lever.

Part Number **J1789022** 



## Oil Control Valve

### **Features**

- Inlet 1/2" female swivel
- Durable and light weight (0.8kg)
- Optional drip tray available.

Part Number		
JDT10001	drip tray	
J1782801	rigid tube	
J1782802	flexible tube	\-

## Aluminium Hose Nozzle

### Features

- Suitable for use with electric pump and gravity flow tanks
- 3/4" inlet port.

Part Number **J1789021** 



## Z Swivel

## **Features**

- 1/4" male and female
- Fits control valves with 1/4" female inlets.





## High Volume Auto Nozzle

## Features

- · High, medium, and low volume latching facility
- · Suitable for use with fuel transfer pumps
- Plastic coated body and lever.

Part Number

J1789023



## Heavy-Duty Pistol Grip Grease Gun

## Features

- Includes both heavy-duty 10" flexible hose
- Jam-proof handle return mechanism
- · Rugged single piece head casting
- Develops up to 700 bar (10,000 psi).

Part Number

J1786501



## High Pressure Grease Control Gun

## Features

- Developes up to 700bar (10000psi)
- · Single hand operation
- 1/4" female inlet
- Suitable for use with most air operated greasing equipment.



J1785701

## Cube 56 - Cube DC

## Diesel Fuel Dispensers

CUBE pumps have been developed for the distribution of Diesel fuel in non-commercial uses.

With CUBE fuel pumps, vehicles can be refuelled quickly and safely, with various options for measuring and recording the quantities dispensed.

The flow-meters mounted on CUBE pumps have sturdy mechanical readout systems whose reliability and easiness to use have been proved by time. Simple and versatile, CUBE pumps can also be installed on drums, thanks to their 2" quick couplings.

## **Performance Specifications**

- Flow-rate (max): up to 56 l/min (70 l/min Cube DC)
- Continuous operation at 230 V
- Noise level: below 70 dB
- Precision of flow-meter: ±1%.

## **Technical Features**

- · Self-supporting stamped-plate structure, treated against corrosion and paintfinished, ready to install
- Self-priming vane pump, fitted with bypass valve, mounted on antivibration supports. Mechanical seal
- · Self-ventilated enclosed motor (IP 55), single-phase versions provided with heat protection
- Intake filter for pump protection

DC versions

12V - 24V

- · Nutating-disk meter with mechanical readout system
- · Automatic pump nozzle complete with flexible hose and swivel connection
- In-built nozzle-holder provided with pump start/stop lever.



Part Number	Description	Pump Model	Flow Rate I/min	Tension Volt/Hz	DC V.	Motor Power W.	rpm	Duty Cycle	Meter	Nozzle AUT	Weight Kg	Package Dimension mm
57500C	Cube 56(*)	Panther 56	56	230/50		360	2800	continuous	K33	•	21	400 x 400 x 460
576000	Cube DC 12V(*)	Panther DC 12V	56		12	360	2800	30min	K33	•	21	400 x 400 x 460
577000	Cube DC 24V(*)	Panther DC 24V	70		24	500	3500	30min	K33	•	21	400 x 400 x 460
109364	Pedestal red										18	1020x260x340

Upon request Cube and Service are available with different tension and 60 Hz frequency

\*Without pedestal

## LUBRICATION AND REFUELING EQUIPMENT

Cube 70

## Diesel Fuel Dispensers

The CUBE 70 fuel pump offers a new design and new performance specifications to satisfy those customers involved in the private distribution of diesel fuel who are looking for a product able to dispense fuel faster at an economical price. CUBE 70 is a compact, light pump that allows refueling at flow rates up to 70 l/min under conditions of complete operator safety. Equipped with an easy to use, high-precision mechanical meter that can even be calibrated on-site. Its housing painted for exterior use with a stainless steel cover provides a nozzle holder with lever on-off switch and automatic pump turn-off. CUBE 70 is extremely versatile and can be installed directly on a wall or to an existing structure with anchor screws or directly to the drum with a 2" quick connect. CUBE 70 can also be integrated with a support base and column for attaching to the ground. The column can be used to house the suction tubing and the electric power cables.

## **Performance Specifications**

- Flow-rate up to 70 l/min
- Counter Precision ± 1%
- Continuous OperationNoise less than 70 dB.

## **Technical Features**

- Self-supporting structure in stamped sheet metal with anti-corrosion treatment and paint finish for exterior use. Satinized stainless steel cover
- Self-priming vane pump with mechanical seal, equipped with bypass, installed on anti-vibrating supports
- $\bullet$  Self-ventilated, IP55 induction motor, with thermal protection
- · Suction filter to protect the pump
- · Oscillating disk, volumetric, mechanical meter
- Nozzle holder contained in the structure, equipped with a pump start/stop lever
- · Automatic nozzle with flexible tubing and swivel joint
- Prepared for a direct connection to the drum by means of a 2" quick coupling
- Optional support base with column for attaching the pump to the ground.



Part Number	Description	Pump Model	Flow Rate	Tension	Motor Power	rpm	Meter	Nozzle	Weight	Package Dimension
			l/min	Volt/Hz	W.			AUT	Kg	mm
591000	Cube 70/33M(*)	Panther 72	70	230/50	550	2800	K33	•	25	400x400x460
010936	Pedestal blue								18	1020x260x340

Upon request Cube and Service are available with different tension and 60 Hz frequency

\*Without pedestal

## Diesel Fuel Dispensers with Multi-user Meter

CUBE 70 MC has been designed and manufactured to cater for the demand for a compact diesel-fuel dispenser for private use that is easy to install, ensures fast and precise dispensing and can only be used by qualified personnel. A dedicated software permits exporting data to a PC.

The compact body contains the nozzle holder, the pump and the meter. The electronic unit is able to control up to 50 users, including by means of a magnetic key, and permits dispensing with preselection. Data can be downloaded into a PC both by means of the magnetic key and by cable connection. CUBE 70 MC can be fitted to a wall, directly on the tank by means of the quick coupling or on a column. In terms of low running costs, compact dimensions and flexibility, together with all-round efficiency,

## Performance specifications

- Flow rates from 70 I/min
- Pre-selected dispensing
- Accuracy: ± -0.5 % within flow rate range

CUBE 70 MC is a truly unique dispenser.

- · Local memory capable of storing data for the last 200 deliveries
- · Can accept vehicle registration numbers and odometer readings
- · Records date and time of dispensing
- · Dedicated software for making printouts of dispensing details and individual user summaries
- · Magnetic keys for user identification.

### **Specifications**

- · Vane pump with built-in bypass
- · Induction motor with overheating protection
- · Mesh filter in the pump intake
- · Pulser meter with oval gears
- Automatic nozzle with swivel joint and 4-metre diesel fuel tube
- · Electronic control unit with display and keypad for entering code numbers
- · Magnetic key for user identification (optional)
- Cable connection to a PC up to 800 m away (optional).



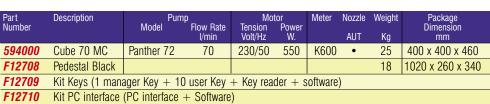






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	N.	1	
	3	ľ	
	-	3	

Options:	PC interface
Key Reade	
User key	



Upon request Cube and Service are available with different tension and 60 Hz frequency \*Without pedestal

OPTION PEDESTAL

## LUBRICATION AND REFUELING EQUIPMENT

Self Service K44

## Diesel Fuel Dispensers

The Self-Service dispenser satisfies those customers who, with regard to the private dispensing of diesel fuel, are looking for a product able to supply fuel in an increasingly faster way, with the possibility of checking the fuel being dispensed. Thanks to the filter, the quality of the fluid can also be checked, eliminating any water which would otherwise be likely to damage new-generation diesel engines. The bodywork has a new attractive design and is at the same time sturdy and functional. It permits easy component part maintenance and houses the nozzle-holder with start and stop switch.

The SERVICE K44 models feature an easy to use, high precision mechanical meter that can be easily calibrated by the user.

The SERVICE K44 PULSER models feature, in the meter, an electronic pulse emitter (10 pulses/litre, single channel), ideal for connecting up to external control systems. Diesel Fuel Dispensers

## Performance specifications

- Flow rates from 70 to 90 I/min
- · Meter accuracy: 1%
- · Continuous operation
- · Noise less than 70 dB.

### **Technical Features**

- · Self-supporting structure in painted and treated plate metal
- · Self-priming vane pump, equipped with bypass, installed on anti-vibration supports
- Induction motor, self-ventilated, IP55, with thermal protection
- Suction filter to protect the pump
- · Absorption filter for eliminating the water from the diesel fuel
- · Oscillating disk, volumetric, mechanical meter
- · Nozzle holder provided in the structure and equipped with a pump stop lever
- · Automatic nozzle with swivel joint and 4-metre flexible tubing
- Electric panel housed in the structure for connection to the mains and low-voltage control of auxiliary components.



Part Number	Description	Pur Model	np Flow Rate I/min	Mo Tension Volt/Hz	otor Power W.	Meter	Nozzle AUT	Water Filter	Height mm	Weight Kg	Package Dimension mm
737000	Self Service 70 K44	Panth 72	70	230/50	550	K44	•		1387	67	1485x500x420
737010	Self Service 70 K44 F	Panth 72	70	230/50	550	K44	•	•	1387	67	1485x500x420
740000	Self Service 100 K44	E 120	90	230/50	750	K44	•		1387	75	1485x500x420
740010	Self Service 100 K44 F	E 120	90	230/50	750	K44	•	•	1387	75	1485x500x420
740020	Self Service 100 K44 pulser	E 120	90	230/50	750	K44P	•		1387	75	1485x500x420
737B00	Self Service 70 K44 Tank	Panth 72	70	230/50	550	K44	•		980	57	1100x500x420
737B20	Self Service 70 K44 Tank pulser	Panth 72	70	230/50	550	K44P	•		980	57	1100x500x420
740B00	Self Service 100 K44 Tank	E 120	90	230/50	750	K44	•		980	65	1100x500x420
F13125	Kit Filter 70 I/min external for tank	version									
F13126	Kit Filter 90 I/min external for tank	version									

Upon request it is available with different tension and 60 Hz frequency

## Self Service MC

## Diesel Fuel Dispensers with Multi-user Meter

A survey of market requirements has led to the definition of a new range of dispensers equipped with a new-concept compact and versatile electronic head. The new design and new lowered version for fitting directly on the tank complete the offer. The dispensers are equipped with: a sturdy and compact structure, with easy access to the internal parts for maintenance with hinged front door complete with lock; a high-capacity pump ensuring fast filling; a high-precision meter; a water-absorption filter, which can be fitted both inside and outside to ensure the quality of the dispensed product. The electronic unit is able to control up to 80 users, including by magnetic key. PC linkup permits exporting performed dispensing operation data, to organise and control these according to need with the possibility of further transferring the data into a separate file.

## Performance

- Pre-selection dispensing. +/- 0.5 % precision within the flow-rate range
- · Able to control 80 users
- Local memory up to the last 255 performed dispensing operations
- Possibility of entering vehicle registration number and kilometres (odometer)
- · Dispensing date and time control
- Possibility of linking to PC and exporting data at a distance of up to 1000 m
- Dedicated software with possibility of printing summary dispensing details for users
- Minimum tank level pump stop
- · Magnetic key for user recognition.

## **Construction features**

- Blade pump with incorporated bypass
- Induction motor featuring cutout for overheating. Local printer (optional)
- · Pump suction mesh filter
- · Water separator filter (optional)
- · Pulser meter with oval gears
- Automatic nozzle with swivel connector and 4-metre diesel fuel hose
- Electronic unit with keyboard and display for entering registration numbers.







Part Number	Description	Pur Model	np Flow Rate I/min	Mo Tension Volt/Hz	otor Power W.	Meter	Water Filter	Nº Users	Mag Key	Height mm	Weight Kg	Package Dimension mm
000738010	Self Service 70MC F	Panth 72	70	230/50	550	K600	•	80	•	1387	67	1485x500x420
F00738B00	Self Service 70MC Tank	Panth 72	70	230/50	550	K600		80	•	980	57	1100x500x420
000741010	Self Service 100MC F	E 120	90	230/50	750	K600	•	80	•	1387	75	1485x500x420
F00741B00	Self Service 100MC Tank	E 120	90	230/50	750	K600		80	•	980	65	1100x500x420
F13125000	Kit filter 70 I/min external f	or Tank vers	sion									
F13125000	Kit filter 90 l/min external f	or Tank vers	sion									
F1270900	Kit Keys (Manager Key +	(it Keys (Manager Key + 10 user keys + key reader + software )										
F1271000	Kit PC interface (PC interface + software)											

Upon request it is available with different tension and 60 Hz frequency

## LUBRICATION AND REFUELING EQUIPMENT

Self Service FM

## Diesel Fuel Dispensers with Multi-user Meter

This innovative range of dispensers are characterised by great sturdiness and elegant design, dispensing speed and precision. Organised data control with selection of authorised operating staff, PC linkup with exporting of data and issuing of ticket by local printer, tank level indicator, water absorption filter to ensure quality of dispensed product, hinged front door, (with lock) for easy access to internal component parts.

## **Performance**

- Flow rates from 70 to 90 I/min
- · Pre-selection dispensing
- +/- 0.5 % precision within the flow-rate range
- · Able to control from minimum 50 to max 120 users
- · Local memory up to the last 255 performed dispensing operations
- · Possibility of entering vehicle registration number and kilometres (odometer)
- · Dispensing date and time control
- Possibility of linking to PC and exporting data at a distance of up to 1000 m.

- Dedicated software with possibility of printing summary dispensing details for users
- Local printer with issuing of ticket at end of dispensing operation (with date and time) and possibility of locally printing details of dispensing operations performed
- · By level indicator, possibility of continuous display of tank contents or level
- · Minimum tank level pump stop
- · Magnetic key for user recognition

## **Construction features**

- · Blade pump with incorporated bypass
- · Induction motor featuring cutout for overheating
- · Pump suction mesh filter
- Water separator filter (optional)
- · Pulser meter with oval gears
- · Automatic nozzle with swivel connector and 4-metre diesel fuel hose
- · Electronic unit with keyboard and display for entering registration numbers
- · Local printer
- · Level gauge (optional).



Part Number	Description	Pui		Mot										Package
		Model	Flow Rate I/min	Tension Volt/Hz	Power W.	Meter	Water Filter	Nº User	Local Printer	Mag Key	Lev ind.	Height mm	Weight Kg	Dimension mm
000738020	Service Service 70 MC FP	Panth 72	70	230/50	550	K600	•	80	•	•		1387	67	1485x500x420
000739000	Service Service 70 FM	Panth 72	70	230/50	550	K600	•	120	•	•	•	1387	67	1485x500x420
F00739B00	Service Service 70 FM Tank	Panth 72	70	230/50	550	K600		120	•	•	•	980	57	1100x500x420
000741020	Service Service 100 MC FP	E 120	90	230/50	750	K600	•	80	•	•		1387	75	1485x500x420
000742000	Service Service 100 FM	E 120	90	230/50	750	K600	•	120	•	•	•	1387	75	1485x500x420
F00742B00	Service Service 100 FM Tank	E 120	90	230/50	750	K600		120	•	•	•	980	65	1100x500x420
F1312500	Kit Filter 70 I/min external for	Tank versi	on											
F1312600	Kit Filter 90 I/min external for	Tank versi	on											
F12709000	Kit Keys (Manager Key + 10	it Keys (Manager Key + 10 user keys + key reader + software )												
F12710000	Kit PC interface (PC interface-	+software	)											

Upon request it is available with different tension and 60 Hz frequency



## Transfer Units

ST diesel fuel transfer stations are the modern and economical solution for the private refueling sector.

Easy to install, versatile and compact, they are used wherever it is necessary to fill mobile tanks or interact with the distribution unit.

Stations equipped with meters provide an accurate measure of the product dispensed and allow a useful and practical periodic check on consumption.

Stations are available in a complete range of flow capacities and motors to satisfy every need.

## **Equipment**

Groups are available with various equipment as listed in the table. All are provided with aspiration filters, check valve with filter and gun support.

The length of the dispensing tube is 4m (6m upon request).

The ST group can be integrated with a metal housing to protect the components. All accessories necessary to complete the installation are also available.



# Lubrication, Refueling and Spill Control LUBRICATION AND REFUELING EQUIPMENT

ST - Data

## Without Meter

				Pι	ımp			Meter		ing Pipe	No	zzle	5		
Part Number	Description	Viscomat 70	Panther 56	E 80	E 120	By pass 2000	Bipump	K33	1"	m     3/4"	Automatic	Manual	<ul> <li>Supply Tension</li> </ul>	≡ iii Flow Rate	ک Weight without Box
266P00	ST Panther 56		•									•	230	56	16
286P00	ST Panther 56 A60		•								•		230	56	16
214000	ST E 80 M.			•					•			•	230	80	21
244000	ST E 80 A80 M.			•					•		•		230	75	21
216000	ST E 120 M.				•				•			•	230	95	23
252000	ST E 120 A120 M.				•				•		•		230	95	23
248000	ST Viscomat 70 M, (*)	•								•		•	230	28	20
21000A	ST By pass 2000 12V					•						•	12	42	10
21100A	ST By pass 2000 24V					•						•	24	42	10

## With Meter

				Pι	ımp			Meter		ing Pipe	No	zzle	Tension		
Part Number With Metal Box	Description	Viscomat 70	Panther 56	E 80	E 120	By pass 2000	Bi	1"	4) 3/4"	"	Automatic	:≺Manual	e Supply Ten	즈 Flow Rate	Weight without Box
385P00	ST Panther 56 K33		•					•		•		•	230	56	17
287P00 365P00	ST Panther 56 K33 A60		•					•		•	•		230	56	17
390000	ST E 80 K33 M.			•				•	•			•	230	80	22
392000 36700B	ST E 80 K33 A80 M.			•				•	•		•		230	75	22
395000	ST E 120 K33 M.				•			•	•			•	230	90	24
397000 36900B	ST E 120 K33 A120 M.				•			•	•		•		230	90	24
256000	ST Viscomat 70 K33 M, (*)	•						•		•		•	230	25	24
23500A	ST By pass 2000/12V K33					•		•		•		•	12	40	11
23600A	ST By pass 2000 24V K33					•		•		•		•	24	40	11
23300A	ST By pass 2000/12V K33 A60					•		•		•	•		12	35	11
23400A	ST By pass 2000/24V K33 A60					•		•		•	•		24	35	11
240000	ST BI-PUMP 12V K33						•	•	•			•	12	80	22
241000	ST BI-PUMP 24V K33						•	•	•			•	24	80	22
399000	ST BI-PUMP 12V K33 A120						•	•	•		•		12	80	22

Packing: 360x360x300mm (600x600x360mm with box)

Metal Box (Part Number 933100A) is available upon request (weight 22Kg)

The units can also be supplied for operating under different voltages

\* For transferring oil application

## Drum

## Transfer Units

The DRUM series has been developed for easy connection to oil drums, thanks to a 2" quick coupling. This unit offers a simple and efficient solution for transferring or dispensing fluids from a drum in any situation. Some models are equipped with flow-meters for controlling the quantities being dispensed and recording single users' consumption.

## **Equipment**

The units are available with various accessories, as described in the chart. The units are also equipped with a telescopic suction tube for direct connection to fuel drums, and with a nozzle holder placed near the pump so as to afford clean and easy operations. The delivery hose is 4m long (6m on request).







## Without Meter

			72	Pump			Me	eter	Dis	spensing P 4m	ipe	١	Nozzle	9	ion		
Part Number	Description	Viscomat 70	Viscomat 200/2	Panther 56	By pass 2000	Bi-pump	K33	K400	1"	3/4"	1/2"	Automatic	Manual	EasyOil	Supply Tension	≡ ui Flow Rate	න Weight
271P00	DRUM Panther 56			•						•			•			56	15
273P00	DRUM Panther 56 A60			•						•		•			230	56	15
21800B	DRUM 2000/12V				•					•			•		12	42	10
218030	DRUM 2000/12V. A60				•					•		•			12	38	10
21900B	DRUM 2000/24V				•					•			•		24	42	10
219030	DRUM 2000/24V A60				•					•		•			24	38	10
222010	DRUM BI-PUMP 12V					•			•				•		12	80	18
222020	DRUM BI-PUMP 24V					•			•				•		24	80	18
222030	DRUM BI-PUMP 12V. A120					•			•			•			12	80	18
222040	DRUM BI-PUMP 24V. A120					•			•			•			24	80	18
270000	DRUM Viscomat 70 M. (*)	•								•			•		230	28	18
261000	DRUM Viscomat 200/2 M. (*)		•								•			•	230	9	18

## With Meter

VVICITIVI			7/2	Pump			Me	eter	Di	spensing P 4m	ipe	N	lozzle	;	sion		
Part Number	Description	Viscomat 70	Viscomat 200/2	Panther 56	By pass 2000	Bi-pump	K33	K400	1"	3/4"	1/2"	Automatic	Manual	EasyOil	< Supply Tension	≅ Flow Rate	중 Weight
272P00	DRUM Panther 56 K33			•			•			•			•		230	56	16
274P00	DRUM Panther 56 K33 A60			•			•			•		•			230	56	16
22000B	DRUM 2000/12V. K33				•		•			•			•		12	40	11
22100B	DRUM 2000/24V. K33				•		•			•			•		24	40	11
282000	DRUM 2000/12V K33 A60				•		•			•		•			12	35	11
283000	DRUM 2000/24V K33 A60				•		•			•		•			24	35	11
222050	DRUM BI-PUMP 12V. K33					•	•		•				•		12	80	19
222060	DRUM BI-PUMP 24V. K33					•	•		•				•		24	80	19
222070	DRUM BI-PUMP 12V. K33 A120					•	•		•			•			12	80	19
222080	DRUM BI-PUMP 24V. K33 A120					•	•		•			•				80	19
270010	DRUM Viscomat 70 K33 M. (*)	•					•			•			•		230	25	19
262000	DRUM Viscomat 200/2 K400 M. (*)		•					•			•			•	230	9	19

Packing: 500x380x280mm

The units can also be supplied for operating under different voltages

Battery Kit

## Lubrication, Refueling and Spill Control

## Fuel Transfer Pump Unit

This is a portable unit for transferring Diesel fuel, fitted with a Bypass 2000 pump run by a 12 V or 24 V DC electric motor. Thanks to its small size, reliability and simple installation, it is specially useful when fuel must be transferred or dispensed safely having only battery power on hand, as in construction sites, on boats and in agriculture.

## **Performance Specifications**

- Consumption: 22 Amp (12 V DC) 11 Amp (24 V DC)
- Flow rate: 38 I/min
- Suction capacity: up to 2 meters
- Duty cycle: 30 min.

### **Technical Features**

- · Self-priming rotary vane pump, with cast-iron casing
- · Fixed-brush motor with permanent-magnet stator
- · Terminal board for switches and circuit-breakers
- · 2m cable with clips for connection to battery
- Antistatic fuel hose, 4 meters length, 3/4" diameter
- · Aluminium hand-nozzle



Part Number	Description	Flow Rate I/min	Tension V.	Absorb Amp	Fuses Capacity	Duty Cycle	Weight Kg	Package Dimension mm
22500A	Battery kit 2000/12V	38	12	22	25	30min	7.5	300x300x180
22600A	Battery kit 2000/24V	38	24	11	15	30min	7.5	300x300x180

## Accessories

## Accessories for Diesel and Oil

A complete range of accessories are available to help you set up and customise your refuelling station, for all specific requirements of safety and efficiency.



Accessories - continued

Rotating I	Hose Connecters (swivels)	
845600	<b>NA</b> Swivel 12.12	M 1/2" G - F 1/2"G
62000	Swivel 34.1	M 3/4"G - F 1"G
62200/	Swivel 1.1 MF	M 1"G - F1"G
623000	Swivel 34.1 MM	M 3/4"G - M 1"G
62400	Swivel 34.34 MI	F M 3/4"G - F 3/4"G



UNION (reu	seable coupling)	
890000	Union 34.27	3/4"G thread, hose 19-27
891000	Union 1.27	1"G thread, hose 19-27
892000	Union 1.35	1"G thread, hose 25-35
893000	Union 34.32	3/4"G thread, hose 19-32
894000	Union 1.32	1"G thread, hose 19-32
895000	Union 1.38	1"G thread, hose 25-38



Check Valve a	nd Filter
609000	Foot valve Ø 25 With Filter
612000	Foot valve Ø 20 With Filter
8153	Check Valve 3/4"G
7978	Check Valve 1"G
9170	Check Valve 1" With Built-in Safety Valve
010571	Filter for Check Valve 3/4"G
797900	Filter for Check Valve 1"G



Elbows	1 END Thread	2 END Thread
7806	F 3/4"G	F 3/4"G
7805	M 3/4"G	F 3/4"G
8609	F 1"G	F 1"G
7988	M 1"G	F 1"G
7856	F 1/2"G	M 3/4"G
7807	F 3/4"G	F 1"G
10824	Flanged e	lbow 1"



Foot Valves	
F12399010	3/4" Foot Valve With filter protection and plug with hose tails



Hose Tails	Thread	Hose Internal (dimension mm)
9347	3/8"G	9.6
9653	1/2"G	16
8267	1/2"G	19
6437	3/4"G	19
7768	3/4"G	25
7757	1"G	19
7764	1"G	25



<b>8950</b>	Line Filter 1.1 F/F, flanged
9120	Line Filter 1.1 F/F NPTF, flanged

Cartridge Filters 10

Water Separator 011698

011699

011567

011569

Hoses Connected



Nipples	1 END Thread	Hose Internal (dimension mm)
7766	M 3/4"G	M 3/4"G
7765	M 1"G	M 1"G



9149	100 LT/M' filter with head 1"G
7772	60 LT/M' filter with head 3/4"G
611000	Cartridge 60 LT/M'
9359	Cartridge 100 LT/M'

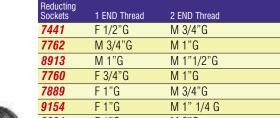
60 l/min 3/4" gas with head 1" G

100 I/min 1" gas with head 1" G

Cartridge 60 I/min water separator Cartridge 100 I/min water separator



Reducting Sockets	1 END Thread	2 END Thread	
7441	F 1/2"G	M 3/4"G	
7762	M 3/4"G	M 1"G	
8913	M 1"G	M 1"1/2"G	
7760	F 3/4"G	M 1"G	
7889	F 1"G	M 3/4"G	
9154	F 1"G	M 1" 1/4 G	
8891	F 1"G	M 2"G	

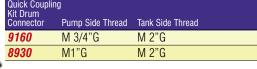


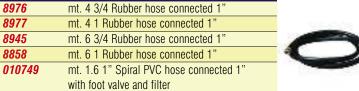


Hoses	
605 000	Rubber hose 19 x 27
606 000	Rubber hose 25 x 32
8870	Spiral PVC hose 25 x 35



Quick Couplin Kit Drum	g		
Connector	Pump Side Thread	Tank Side Thread	
9160	M 3/4"G	M 2"G	
8930	M1"G	M 2"G	







Sealant Past	е	
8173	g.130	Liquid telflon
F10767	ml.250	Sealant Paste Medium Duty
F12278	ml.250	Sealant Paste Heavy Duty



Graving Kit		
328 000	3 mt. Rubber hose 1"	
	+self 2000 nozzel	
	+opening valve	





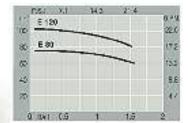
## E80 - E120 Pump

## AC Fuel Transfer Pumps

Displacement, self-priming, rotary electric vane pumps for transferring diesel fuel. All models equipped with by-pass valve. Powerful, dependable and economical, they are also available with single and three-phase AC motors. Thanks to their compact size, ease of installation, dependability and safety, they are used to equip fuel pumps for private use, fixed systems for transferring fuel and other industrial applications.

## **Technical Characteristics**

- · Cast iron pump body with anti-corrosion treatment and paint
- Vane pump with sintered steel rotor and acetal resin vanes
- · Incorporated by-pass valve.

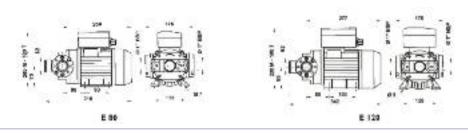


- · Induction motor with aluminum casing and anchoring brackets
- Protection grade IP55
- · Suitable for continuous service with thermal motor overload protection
- 1" flanged connectors, external filter.





Part Number	Description	Pump Flow Rate	Motor Single Phase Power				rpm	Connections	Weight	Package Dimension	
305000	E 80 M	1/m (max) 75	230	Hz 50	- V	Hz -	Watt 500	1400	1"G	13	195x355x270
307000	E 80 T	75	-	-	400	50	500	1400	1"G	13	195x355x270
326000	E 120 M	100	230	50	-	-	750	1400	1"G	15.6	195x355x270
312000	E 120 T	100	-	-	400	50	750	1400	1"G	15.6	195x355x270



**Panther** 

## AC Fuel Transfer Pump

PANTHER 56 and PANTHER 72 represent the results of a careful analysis of the requirements connected with transferring and distributing Diesel fuel. These self-priming rotary vane pumps feature a mechanical seal that guarantees constant reliability, even in low temperatures. Compact, safe and dependable, they can be used for equipping fuel pumps and stationary fuel-transfer installations.

### **Technical Features**

- · Cast-iron pump casing, treated against corrosion and paint-finished
- · Vane pump with sintered steel rotor and acetalic resin blades
- · Mechanical seal
- · Bypass valve built into pump casing
- In-built 100-micron filter, easily accessible for cleaning
- · Induction motor with aluminium casing
- Grade of protection: IP 55
- · Continuous running
- Threaded joints on pump casing. Flanged joints available on request



Parether 56 - Pancher 72

Part Number	Description	Pump Flow Rate I/m	Single V	e Phase Hz	Motor Three Phase V Hz		Power Watt	rpm	Connections	Weight Kg	Package Dimension mm
730000	Panther 56 230/50	56	230	50	-	-	370	2800	1"G	7.4	195x335x270
731000	Panther 56 230/60	68	230	60	-	-	450	3400	1"G	7.4	195x335x270
733000	Panther 56 400/50	56	-	-	400	50	370	2800	1"G	7.4	195x335x270
734000	Panther 56 400/60	68	-	-	400	60	450	3400	1"G	7.4	195x335x270
732000	Panther 72 230/50	72	230	50	-	-	500	2800	1"G flanged	7.9	195x335x270
735000	Panther 72 400/50	72	-	-	400	50	500	2800	1"G flanged	7.9	195x335x270

## Panther DC

## DC Fuel Transfer Pump

Made to complete the Panther range for transferring diesel fuel, these pumps are of the rotary blade type, self-priming, with high flow rate and easy operation and installation. Besides featuring an integrated bypass valve and suction filter, they are also equipped with a mechanical seal that ensures a high standard of reliability even at low operating temperatures. Compact, safe and reliable, they can be fitted to earthmoving machines, mobile dispensers on motor vehicles and fixed dispensers in case only battery power is available.

## Technical specifications.

- Pump body in cast iron with anti-corrosion treatment and painting
- · Support base
- · Pump of the blade type with sintered steel rotor and acetalic resin blades
- · Mechanical seal
- · Incorporated bypass valve
- · D.C. motor with brushes and permanent magnets
- · Connector block with ON/OFF switch
- · Protection fuse
- Degree of protection IP55
- Filter 100  $\mu$  incorporated in pump body, easy access for maintenance
- Threaded 1" coupling directly on pump body.



Part Number	Description	Pump Flow Rate I/m	Tension V	Motor Current (max) Amp	Duty Cycle min	rpm	Connections	Weight Kg	Package Dimention mm
34000A	Panther 56 DC 12V	56	12	38	30	2900	1"G	7.5	135x335x270
34100A	Panther 72 DC 24V	70	24	25	30	3500	1"G	7.5	135x335x270

## LUBRICATION AND REFUELING EQUIPMENT

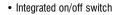
**Bipump** 

## DC Fuel Transfer Pumps

Displacement, self-priming, rotary electric vane pumps for transferring diesel fuel, characterized by high flow rates. All pumps are equipped with by-pass valve. Powerful, dependable and economical, they are available in 12 and 24-volt versions. Thanks to their compact size, ease of installation, dependability and safety, these pumps are used as the primary system on earth-moving machinery and on mobile fuel pumps on vehicles or in construction yards.

## **Technical specifications**

- · Cast iron pump body finished with anti-corrosion paint
- · Vane pump with sintered steel rotor and acetal resin vanes
- · By-pass valve incorporated in the pump body
- Direct current brush motor with permanent magnet stator



- · Flanged 1" connectors
- Available with power cables, incorporated fuses and pincers for connection to terminal strips

## **BIPUMP Model**

Characterized by high flow rates, it can be powered at either 12 or 24-Volts. Integrated on/off switch. Flanged 1" connectors. Available with power cables, incorporated fuses and clamps for connection to terminal strips.



Part Nu with on/off switch	ımber without on/off switch	Description	Pump Flow Rate I/m (max)	Tenstion V	Motor Current (Max) Amp	Duty Cycle Min	rpm	Connection	Fuse On Cable	Weight Kg	Package Dimenstion mm
363000	-	BI-PUMP12V-24V WITH ON/OFF SWITCH	85	12 24	35 18	30 30	2000	1"G		9.9	190x350x280
363010	-	BI-PUMP 12V with cable 2M	85	12	35	30	2000	1"G	•	10.2	190x350x280
363020	-	BI-PUMP 12V with cable 4M	85	12	35	30	2000	1"G	•	10.4	190x350x280
363030	-	BI-PUMP 24V with cable 2M	85	24	18	30	2000	1"G	•	10.2	190x350x280
363040	-	BI-PUMP 24V with cable 4M	85	24	18	30	2000	1"G	•	10.4	190x350x280
-	363210	BI-PUMP12V-24V WITHOUT ON/OFF SWITCH	85	12 24	35 18	30 30	2000	1"G		8.5	190x350x280
-	F12706	Kit cable 2 m (12/24 v)							•	0.7	-
-	F12707	Kit cable 4 m (12/24 v)							•	0.7	-

## By Pass 2000

## DC Fuel Transfer Pumps

Displacement, self-priming, rotary electric vane pumps for the transfer of diesel fuel equipped with by-pass valve. Powerful, dependable and economical, they are available with 12 and 24-volt direct current motors. Thanks to their compact size, ease of installation, dependability and safety, these pumps are used as the primary system on earth-moving machinery and on mobile fuel pumps on vehicles or in construction yards.

## **Technical Specifications**

- · Cast iron pump body finished with anti-corrosion paint
- Vane pump with sintered steel rotor and acetal resin vanes
- · By-pass valve incorporated in the pump body
- · Direct current brush motor with permanent magnet stator
- Motor protection grade IP55
- Used in intermittent service with 30-minute work cycles
- Pump attachment support bracket.

## Model By Pass 2000

Available in two versions (12 and 24-Volt) with  $3\!/\!\!4"$  threaded connectors on the pump body.

## Model Carry 2000

Available in 12 and 24-Volt versions. 3/4" threaded connectors on the pump body. Switch box and fuse carrier, complete with power cables and pincers for connection to terminal strips.

## Model BY PASS 2000 HF

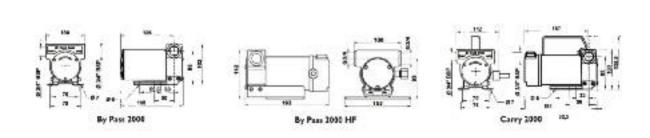
Available in version 24-Volt with ¾" threaded connectors. Pump without bypass for free outflow pumping with switch, fuse and reinforced base. Ideal for direct fitting to earthmoving machinery.





## LUBRICATION AND REFUELING EQUIPMENT

By Pass 2000 - Data



Part Nu with on/off switch	umber without on/off switch	Description	Pump Flow Rate I/m (max)	Tenstion V	Motor Current (Max) Amp	Duty Cycle Min	rpm	Connection	Fuse On Cable	Weight Kg	Package Dimenstion mm
-	33500B	By Pass 2000 12V	40	12	18	30	2800	3/4"G		3.5	215x120x160
-	33600B	By Pass 2000 24V	43	24	9	30	2800	3/4"G		3.5	215x120x160
22300A	-	Carry 2000 12V with cable 2 r	n 40	12	18	30	2800	3/4"G	•	4.2	215x120x160
22400A	-	Carry 2000 24V with cable 2 r	n 43	24	9	30	2800	3/4"G	•	4.2	215x120x160
-	336290	By pass 2000 24V HF	50	24	10	30	2800	3/4"G	•	3.5	215x120x160

## Viscomat

Gear and Vane-type Oil Pumps
VISCOMAT is a family of internal profile or vane gear pumps designed as modern, effective solutions for the various requirements of pumping oils and lubricants. Thanks to the several available models VISCOMAT satisfies the need to:

- Transfer large quantities of product at medium pressure between tanks;
- · Guarantee good flow rates at high pressure in applications in which the pump must supply the reeling drums of fixed, "in-line" oil distribution systems on fixed pumping systems:

Common features of all models are:

- · Quiet operation,
- Regularity of flow characterized by the absence of pulsations,
- Closed-delivery operation
- · High suction capacity
- · Compact design.

## **Construction characteristics**

Closed, self-ventilating, AC motor (protection grade IP 55) available in various voltages and frequencies. Die-cast aluminum pump body. By-pass integrated into the pump body. 1" female inlet/outlet ports.

## **Gear Type Model**

Sintered steel gears, with a specially designed internal profile.

Mechanical seal on the motor shaft, accessible from the pump side. Incorporated self-priming device.

## Vane Type Model

Sintered steel rotor with resin vanes. Rotating shaft seal accessible from the pump

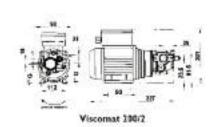
## **Performance Characteristics**

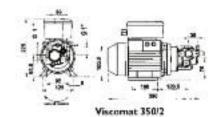
- Flow rates from 9 to 50 l/min (2,4 to 13,2 gal/min)
- Pressures from 5 to 25 bar (71 to 355 psi)
- · Continuous operation
- Noise less than 70 dB.

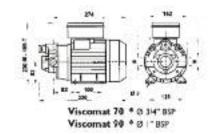


## LUBRICATION AND REFUELING EQUIPMENT

Viscomat - Data







Part Number	Descripion	FI	Max ow Rate	ate Pressure							Power	Weight	Package Dimenstion
		l/m	gal/min	bar	psi	V	Hz	V	Hz		Watt	Kg	mm
304030	Viscomat 200/2 M.	9	2.4	12	170	230	50			1450	550	9	350x200x280
304050	Viscomat 200/2 T.	9	2.4	12	170			400	50	1450	550	9	350x200x280
304200	Viscomat 200/2	9	2.4	12	170	110	60			1450	550	9	350x200x280
304100	Viscomat 200/2 M.	9	2.4	12	170	230	60			1450	550	9	350x200x280
304300	Viscomat 230/3 M.	14	3.7	12	170	230	50			1450	900	12,5	350x200x280
304T40	Viscomat 250/3 T.	14	3.7	12	170			400	50	1450	900	12,5	350x200x280
304010	Viscomat 200/2 M.	9	2.4	25	355	230	50			1450	750	12,5	350x200x280
304T10	Viscomat 350/2 T.	9	2.4	25	355			400	50	1450	750	12,5	350x200x280
304110	Viscomat 350/2	9	2.4	25	355	110	60			1450	750	12,5	350x200x280
334900	Viscomat 70 M.	25	6.6	6	85	230	50			1450	750	14,1	350x200x280
331900	Viscomat 70 T.	25	6.6	6	85			400	50	1450	750	14,1	350x200x280
303000	Viscomat 90 T.	50	3.2	5	71			400	50	1450	2000	14,1	350x200x280

## Visco-Flowmat

## Gear -Type Pumps with Pressure Switch

The new range of VISCOMAT pumps with pressure switch are designed to satisfy requirements for deliveries with a constant flow self-priming pump with automatic switch-off at the end of delivery. The unit consists of an internal profile gear pump with alternating current motor, integrated with a pressure switch. Switch-on of the motor and delivery are performed automatically when the nozzle opens. At the end of delivery the pump continues to operate for a few seconds in order to permit topping up if necessary and then switches off.

The performance of the gear pump guarantees good flow rates with high pressures, no pulsing, regular flow and silent operation. The pressure switch activates the pump when a minimum pressure is reached and switches the pump off when a maximum pressure is reached, below the pump bypass pressure. The pressure switch is also provided with a safety valve which limits the maximum system pressure to 10 bars.

The above unit combines the typical characteristics of gear pumps with the simplicity and convenience of being able to activate the pump without worrying about motor switch-on and switch-off. It can be used both for feeding single delivery points, also with reels, and on fixed distribution systems.

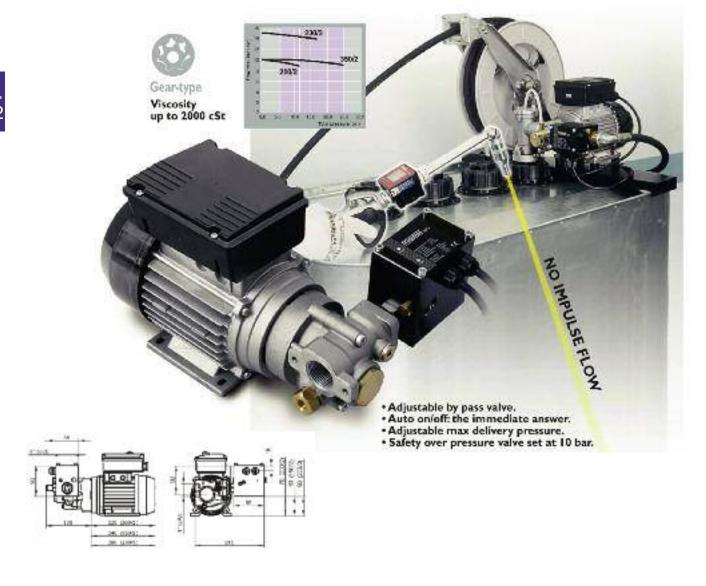
### Performance

Flow rates from 9 to 14 I/min (2,4 to 3,7 gal/min). Operating pressures from 12 to 25 bars (170 to 355 psi). Automatic switch-on and switch-off.

Regular no-pulse flow. Noise level below 65dB. Self-priming pump.

## **Construction features**

- Closed self-ventilated a.c. motor (protection rating IP 55) available in different voltages and frequencies
- Die-cast aluminium pump body
- · Sintered steel gears with specially designed internal profile
- · Mechanical seal on motor shaft, accessible from pump side
- · By-pass integrated in pump body
- 1" G female suction inlets and 1" G female outlets
- · Incorporated priming device
- · Pressure switch featuring 2 pressure thresholds with incorporated safety valve
- · Max pressure adjustment option.



Part Number					Motor					Package		
		Flow I/m'	/ Rate gal/min	Pres bar	ssure psi	Voltage (V)*	Freq (Hz)*	rpm	Power (W)	Weight Kg	Dimenstion mm	
302000	Visco Flowmat 200/2	9	2.4	12	170	230	50	1450	550	12	360x360x300	
302040	Visco Flowmat 230/3	14	3.7	16	225	230	50	1450	750	15	360x360x300	
302060	Visco Flowmat 350/2	9	2.4	25	385	230	50	1450	750	15	360x360x300	

## LUBRICATION AND REFUELING EQUIPMENT

Viscotroll

## Mobile Unit for Oil Transfer

Viscotroll is the ideal product for delivering oil from a drum anywhere in the workshop. As it is powered by electricity it can be connected to any power socket thus eliminating the need for compressed air. The group comes equipped with a self-priming gear pump and there is also a version with a pressure switch which ensures constant silent delivery and a regular no-pulse flow. Opening and closing the delivery nozzle, on the pressure switch model, automatically causes motor ignition and shutdown.

The nozzle is installed with a flow meter and display to guarantee precise delivery operations, giving total control over the fluid used.

## **Performances**

- Flow rate 9-25 l/min (2,4 to 6,6 gal/min)
- Operating pressure 6-12 bar (85 to 170 psi)
- Noise levels less than 65 dB
- · Motor supply 230 V
- Power 0.75 kW
- Oil viscosity from 10 to 2000 "cs"
- Automatic ignition and shutdown with pressure switch
- K400 meter with accuracy +/- 0.5% or K33 meter with accuracy +/- 1%.

### **Specifications**

- Tubular structure trailer-mounted support for moving drums, complete with nozzle support, pipe support and drip collector
- Self-priming pump with a.c. motor, self-ventilating closed (protection rating IP 55) at 230 V
- 1" Gas suction pipe with standing valve and filter
- 4 metre long 1/2" Gas delivery pipe
- Delivery nozzle with flexible end and automatic non-drip valve.

## Options:

- · Flow meter
- · Pressure switch with incorporated safety valve.



Part Number	Description	Flow I/m'	Rate gal/min	Voltage (V)*	Power (Kw)	Pressure Switch	Meter	Viscosity cSt	Weight Kg	Package Dimension mm
263000	Viscotroll 200/2	9	2.4	230	0.75			up to 2000	34	1090x690x300
263010	Viscotroll 200/2 - K400	9	2.4	230	0.75		K400	up to 2000	35	(trolley)
263020	Viscotroll 200/2 - PST	9	2.4	230	0.75	•		up to 2000	36	+
263030	Viscotroll 200/2 - PST - K400	9	2.4	230	0.75	•	K400	up to 2000	37	360x360x300
263100	Viscotroll 70	25	6.6	230	0.75			up to 500	34	(equipment)
263110	Viscotroll 70 /K33	25	6.6	230	0.75		K33	up to 500	36	

## Hand Pump

Piston, Rotary and Manual Pumps for Drums Manual action pumps, suitable for transferring fluids, characterised by ease of installation, simplicity of operation, dependability and economy.

## Model 316000

Double-acting piston pump, 900 cm3/cycle. Complete with 2" connector for drums, telescoping suction tube and 3/4" threaded connector on the outlet. Suitable for use with petrol, oil and diesel fuel.

## Model 332000

Rotary vane pump, complete with 2" drum adapter and suction tube. Suitable for use with oil, diesel fuel and petrol.

## Model 332010

Rotary vane pump, 250 cm3/cycle. Complete with 2" drum adapter and suction tube. Suitable for use with oil and diesel fuel. Provided with a 3/4" threaded connector.

## Model 349000

Piston pump, complete with suction tube and 2'' and  $1-\frac{1}{2}''$  drum connectors. Suitable for use with oil and diesel fuel. Provided with a connector for ½" rubber hose.

## Model 351000

Piston pump, 350 cm3/cycle. Complete with suction tube and 2" drum connector. Suitable for use with oil and diesel fuel. Provided with 3/4" hose-end fitting.

## Grease gun

Lubricators with tank, also suitable for working with cartridge. Available with various volumetries. Provided with 300 mm flexible end and 4-fastener head.



# Lubrication, Refueling and Spill Control LUBRICATION AND REFUELING EQUIPMENT

Hand Pump - Data

Part Number	Description	Approximate (60 strokes/min) flow rate	Displacemen nt (l/cycle)	Fluid Compatible	Connections	Package Weight Kg	Dimenstion mm
316000	PM GPI Piston	60	0.9	0,D,G	1-3/4"NPT	5.3	465x395x240
332000	Aluminium rotative hand pump	40	0.27	0,D,G	3/4" Gas	5.6	340x160x125
332010	Cast Iron rotative hand pump	45	0.25	0,D	3/4" Gas	5.3	340x160x125
349000	Piston hand pump 25 l/m'	25	0.25	0,D	End hose Ø 20	3.0	600x110x65
351000	Piston hand pump 35 I/m'	35	0.35	0,D	End hose Ø 20	3.0	300x150x105

## Compatable Fluid Legend

0 = Lubricating and transmission oil

D = Diesel fuel

G = Gasoline (petrol)

Part Number	Description	Size	Size Cartridge	Weight Kg	Package Dimenstion mm	
352000	Grease gun 500cc	500cc	16oz	1.4	120x370x60	
352010	Grease gun 800cc	800cc	28oz	1.7	120x480x60	
352020	Grease gun 1000cc	1000cc	350z	1.9	120x540x60	

## Electronic Meters

## Oval Gear Meter

The electronic oval gear meters for product delivery control and measurement are used in the private distribution of low, medium and high viscosity fluids such as fuel, lubrication oil and other special fluids compatible with the construction materials. The oval gear measuring principle adopted offers high precision and low pressure losses together with a compact lightweight design and easy installation. An electronic card with microprocessor permits control of the display and calibration of the meter. A complete range of models is designed to satisfy all flow rate requirements. Ease of use, compactness and the independent battery power supply make these products suitable for installation in both stationary systems on fluid transfer and distribution lines and in mobile applications as an accessory for delivery valves and guns and for all other industrial applications that require fluid delivery control.

### Performance

- Precision ± 0.5 % in flow rate range after calibration
- Repeatibility 0.2%
- Pressure loss < 0.5 bars (7 psi) at max flow rate.

## **Construction Features**

- · Body with aluminium measuring chamber
- · Oval gears made of acetalic resin
- Aligned inlet/outlet apertures provided with female thread Versions K600 & k900 with flange
- Integrated suction filter (not present in model K400)
- Pulse signal type: raw signal (reed switch), single channel
- Electronic card with LCD housed in cover 5-digit partial total (h= 11.5 mm) with floating point from 0.001 to 999.99 8-digit non-resettable total (h= 5 mm) from 1 to 99999999
- · Battery power supply 2 x 1.5 V
- · Resettable total available
- Flow rate indication (only for K600/K900).

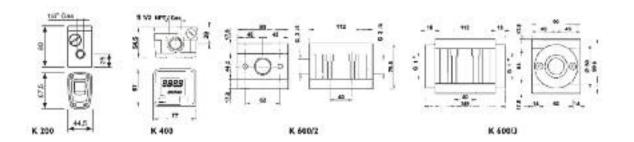


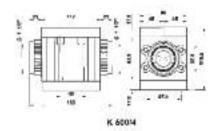
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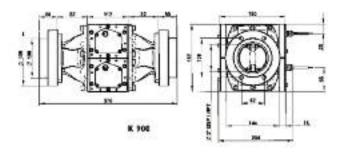
## Lubrication, Refueling and Spill Control

## LUBRICATION AND REFUELING EQUIPMENT

Electronic Meters - Data







## Compatable Fluid Legend

0 = Lubricating and trainsmission oil

D = Diesel fuel

A = Antifreeze

W = Washing windscreen liquid

## Upon Request

Available Gallon/Quarter or Pint

Part Number	Description		/ Rate Inge gal/min	Max Op Press bar		Compatible Fluids	IN/OUT Connection	Weight Kg	Package Dimenstion mm
430120	K200	0.1 - 2.5	0.03 - 0.66	550	7810	O,D,A	1/8"	0.6	310x170x55
47500A	K400	1 - 30	0.26 - 7.9	70	994	O,D,A	1/2"	0.5	80x80x75
483020	K400 windscreen	1 - 30	0.26 - 7.9	70	994	O,D,A,W	1/2"	0.5	80x80x75
494000	K600/2	6 - 60	1.58 - 15.8	70	994	0,D,A	3/4"	2	200x120x140
496000	K600/3	10 - 100	2.64 - 26.4	30	426	O,D,A	1"	2.6	200x120x140
497000	K600/4	15 - 150	3.9 - 39	20	284	D,A	1 1/2"	3.2	200x120x140
499000	K900	50 - 500	13.2 - 132	10	142	D,A	3"	12	400x290x200

## Oval Gear Pulse Meters

The oval gear pulse meters are designed to meet a wide range of product delivery measuring requirements in the private distribution of fuel, lubricant and low, medium and high viscosity liquids. The oval gear measuring principle adopted offers high precision and low pressure losses. A complete range of models are designed to satisfy all flow rate requirements. Easy interfacing with control systems makes these pulse meters the ideal solution for equipping fuel delivery pumps for private use in stationary lubricant transfer/delivery systems, as meters for tank filling arms, for control of burner or power unit fuel consumption and other industrial applications requiring fluid delivery control.

## **Performance**

- Precision ± 0.5 % in flow rate range after calibration
- · Repeatibility 0.2%
- $\bullet$  Pressure loss < 0.5 bars (7 psi) at max flow rate

## **Construction Features**

- · Body with aluminium measuring chamber
- · Oval gears made of acetalic resin
- · Aligned inlet/outlet apertures provided with female thread
- Integrated suction filter (not in model K400).

### **Construction features**

- · Body with aluminium measuring chamber
- · Oval gears made of acetalic resin
- · Aligned inlet/outlet apertures provided with female thread
- Integrated suction filter (not in model K400).

## Connections

Pulse meter for connection to external receiver.

Type of output signal: raw signal (reed switch), single channel. Max 28 V Ac/dc 100 mAmp.

Pulse meter K900 with display and impulse transmission.

Display power supply 4-12 Vdc, 1.2 Amp.

Type of output signal: open collector max 50 V, 1.2 Amp, single channel. On-board display for calibration and local reading.

 $\label{eq:pulse meter K900} \textbf{Pulse meter K900} \ \ \text{with display and impulse transmission}.$ 

Display power supply 4-12 Vdc, 1.2 Amp.

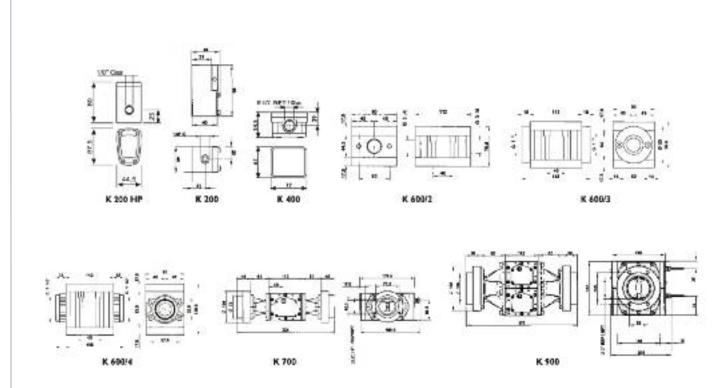
Type of output signal: open collector max 50 V, 1.2 Amp, single channel. On-board display for calibration and local reading.





## LUBRICATION AND REFUELING EQUIPMENT

Pulse-Meters - Data



Part Number	Description	Pump Flow Rate I/m	Single V	Phase Hz	Motor Three I V	Phase Hz	Power Watt	rpm	Connections	Weight Kg	Package Dimension mm
730000	Panther 56 230/50	56	230	50	-	-	370	2800	1"G	7.4	195x355x270
731000	Panther 56 230/60	68	230	60	-	-	450	3400	1"G	7.4	195x355x270
733000	Panther 56 400/50	56	-	-	400	50	370	2800	1"G	7.4	195x355x270
734000	Panther 56 400/60	68	-	-	400	60	450	3400	1"G	7.4	195x355x270
732000	Panther 72 230/50	72	230	50	-	-	500	2800	1"G flanged	7.9	195x355x270
735000	Panther 72 400/50	72		-	400	50	500	2800	1"G flanged	7.9	195x355x270

## Remote Display

## Oval Gear Pulse Meters

Designed to be used with the range of pulse meters. Remote installation is provided by simply connecting 2 wires. A large screen simultaneously displays the quantity delivered and the non resettable total. The Remote Display also comes with software applications for calibrating flow

It is available both as a basic display device and as a pulse emitter. In the latter case it can be connected to external apparatus which can directly receive gauged impulses from the remote display. It is indispensable when the receiver only recognises discrete quantities of pulses.

The remote display is the ideal addition to our series of pulse meters wherever display and reading of the quantities delivered are indispensable, not directly at the point of installation of the flow meters, but over a distance.

With their easy interfacing management systems, pulse transmitter models connected to Remote Display extend the field of application of pulse meters.

### **Specifications**

- Body in drawn aluminium
- Single display with 5 figure partial Total (h=11.5 mm) floating point (0.001 to 99999) and 8 figure non resettable Total (h = 5 mm, from 1 to 99999999)
- · Front sealing plate and display guard
- Reset button and calibration
- · Battery or grid powered
- Remote connection to pulse meter up to 50 metres
- Pulse out set in 1, 2, 10, 20, 50, 100 P/litre
- · Resettable total available
- · Different unit of measurement setting option
- · Low battery indication
- · Flow rate indication.

## **Available models**

- ▲ Remote display for display only
- · Battery powered display 2 x 1.5 V
- Remote display with pulse transmitter
- · Battery powered 2 x 1.5 V

Outgoing signal type: open collector max 50 V, 1.2 Amp, single channel,

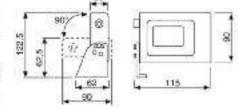
Grid powered 4-12 V dc, 1.2 Amp

Outgoing signal type: open collector max 50 V, 1.2 Amp, single channel.



Remote display for pulser	Remote	hattery	e transmitter powered guise per liter after		v rate nge	Weight	Peckage dimension
Wildle .	item	item	culbration	Vinin	galimin	Kg	mm
K200	FI 1229000	011749000	1, 2, 10, 20, 50, 100	0.1 - 2.5	0.03 - 0.66		
K400	0 1966000	011750000	1, 2, 10, 10, 50, 100	1 - 30	0.36 - 0.79	1	
K600/2	011231000	011751000	1, 2, 10, 20, 50, 100	6 - 60	1,58 - 15,8	15500	*** *** ***
K600/3	0:1233000	011752000	1, 2, 10, 20, 50, 100	10 - 100	2.64 - 26.4	14	225x125x150
K600/4	0 1235000	011753000	1, 2, 10, 20, 50, 100	15 - 150	3,9 . 19		
K700	FI 1236000	011754000	1, 2, 10, 30, 50, 100	25 - 250	6.6 - 66		

Upon request available in Gallon/Quarter or Pint ▲ Remote display



pulse transmitter battery powered pulse transmitter externally powered

**Technical Features** 

from both sides.

1" G inlet, 1" G outlet, in line.

## LUBRICATION AND REFUELING EQUIPMENT

Aluminium metering chamber with polybutylene nutating disk.

The top can be rotated to give four different flow configurations. Mechanical readout

Available with litre units or gallon units. The K44/P model is equipped with a Pulser

card, "Open collector" type, externally powered by the receiver. Flanged coupling

device with rotating wheels. Subtotals can be set to zero, total readouts cannot.

Mechanical Meters

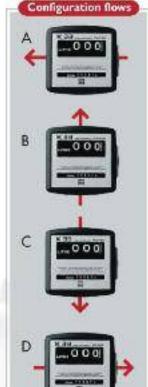
## Fuel meters

K33 and K44 are nutating-disk meters that measure the exact quantity of the dispensed fuel or lubricant. They are designed for non-commercial use only. These flow-meters are reliable, inexpensive, easy to install and simple to calibrate on the workplace. The Pulser model is fitted with a pulse emitter for connection to a fuel management system. Thanks to reduced flow resistance, they can also function by gravity.

## **Performance Specifications**

- Flow-rate (range):  $20 \div 120$  l/min (5,3  $\div 32$  gal/min)
- Precision: ±1% of flow range after calibration
- Repeatability: 0,2%
- Max. operating pressure: 10 bar (142 psi)
- Bursting pressure: 30 bar (426 psi)
- Readout system:
- K33, 3-digit subtotals (max 999 litres), 6-digit totals
- K44, 4-digit subtotals (max 9999 litres), 7-digit totals
- Resolution: 0.1 litre
- Pulser card type: "Open collector", frequency: 10 pulses/litre, power supply: 6-24 V DC, max 10 mA.













Flange connection in both sides



Part Number for Diesel	Part Number for Oil	Description	Ope	lax ration ssure	Flow Direction	Pulse Per Litre (per gal)	IN/OUT	Weight Kg	Package Dimenstion mm
550000	<i>550160</i>	K33 Ver A	10	142	←	-	1"	2	180x180x170
551000	551160	K33 Ver B	10	142	<b>↑</b>	-	1"	2	180x180x170
552000	557000	K33 Ver C	10	142	$\downarrow$	-	1"	2	180x180x170
553000	558000	K33 Ver D	10	142	$\rightarrow$	-	1"	2	180x180x170
560000	560160	K33 ver A	10	142	←	-	1"	2	180x180x170
561000	561020	K33 ver B	10	142	<b>↑</b>	-	1"	2	180x180x170
562000	562020	K33 ver C	10	142	$\downarrow$	-	1"	2	180x180x170
563000	563020	K44 ver D	10	142	$\rightarrow$	-	1"	2	180x180x170
56500A		K44 / Pulser	10	142	$\rightarrow$	10(38)	1"	2	180x180x170

## K 500

## Preset Batch Nozzle Meter

K500 is a meter nozzle able to cater for even the most discerning market requirements. The possibility of dispensing in preselection makes it truly unique. Once the pre-selected quantity has been reached, the nozzle automatically closes the valve and stops dispensing. It can be used with oil, diesel fuel and antifreeze. Its functions are extended by a vast menu. The oval-gear meter makes it possible to achieve high count precision with low flow resistance.

Also available in type-approved version. The nozzle makes for easy calibration. Dispensing is made easier thanks to the articulated end and swivel connection for reaching any position. The external structure consists of an ergonomic plastic shell with shockproof rubber. The trigger protection prevents accidental operation. Thanks to the threaded outlet coupling, any end can be connected.

A large easy-maintenance inlet filter protects the nozzle from impurities. Thanks to the sealed battery compartment it can be used in any condition. K500, a unique and indispensable tool for industry operators.

## **Performance Specifications**

- Flow rate from 1 to 30 l/min  $(0.6 \div 7.9 \text{ gal/min})$
- Accuracy 0.5 % over the entire flow rate range (±0.3% type-approved version)
- · Repeatability 0.2%
- · Viscosity range from 5 to 2000 cSt
- Max. operating pressure: 70 bar max (994 psi)
- Pre-selectable quantity: 0.1 litres min., 99.9 litres max
- · Quantity dispensed indicators with various units of measure.

## **Technical Specifications**

- Pressure molded meter body, resistant to high pressures, protected by a structure of anti-shock, thermohardened plastic with rubber protection
- · Trigger protection to prevent accidental operation
- · IP55 insulation with sealed battery compartment
- Inlet with 1/2" Gas swivel connector and incorporated filter.
- Outlet for end connection 3/8" gas female
- · Balanced valve to reduce pressure on the trigger
- · Oval gear meter, with acetal resin gears. Single-channel. Two channel for type-approved version
- Electronic circuit card with microprocessor for managing the card functions
- LCD with four-digit partial supply indicator (height 11.5 mm) and non-resettable, six-digit total indicator (height 5 mm)
- · Powered by 4 1.5 V AA size batteries
- · Articulated end with clutched positioning button, complete with anti-drip valve.



Part Number

## LUBRICATION AND REFUELING EQUIPMENT

K 450

## Nozzle Meter

K450 integrates the functions of the dispenser valve with those of the meter, making it possible to dispense oil, diesel fuel and antifreeze. The oval-gear meter makes it possible to achieve high count precision with low flow resistance. The nozzle makes for easy calibration. An on-board electronic board controls all the meter functions. The articulated end and swivel connection make it possible to reach every dispensing position and point.

The trigger protection prevents accidental operation. Thanks to the threaded outlet coupling, any end can be connected, according to need. A large easy-maintenance inlet filter protects the meter from impurities. Thanks to the sealed battery compartment it can be used in any condition. Compact and ergonomic, K450 is a reliable working tool wherever the quantity of dispensed fluid needs controlling.

## Performance specifications

- Flow rate from 1 to 30 l/min  $(0.6 \div 7.9 \text{ gal/min})$
- Accuracy 0.5% over the entire flow rate range (±0.3% type-approved version)
- · Repeatability 0.2%
- · Viscosity range from 5 to 2000 cSt
- Max. operating pressure: 70 bar max (994 psi).

## **Technical specifications**

- Pressure molded meter body, resistant to high pressures, protected by a shell of anti-shock, thermohardened plastic with rubber protection
- Protection grade IP55 with sealed battery compartment
- Inlet with 1/2" BSP swivel connector and incorporated filter
- Outlet for connecting 1/2" BSP female end
- · Balanced valve to reduce pressure on the trigger
- Oval gear meter, with acetal resin gears. Single-channel. Two-channel for type-approved version
- · Electronic circuit card with microprocessor for managing the card functions
- LCD with four-digit partial supply indicator (height 11.5 mm) and non-resettable, six-digit total indicator (height 5 mm)
- Powered by 4 1.5 V AA size batteries
- · Articulated end with clutched positioning button, complete with anti-drip valve.



## Easyoil and Easyoil K400

## Oil Dispensing Nozzle

EASYOIL is a new dispensing nozzle specifically designed for the industry. Its main advantages are

- Ergonomics, featuring an anatomical handgrip and a trigger that requires minimal pressure
- Safety, thanks to lever protection that prevents accidentally pressing the trigger
- · Easily Integratable
  - The EASYOIL handgrip, combined with a K400 meter becomes an extremely mobile tool for measuring the dispensing of oil
- Versatility. A wide array of accessories allows configuring the dispensing nozzle for the most varied requirements.

## **Construction characteristics:**

- The aluminum body is resistant to high pressure
- The plastic, anti-shock handgrip is available in several colors
- · A balanced valve reduces pressure on the trigger
- The trigger is protected to prevent accidental spills
- · Trigger lock button for dispensing
- · Optional suction filter available
- The K400 meter can be installed in the handgrip.



## LUBRICATION AND REFUELING EQUIPMENT

Easyoil and Easyoil K400 - continued







Trigger lock

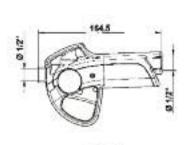


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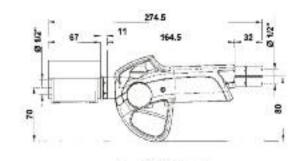


Color code

Part Number	Description	Weight	Package Dimensions mm
966000	Easyoil FF 1/2 x 1/2 BSP	0.45	
976000	K400 CAL L/Gas + Easyoil + Swivel	1.2	203x320x88
976900	K400 CAL L/Gas + Easyoil + Swivel + Rubber Protection + Rigid Spout	1.5	203x320x88
976910	K400 CAL L/Gas + Easyoil + Swivel + Rubber Protection + Flexible Spout	1.5	203x320x88



Easy Oil



Easy Oil K400 meter



## Easyoil Accessories

Oil Dispensing Nozzle Accessories
The EASYOIL handgrip is supported by a wide array of accessories that make it easily adaptable to many different applications.



Easyoil Accessories - continued

## Nozzle

K400 Hose-end Meter 97600A

Easy Oil Nozzle FF 1/2" x 1/2" BSP		
966000	Black Handle	
966050	Yellow Handle	
966040	Green Handle	
966030	Red Handle	
966060	Blue Handle	



## Anti-drip Valves

Automatic an	ti-drip valves	
660000	M14 X 1.25	
663000	1/4" NPT	
664000	1/4" NPT	



Manual anti-d	rip valves
690000	BSP 1/4" LF
692000	NPTF 1/4" LF



Manual anti-d	lrip valves
691000	BSP 1/2" HF
695000	BSP 3/8" HF
694000	NPTF 1/2" HF
696000	NPTF 3/8" HF



## Spouts for Easy Oil Nozzle

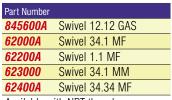
K400 CAL L/Gas + easyoil Black Handle

+ Swivel Available with NPT thread connection

and different colour handle

Flexible Spout	with automatic anti-drip valve	
666000	BSP A/P	

		' ~ '
lexible Spout	t - with manual anti-drip valve	
39000	BSP LF	





Available with NPT thread

Digital Meters

Swivels

## Colour Code Swivel Protector

1/2" Swivel	Rubber Protectors
9659	Colour Code Black
9757	Colour Code Yellow
9758	Colour Code Green
9899	Colour Code Red
9955	Colour Code Blue



930000	B25 HE

Rigid Spout - wi	th automatic	anti-drip valve

	•	
6650	nn	RSP A/P



665000	BSP A/P
--------	---------





K400 Oval Gears Digital Meters		
47500A	Meter K400 CAL L/Gas	
483020	Meter K400 CAL L/Gas	
	windscreen	
48000A	Meter K400 CAL Q/NPT	
2277	Rubber Protection	

## Rigid Spout - with manual anti-drip valve

Rigid Spout - with manual anti-drip valve

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## **Filters**



Part Number	
009949	Filter for Easy Oil

## Greaser

## Grease Meter Nozzle

GREASTER is a new dispensing nozzle for grease, equipped with an oval-gear weight meter. The flow-rate of grease nozzles depends on the specific working conditions:

- resistance to the entry of new grease, which depends on many factors (conduit diameter, working temperature, possible clogging, etc.);
- pump efficiency. Measuring the actual amount of grease only according to the
  time required for dispensing, may result in approximation errors both by defect or
  by excess. Thanks to GREASTER the exact amount of grease dispensed by the
  nozzle is no longer measured according to an empirically method, but can be
  accurately determined and displayed on a LCD. Thanks to its compact size and
  low weight GREASTER can replace normal grease dispensers, also offering the
  following advantages:
- it guarantees the correct and exact execution of the greasing operation by displaying the resettable batch total dispensed;
- it stores grease consumption by reckoning and displaying the cumulative total amount dispensed.

### **Technical features**

Handle - made of aluminium, equipped with a steel control lever. The handle houses the battery compartment for nozzle meter powering (two 1.5 V standard batteries, AA Size). Meter - located in the front part of the handle, oval gear type. The gears can be easily accessed by removing the front cover.

Electronic - located in the upper part of the handle. A microprocessor controls the LCD displaying the resettable batch total and the cumulative total. Nozzle inlet - in line with the handle and suitable for straight swivel or Z-swivel connection. Nozzle outlet

- located in the front part of the handle, it enables the easy installation of rigid or flexible extension. Lever-lock - to ensure safe locking of the lever so as to avoid accidental opening of the valve.

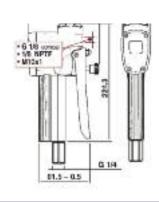
## **Performances**

• Operating pressure: (max) 550 bar

Burst pressure: (min) 1000 bar
Metering accuracy: ± 3%.



Part Number	Description	Batch Total	Cumulative Total	Inlet Thread Connection	Outlet Thread Connection	Working Pressure	Package Dimensions mm	Weight Kg
430000	Greaster gr/kg	gr	kg	1/4" Gas	1/8" Gas Conical	550 bar	310x170x55	0.98
430020	Greaster gr/kg M10x1	gr	kg	1/4" Gas	M10x1	550 bar	310x170x55	0.98
431000	Greaster gr/kg with rigid							
	Spout and Z-swivel	gr	kg	1/4" Gas	M10x1	550 bar	310x170x55	1.2
435000	Greaster oz/lb	0Z	lb	1/4" NPT	1/8" NPT	7800 psi	310x170x55	0.98
436000	Greaster oz/lb with rigid							
	Spout and Z-swivel	OZ	lb	1/4" NPT	1/8" NPT	7800 psi	310x170x55	1.2
430110	In line grease meter	gr	kg	1/8" Gas	1/8" Gas	550 bar	310x170x55	0.6



workshops and service stations.

**Performance Specifications** 

## LUBRICATION AND REFUELING EQUIPMENT

Cambiaolio

## Oil Changer

CAMBIAOLIO responds to the ever more frequent need to extract used oil from automobiles directly from the dipstick holder. By means of a simple, clean operation it is possible to suction all the used oil and collect it directly in a temporary storage container for later disposal in conformance with the law.

The device is equipped with a special electrically operated, self-priming centrifugal pump capable of generating high suction pressure. The lack of contact between sliding parts and the used contaminated oil prevents deterioration due to wear and guarantees the pump's performance over time.

The suction tube is equipped with a vacuum meter to indicate that the oil has been emptied and a quick coupling for the provided oil probe.

Flow-rate from 2 to 10 l/min (8 ÷ 40 gal/min).
Continuous Operation.
Noise less than 70 dB.

## **Technical Features**

- Wheeled tubular support structure with anti-corrosion treatment and paint finish for outside use
- · Self-priming, liquid ring centrifugal pump
- Self-ventilated, IP55 induction motor, with thermal protection
- · Vacuum meter to verify pump function and that oil has been emptied

The support is wheeled for ease of movement and use. Compact, light,

economical, easy to use and maintain, it is an indispensable tool for

- · Suction tube complete with quick coupling for probe
- Complete set of probes to cover vehicles on the market.

## including:

1 semi-rigid probes Ø 6 x 800 mm

1 semi-rigid probes Ø 8 x 800 mm

1 rigid probes Ø 8 x 650 mm

1 rigid pieces Ø 9 x 650 mm

 Removable probe holder with sealed bottom for collecting oil dripping from the probes. Mobile polyethylene oil recovery tank, transparent white with a capacity of 121







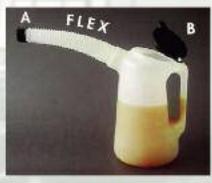
Part Number	Description	Volt	Hz	Watt	Tank Liter (gal)	Weight Kg	Package Dimension mm
50000A	Cambiaolio M.	230	50	750	12(9.2)	19.5	670x310x330

Upon request Cambiaolio M. is available with different tension and 60Hz frequency

## **Dumbox**

Oil Containers and Funnels
DUMBOX: an essential tool for a more efficient and cleaner workstation. The cap fitted (A) and the cover (B) protect the contents from external contamination and ensure a safer handling without causing any oil spillages. Made of transparent polyethylene to allow contents to be immediately checked. The filter installed on the funnel (C) prevents unwanted parts from falling accidentally.

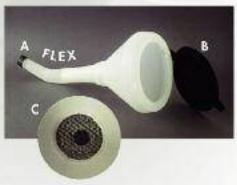






21. 11.





Part Number	Description	Weight Kg	Package Dimension mm
920000	Container 5 Litres	0.34	Dooling
917000	Container 2 Litres	0.20	— Packing — dimension
916000	Container 1 Litres	0.12	depending
930000	Funnel fl 180mm	0.20	on quantity
931000	Funnel fl 220mm	0.30	

## LUBRICATION AND REFUELING EQUIPMENT

MCO System

## Oil Monitoring System

The design of the new management system for the distribution of oils and other fluids focuses on one concept: "user friendliness".

Its quick installation as well as its easy use and management are also enabled by the powerful and user-friendly MCO Software. Its key feature lies in its expandability enabled by the special "Module" conception.

The MCO Module is the basic unit which enables the management of plants of higher complexity. All MCO System components have been specially designed for easy integration and they offer standard performances, which so far had only been achieved by more expensive systems.

Each Module, which controls up to 12 reels, is completely independent and can work either:

- as a stand alone unit which prints the collected data by means of a printer;
- as a system interfaced with PC for a more "sophisticated" collection and management of the dispensing data by means of the MCO Software.

If the installation is complex, and many dispensers installed in different bays are to be used simultaneously, MCO is the best solution:

Up to 32 Modules can be networked and connected to a PC for a control of up to 384 dispensers.

New MCO Modules can be added without requiring any additional component.

Up to 900 users can be controlled and up to 9999 job numbers (job orders).

The system permits automatic disabling of job numbers and use of free job numbers and predefined job numbers with indication of pre-selected quantity and oil type.

### The MCO Software:

- · is user-friendly as it was developed in a Windows environment
- manages a countless number of tanks and products; updates and displays the levels of each tank; warns the manager in low level conditions; stops the pumps in very low level conditions; logs and stores in memory all loading/unloading operations
- optimizes the printing output; applies filters and/or orders the output of the dispensing operations performed (according to period, user, tank or product); organizes and prints the lists relevant to products, operators or jobs
- limits the access to information thanks to the use of passwords at various levels
- · enables the activation of any dispenser from the PC
- automatically collects the data relevant to the on-site units, thus guaranteeing a constantly updated tanks report.



