



sales@scintex.com.au | www.scintex.com.au  
 Ph: (07) 3137 0135 | Fax: (07) 3041 0541

## Pump Manual

### 12V 75LPM Vane Pump & Vane Pump Station SPEP12V75 & SP12VFS75



**SPEP12V75**

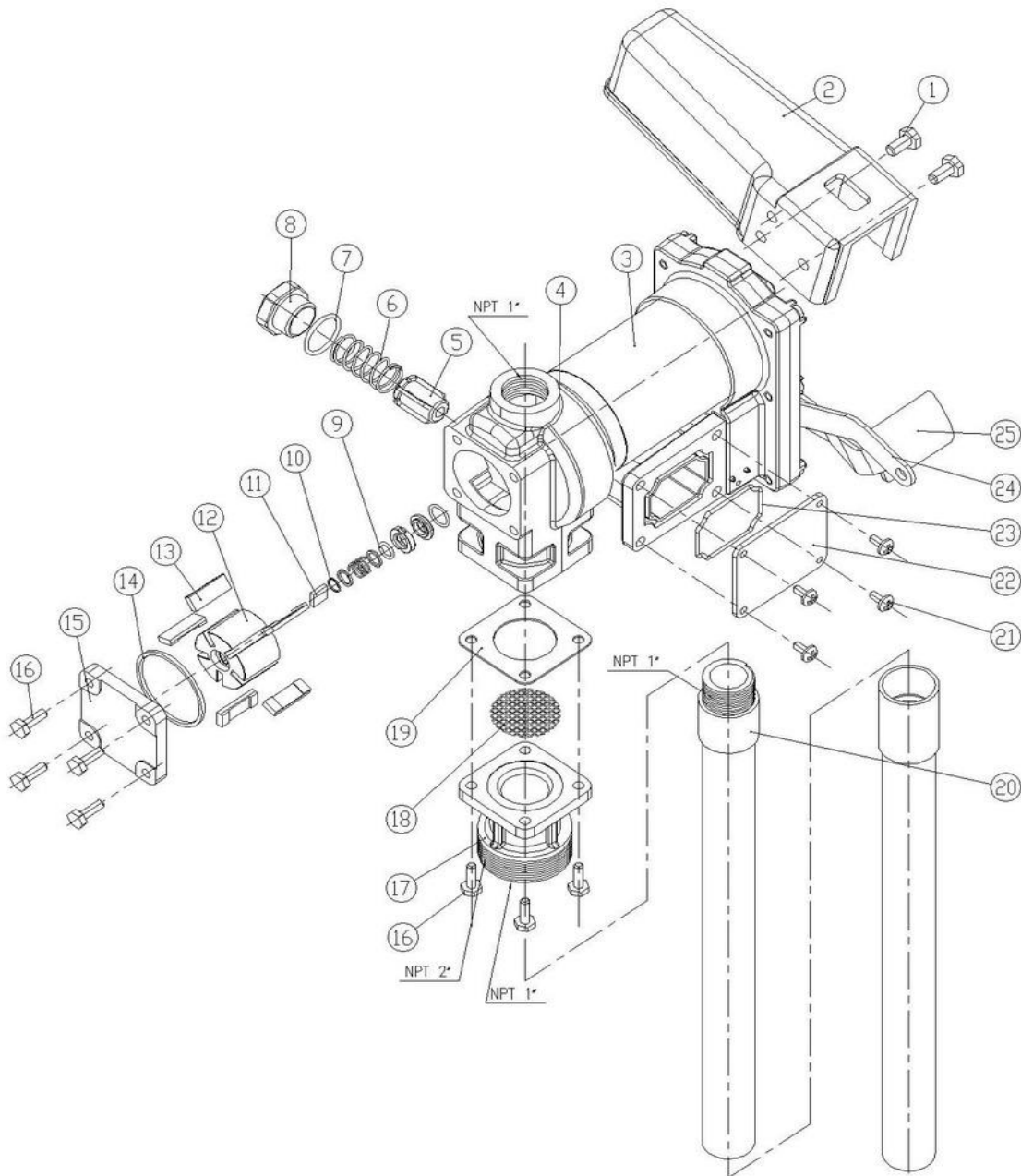


**SP12VFS75**

#### Parts List

No.	Part Name	QTY	No.	Part Name	QTY.
1	Screw M8x16	2	14	Ring	1
2	Nozzle Holder	1	15	Cover	1
3	Motor	1	16	Screw M6x20	8
4	Pump Body	1	17	Inlet Joint	1
5	Bypass Valve	1	18	Filter	1
6	Spring	1	19	Gasket	1
7	O-ring 26.5x2.65	1	20	Oil Pipe	-
8	Cover	1	21	Screw M5x12	4
9	Seals Assy.	1	22	Cover	1
10	End Ring 9	1	23	O-ring	1
11	Key	1	24	Upper Lever I	1
12	Rotor	1	25	Upper Lever 2	1

## Exploded Pump View



### Features:

**Voltage:** 12V

**Power:** 185 Watts

**Duty Cycle:** 30 Minutes

**Flow Rate:** 20 – 75LPM

**Operating Pressure:** 0.14MPA

**Current Draw:** ~15 A

**Inlet / Outlet:** 1" BSP

**Drum Fitting:** 2" BSP

**Hose length:** 4 meters

**Other:**

- Rain / Water proof
- Built in strainer and Bypass Valve
- Explosion proof permanent magnet motor
- Thermal Overload protection

**Installation & Usage**

- 1) Tightly screw in suction pipe or dip tube (not supplied) into the 1" inlet using teflon tape. Your inlet tube or dip tube should terminate ~3" from the bottom of the drum or container.
- 2) Securely attach the 4 meter discharge hose (supplied) to the outlet. Use Teflon tape.
- 3) Connect your 12V power supply by removing the electrical junction box cover and connecting you power leads (Black -ve, Red +ve). Using an M20 (not supplied) cable gland seal the power cables as they leave the rear of the pump.
- 4) Pump body should be earthed as per the instructions on the pump label.
- 5) The pump is turned On or OFF with the Upper and Lower levers. Move the Upper Lever to ON.
- 6) Keep the nozzle in contact with the drum being filled.

**Warning:**

- 1) The drum or container being filled should be earthed to prevent static discharge and possible fire or explosion. The discharge hose is not conductive and does not provide an earth.
- 2) Do not install additional foot valves or check valves that do not have a pressure relief valve.

**Trouble Shooting**

Q) The pump is working but is not delivering appropriate flow rate or flow rate is decreasing.

A) Possible hose or filter blockage or air leaks. Check all hoses and connections. Also check pump positioning, clean pump and check vanes are sliding easily.

Q) Pump fails to prime.

A) Check for air leaks in suction tube. Check bypass valve for grit or dirt.

Q) Motor hums or fails to start.

A) Pump motor may be bound. Remove cover and check rotor and vanes for dirt and make sure movement is free.

## Flow Meter 20 – 150LPM (For SP12VFS75 Pumps Only)

**WARNING:** A flow of at least 20 LPM will be required to gain an accurate reading. Be careful when rotating the face of the flow meter. It is recommended this be performed by a suitably qualified technician. Do not exceed any specifications laid out in the technical data.

### Technical Data

Mechanism: Nutating disk

Flow range: 20 – 120 LPM (SFM120LPM) & 20 – 150LPM (SFM150LPM)

Operating pressure: 3.5 Bar or 49 PSI (MAXIMUM)

Operating temperature: -10 to 60°C

Accuracy: +/-1% after calibration

Repeatability: +/-0.3%

Readout resolution: 0.1L

Connection: 1" BSP Inlet / Outlet

Weight: 1.8kg

### Calibration

Scintex analogue flow meters are calibrated for use with diesel prior to dispatch. Many factors influence the accuracy of the flow meter including temperature, pressure and viscosity. If the accuracy of the flow meter is compromised then a calibration should be performed. Calibrating flow meters is a normal part of their maintenance and is not an indication of a fault with the unit.

### Calibration procedure

- 1) Unscrew the brass calibration plug shown in diagram 1.
- 2) Purge the system (pump, piping, meter) of air.
- 3) Stop the flow by shutting off the nozzle or outlet, but leave the pump running. Do not exceed the maximum pressure of the flow meter.
- 4) Reset the batch totalizer.
- 5) Dispense with a reasonable flow (>20LPM) into a vessel of known and accurate volume of no less than 20L. Do not at any point throttle the flow.
- 6) Compare the value on the batch total to the volume of the vessel.  
If the indicated value is higher than the real value, loosen the screw.  
If the indicated value is lower than the real value, tighten the screw.
- 7) Repeat steps 4-6 until the values match.
- 8) Tighten the brass calibration plug.

## **Maintenance**

Before disassembling make sure all fluid is drained from the meter and connecting pipes. Cleaning can be carried out using a soft brush. Be careful not to damage the chamber or disk. Use only original spare parts. A new calibration should be performed after cleaning or disassembly.

## **Flow Meter Disassembly**

- 1) Remove the reset knob by pulling firmly to the side.
- 2) Loosen the 4 retaining screws see Diagram 1, pos 22.
- 3) Loosen the 2 screws at pos 5.
- 4) Reassembly is the reverse.

## **Measuring Chamber**

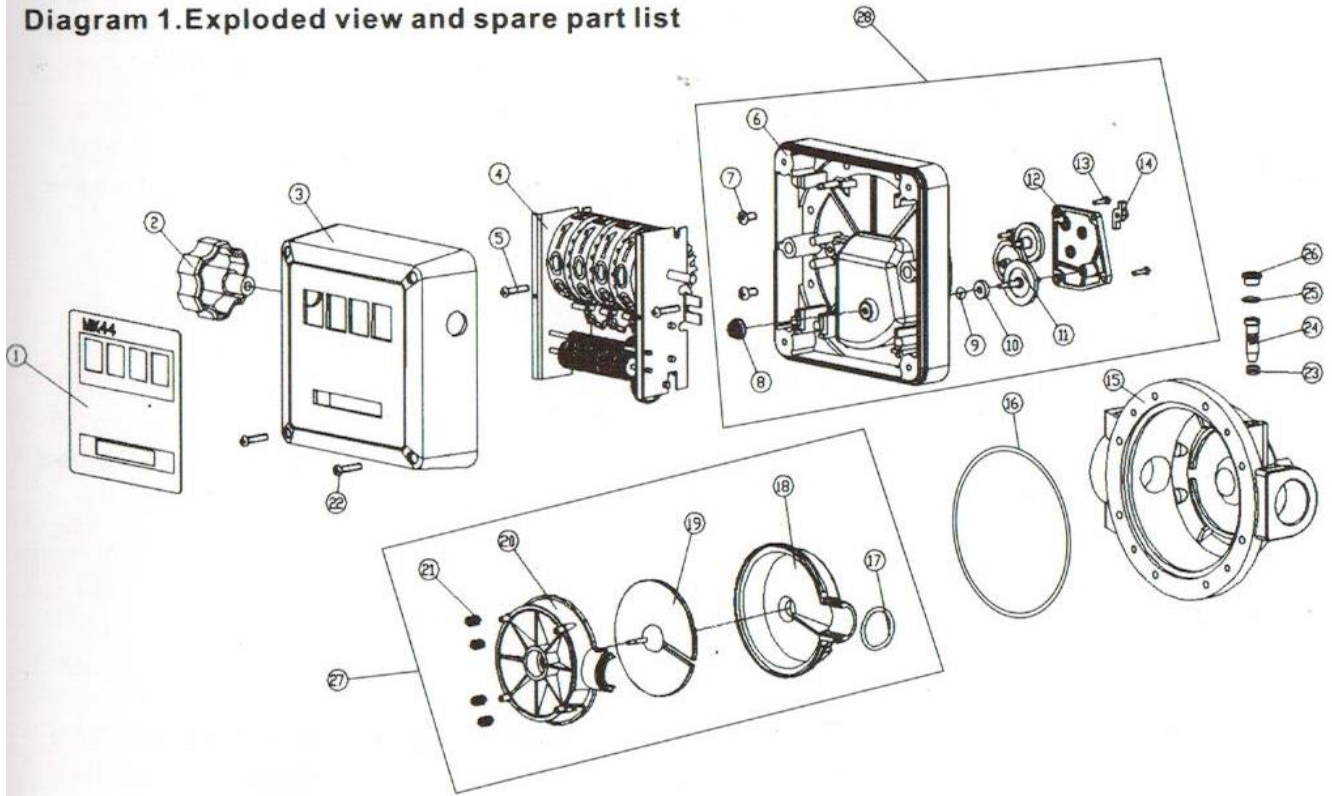
- 1) Disassemble the unit as per the above instructions.
- 2) Loosen the 8 screws at pos 7.
- 3) Remove the body cover, pos 28, together with the gear unit. Be careful not to damage the gasket, pos 16.
- 4) Remove the whole measuring chamber, pos 27, by lifting it from the meter body and at the same time pulling it back towards the inlet in order to remove the O ring, pos 17, from its seal at the outlet.
- 5) To check the inside of the measuring chamber, pos 27, remove the O ring, pos 17, and divide the two half chambers containing the nutating disks.
- 6) To reassemble the chamber reverse the procedure. Be careful to verify the disk rotates freely in the chamber. Install the gaskets properly and make sure to lubricate them. Make sure the while fixing the cover on the body the nutating disk needle does not hit the gear, pos 14, which must remain free to be pulled by the disk needle. Tighten screws at pos 7.

## **Gear Unit**

To reach the gear unit.

- 1) Remove cover, pos 28.
- 2) Loosen screws, pos 13
- 3) Remove plate, pos 12. Now all gears can be reached for inspection.
- 4) Should the gasket, pos 10, need to be replaced, remove the bevel gear, pos 8, from the shaft by pulling axially, then remove the gear, pos 11, together with the shaft.
- 5) Reassembly is the reverse procedure.

**Diagram 1.Exploded view and spare part list**



No.	Description	Material	Quality	No.	Description	Material	Quality
1	Name plate Mk4	Polycarbonate	1	15	Meter body	Aluminum	1
2	Reset knob	Nylon	1	16	O-ring 110.72x3.53	Nbr	1
3	External cover	Nylon	1	17	O-ring 23.47x2.62	Nbr	- 1
4	Meter Mk44		1	18	Measuring chamber	Plastics	1
5	Screws 4x20	Steel	2	19	Measuring tray	Plastics	1
6	Body cover	Aluminum	1	20	Measuring chamber	Plastics	1
7	Screw 5x16	Steel	8	21	Cylinder spring	65Mn	4
8	Bevel pinion	Nylon	1	22	Screws 4x20	Steel	4
9	O-ring 3.63x2.62	NBR	1	23	O-ring 4.47x1.78	Nbr	2
10	Cover sealing	Nylon	1	24	By-pass adjusting screw	Cu	1
11	Gear kit	Pom	1	25	O-ring 9.25x1.78	Nbr	1
12	Gear plate	Pom	1	26	By-pass plug	Cu	1
13	Screws 3x10	Steel	4	27	Measuring chamber		1
14	Driving lever	Pom	1	28	Cover		1