



# Scienco® Products

Diaphragm, Air Piston, Hand Pumps  
and Flow Meters



*Experience In Motion*



## Experience makes the difference

Flowserve Scienco pumps are the most dependable chemical transfer pumps in the agricultural industry. Pump to pump, chemical to chemical, Scienco pumps deliver the performance and reliability expected from a leader. After all, Scienco has been providing chemical transfer systems for more than 30 years.

### Reaping benefits

Scienco's versatile transfer pump product lines offer numerous benefits and options.

- Pump designs — diaphragm, air piston and hand pump models
- Mounting flexibility — horizontal or vertical configurations
- Chemical resistance — plastic or metallic construction
- Self-priming capability
- Portability
- Ease of use and maintenance

### Reliability guaranteed

Scienco's industry-leading pumps also come with an industry-leading service program. Scienco offers its 5-Year Service Program on its standard duty CT6 pumps and pump-mounted SEM-10 flow meters.

For five years from the date of manufacture, Scienco will provide a replacement pump or meter electronics in the case of equipment failure.

Through this program, Scienco pump users will spend less money and time on chemical transfer equipment than ever before.



## Scienco product overview



### CT6 diaphragm transfer pump .....4

The CT6 is a six-chamber diaphragm pump designed for chemical transfer applications. It is a self-priming pump with wetted parts resistant to many agricultural and industrial chemicals.



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The AP-30 air piston pump is a high-capacity, low-maintenance pump for herbicides, diesel fuel, gasoline, lubricating oil, and other ag-chem and industrial services.



### EZ Handler hand-operated drum pump .....7

The EZ Handler hand-operated drum pump is designed to efficiently deliver high volumes of harsh and viscous chemicals at low pressures.



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The manually operated metered hand pump precisely delivers high volumes of chemicals at low pressures.



### SEM flow meters .....9

The SEM-10 electronic flow meter offers simple one-touch operation and comes ready to use.

# CT6 diaphragm transfer pump

## High flow rates for faster loading

The CT6 is a six-chamber diaphragm pump designed for chemical transfer applications. It is a self-priming pump with wetted parts resistant to many agricultural and industrial chemicals. It is used primarily to dispense fluids from bulk or mini-bulk tanks, intermediate bulk containers (IBCs), drums, and for similar containers. The pump can be configured with a variety of brackets, dip tubes, flow meters, fittings, hoses and valves to provide a complete pumping system.

## Applications

- Crop protection chemicals
- Seed treatment products
- Crop oils
- Spray adjuvants
- Starter fertilizers
- Micronutrient solutions
- Biocides
- Harvest aides
- Detergents
- Antifreeze
- Diesel exhaust fluid (DEF)
- Light oils
- General chemical transfer
- Non-flammable liquids

## Features

- High flow rates
- Self-priming from a dry state
- Multiple configurations for use with caged IBCs, mini bulk tanks and drums
- Lightweight and portable
- Quiet system
- Electronic flow meters and ancillaries
- 12V DC or 115V AC motors
- Ag and DEF compatible
- Increased operating parameters
- Integrated Micro Matic® coupler
- NPT and BBSP threading
- Fully compliant with ISO 22241 for DEF
- Optional SPAN cap
- Easy to service

## Operating parameters

- Flows CT6 to 50 lpm (13 gpm)
- Flows CT6-HF to 68 lpm (18 gpm)
- Pressure to 2.0 bar (30 psi)
- Temperature to 66°C (150°F)
- Suction lift to 2.4 m (8 ft) for water-like fluids



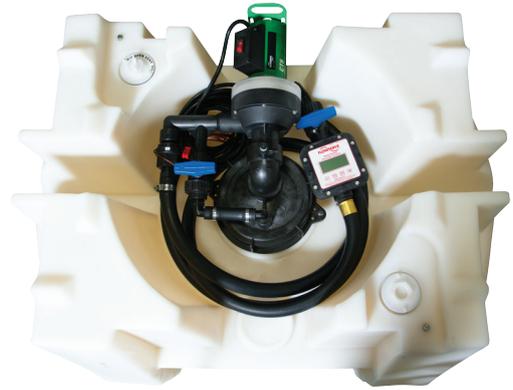
12V CT6 pump with flow meter, hose, valve and spout



12V CT6 pump with Micro Matic valve

## Configurations

- CES CT6 side mount for use with 275- or 330-gallon caged IBCs with bottom outlet
- CT6 caddy pump in protective frame for use with caged IBCs, mini bulk tanks or drums
- CES CT6 SPAN cap horizontal mount for use with mini bulk tanks with 9-in opening
- CT6 vertical mount for use with drums or tank lid with 2-in opening
- CT6-MM vertical mount integrated with Micro Matic three-pin coupler for use with drums or tanks fitted with Micro Matic three-pin container valve and suction tube



## Materials

Code	Materials of Construction				
	Housing	Diaphragm	Valve Plate	Valve	O-rings
CT6, CT6-HF	Glass-filled Polypropylene	Santoprene®	Glass-filled Polypropylene	EPDM, Viton®, Santoprene	EPDM, Viton, Santoprene

® Santoprene and Viton are registered trademark of the DuPont Company.

# AP-30 air piston pump

## High capacity, low maintenance

The high-capacity AP-30 air piston pump is ideal for agricultural and industrial services, including herbicides, diesel fuel, gasoline and lubricating oils. It offers users a high degree of reliability, versatility and long life.

The AP-30 air piston pump is ruggedly and smartly constructed. With no motor to burn out and minimal moving parts, the AP-30 is extremely reliable and requires little maintenance. Its aluminum, stainless steel and non-metallic construction resists corrosion from most agricultural and industrial chemicals. The pump is built with no metal-to-metal contact to reduce wear.

## Applications

- Herbicides
- Diesel fuel
- Lubricating oils
- Cutting oils
- Gasoline
- Antifreeze
- Water
- Waste oils

## Features

- Versatile air piston design accepts stationary and portable auxiliary air compressors as well as portable carbon dioxide cylinders
- Ruggedly constructed with minimal moving parts and no metal-to-metal contact
- Includes 50 mm (2 in) NPT bung adapter and high-density polyethylene dip tube
- Undamaged by dead heading

## Operating parameters

- Flows to 10 m<sup>3</sup>/h (30 gpm)
- Maximum air pressure: 8.6 bar (125 psi)
- 15 m<sup>3</sup>/h (9 ft<sup>3</sup>/m compressed air)
- Pressure rating: 1/3 to 1

## Versatility of air sources

- Stationary air compressor
- Portable CO<sub>2</sub>
- Portable air compressor
- Truck compressor attachments
- Auxiliary air

## Materials

Code	Materials of Construction				
	Housing, Piston	Piston Liners, Valve Springs, Shaft	Piston Ring	Packing	Valves
AP-30 air pump	Aluminium	Stainless steel	PTFE with Buna® O-ring backup	FTFE	Nylon®

® Buna is a registered trademark of the DuPont Company.



# EZ Handler hand-operated drum pump

## Minimal effort, zero waste

The Flowserve EZ Handler hand-operated drum pump is ideal for a wide range of commercial and industrial fluid transfer applications. It safely and efficiently delivers high volumes of harsh and viscous chemicals at low pressures. Its patented no-friction design has no parts to wear or jam and minimizes the manual effort required for operation. The EZ Handler drum pump is available in two sizes to suit application needs:

- The HP-30 is designed to fit 40- and 110-liter (15- and 30-gallon) containers.
- The HP-55 fits 110- and 200-liter (30- and 55-gallon) drums.

## Applications

- Acids
- Alkaline
- Chlorine-based liquids
- Oils
- Diesel fuel
- Liquid fertilizers
- Crop chemicals
- Lubricants

## Features

- Efficient, patented double-pumping action ensures product delivery on both up and down strokes.
- No-friction design eliminates wear and prevents jamming.
- Outlet spout swivels to prevent drips and accepts an extender hose for convenience and flexibility.
- Lightweight, non-metallic construction makes the pump easily portable.
- Wetted components are made of food-grade polypropylene and polyethylene.
- Anti-pumping safety device prevents accidents.
- 50 mm (2 in) buttress and NPT adapters are standard.

## Operating parameters

	HP-30	HP-55
Uses	40- and 110-liter (15- and 30-gallon) containers	110- and 200-liter (30- and 55-gallon) drums
Output per stroke	400 ml (15 oz)	400 ml (15 oz)
Maximum depth (from neck to bottom)	770 mm (30 in)	930 mm (36 in)
Width of spout	20 mm (0.75 in) (Fits 25 mm [1 in] diameter extender hose)	20 mm (0.75 in) (Fits 25 mm [1 in] diameter extender hose)
Width of case pipe	41 mm (1.5 in)	41 mm (1.5 in)
Weight per pump	635 g (1.4 lb)	700 g (1.6 lb)



# MHP metered hand pump

## Precisely, manually operated

The manually operated metered hand pump precisely delivers high volumes of chemicals at low pressures.

## Applications

- Herbicides
- Diesel fuel
- Gasoline
- Lubricating oils

## Features

- Rugged polypropylene construction with Viton seals
- Includes diptube, discharge hose, ball valve and spout
- Accurate to 2% per full stroke
- 50 mm (2 in) threaded bung connection
- EPDM seals available
- Buttress thread adapter optional
- 1-quart/1-liter capacity
- Metric or English units

## Configurations

- 1-quart capacity with English units
- 1-liter capacity with Metric units



# SEM flow meters

## Accurate, reliable metering

The Scienco SEM-10 and SEM-10FT electronic flow meters employ positive displacement nutating disc technology to meter liquids of various viscosities with great accuracy and nominal pressure loss. With the largest LCD display available on the market, large positive touch buttons and simple one-touch operation, the SEM-10, SEM-10FT and SEM-10SS flow meters are easy to read and use.

The SEM-10 meter mounts directly to the pump discharge via a 25 mm (1 in) rear port. The flow-through configuration of the SEM-10FT enables the meter to be mounted at hose end via a 25 mm (1 in) side port. The SEM-10SS is equipped with a stainless steel housing to meter many pesticides, chemicals and petroleum products and can be mounted directly to the pump discharge via a 25 mm (1 in) rear port.

## Applications

- Agriculture
- Chemical transfer
- Non-flammable liquids
- Light oils
- Inks
- Automotive fluids



SEM-10 flow meter



SEM-10FT flow-through flow meter



SEM-10SS stainless steel flow meter

## Features

- Fixed mounting or flow-through configurations provide application flexibility.
- Positive displacement nutating disc design meters liquids of various viscosities with great accuracy and minimal pressure loss.
- Simple, one-touch operation with large, positive touch buttons
- LCD display measures 20 mm (0.75 in) and is the largest on the market.
- Choice of three calibration modes to suit application needs
- Extended battery life is provided by one 3-volt lithium battery.
- Auto shut-off after 40 seconds of inactivity saves battery life.
- Auto wake-up occurs when pumping resumes.

## Operating parameters

- Flows from 0.5 to 6.8 m<sup>3</sup>/h (2 to 30 gpm)
- Temperatures for SEM-10 and 10FT to 55°C (130°F)
- Temperatures for SEM-10SS to 85°C (185°F)
- Pressures for SEM-10 and 10FT to 4 bar (60 psi)
- Pressures for SEM-10SS to 6.9 bar (100 psi)
- Accuracy to +/- 0.5%

## Materials

Code	Materials of Construction				
	Housing	Meter Chamber	O-Rings	Electronic Body	Screws
SEM-10	Nylon	Polyphenylene Sulfide and stainless steel	Viton	Nylon	Stainless steel
SEM-10EPDM			EPDM		
SEM-10FT			Viton		
SEM-10FTE			EPDM		
SEM-10FTP	Polyphenylene		Viton	Stainless steel	
SEM-10SS	Nylon				

## Accessories for CT6

### Hose

Hose for suction or discharge use.

- 25 mm x 3.65 m (1 in x 12 ft) EPDM
- Two-braid, four-ply polypropylene fittings

Code: **EP-58-09**



### Tubes

Adjustable HDPE (high-density polyethylene) dip tubes.

- Adjusts from 67.3 to 120.7 cm (26.5 to 47.5 in)
- Hose clamp connection
- Rubber hose
- Clamps

Code: **Xtube-V** (Viton O-rings)  
**Xtube-E** (EPDM O-rings)



Threaded adjustable HDPE (high-density polyethylene) dip tube.

- Adjusts from 67.3 to 120.7 cm (26.5 to 47.5 in)
- 25 mm (1 in) male pipe threads

Code: **Xtube-TV** (Viton O-rings)  
**Xtube-TE** (EPDM O-rings)



### Ball valve and spout cap

Non-metallic ball valve and spout.

- 25 mm (1 in) NPT ball valve and spout
- Polypropylene construction

Code: **PH-20**



### Cap

Cap to adapt CT6 pumps to 190.5 mm (7.5 in) tank openings.

Code: **SPAN**



### Tank gasket

For adapter plates

Code: **SPAN-01G**



### SPAN adapter plates

Auto recirculation

Code: **SPA 700RA**



Manual recirculation

Code: **SPA 700R**



No recirculation

Code: **SPA 700N**



### Bung adapter

Fits 50 mm (2 in) male NPT x  
50 mm (2 in) female NPT x  
25 mm (1 in) female NPT.

Code: **PH-25**

**PH-25B** (includes buttress threads)



### Battery clips and cable

Code: **PHA 06**

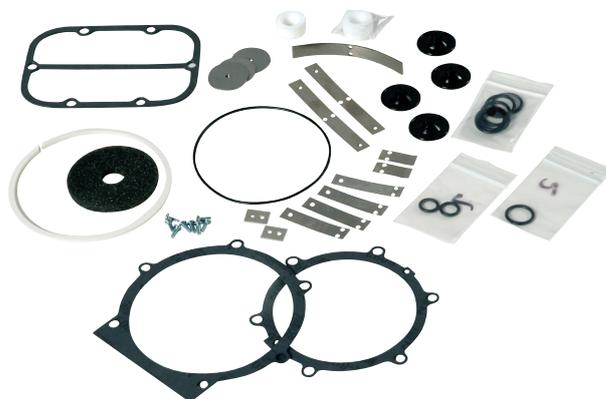


## Repair kits

### AP-30 air piston pump

AP-30 repair kit, rebuild kit for repairing AP-30 air pump.

- Buna-N O-rings
  - PTFE piston ring
  - Nylon valves and valve backups
  - Chevron packing
  - Foam washer
  - Gasket
- Code: **AP-30 Kit**



### SEM-10 flow meters



SEM-10 Electronics Kit  
Electronics repair kit for SEM-10 and SEM-10FT flow meters.

- Electronic LCD display
- 3-volt lithium battery
- Mounting gasket
- Stainless steel screws

Code: **SEM-10 Kit-1**



SEM-10 Chamber Kit  
Chamber repair kit for SEM-10 and SEM-10FT flow meters.

- Nylon
- Magnet wheel
- Top and bottom Viton O-rings

Code: **SEM-10 Kit-2**

**SEM-10 Kit-2E**  
(with EPDM O-rings)



SEM-10SS Electronics Kit  
Electronics repair kit for SEM-10SS flow meter.

- Potted electronic assembly
- 3-volt lithium battery
- Mounting gasket
- Stainless steel screws

Code: **SEM-10SS Kit**



SEM-10SS Conversion Kit  
Converts SEM-30 flow meter to the SEM-10SS flow meter.

- Potted electronics assembly
- Formed stainless steel cover
- Mounting gasket
- Viton O-rings
- Stainless steel screws

Code: **SEM-10SS CONV**



SEM-10SS and SEM-30 Chamber Kit  
Chamber repair kit for SEM-10SS and SEM-30 flow meters.

- Magnet holder assembly
- Washer
- Drive dog assembly and pin
- Wobble plate assembly and housing
- Viton O-rings

Code: **SEM-20 Kit**



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