

# Scienco<sup>®</sup> Products Product Reference Manual



**Experience In Motion** 



Scienco Product Reference Manual

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# Disclaimer

It is the customer's responsibility to ensure the compatibility of the pump and the product being dispensed.



# Scienco<sup>™</sup> AP-30

Air Piston Pump



# High Capacity, Low Maintenance

The high capacity AP-30 air piston pump is ideal for agricultural and industrial uses, such as transferring motor oil, gear oil, hydraulic oil, waste oil or antifreeze. 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 with minimal moving parts, the AP-30 is extremely reliable and requires little maintenance. The materials of construction are aluminum, stainless steel and non-metallic elastomers, resisting corrosion from most agricultural and industrial chemicals. The pump is built with no metal-to-metal contact to reduce wear.

· Cutting oil

Waste oil

### **Applications**

- Motor oil
- Gear oil
- Hydraulic oil
- Antifreeze Transmission fluid • Water
- Diesel fuel

# Features and Benefits

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

# **Experience In Motion**

Air Transfer Pump SCIENCO. FLOWSERVE



### Materials of Construction

Component	Material
Housing, Piston	Aluminum
Piston Liners, Valve Springs, Shaft	Stainless Steel
Piston Ring	PTFE with Buna <sup>®</sup> O-ring backup
Packing	PTFE
Valves	Nylon®

Note: Ensure chemical compatibility between liquid pumped and the wetted pump components prior to use.

<sup>®</sup> Buna is a registered trademark of the DuPont Company.

<sup>®</sup> Nylon is a registered trademark of the DuPont Company.

### **Pump Dimensions**

Height	400 mm (16 in)
Width	175 mm (7.5 in)
Air Inlet	6 mm (0.25 in) female NPT
Suction Port	25 mm (1 in) female NPT
Discharge Port	25 mm (1 in) female NPT
Weight	7 kg (15 lbs)

### Versatility of Air Sources

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

#### Bulletin PSS-90-20.1d (E) August 2015. © 2015 Flowserve Corporation

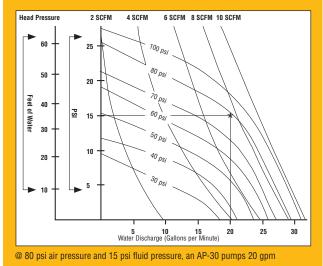
#### To find your local Flowserve representative:

For more information about Flowserve Corporation, visit www.flowserve.com or call USA 1 800 728 PUMP (7867)

### **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: <sup>1</sup>/<sub>3</sub> to 1

### AP-30 Performance Curve



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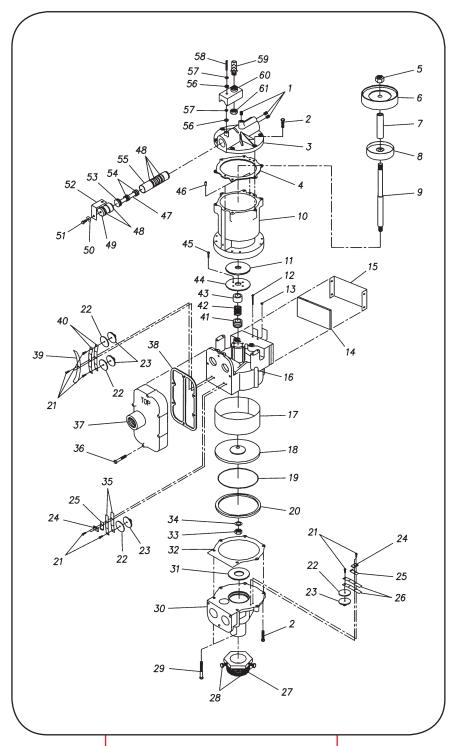
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AP-30 Air Piston Pump Unit Parts List





# AP-30 Air Piston Pump Parts List

ITEM NUMBER	PART NUMBER	QTY	DESCRIPTION	AVAILABLE AS
1	AP-08	3	PIPE PLUG	AP-30 KIT-03, AP-30 KIT-06
2	BP-32	10	HEX HEAD SCREW	AP-30 KIT-03
3	AP-01	1	SPOOL VALVE HSG	AP-30 KIT-06
4	AP-11	1	GASKET	AP-30 KIT-08, AP-30 KIT-06
5	AP-14	1	HEX NUT	AP-30 KIT-03, AP-30 KIT-02
6	AP-15	1	LARGE RUBBERIZED PISTON	PART
7	AP-17	1	SPACER	AP-30 KIT-02
8	AP-18	1	SMALL RUBBERIZED PISTON	PART
9	AP-16	1	PISTON ROD	AP-30 KIT-02
10 11	AP-12 AP-19	1	AIR MOTOR HOUSING FOAM WASHER	AP-30 KIT-02 AP-30 KIT-02
12	AP-54	8	HEX SCREW	AP-30 KIT-02
13	AP-86	2	NUT	AP-30 KIT-03
14	BP-38	1	BREATHER FILTER	AP-30 KIT-04
15	AP-45	1	BREATHER COVER FOR AIR PUMPS	AP-30 KIT-04
16	AP-44	1	UPPER HOUSING	PART
17	BP-17	1	STAINLESS STEEL PISTON LINER	AP-30 KIT-07
18	BP-18	1	PISTON	AP-30 KIT-07
19	BP-19A	1	O-RING	AP-30 KIT-07
20	BP-19	1	PISTON RING	AP-30 KIT-07, AP-30 KIT
21	BP-20	10	PAN HEAD SCREW	AP-30 KIT
22	AP-36A	4	SS VALVE BACKUP	AP-30 KIT
23	BP-25	4	VALVE	AP-30 KIT
24	BP-21	2	VALVE SPRING BASE	AP-30 KIT
25	BP-35	2	SINGLE VALVE SPRING BACKUP	AP-30 KIT
26	BP-36	2	SINGLE VALVE SPRING	AP-30 KIT
27	BP-29	1	VENTED BUNG ADAPTER	AP-30 KIT-05
28 29	BP-30 BP-28	2	HEX HEAD SCREW	AP-30 KIT-03, AP-30 KIT-05
30	BP-31	2	HEX HEAD SCREW LOWER HOUSING	AP-30 KIT-03 AP-30 KIT-01
31	BP-67	1	ALUMINUM WASHER	AP-30 KIT-01
32	BP-33	1	BOTTOM GASKET	AP-30 KIT-01, AP-30 KIT
33	BP-12	1	THIN NUT	AP-30 KIT-03
34	BP-12W	1	LOCK WASHER	AP-30 KIT-03
35	BP-36	4	SINGLE VALVE SPRING	AP-30 KIT
36	BP-26	6	HEX HEAD SCREW	AP-30 KIT-03
37	BP-16	1	VALVE HOUSING	PART
38	BP-27	1	GASKET	AP-30 KIT
39	AP-23	1	DOUBLE VALVE SUPPORT	AP-30 KIT
40	BP-23	2	DOUBLE VALVE SPRING	AP-30 KIT
41	BP-09	1	CHEVRON PACKING ASSY.	AP-30 KIT
42	BP-08	1	SPRING	AP-30 KIT-02
43	BP-07	1	TEFLON PACKING	AP-30 KIT
44 45	AP-20 AP-49	1 4	WASHER PLATE ALLEN HEAD CAP SCREW	AP-30 KIT-02 AP-30 KIT-03
45	AP-62	2	STAINLESS SPIRAL PIN	AP-30 KIT-03
40	AP-10	1	SPOOL	AP-30 KIT-02 AP-30 KIT-06, AP-30 KIT-08
48	AP-06	5	O-RING	AP-30 KIT, AP-30 KIT-06
49	AP-51	1	PLUG	AP-30 KIT-06, AP-30 KIT-08
50	AP-53A	1	WASHER	AP-30 KIT-03, AP-30 KIT-06, AP-30 KIT-08
51	AP-52	1	HEX SCREW	AP-30 KIT-06, AP-30 KIT-03, AP-30 KIT-08
52	AP-63	1	PLUG RETAINER	AP-30 KIT-06, AP-30 KIT-08
53	AP-05	1	O-RING	AP-30 KIT, AP-30 KIT-06, AP-30 KIT-08
54	AP-07	2	O-RING	AP-30 KIT, AP-30 KIT-06, AP-30 KIT-08
55	AP-03	1	SPOOL SLEEVE	AP-30 KIT-06, AP-30 KIT-08
56	DD6P-09SS	2	SS FLAT WASHER	AP-30 KIT-06, AP-90 KIT, AP-30 KIT-03
57	AP-02A	2	THIN NUT	AP-30 KIT-03, AP-90 KIT, AP-30 KIT-06
58	AP4-52	1	SET SCREW	AP-30 KIT-03, AP-90 KIT
59	AP4-54	1		AP-30 KIT-06, AP-90 KIT
60	AP-90	1		AP-30 KIT-06, AP-90 KIT
61 61	AP-92	1	NPT JAM NUT ZINC PLATED	AP-30 KIT-03, AP-90 KIT, AP-30 KIT-06
61	AP-93 BP-65A	2	SET SCREW FILTER	
01	DI-00A	1		



## AP-30 Air Piston Pump Accessories



**SEM-10** Includes Viton<sup>®</sup> O-rings. **SEM-10EPDM** Includes EPDM O-rings.

Non-metallic electronic flow meter.



**SEM-10FT** The SEM-10FT flow through electronic flow meter is able to be mounted at the hose end.



**SEM-10SS** Stainless steel electronic flow meter.



*Xtube-V* Includes Viton O-rings. *Xtube-E* 

Includes EPDM O-rings.

Adjustable polypropylene dip tubes.

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



*Xtube-TV* Includes Viton O-ring. *Xtube-TE* Includes EPDM O-ring.

Threaded adjustable polypropylene dip tube.

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



*EP-58-10* 1 in x 12 ft (20 mm x 3.6 m) nylon lined discharge hose.



# AP-30 Air Piston Pump Accessories



*EP-62* Ball valve and spout.

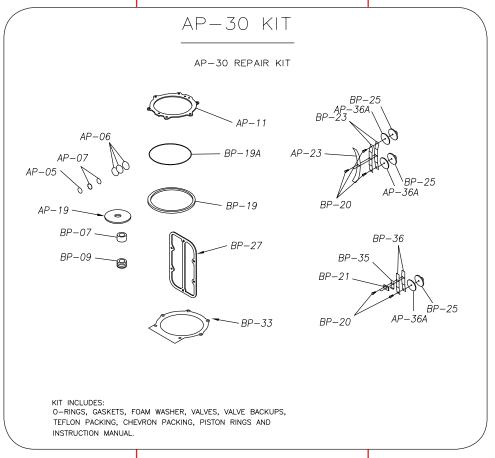


**PH-20** 25 mm (1 in) NPT ball valve and spout.



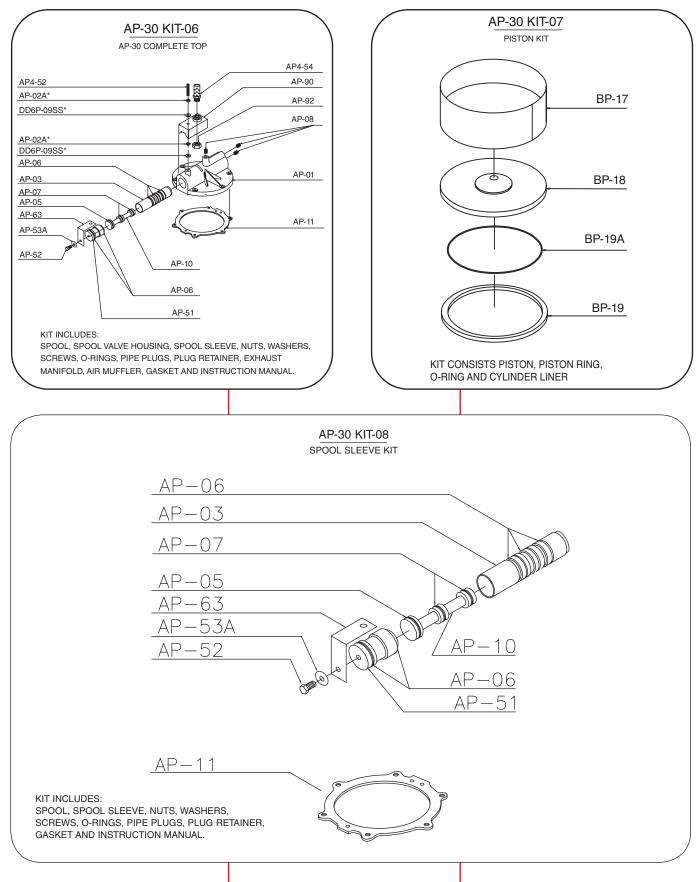
# AP-30 Air Piston Pump Kits





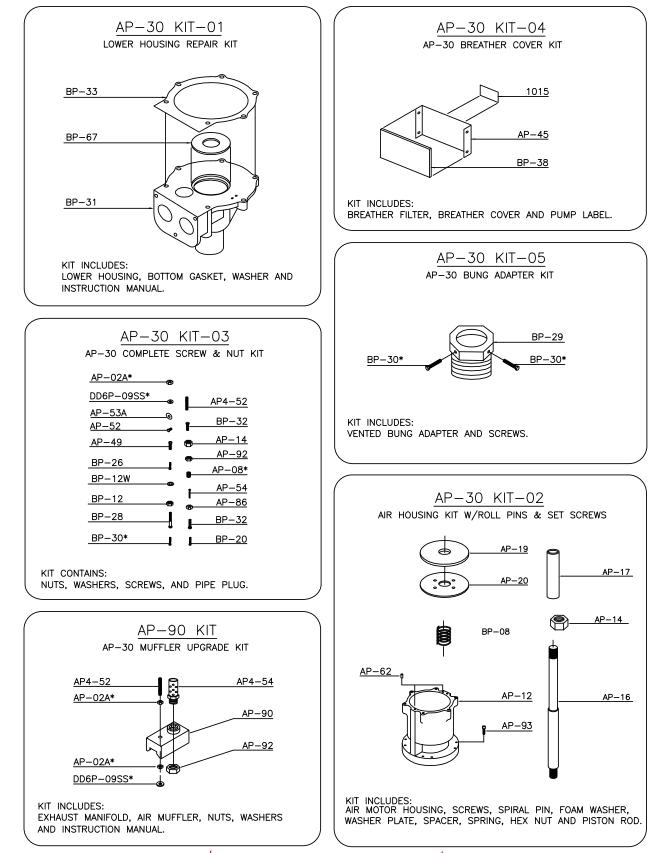


## AP-30 Air Piston Pump Kits





## AP-30 Air Piston Pump Kits





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# Scienco DD6

Self-Priming Diaphragm Pump and Motor





# Versatile and Reliable Closed System Pumping

The DD6 is a versatile self-priming diaphragm pump designed to transfer high and low viscosity liquids. Its unique mounting design makes it ideal for closed system mixing, transferring and rinsing since the pump never needs to be removed and the container never needs to be opened.

### **Applications**

- Agriculture
- · Light oils
- Chemical transfer
- Inks
- Non-flammable liquids
- · Automotive fluids
- **Operating Parameters**
- Flows to 45 l/m (12 gpm)
- Heads to 3.6 m (12 ft)
- Pressures to 1.7 bar (25 psi)
- Temperatures to 55°C (130°F)
- Viscosities to 250 cP (11 600 ssu)

### Features and Benefits

Six-celled Piston Diaphragm Construction is highly reliable and can run dry without damage.

Unique Mounting Design enables closed system mixing, transfer and rinsing.

Unique Slip-in-place Discharge Port rotates 120° for easy operation.

Removable Drive Unit enables multiple unit pumping with a single motor.

**Durable Stainless Steel and Non-metallic Pump Construction** provides excellent corrosion resistance.

Low Amperage Draw allows the motor to drive the pump without overheating.

Pump Cover protects pistons and springs from damage and contamination when not in use.

Manual Tank Vent is standard.

**Experience In Motion** 



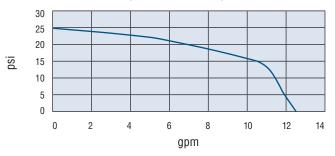
### Materials of Construction

Component	Material	
Pump housing	Glass-filled polypropylene	
Internal wetted parts	Polypropylene, Ryton <sup>®</sup> and stainless steel	
Diaphragm, Gaskets, O-rings	Santoprene <sup>®</sup> (Viton <sup>®</sup> optional)	
Coupling	EPDM (Viton optional)	
Hose clamps	Stainless steel	
Discharge hose	EPDM	

Note: Ensure chemical compatibility between liquid pumped and the wetted pump components prior to use.

® Ryton and Viton are registered trademarks of the DuPont Company.
® Santoprene is a registered trademark of the Monsanto Company.

### Pressure vs. Flow (water @ 70°F)



### **Removable DD6 Drive Unit**

The DD6 drive unit is a 12-volt motor (110 V AC available) designed for use with the DD6 pump. It is well suited to operate pumps transferring both viscous and thin liquids.

The DD6 motor is easily removed to facilitate maintenance. This feature also enables multiple unit pumping with a single motor. Operating costs are reduced since multiple motors are not needed.

The DD6 motor is available alone or as part of a drive unit package. The DD6 drive unit package includes: DD6 motor, electronic flow meter, discharge elbow, discharge hose, ball valve, spout and aluminum quick coupler.

### **Operating Parameters**

- · Operating current: 15 to 25 amps
- Speed: 2600 rpm
- Power source: 12 V DC; 110 V AC optional



**DD6 Drive Unit and Accessories** 

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#### To find your local Flowserve representative:

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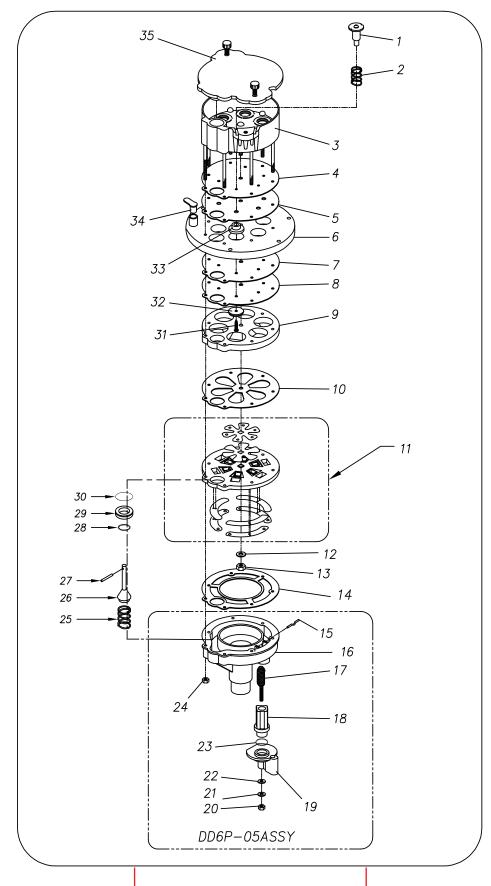
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### flowserve.com



DD6 Pump / CKVLV Parts List





# DD6 Pump / CKVLV Parts List

ITEM NUMBER	PART NUMBER	QTY	DESCRIPTION	AVAILABLE AS
1	DD6P-12	6	Piston	KD-35
2	DD6P-13	6	Piston Spring	KD-35
3	DD6P-01	1	Top Housing	KD-45
4	DD6P-14	1	EPDM Dry Side Noreinforc. Diapm.	KD-34
5	DD6P-15	1	EPDM Fluid Side Reinforc. Diapm.	KD-34
6	DD6P-02H	1	White/11 Hole/Vntd Adapt Plate Without Pushrod Hole	Part
7	DD6P-18	1	EPDM Dry Side Reinforc. Diapm.	KD-34
8	DD6P-19S	1	Viton Fluid Side Noreinforc. Diapm.	KD-34
9	DD6P-03	1	Cylinder Plate	Part
10	DD6P-21	1	EPDM Inlet Gasket	DD6 Repair Kit, DD6 Kit-01, DD6 Kit-03
11	KD-16	1	Valve Plate Assy w/ Valves	KD-16
12	DD6P-09SS	1	SS Flat Washer	KD-45, KD-45Y, DD6 Repair Kit, DD6 Kit-01
13	DD6P-10SS	1	SS Hex Nut	KD-45, KD-45Y, DD6 Repair Kit, DD6 Kit-01
14	DD6P-22	1	EPDM Outlet Gasket	DD6 Repair Kit, DD6 Kit-01
15	DD6P-27-01	1	Dowel Pin, 316 Stainless Steel	Part
16	DD6P-05	1	Bottom Housing	Part
17	DD6P-26	1	SS Spring & SS Screw	KD-07
18	DD6P-25	1	Bypass Cylinder	KD-07
19	DD6P-36	1	Bypass Deplector	KD-07
20	DD6P-07SS	1	SS Nyl Ins Lock Nut	KD-07, DD6 Kit-01, DD6P-51 Assy
21	DD6P-46W	1	SS Washer	KD-07, DD6 Kit-03, DD6P-51 Assy
22	DD6P-26B	1	EPDM Washer KD-07	
23	DD6P-42A	2	Viton O-Ring	KD-07
24	NUT-02	7	SS Nylong Lock Nut	KD-45, KD-45Y
25	EP-51	1	Bypass Spring	Part
26	DD6P-75	1	Safety Valve Stem	Part
27	DD6P-76	1	1/8 x 7/8 SS Dowel Pin	Part
28	HPA-24V	1	O-Ring, #114, Viton	Part
29	DD6P-77	1	Teflon Valve Seat	Part
30	DD6M-100	1	#020 Viton O-Ring Comp #19707	Part
31	DD6P-17SS	7	Phil Pan HD SS Screw	KD-06, KD-35
32	DD6P-20	6	Piston Backup	KD-35
33	DD6P-16	6	Piston Cap	KD-35
34	DD6P-06A	1	Pump Vent Handle KD-15, DD6 Kit-03	
35	DD6P-29-01	1	Rain Cover for DD6 Pmp Ck/Vlv KD-06	
36	DD6P-GR-45	1	EPDM Gasket Part	
37	DD6P-29P	1	Plug KD-06	
38	DD6P-32	2	Bolt Retainer	KD-06
39	DD6P-33	2	Screw KD-06	



# **DD6 Pump Accessories**



**DD6 Motor** Twelve volt motor for the DD6 pump; 110 volt motor available.



**SEM-10FT** The SEM-10FT flow through electronic flow meter is able to be mounted at the hose end.



Xtube-V Includes Viton O-rings. Xtube-E Includes EPDM O-rings.

Adjustable polypropylene dip tubes.

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

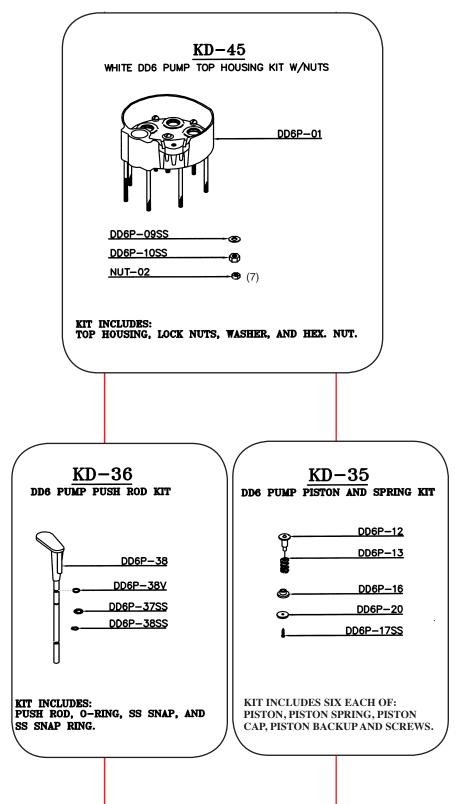


*Xtube-TV* Includes Viton O-ring. *Xtube-TE* Includes EPDM O-ring.

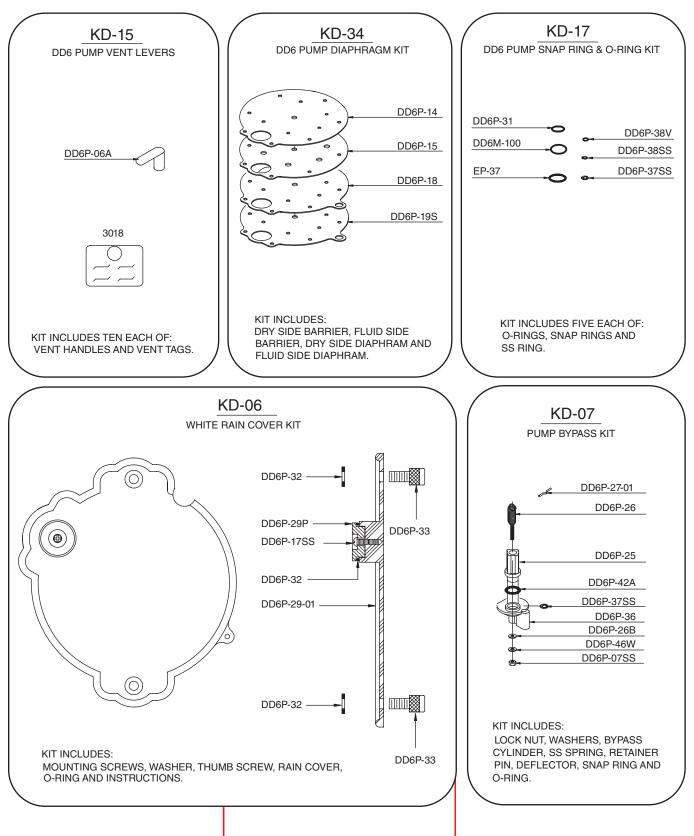
Threaded adjustable polypropylene dip tube.

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

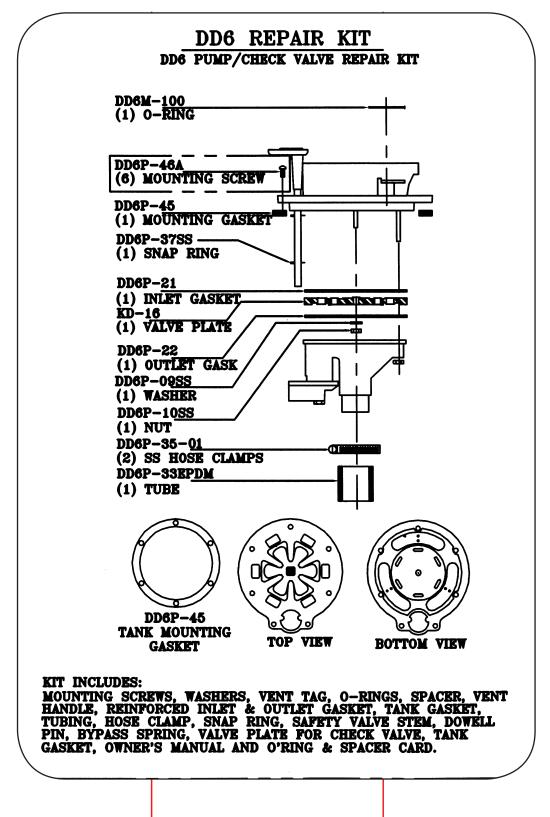




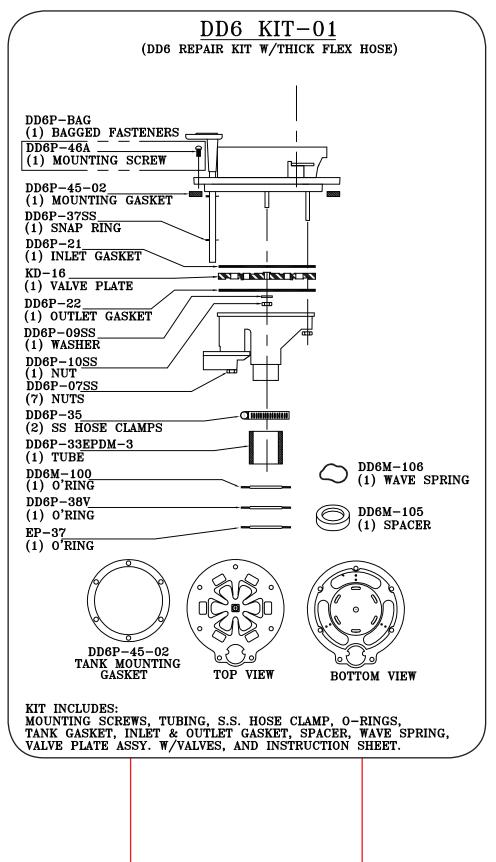




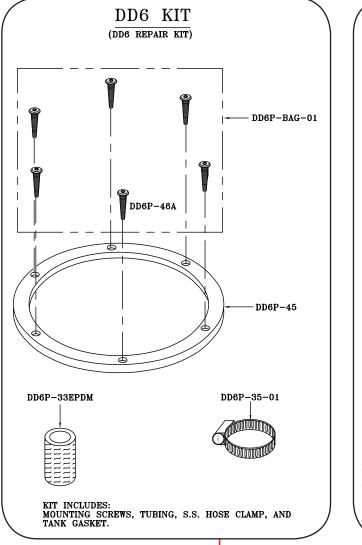


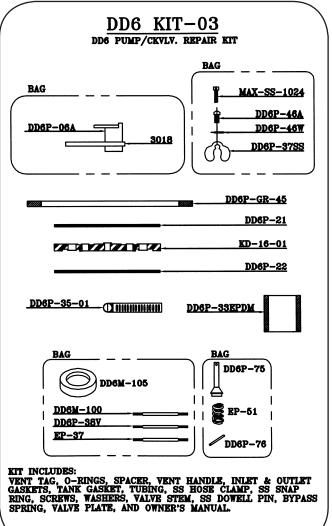






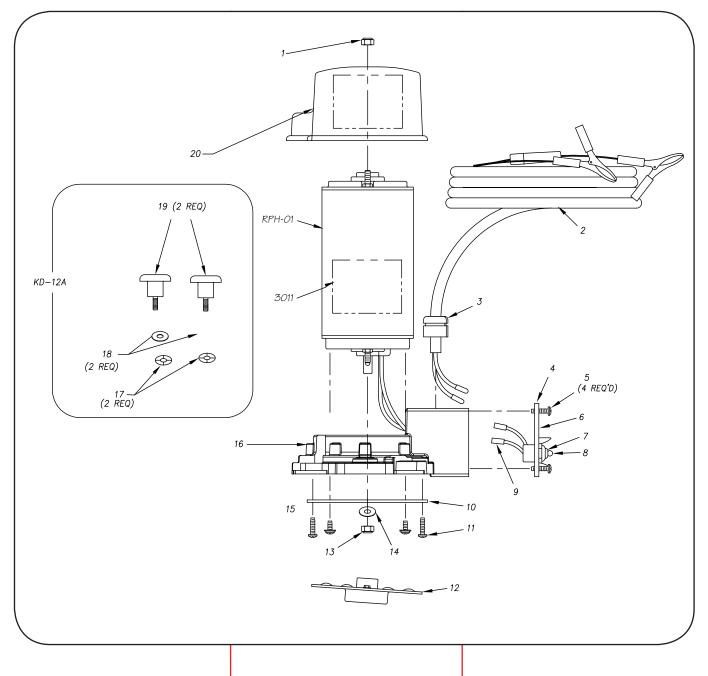








# **DD6 Motor Parts List**





# DD6 Motor Parts List

ITEM NUMBER	PART NUMBER	QTY	DESCRIPTION	AVAILABLE AS
1	DD6P-07SS	2	Nut	PART
2	PHA-04	1	Cable Assembly	PART
3	PH-14	1	Cord Bushing	PART
4	PH-07	1	Switch Plate	PHP KIT-03
5	PH-03	4	Screw	PHP KIT-03
6	3081			PART
7	PH-09	1	Switch Boot	PHP KIT-03
8	PH-08	1	Switch	PHP KIT-03
9	PH-11	2	Wire Terminals	PHP KIT-03
10	PH-02SZ	1	Motor Mounting Plate	PART
11	PH-03	7	Screw	PART
12	WP-01ASSY	1	Drive Plate	KD-11
13	DD6P-07SS	2	Nut	PART
14	Washer-34	2	Washer	PART
15	EP-11	2	Screw	PART
16	PH-50	1	Motor Adapter	PART
17	DD6P-32	2	Bolt Retainers	KD-12A
18	DD6M-47NW	2	Washer	KD-12A
19	DD6M-41	2	Motor Handles	KD-12A
20	PH-49	1	Motor Cap	PART



# **DD6 Motor Accessories**



*SEM-10* Includes Viton<sup>®</sup> O-rings. *SEM-10EPDM* Includes EPDM O-rings.

Non-metallic electronic flow meter.



**SEM-10SS** Stainless steel electronic flow meter.



*PH-20* Non-metallic ball valve and spout.



*PHA-04* DD6 motor cable.



*EP-80* Battery clips, red.

*EP-80* Battery clips, black.



# **DD6 Motor Accessories**



*EP-58-10* 1 in x 12 ft (20 mm x 3.6 m) nylon lined hose.



*EP-58-09* 1 in x 12 ft (25 mm x 3.6 m) EPDM hose.



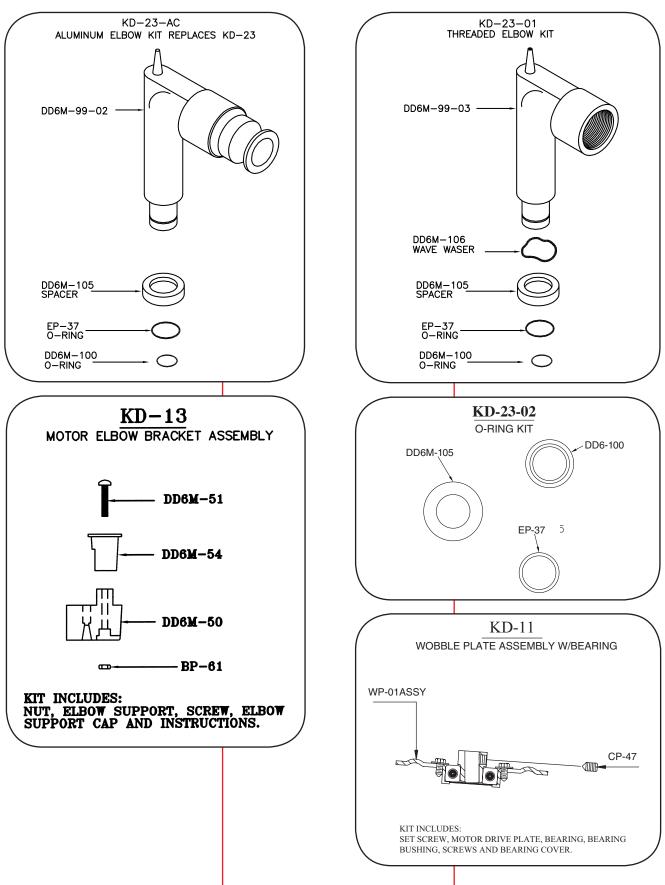
**KD-23-01** Elbow kit, threaded.



*KD-23-AC* Elbow kit, not threaded.

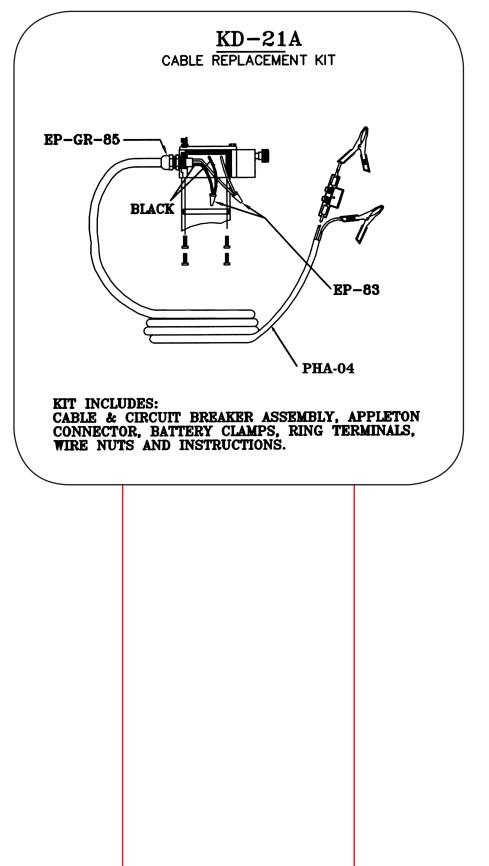


## DD6 Motor Kits



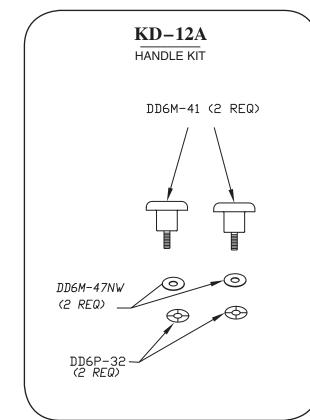


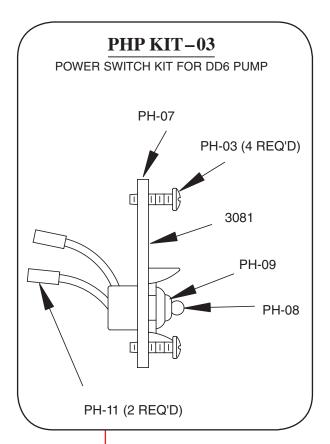
DD6 Motor Kit





# DD6 Motor Kits







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# Scienco PH6

Diaphragm Transfer Pump



# **Powerful and Versatile**

The PH6 diaphragm transfer pump is engineered for use with low and high viscosity fluids. Designed to fit virtually any container, the PH6 is the standard for many ag-chem mini-bulk systems. Capable of generating a maximum pressure of 1.7 bar (25 psi), it is able to pump viscous chemicals even on the coldest mornings. Its 12-volt motor is engineered to produce a flow rate of 30 to 38 l/m (8 to 10 gpm) at 16°C (60°F) with a 30-minute duty cycle. For application flexibility, the PH6 may be vertically or horizontally mounted.

### **Operating Parameters**

- Flows to 38 l/m (10 gpm)
- Heads to 3.6 m (12 ft)
- Pressures to 1.7 bar (25 psi)
- Temperatures to 55°C (130°F)
- Viscosities to 2500 cP (11 600 ssu)

### **Applications**

- Chemical transfer
- Non-flammable liquids
- Light oils

### Features and Benefits

**Removable Cartridge** containing diaphragm, valves and bypass assembly simplifies maintenance and field replacement.

Inks

· Automotive fluids

Agriculture

*Multiple Pump-chamber Design* increases pump dependability and availability.

*Chemically Resistant, Non-metallic Construction* prolongs pump life. Nylon<sup>®</sup> pump housing and EPDM seals standard. Polypropylene housing and Viton<sup>®</sup> seals available. Diaphragm design is able to pump high or low viscosity fluids.

**Vertical or Horizontal Container Top Mount** provides application flexibility.

**50 mm (2 in) Suction Port** is adaptable to most container fittings or a camlock fitting. A 25 mm (1 in) reducer is available.

**Optional SPAN Cap** fits tanks with 190.5 mm (7.5 in) male threaded openings. It is available in no recirculation, autorecirculation and manual recirculation designs.



### Materials of Construction

Component	Standard Material	Optional Material
Casing	Glass-filled nylon	Glass-filled polypropylene
Cartridge housing	Polyphenylene sulfide (PPS)	
Valves	Stainless steel	Ероху
O-rings	EPDM	Viton <sup>®</sup> , Buna-N <sup>®</sup>
Diaphragm	Santoprene®	

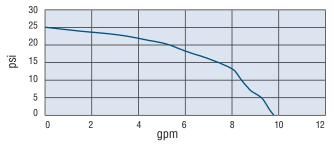
Note: Ensure chemical compatibility between the liquid pumped and the wetted pump components prior to use.

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<sup>®</sup> Buna-N is a registered trademark of the DuPont Company.

<sup>®</sup> Santoprene is a registered trademark of the Monasanto Company.

### Pressure vs. Flow (water @ 70°F)



### Available Equipment and Accessories

The PH6 pump is available in multiple configurations, each with varying equipment and accessories. Dip tubes, bung adapters, male and female camlocks, ball valves and spouts, SPAN caps and discharge hoses are available.

Refer to the Scienco Product Support Catalog (P-70-100) to learn more about the available configurations.

### Portable PH6 CADDY System

With its lightweight tubular frame, the PH6 CADDY System provides maximum portability and ease of handling for users of multiple containers.

The PH6 CADDY System includes: the tubular frame; the PH6 pump with 12-volt motor; an SEM-10 flow meter; a ball valve and spout; and two 25 mm (1 in) EPDM hoses. Other configurations are available and may include the SEM-10SS flow meter or the 110-volt motor.



### **Reliability Guaranteed by 5-Year Service Program**

Scienco's standard-duty PH6 pumps, PH6 CADDY Systems and pump-mounted SEM-10 flow meters are backed by its industry-leading 5-Year Service Program. Through this program, Scienco pump users will spend less money and time on chemical transfer equipment than ever before.



For additional information about Scienco pumps or Scienco's 5-Year Service Program, please call 800 343 PUMP (7867).

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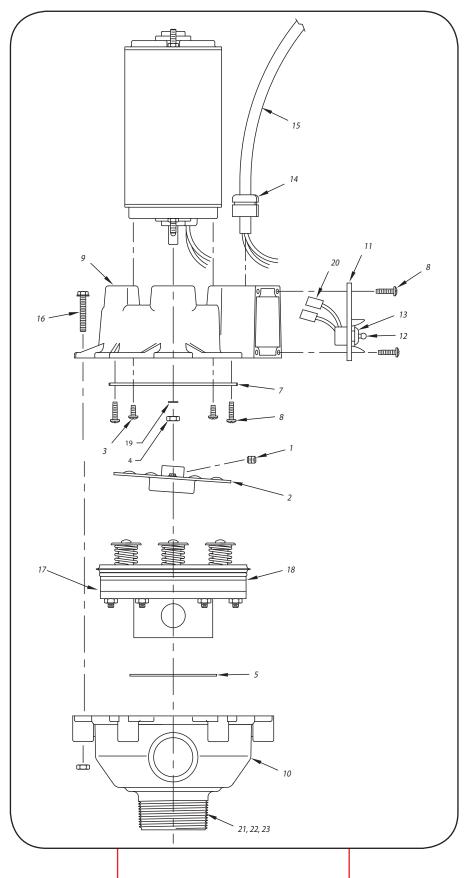
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PH6 Pump Parts List (PH6P-01)





# PH6 Pump Parts List

ITEM NUMBER	PART NUMBER	QTY	DESCRIPTION	AVAILABLE AS
1	CP-47	1	1/4 - 20 X 1/4 SET SCREW	PH6M01
2	WP-01ASSY	1	MOTOR DRIVE PLATE ASSEMBLY	KD-11
3	EP-11	2	10/32 X 3/8 RND HD/PAN HD PHL SCREW	PH6MO1
4	DD6P-07SS	2	10-32 SS NYLON INSERT LOCK NUT	PH6M01
5	LF-03 EPDM	1	EPDM 1/16 BOTTOM GASKET	PHP KIT-01, PHP KIT-02
6	RPH-01	1	12 VOLT MAMCO MOTOR FOR PHP	PH6MO1
7	PH-02SZ	1	ALUMINUM MOTOR MOUNTING PLATE	PH6M01
8	PH-03	7	#10 X 5/8 PHIL. SS HI-LO SCREW	PHP KIT-03
9	PH-04	1	POLYPROPYLENE MOTOR HOUSING	PART
10	PH-05	1	NYLON PUMP HOUSING	PH6 KIT-01
11	PH-07	1	MOLDED JUNCTION BOX COVER	PHP KIT-03
12	PH-08	1	GAYNOR MICRO SWITCH/#6602-57	PHP KIT-03
13	PH-09	1	HALF BOOT FOR TOGGLE SWITCH	PHP KIT-03
14	PH-14	1	STRAIN RELIEF CORD BUSHING #1254	PH6M01
15	PHA-04	1	20' CABLE ASSY. FOR PH6 PUMP	PH6M01
16	PH-13	6	SELF-TAPPING SCREW	PH6 KIT-01
17	SS6P-D	1	PUMP CARTRIDGE FOR PH6	PHP KIT-01
18	SS6P-44	1	O-RING #247 EPDM	PHP KIT-01, PHP KIT-02
19	WASHER-34	2	#10 LOCK WASHER	PART
20	PH-11	2	MOLEX FEMALE TERMINAL	PART
21	PH-91	1	CHECK VALVE BODY	PART
22	PH-92	1	CHECK VALVE DIAPHRAGM	PART
23	PH-94	1	PUSH RING SS	PART



### PH6 Pump Accessories



**SEM-10** Includes Viton<sup>®</sup> O-rings. **SEM-10EPDM** Includes EPDM O-rings.

Non-metallic electronic flow meter.



**SEM-10FT** The SEM-10FT flow through electronic flow meter is able to be mounted at the hose end.



**SEM-10SS** Stainless steel electronic flow meter.



**EP-58-09** 1 in x 12 ft (25 mm x 3.6 m) EPDM hose.



*Xtube-V* Includes Viton O-rings. *Xtube-E* Includes EPDM O-rings.

Adjustable polypropylene dip tubes.

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



*Xtube-TV* Includes Viton O-ring.

*Xtube-TE* Includes EPDM O-ring.

Threaded adjustable polypropylene dip tube.

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



# PH6 Pump Accessories



*PH-20* Non-metallic ball valve and spout.



*SPAN* Cap to adapt PH6 and DD6 pumps to 190.5 mm (7.5 in) tank openings.



*SPA 700RA* SPAN adapter plate – auto recirculation adapter.



*SPA 700R* SPAN adapter plate – manual recirculation adapter.



*SPA 700N* SPAN adapter plate – no recirculation adapter.

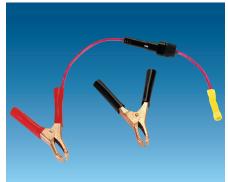


(Gasket P/N CL-29 not included)

**PH-25** Bung adapter.



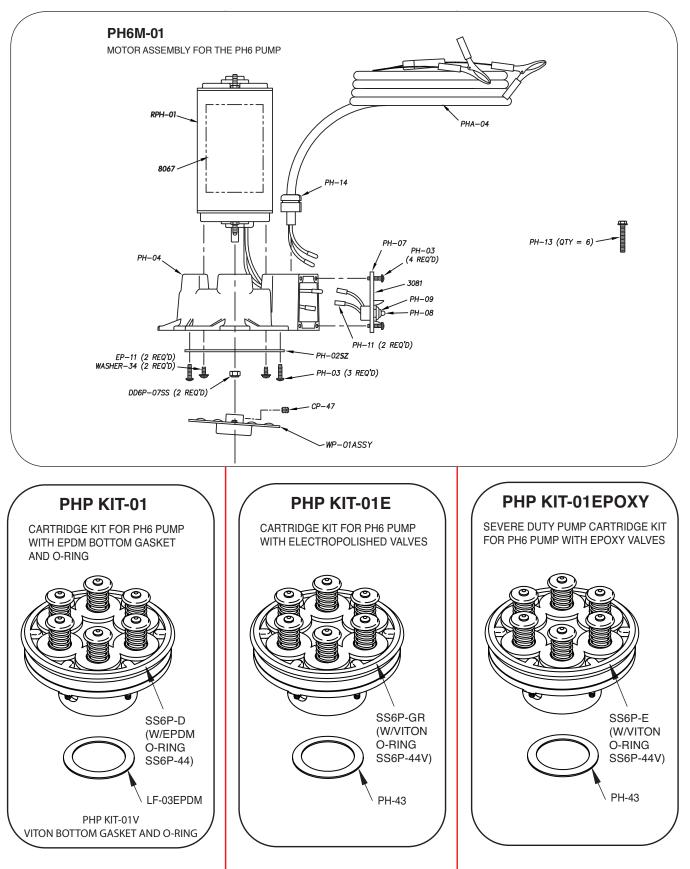
*SPA 700G* Tank gasket for adapter plates. For use with PH6 or DD6 pumps.



**PHA 06** Battery clips and cable.

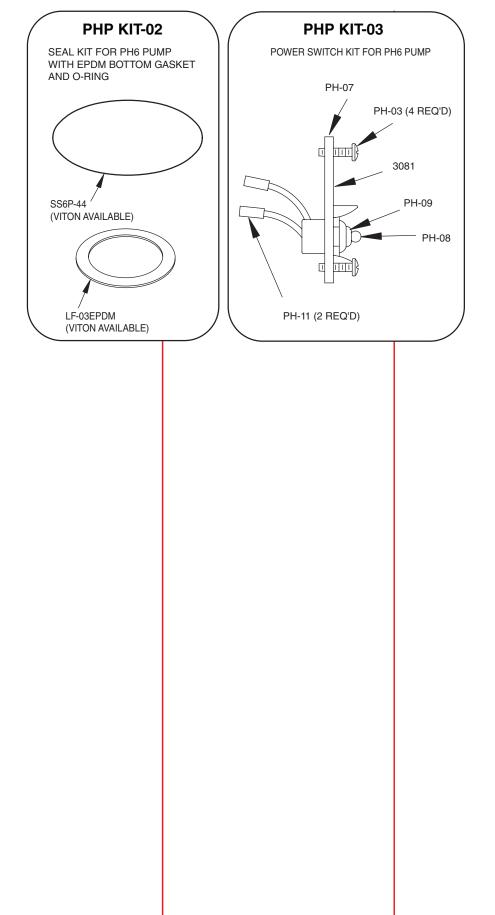


# PH6 Pump Kits





# PH6 Pump Kits





# SEM-10 and SEM-10FT

Fixed Mounting and Flow Through Electronic Flow Meters





The Scienco SEM-10 and SEM-10FT electronic flow meters employ positive displacement nutating disk 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 and SEM-10FT flow meters are easy to read and to 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.

### **Applications**

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

### **Operating Parameters**

- Flows from 0.5 to 6.8 m<sup>3</sup>/h (2 to 30 gpm)
- Temperatures to 55°C (130°F)
- Pressures to 4 bar (60 psi)
- Accuracy to +/- 0.5%
- Totals to 999 999

### Features and Benefits

**Fixed Mounting or Flow Through Configurations** provide application flexibility.

**Positive Displacement Nutating Disk 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.

## **Experience In Motion**



# SEM-10 and SEM-10FT

Fixed Mounting and Flow Through Electronic Flow Meters

### **Materials of Construction**

Component	Material
Meter Housing	Nylon <sup>®</sup> (Polypropylene optional)
Meter Chamber	Polyphenylene sulfide (PPS) and stainless steel
O-rings	Viton <sup>®</sup> (EPDM optional)
Electronics Body	Nylon
Screws	Stainless steel

Note: Ensure chemical compatibility between liquid metered and the meter's wetted parts prior to use.

® Nylon and Viton are registered trademarks of the DuPont Company.





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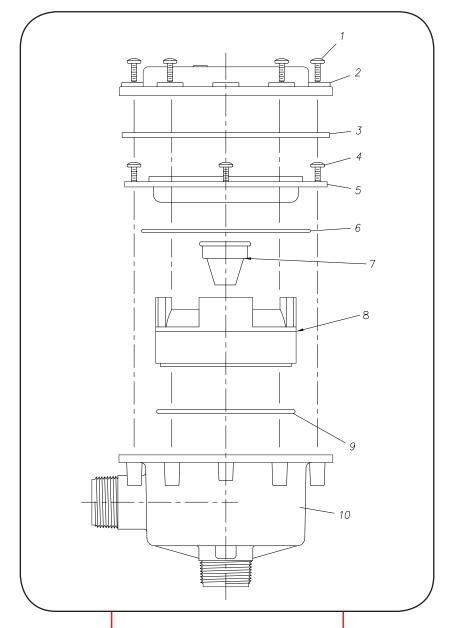
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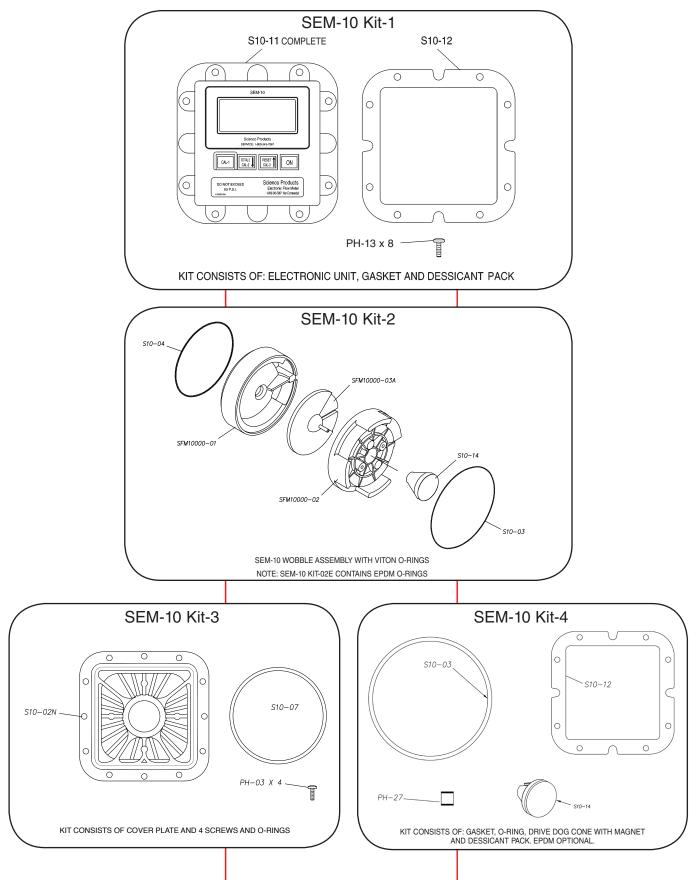
# SEM-10 Parts List



ITEM	PART	QTY	DESCRIPTION	AVAILABLE AS
1	PH-13	8	#10 X 1" PHIL.SS HI-LO SCREW	Part
2	S10-11 COMPLETE	1	POLYPROPYLENE ELECTRONICS	SEM-10 Kit-01
3	S10-12	1	GASKET, 1/16", EPDM	SEM-10 Kit-01
4	PH-03	4	#10 X 5/8" PHIL.SS HI-LO SCREW	SEM-10 Kit-03
5	S10-02N	1	NYLON MOLDED COVER PLATE	SEM-10 Kit-03
6	S10-03	1	94.4 X 3.1 METRIC/VITON O-RING	SEM-10 Kit-04
7	S10-14	1	DRIVE DOG CONE W/MAGNET	SEM-10 Kit-02, SEM-10 Kit-04
8	SFM10000-01,02,03A	1	WOBBLE PLATE COMPONENTS	SEM-10 Kit-02
9	S10-04	1	#152 VITON O-RING	SEM-10 Kit-02
10	S10-05N	1	NYLON MOLDED FLUID CAN	Part

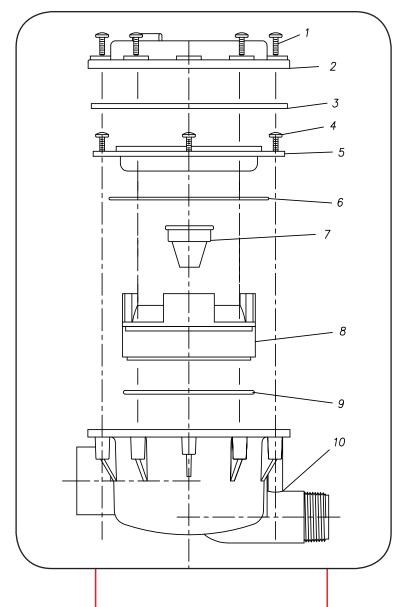


### SEM-10 and SEM-10FT Meter Kits





# SEM-10FT Parts List



ITEM	PART	QTY	DESCRIPTION	AVAILABLE AS
1	PH-13	8	#10 X 1" PHIL.SS HI-LO SCREW	Part
2	S10-11 COMPLETE	1	POLYPROPYLENE ELECTRONICS	SEM-10 Kit-01
3	S10-12	1	GASKET, 1/16", EPDM	SEM-10 Kit-01
4	PH-03	4	#10 X 5/8" PHIL.SS HI-LO SCREW	SEM-10 Kit-03
5	S10-02N	1	NYLON MOLDED COVER PLATE	SEM-10 Kit-03
6	S10-03	1	94.4 X 3.1 METRIC/VITON O-RING	SEM-10 Kit-04
7	S10-14	1	DRIVE DOG CONE W/MAGNET	SEM-10 Kit-02, SEM-10 Kit-04
8	SFM10000-01,02,03A	1	WOBBLE PLATE COMPONENTS	SEM-10 Kit-02
9	S10-04	1	#152 VITON O-RING	SEM-10 Kit-02
10	S10-10	1	NYLON MOLDED FLUID CAN	Part



Scienco Product Reference Manual

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# SEM-10SS

### Stainless Steel Electronic Flow Meter



# Accurate, Reliable Metering

The Scienco SEM-10SS stainless steel electronic flow meter employs positive displacement nutating disk 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-10SS flow meter is easy to read and to use. Its stainless steel and plastic construction provides increased resistance to corrosion. This multiple use non-commercial meter mounts directly to the pump discharge via a one-inch stainless steel rear port and may be used with many pesticides, chemicals and petroleum products.

### **Applications**

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



### **Operating Parameters**

- Flows from 0.5 to 6.8 m<sup>3</sup>/h (2 to 30 gpm)
- Pressures to 6.9 bar (100 psi)
- Temperatures to 85°C (185°F)
- Accuracy to +/- 0.5%
- Totals to 999 999

### Features and Benefits

Stainless Steel Housing is durable and corrosion resistant.

**Positive Displacement Nutating Disk 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

**25 mm (1 in) Rear Mounting Port** allows meter to be mounted directly to the pump discharge. Side port measures 25 mm (1 in).

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 once pumping resumes.

## **Experience In Motion**



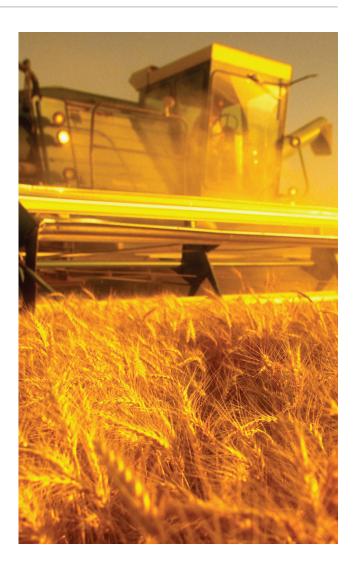
### Materials of Construction

Component	Material
Meter Housing	Stainless steel
Meter Chamber	Polyphenylene sulfide (PPS) and stainless steel
O-rings	Viton <sup>®</sup> (EPDM optional)
Electronics Body	Nylon®
Screws	Stainless steel

Note: Ensure chemical compatibility between liquid metered and the meter's wetted parts prior to use.

<sup>®</sup> Viton and Nylon are registered trademarks of the DuPont Company.





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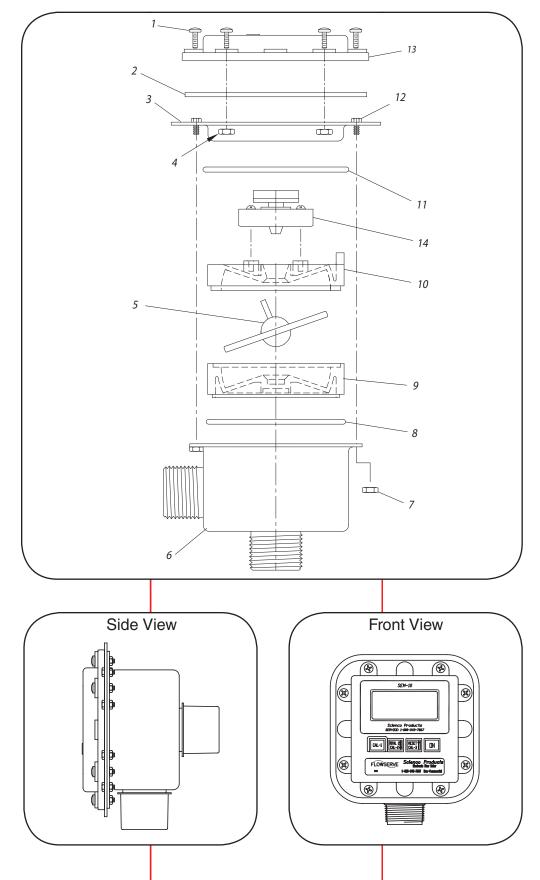
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# SEM-10SS Parts List





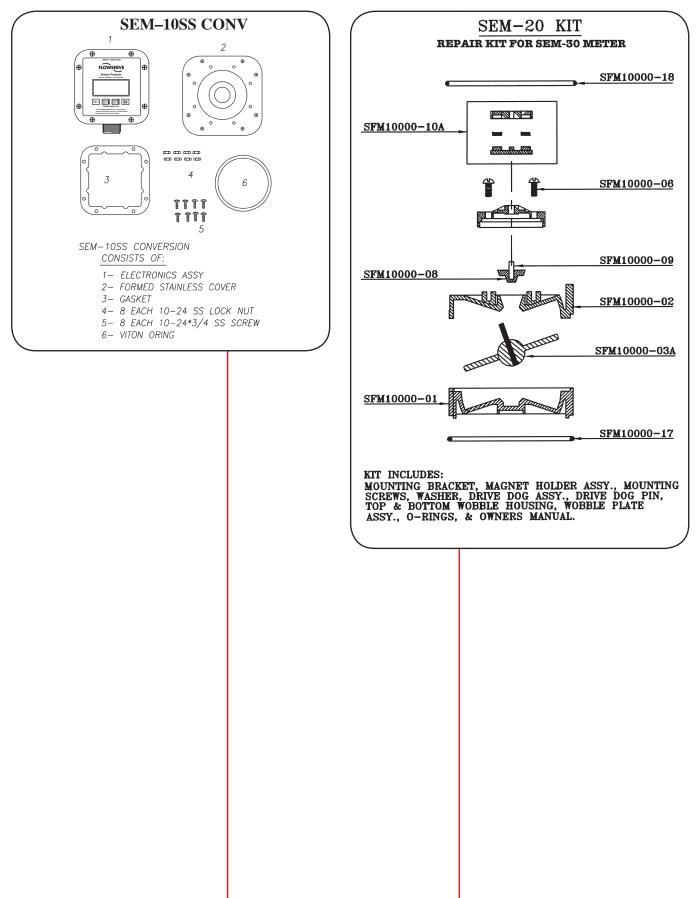
# SEM-10SS Parts List

ITEM NUMBER	PART NUMBER	QTY	DESCRIPTION	AVAILABLE AS
1	DD6P-46A	8	Screw	SEM-10SS Kit
2	S10-06SS	1	.125 Thick Gasket	SEM-10SS Kit
3	SFM10000-14A	1	Stamped Cover Plate	SEM-10SS Conv Kit
4	NUT-02	8	Nut	SEM-10SS Kit
5	SFM10000-03A	1	Wobble Plate Assy	SEM-20 Kit
6	SFM10000-13A	1	Can Assy	PART
7	SFM10000-20	8	Nut	PART
8	SFM10000-17	1	Viton O-Ring	SEM-20 Kit
9	SFM10000-01	1	Bottom Wobble Housing	SEM-20 Kit
10	SFM10000-02	1	Top Wobble Housing	SEM-20 Kit
11	SFM10000-18	1	Viton O-Ring	SEM-20 Kit
12	SFM10000-19	8	Hex Head Screw	PART
13	S10-11 COMPLETE	1	Potted Electronics	SEM-10SS Kit
14	S10-14SS	1	Cone	PART



5.5

### SEM-30 Meter Kits





### **Accessories** (Other couplers available upon request)



(Gasket P/N CL-29 not included)

*PH-25* Bung adapter.



#### *HFA-02* DD6 replacement adapter plate to 2 in (50 mm) buttress.



**SPA700G** Tank gasket for adapter plates. For use with PH6 or DD6 pumps.



**Btube-63** Dip tube with bellows and EPDM sleeve 33<sup>3</sup>/<sub>4</sub> in.



Xtube-V Includes Viton O-rings. Xtube-E Includes EPDM O-rings.

Adjustable polypropylene dip tubes.

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



*Xtube-TV* Includes Viton O-ring. *Xtube-TE* Includes EPDM O-ring.

Threaded adjustable polypropylene dip tube.

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



**B-01 ASSY** Molded foot assembly.



### Accessories



*SPA 700N* SPAN adapter plate – no recirculation adapter.



**SPA 700RA** SPAN adapter plate – auto recirculation adapter.



*SPA 700R* SPAN adapter plate – manual recirculation adapter.



*SPAN* Cap to adapt PH6 and DD6 pumps to 190.5 mm (7.5 in) tank openings.



*MC* Light duty clutch.

*MC/ACE* MC with ACE adapter. *MC/HYPRO* MC with HYPRO adapter. **MCH2** Heavy-duty clutch.

*MCH2-CW* Heavy-duty, clutch-clockwise rotation. up to 23 hp at 4,000 rpm. Draws two amps. Type "A" belt used on 5 in (127 mm) pulley, and fits a 5/8 in (16 mm) straight shaft.



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