



# CT6

## CHEMICAL TRANSFER PUMP

*Distributor Reference Manual*

*FPD-1615a*

## CT6 Diaphragm Pump For Chemical Transfer

FPD-1615

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## Product Summary and Description

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. The CT6 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, flowmeters, fittings, hoses and valves to provide a complete pumping system.



## Standard and Optional Construction

The standard CT6 has a glass fiber reinforced polypropylene pump housing, a Santoprene™ diaphragm, peroxide cured EPDM valves and seals, and a stainless steel bypass valve spring. These items comprise the wetted parts. Viton® or Santoprene™ valves and seals are also available.

The CT6 is offered with four combinations of housing inlets and outlets. The standard housing (most often used in agricultural applications) has a 2" NPT male inlet and a 1" female NPT outlet. For customers requiring British threads, we offer a pump housing with a 1" BSPP inlet and a ¾" BSPP discharge connection (both female). We also offer two housing varieties with Micro Matic® coupler installed in the inlet for quick, direct tank mounting. Those pumps are available with either a 1" female NPT or a ¾" female BSPP discharge connection. More plumbing configurations are available through the use of various couplings, adapters or fittings.

An internal bypass valve protects the pump and motor from damage in the short term by relieving pressure and recirculating flow internally in the event a discharge valve is closed while the pump is running.

Flowserve Scienco™ provides a 12V DC motor with a 20' long, 12-gauge cable as our standard motor configuration. An optional higher torque motor with a 20' 10-gauge cable is included on HF models. Both include blade style fuses in-line with the cable for ease of service. We also offer models for use with a standard 115V AC power source.

The CT6 pump can be mounted and configured in a variety of pumping system solutions to suit customers' applications.

A variety of mounting brackets are available with the CT6. Some are used in conjunction with an elbow and cap which connect directly to a 7.5" tank opening. An extendable dip tube is used for fluid pick-up. Several brackets are available for mounting the pump to the side of a container. A "Caddy" frame is combined with other brackets and a pump-mounted flowmeter to make a robust, portable package. Several types of hoses are available, and they can be combined with ball valves and spouts for dispensing. A fueling station style dispensing nozzle is also available. Flowmeters can be pump-mounted or a "flow through" version can be used at the hose end.

A recirculation feature is also offered to agitate the chemical in the event settling has occurred. Flowserve Scienco™ offers a unique and powerful recirculation option that adds value for the end user by ensuring each batch dispensed has the same potency.

® Viton is a registered trademark of the DuPont Company.

™ Santoprene is a trademark of ExxonMobile.

## Pump Features and Benefits

### 1. Self-priming Unit

The CT6 is self-priming from a completely dry pump state. It can be part of a closed chemical transfer system that reduces the risk of chemical exposure to the operator. Our diaphragm pump can also run dry without damage. The bypass valve is located completely inside the pump housing with no exterior covers or seals that could leak.

### 2. Multiple System Configurations

The pump can be mounted vertically, horizontally, or side mounted on the tank, allowing the system to meet customer application needs.

### 3. Lightweight and Portable

The CT6 pump is lightweight and portable. Despite its compact size, the standard unit can pump up to 13 GPM, and the HF version can pump up to 18 gpm.

### 4. Quiet System

Because it has six chambers, the flow is smooth, and the pump has minimal vibration.

### 5. AG and DEF Compatible

Standard and optional material choices ensure chemical compatibility and prolong pump life. The CT6 has a glass fiber reinforced polypropylene pump housing, a Santoprene diaphragm, peroxide cured EPDM valves and seals, and a stainless steel bypass valve spring. These items comprise the wetted parts. Viton valves and seals are optional. Santoprene valves are also available.

### 6. Increased Operating Parameters

The CT6 can transfer thin as well as viscous chemicals (up to 2500 cps). The suction lift on water-like fluids is 8 feet. Operating pressures can be up to 30 psi before the bypass valve will open to relieve pressure. Fluid operating temperature can go up to 150°F. Flows up to 13 gpm at 60°F (standard design) and up to 18 gpm (high-flow design).

### 7. Variety of Inlet/Outlet Sizes

The standard housing (most often used in agricultural applications) has a 2" NPT male inlet and a 1" female NPT outlet. For customers requiring British threads, we offer a pump housing with a 1" BSPP inlet and a ¾" BSPP discharge connection (both female). We also offer two housing varieties with Micro Matic couplers installed in the inlet for quick, direct tank mounting. Those pumps are available with either a 1" female NPT or a ¾" female BSSP discharge connection. More plumbing configurations are available through the use of reducing couplings and adapters.

### 8. Integrated Micro Matic Coupler

This option eliminates a hose and associated fittings, while allowing quick connection and disconnection of the pump.

### 9. Electronic Flow Meters and Ancillaries

Electronic flow meters and ancillaries are available to complete the pumping system.

### 10. Optional SPAN Cap

SPAN Cap fits tanks with 7.5 inch (190.5 mm) male threaded openings. It is available in standard and recirculation designs.

# Product Brochure

## CT6 Diaphragm Pump for Chemical Transfer



## Product Summary and Description

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. The CT6 is used primarily to dispense fluids from Bulk or Mini-Bulk tanks, Intermediate Bulk Containers (IBCs), Drums, and for similar applications. The pump can be configured with a variety of brackets, dip tubes, flowmeters, fittings, hoses and valves to provide a complete pumping system.



### Standard and Optional Construction

The standard CT6 has a glass fiber reinforced polypropylene pump housing, a Santoprene diaphragm, peroxide cured EPDM valves and seals, and a stainless steel bypass valve spring. These items comprise the wetted parts. Viton or Santoprene valves and seals are also available.

The CT6 is offered with four combinations of housing inlets and outlets. The standard housing (most often used in agricultural applications) has a 2" NPT male inlet and a 1" female NPT outlet. For customers requiring British threads, we offer a pump housing with a 1" BSPP inlet and a 3/4" BSPP discharge connection (both female). We also offer two housing varieties with Micro Matic coupler installed in the inlet for quick, direct tank mounting. Those pumps are available with either a 1" female NPT or a 3/4" female BSPP discharge connection. More plumbing configurations are available through the use of various couplings, adapters or fittings.

An internal bypass valve protects the pump and motor from damage in the short term by relieving pressure and recirculating flow internally in the event a discharge valve is closed while the pump is running.

Flowserve Scienco provides a 12V DC motor with a 20' (6 m) long, 12-gauge cable as our standard motor configuration. An optional higher torque motor with a 20' (6 m) 10-gauge cable is included on HF models. Both include blade style fuses in-line with the cable for ease of service. We also offer models for use with a standard 115V AC power source.

The CT6 pump can be mounted and configured to provide a pumping system solution to the customer's application.

A variety of mounting brackets are available with the CT6. Some are used in conjunction with an elbow and cap which connect directly to a 7.5" (190.5 mm) tank opening. An extendable dip tube is used for fluid pick-up. Several brackets are available for mounting the pump to the side of a container. A "Caddy" frame is combined with other brackets and a pump-mounted flowmeter to make a robust, portable package. Several types of hoses are available, and they can be combined with ball valves and spouts for dispensing. A fueling station style dispensing nozzle is also available. Flowmeters can be pump-mounted or a "flow through" version can be used at the hose end.

A recirculation feature is also offered to agitate the chemical in the event settling has occurred. Flowserve Scienco offers a unique and powerful recirculation option that adds value for the end user by ensuring each batch dispensed has the same potency.

## Features and Benefits

### 1. Self-priming Unit

The CT6 is self-priming from a completely dry pump state. It can be part of a closed chemical transfer system that reduces the risk of chemical exposure to the operator. Our diaphragm pump can also run dry without damage. The bypass valve is located completely inside the pump housing with no exterior covers or seals that could leak.



### 2. Multiple System Configurations

The pump can be mounted vertically, horizontally, or side mounted on the tank, allowing the system to meet customer application needs.



### 3. Lightweight and Portable

The CT6 pump is lightweight and portable. Despite its compact size, the standard unit can pump up to 13 gpm (50 LPM), and the HF version can pump up to 18 GPM (68 LPM).



### 4. Quiet System

Because it has six chambers, the flow is smooth, and the pump has minimal vibration.



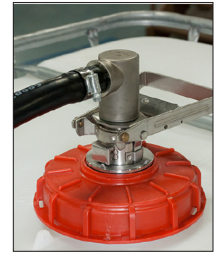
### 5. AG and DEF Compatible

Material choices in CT6 design prevent fluid contamination. Chemically resistant construction prolongs pump life. The CT6 has a glass fiber reinforced polypropylene pump housing, a Santoprene diaphragm, peroxide cured EPDM valves and seals, and a stainless steel bypass valve spring. These items comprise the wetted parts. Viton valves and seals are optional. Santoprene valves are also available.



### 6. Increased Operating Parameters

The CT6 can transfer thin as well as viscous chemicals (up to 2500 cps). The suction lift on water-like fluids is 8 feet. Operating pressures can be up to 30 psi (2.0 bar) before the bypass valve will open to relieve pressure. Temperature to 150°F (66°C).



### 7. Variety of Inlet/Outlet Sizes

The standard housing (most often used in agricultural applications) has a 2" NPT male inlet and a 1" female NPT outlet. For customers requiring British threads, we offer a pump housing with a 1" BSPP inlet and a 3/4" BSPP discharge connection (both female). We also offer two housing varieties with Micro Matic couplers installed in the inlet for quick, direct tank mounting. Those pumps are available with either a 1" female NPT or a 3/4" female BSSP discharge connection. More plumbing configurations are available through the use of reducing couplings and adapters.

### 8. Integrated Micro Matic Coupler

This is an optional offer that eliminates a hose and associated fittings, while giving the user a quick disconnect and re-connect of the pump.



### 9. Electronic Flow Meters and Ancillaries

Electronic flow meters and ancillaries are available to complete your pumping system.





Base Pump Options



12V CT6 DEF Pump



12V CT6 DEF Pump with  
Micro Matic valve



115V CT6 Pump



115V CT6 Pump with  
Micro Matic valve



12V CT6 Pump



12V CT6 Pump with  
Micro Matic valve



115V CT6 DEF Pump



115V CT6 DEF Pump with  
Micro Matic valve

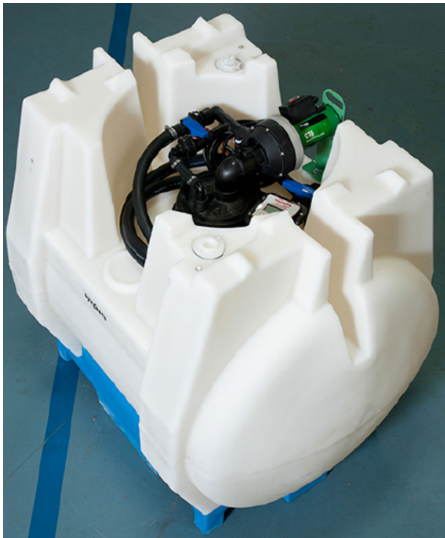


12V CT6 HF Pump



12V CT6 HF DEF Pump

**Available Systems**



*Horizontal container top mount with recirculation system*



*Side mounted pump for IBC*



*Horizontal CADDY system with lightweight tubular frame*



*Side mounted pump for IBC (DEF)*

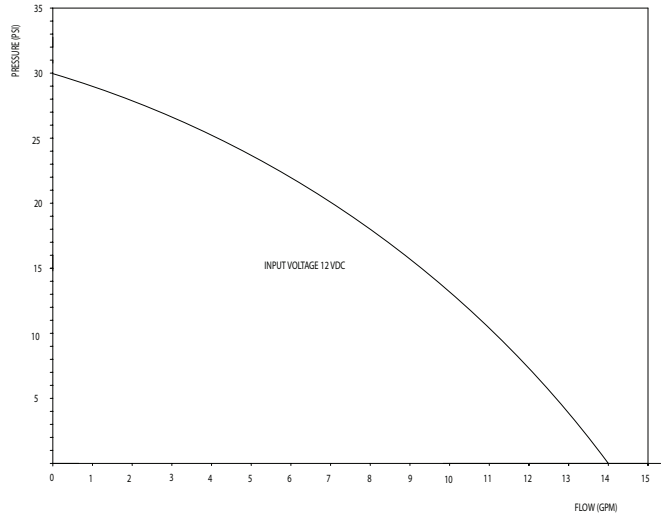
### Material of Construction

The CT6 has a glass fiber reinforced polypropylene pump housing, a Santoprene diaphragm, peroxide cured EPDM valves and seals, and a stainless steel bypass valve spring. These items comprise the wetted parts. Viton valves and seals are optional. Santoprene valves are also available.

| Component   | Material                   |
|-------------|----------------------------|
| Housing     | Glass-filled Polypropylene |
| Diaphragm   | Santoprene                 |
| Valve Plate | Glass-filled Polypropylene |
| Valve       | EPDM, Viton, Santoprene    |
| O-ring      | EPDM, Viton, Santoprene    |

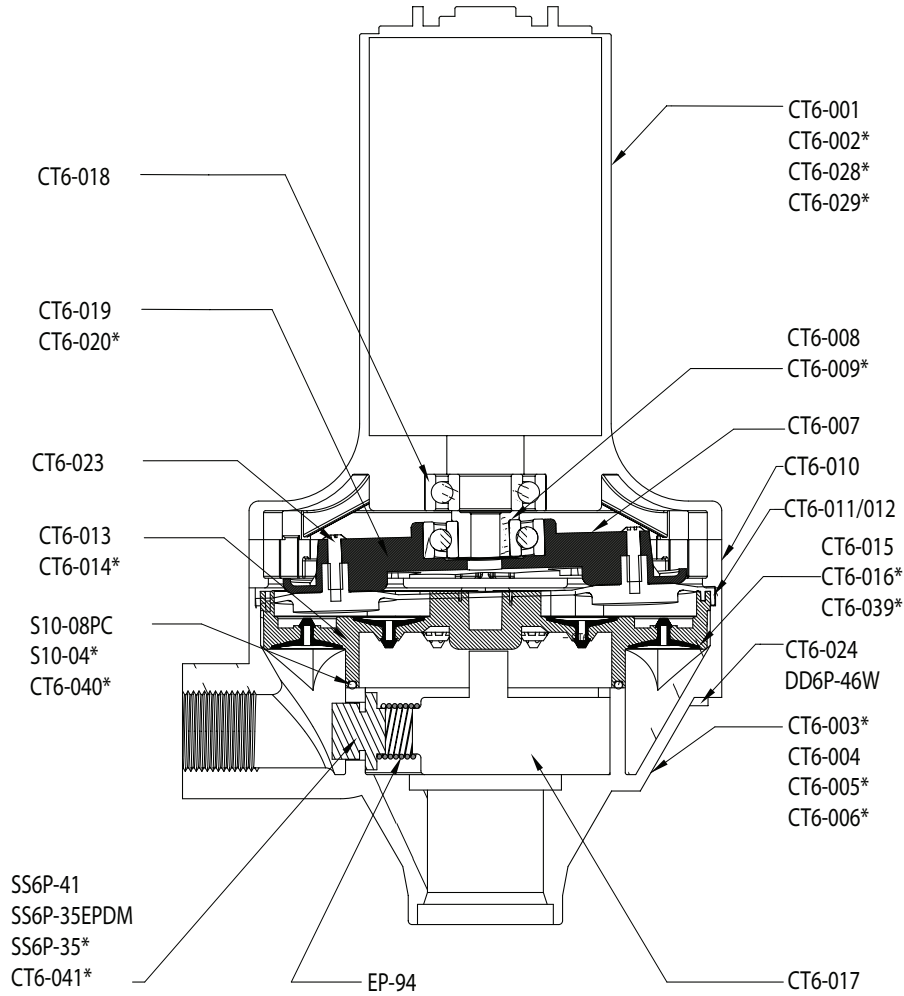
NOTE: Ensure chemical compatibility between the liquid pumped and the wetted pump components prior to use.

### Pressure vs. Flow (water @ 70°F)



Data shown are for standard CT6, 12V pump.

Cross-Sectional Drawings



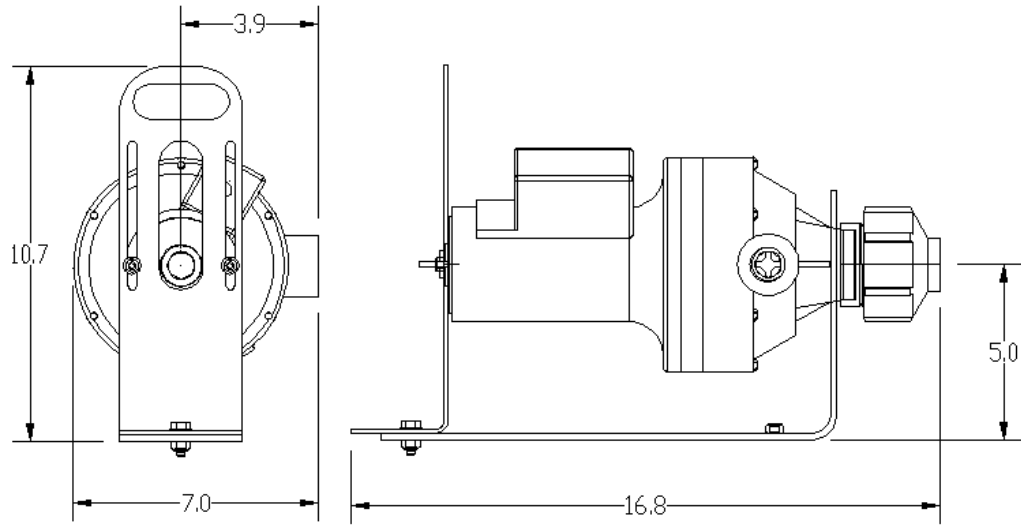
| ITEM     | DESCRIPTION                                |
|----------|--|
| CT6-001  | Motor Assembly (Green 12V)                 |
| CT6-002* | Motor Assembly HF                          |
| CT6-003* | <b>Housing</b> - Inlet: MM, Outlet: NPT    |
| CT6-004* | <b>Housing</b> - Inlet: MM, Outlet: BSPP   |
| CT6-005  | <b>Housing</b> - Inlet: NPT, Outlet: NPT   |
| CT6-006* | <b>Housing</b> - Inlet: BSPP, Outlet: BSPP |
| CT6-007  | Wobble Plate                               |
| CT6-008  | Bushing                                    |
| CT6-009* | Bushing HF                                 |
| CT6-010  | Spacer (Aluminum)                          |
| CT6-011  | Diaphragm                                  |
| CT6-013  | Valve Plate                                |
| CT6-014* | Valve Plate HF                             |
| CT6-015  | Valves (Peroxide EPDM)                     |
| CT6-016* | Valves (Viton)                             |

| ITEM        | DESCRIPTION               |
|-------------|---------------------------|
| CT6-017     | Bypass Support            |
| CT6-018     | Bearing                   |
| CT6-023     | Screw (Wobble plate)      |
| CT6-024     | Screw (Housing)           |
| CT6-039     | Valve, Santoprene         |
| CT6-040     | O-ring, Santoprene        |
| CT6-041     | Bypass seal, Santoprene   |
| DD6P-46W    | Stainless Steel Washer    |
| SS6P-41     | Bypass valve              |
| EP-94       | Bypass valve spring       |
| SS6P-35EPDM | Bypass valve gasket       |
| SS6P-35*    | Bypass valve gasket Viton |
| S10-08      | O-ring                    |
| S10-04      | O-ring (Viton)            |

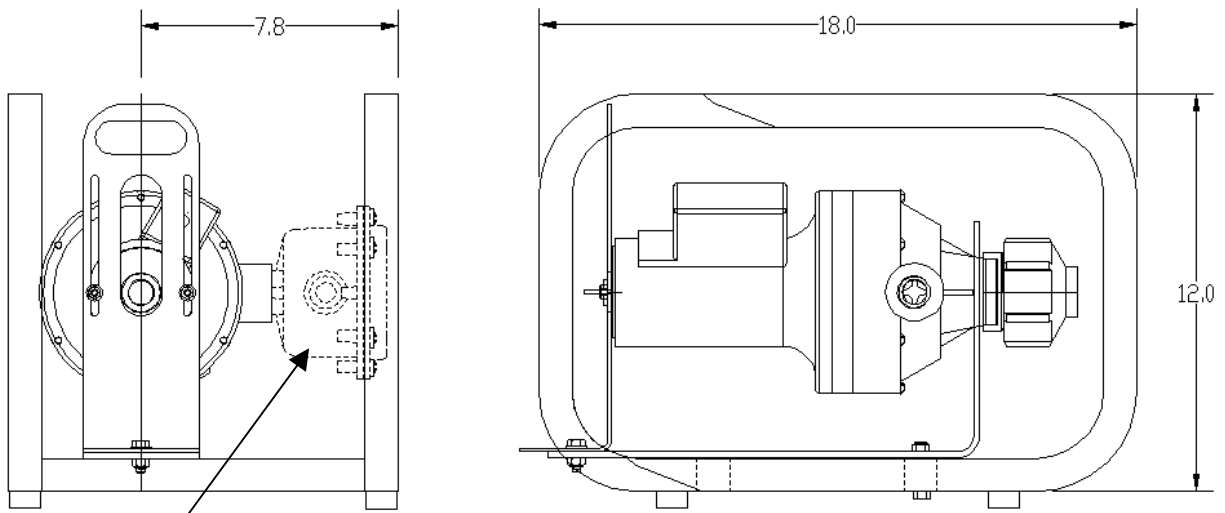
\* optional

### General Arrangement Drawings

#### 1- Horizontally Mounted CT6 Pump With Brackets

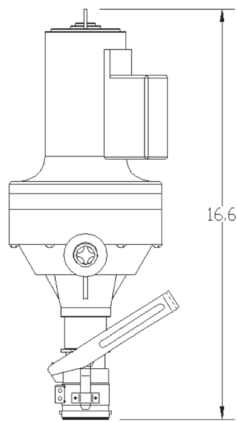


#### 2- CT6 CADDY System

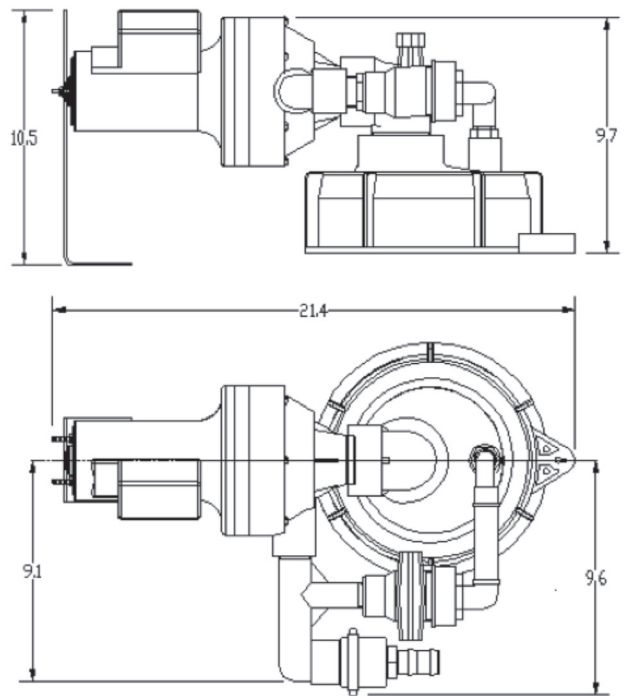


Flow Meter shown optional

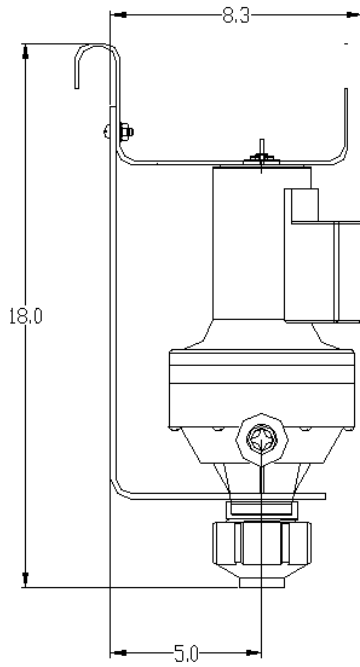
3- Vertical CT6 Pump With Micromatic Valve



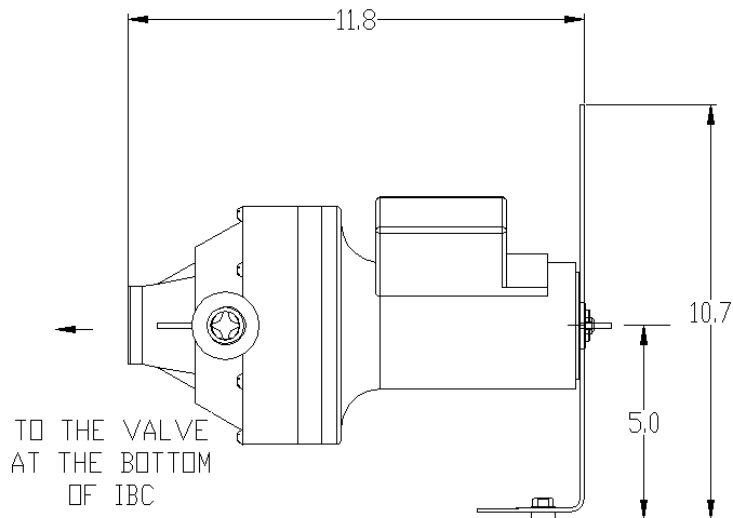
4- Horizontally Mounted CT6 Pump With SPAN Cap



**5. Side Mounted CT6 Pump for Intermediate Bulk Containers (IBCs)**



**6. Valve Mounted CT6 Pump for Intermediate Bulk Containers (IBCs)**



## CT6 Engineering Data

### Bare Pump Dimensions:

7" wide at widest point x 13" long (115V model is 15" long including fan guard)

### Weight:

12 lbs. with power cable

### Material of construction:

#### Wetted parts

Glass filled polypropylene injection molded pump housing, valve plate, and bypass valve; Santoprene diaphragm; peroxide cured EPDM valves and seals; 302 stainless steel bypass valve spring

#### Mechanical parts

Die cast aluminum wobble plate, offset bushing, spacer, and motor housing; powder coated steel motor tube, 18-8 stainless steel machine screws and washers

### Input voltage:

- 12 VDC (nominal)
- 115 VAC

### Fluid Connections:

- 2" male NPT inlet with 1" female NPT discharge
- Integral Micro Matic coupler inlet with 1" female NPT discharge
- Integral Micro Matic coupler inlet with ¾" female BSPP discharge
- 1" female BSPP inlet with ¾" female BSPP discharge



## Standard Lead Times

Lead times are based on acceptance of Flowserve Terms and Conditions.

Two to three business days (refer to the factory for high volume orders).

**This section is to be used as a guide and ALL deliveries and must be checked with Flowserve Scienco™.**

### **THE FOLLOWING NOTES AND INSTRUCTIONS ARE IMPORTANT AND MUST BE READ IN CONJUNCTION WITH THE DELIVERY SCHEDULE FOR EACH PRODUCT TYPE.**

1. Deliveries given in the schedule are Ex-Works in working weeks as defined on this page and make no allowance for national or local holidays.
2. Deliveries are date from receipt of complete purchase order, enabling us to proceed with manufacture.
3. When optional extras are required, then the longest time shown is that which rules.
4. Orders sold FOB/CFR/CIF + one working week
5. If legislation of documents required + two working weeks

#### **Delivery Definition**

1. Delivery period commences with the receipt of an order by the relevant Customer Service/Order Acquisition.
2. Contractual delivery should always be clearly stated on all tenders. This will normally be 'Ex Works' but will generally be defined by the customer requirements and can be:
  - a) Notification of Readiness
  - b) FOB
  - c) CIF
  - d) DDP, etc.

If in doubt, Ex-Works should be used.

#### **Notes:**

- If the delivery period cannot commence because of insufficient information to proceed, then an order does not exist and no acknowledgement will be issued. The tender is still at negotiation.
- Delivery times are estimates only.
- Delays occasioned by carriers are not the seller's responsibility.

## Typical Specifications

### Design

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.

### Housing

The CT6 has a glass fiber reinforced polypropylene pump housing, and it is offered with four combinations of housing inlets and outlets. The standard housing (most often used in agricultural applications) has a 2" NPT male inlet and a 1" female NPT outlet. For customers requiring British threads, we offer a pump housing with a 1" BSPP inlet and a 3/4" BSPP discharge connection (both female). We also offer two housing varieties with Micro Matic couplers installed in the inlet for quick, direct tank mounting. Those pumps are available with either a 1" female NPT or a 3/4" female BSPP discharge connection. More plumbing configurations are available through the use of reducing couplings and adapters.

### Wetted Parts

Santoprene diaphragm, peroxide cured EPDM valves and seals, and a stainless steel bypass valve spring. Viton and Santoprene valves and seals are also available.

### Bypass Valve

An internal bypass valve protects the pump and motor from damage in the short term by relieving pressure and recirculating flow internally in the event a discharge valve is closed while the pump is running.

### Motors

Flowserve Scienco provides a 12V DC motor with a 20' (6 m) long, 12-gauge cable as our standard motor configuration. An optional higher torque motor with a 20' (6 m) 10-gauge cable is included on HF models. Both include blade style fuses in-line with the cable for ease of service. We also offer models for use with a standard 115V AC power source.

### Brackets

A variety of mounting brackets are available with the CT6. Some are used in conjunction with an elbow and cap which connect directly to a 7.5" (190.5 mm) tank opening. Several brackets are available for mounting the pump to the side of a container. A "Caddy" frame is combined with other brackets and a pump-mounted flowmeter to make a robust, portable package.

### Hoses

Several types of hoses are available, and they can be combined with ball valves and spouts for dispensing. A fueling station style dispensing nozzle is also available. Flowmeters can be pump-mounted or a "flow through" version can be used at the hose end.

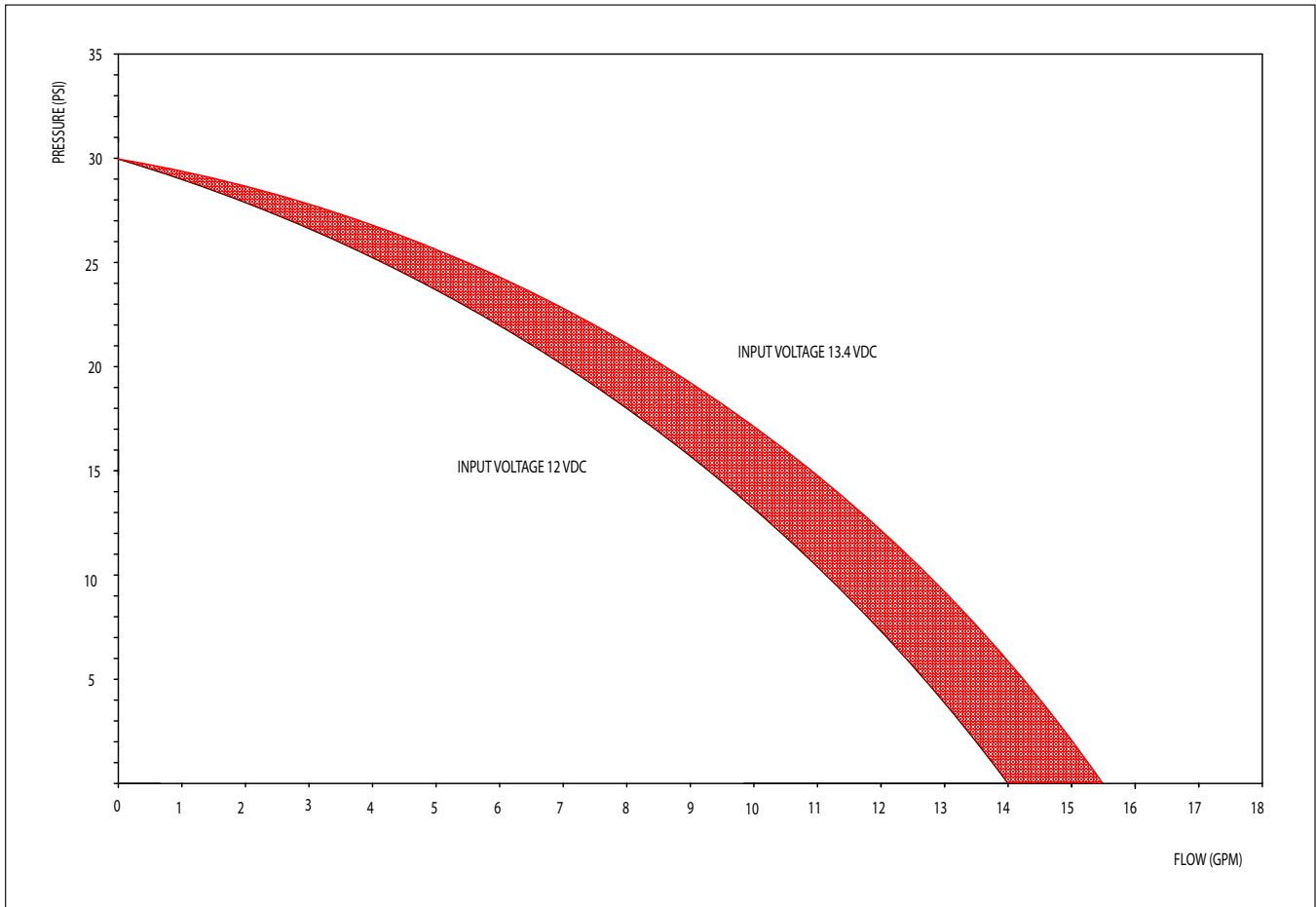
### Recirculation System

A recirculation feature is also offered to agitate the chemical in the event settling has occurred. Flowserve Scienco offers a unique and powerful recirculation option that adds value for the end user by ensuring each batch dispensed has the same potency.

## Typical Applications

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

### Coverage Charts



### Pump Selection Program Guidelines

Our customer service representatives will be happy to guide you through the selection process, and help you determine which pump configuration is the best for your application. For your convenience, the Pump Order Check List is shown below.

#### Customer Pump Order Check List

|                            |                                 |                                    |  |
|----------------------------|---------------------------------|------------------------------------|--|
|                            | AG <input type="checkbox"/>     | DEF <input type="checkbox"/>       | HF <input type="checkbox"/>                |
| POWER SUPPLY               | 12V <input type="checkbox"/>    | 115V <input type="checkbox"/>      |  |
| SEALS                      | EPDM <input type="checkbox"/>   | VITON <input type="checkbox"/>     | SANTOPRENE <input type="checkbox"/>        |
| INLET                      | NPT <input type="checkbox"/>    | BSPP <input type="checkbox"/>      | MICRO-MATIC VALVE <input type="checkbox"/> |
| OUTLET                     | NPT <input type="checkbox"/>    | BSPP <input type="checkbox"/>      |  |
| CADDY                      | YES <input type="checkbox"/>    | NO <input type="checkbox"/>        |  |
| CHEMICAL EVACUATION SYSTEM | YES <input type="checkbox"/>    | NO <input type="checkbox"/>        |  |
| RECIRCULATION SYSTEM       | YES <input type="checkbox"/>    | NO <input type="checkbox"/>        |  |
| SEED TREATMENT SYSTEM      | YES <input type="checkbox"/>    | NO <input type="checkbox"/>        |  |
| METER                      | STD <input type="checkbox"/>    | FLOW-THRU <input type="checkbox"/> | STAINLESS STEEL <input type="checkbox"/>   |
| HOSE DIAMETER              | 3/4" <input type="checkbox"/>   | 1" <input type="checkbox"/>        |  |
| HOSE LENGTH                | 12' <input type="checkbox"/>    | 20' <input type="checkbox"/>       | 30' <input type="checkbox"/>               |
| HOSE FTT 1                 | NO FTT <input type="checkbox"/> | BRASS <input type="checkbox"/>     | POLYPROP. <input type="checkbox"/>         |
|                            | 3/4"SS <input type="checkbox"/> | 1"SS <input type="checkbox"/>      | 3/4"BSPP SS <input type="checkbox"/>       |
| HOSE FTT 2                 | NO FTT <input type="checkbox"/> | BRASS <input type="checkbox"/>     | POLYPROP. <input type="checkbox"/>         |
|                            | 3/4"SS <input type="checkbox"/> | 1"SS <input type="checkbox"/>      | 3/4"BSPP SS <input type="checkbox"/>       |

### Pump Nomenclature

The following example explains how the part number identifies key construction features:

CT6 - X X X X X - X X X

UNIQUE PUMP MODEL IDENTIFIER

| MOTOR      |   | MATERIAL   |   | HOUSING   |   | CONFIG   |   | MARKET |   |
|------------|---|------------|---|-----------|---|----------|---|--------|---|
| 12V STD GR | 1 | EPDM       | E | NPT-MM    | 3 | BARE     | B | AG     | A |
| 12V STD BL | 2 | VITON      | V | BSPP-MM   | 4 | CADDY    | D | DEF    | D |
| 12V HF     | 3 | SANTOPRENE | S | NPT-NPT   | 5 | CES      | C |        |   |
| 115V       | 4 |            |   | BSPP-BSPP | 6 | CAGE     | G |        |   |
|            |   |            |   |           |   | SEED TR. | S |        |   |
|            |   |            |   |           |   | MIX      | M |        |   |

Example: CT6-1E5CA-000



**SEM-10**

Includes Viton 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 HDPE (High Density polyethylene) 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-rings.

**Xtube-TE**

Includes EPDM O-rings.

Threaded adjustable HDPE (High Density polyethylene) 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



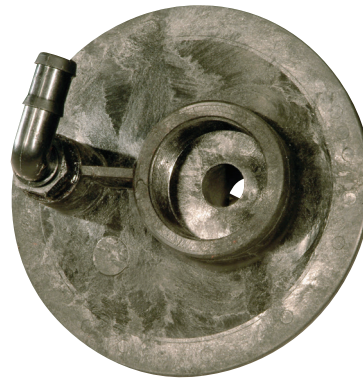
**CLM-01**  
Male Clean-Lock, pump portion with 90° discharge elbow and 360° swivel. A Clean Aid rinse-out device with extra O-rings is included with each male Clean-Lock.



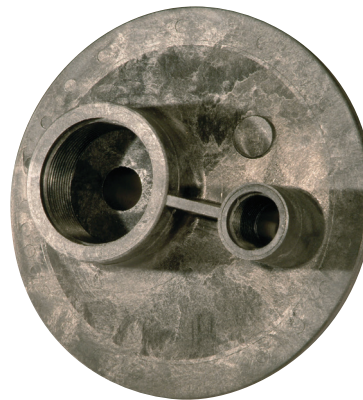
**PH-20**  
Non-metallic ball valve and spout.



**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**

**PH-25B**

Includes buttress threads. Bung adapter.



**SPA 700G**

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



**PHA 06**

Battery clips and cable.

## Aftermarket and Recommended Spare Parts

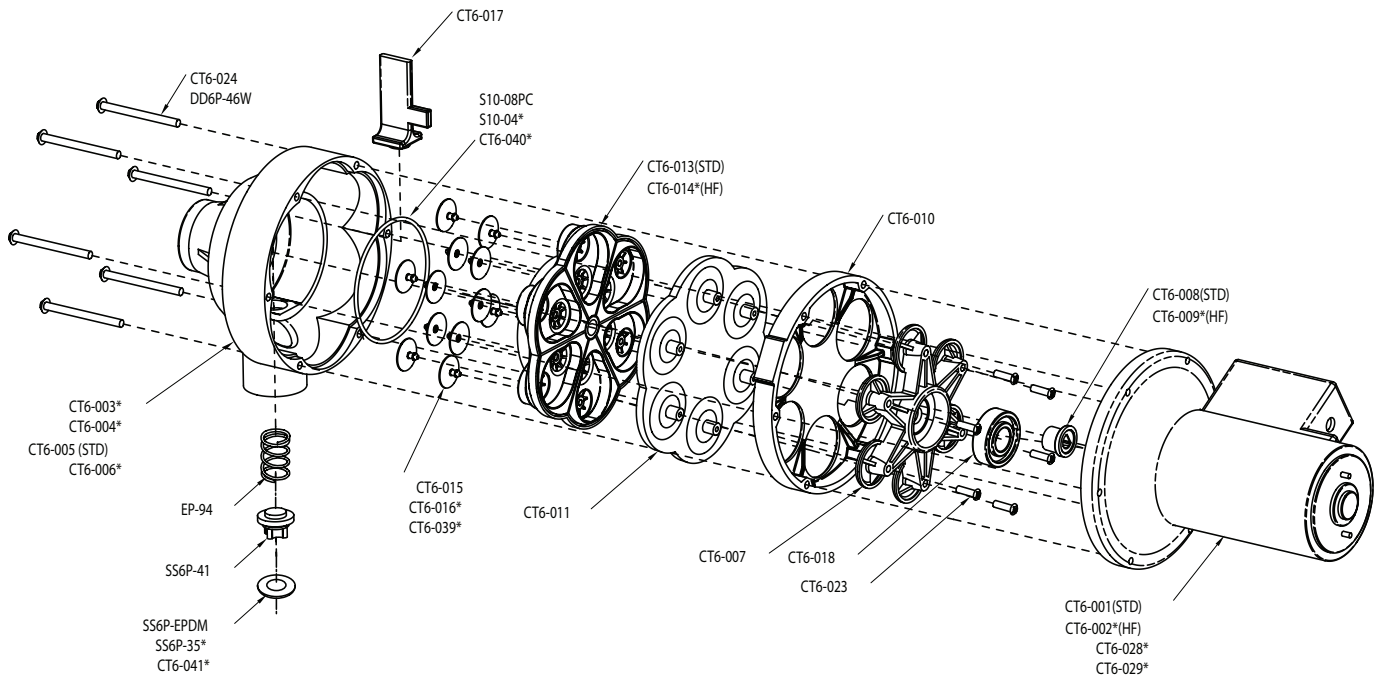
### Ordering of spare parts

Flowserve keeps records of all pumps that have been supplied via serial number, and offers a number of kits for pump servicing needs.

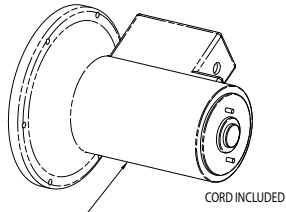
| ITEM     | DESCRIPTION                                |
|----------|--|
| CT6-001  | Motor Assembly (Green 12V)                 |
| CT6-002* | Motor Assembly HF                          |
| CT6-003* | <b>Housing</b> - Inlet: MM, Outlet: NPT    |
| CT6-004* | <b>Housing</b> - Inlet: MM, Outlet: BSPP   |
| CT6-005  | <b>Housing</b> - Inlet: NPT, Outlet: NPT   |
| CT6-006* | <b>Housing</b> - Inlet: BSPP, Outlet: BSPP |
| CT6-007  | Wobble Plate                               |
| CT6-008  | Bushing                                    |
| CT6-009* | Bushing HF                                 |
| CT6-010  | Spacer (Aluminum)                          |
| CT6-011  | Diaphragm                                  |
| CT6-013  | Valve Plate                                |
| CT6-014* | Valve Plate HF                             |
| CT6-015  | Valves (Peroxide EPDM)                     |
| CT6-016* | Valves (Viton)                             |

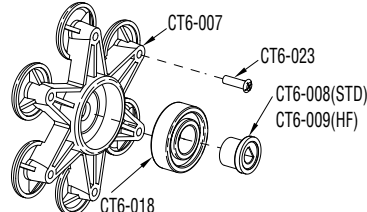
| ITEM        | DESCRIPTION               |
|-------------|---------------------------|
| CT6-017     | Bypass Support            |
| CT6-018     | Bearing                   |
| CT6-023     | Screw (Wobble plate)      |
| CT6-024     | Screw (Housing)           |
| CT6-039     | Valve, Santoprene         |
| CT6-040     | O-ring, Santoprene        |
| CT6-041     | Bypass seal, Santoprene   |
| DD6P-46W    | Stainless Steel Washer    |
| SS6P-41     | Bypass valve              |
| EP-94       | Bypass valve spring       |
| SS6P-35EPDM | Bypass valve gasket       |
| SS6P-35*    | Bypass valve gasket Viton |
| S10-08      | O-ring                    |
| S10-04      | O-ring (Viton)            |

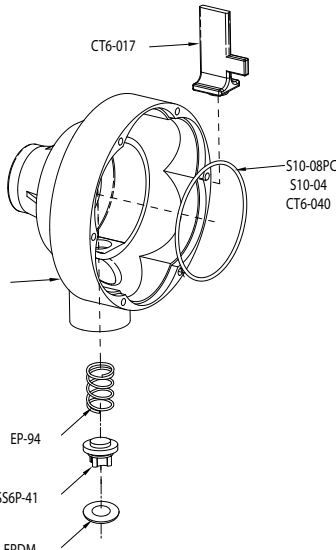
\* optional



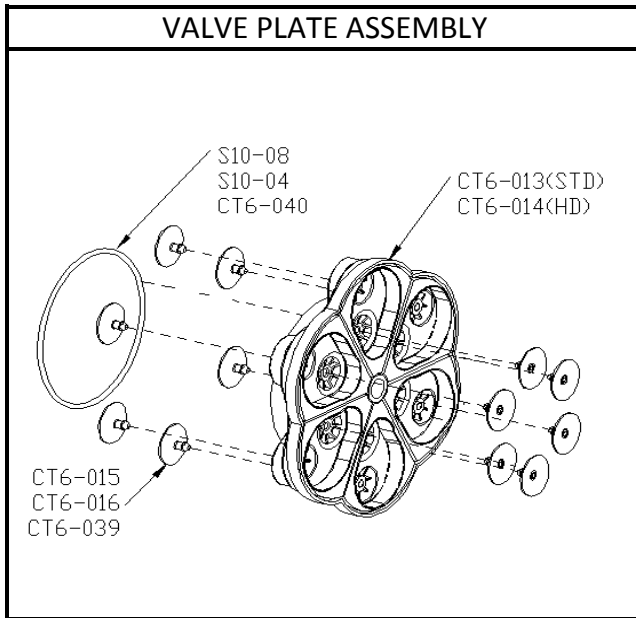
CT6 DIAPHRAGM PUMP - EXPLODED VIEW

| MOTOR ASSEMBLY   |  |         |
|--|--|---------|
|  <p>CORD INCLUDED</p> <p>CT6-001, 12V GREEN<br/>CT6-002, 12V, GREY(HF)<br/>CT6-028, 12V, BLUE<br/>CT6-029, 115V, BLUE</p> |  |         |
| KIT P/N  | DESCRIPTION  | PARTS   |
| CT6KIT-101   | MOTOR ASSEMBLY, 12V CT6 GREEN, INCLUDING SWITCH AND CABLE    | CT6-001 |
| CT6KIT-102   | MOTOR ASSEMBLY, 12V CT6 HF, GRAY, INCLUDING SWITCH AND CABLE | CT6-002 |
| CT6KIT-103   | MOTOR ASSEMBLY, 12V CT6 BLUE, INCLUDING SWITCH AND CABLE     | CT6-028 |
| CT6KIT-104   | MOTOR ASSEMBLY, 115V CT6 BLUE, INCLUDING SWITCH AND CABLE    | CT6-029 |

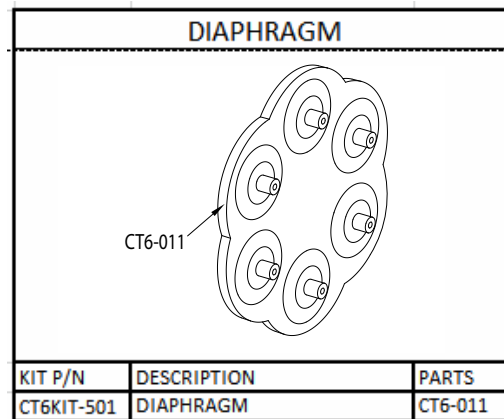
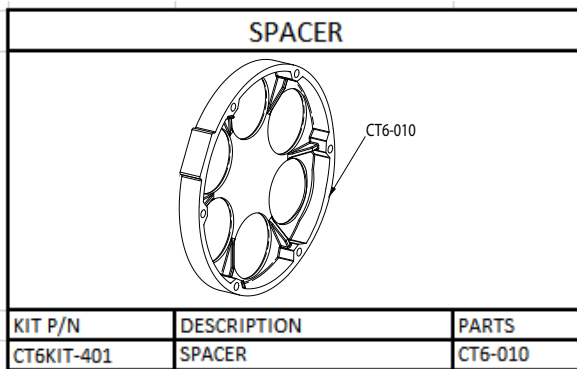
| WOBBLE PLATE ASSEMBLY  |                           |  |
|--|---------------------------|--|
|  <p>NOTE: CT6-007, CT6-018, AND CT6-008 OR 009 COME PRE-ASSEMBLED.</p> |                           |  |
| KIT P/N  | DESCRIPTION               | PARTS                                    |
| CT6KIT-601   | WOBBLE PLATE ASSEMBLY     | CT6-007<br>CT6-008<br>CT6-018<br>CT6-023 |
| CT6KIT-602   | WOBBLE PLATE ASSEMBLY, HF | CT6-007<br>CT6-009<br>CT6-018<br>CT6-023 |

| PUMP HOUSING ASSEMBLY   |  |
|---|--|
|  <p>CT6-003<br/>CT6-004<br/>CT6-005<br/>CT6-006</p> <p>EP-94</p> <p>SS6P-41</p> <p>SS6P-EPDM<br/>SS6P-35*<br/>CT6-041*</p> <p>CT6-017</p> <p>S10-08PC<br/>S10-04<br/>CT6-040</p> |  |

| KIT P/N    | DESCRIPTION                                       | PARTS   | KIT P/N    | DESCRIPTION   | PARTS  |
|------------|---|---|------------|---|--|
| CT6KIT-201 | KIT, HOUSING, INLET MM, OUTLET 1"NPT, EPDM        | CT6-003<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35EPDM<br>S10-08 | CT6KIT-207 | KIT, HOUSING, INLET 2"NPT, OUTLET 1"NPT, VITON          | CT6-005<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35<br>S10-04  |
| CT6KIT-202 | KIT, HOUSING, INLET MM, OUTLET 3/4" BSPP, EPDM    | CT6-004<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35EPDM<br>S10-08 | CT6KIT-208 | KIT, HOUSING, INLET 1"BSPP, OUTLET 3/4"BSPP, VITON      | CT6-006<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35<br>S10-04  |
| CT6KIT-203 | KIT, HOUSING, INLET 2"NPT, OUTLET 1"NPT, EPDM     | CT6-005<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35EPDM<br>S10-08 | CT6KIT-209 | KIT, HOUSING, INLET MM, OUTLET 1"NPT, SANTOPRENE        | CT6-003<br>CT6-017<br>EP-94<br>SS6P-41<br>CT6-041<br>CT6-040 |
| CT6KIT-204 | KIT, HOUSING, INLET 1"BSPP, OUTLET 3/4"BSPP, EPDM | CT6-006<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35EPDM<br>S10-08 | CT6KIT-210 | KIT, HOUSING, INLET MM, OUTLET 3/4" BSPP, SANTOPRENE    | CT6-004<br>CT6-017<br>EP-94<br>SS6P-41<br>CT6-041<br>CT6-040 |
| CT6KIT-205 | KIT, HOUSING, INLET MM, OUTLET 1"NPT, VITON       | CT6-003<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35<br>S10-04     | CT6KIT-211 | KIT, HOUSING, INLET 2"NPT, OUTLET 1"NPT, SANTOPRENE     | CT6-005<br>CT6-017<br>EP-94<br>SS6P-41<br>CT6-041<br>CT6-040 |
| CT6KIT-206 | KIT, HOUSING, INLET MM, OUTLET 3/4" BSPP, VITON   | CT6-004<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35<br>S10-04     | CT6KIT-212 | KIT, HOUSING, INLET 1"BSPP, OUTLET 3/4"BSPP, SANTOPRENE | CT6-006<br>CT6-017<br>EP-94<br>SS6P-41<br>CT6-041<br>CT6-040 |



| KIT P/N    | DESCRIPTION                      | PARTS                         |
|------------|----------------------------------|-------------------------------|
| CT6KIT-301 | VALVE PLATE ASSEMBLY, EPDM       | CT6-013<br>CT6-015<br>S10-08  |
| CT6KIT-302 | VALVE PLATE ASSEMBLY, VITON      | CT6-013<br>CT6-016<br>S10-04  |
| CT6KIT-303 | VALVE PLATE ASSEMBLY, SANTOPRENE | CT6-013<br>CT6-039<br>CT6-040 |
| CT6KIT-303 | VALVE PLATE ASSEMBLY, EPDM, HF   | CT6-014<br>CT6-015<br>S10-08  |
| CT6KIT-304 | VALVE PLATE ASSEMBLY, VITON, HF  | CT6-014<br>CT6-016<br>S10-04  |
| CT6KIT-302 | VALVE PLATE ASSEMBLY, SANTOPRENE | CT6-014<br>CT6-039<br>CT6-040 |



## FAQs (Frequently Asked Questions)

- 1. Why should I buy the CT6 vs. competition?**  
 The CT6 is the premier chemical transfer product, offering the best solution to various customer applications. A quantities competitive analysis demonstrates the multiple CT6 advantages. Standard and High-Flow versions of the CT6 provide for the competitive advantages in flow rate, liquid viscosity, handling, and operating pressure.
- 2. Can the CT6 be used for DEF?**  
 Yes, the CT6 can be used for DEF.
- 3. Is CT6 a self-priming pump?**  
 Yes, CT6 is a self-priming pump from completely dry state to startup.
- 4. What is the fluid operating temperature range for CT6?**  
 The CT6 can operate with fluids above their freezing point up to 66°C (150°F).
- 5. What is the flow rate?**  
 For base model up to 13 gpm (50 lpm) max, high-flow model up to 18 gpm (68 lpm), both at 16 °C (60 °F).
- 6. What are the benefits of higher CT6 flow rate?**  
 Faster dispensing; handling even viscous products under cold conditions.
- 7. What are the chemical compatibility options of CT6?**  
 CT6 is compatible with a complete range of crop protection chemicals. Wetted parts are glass filled polypropylene, with Santoprene diaphragm, and EPDM or Viton seals, depending on the application.
- 8. What configurations are available for CT6 pumps?**  
 The pump can be configured with a variety of brackets, dip tubes, flowmeters, fittings, hoses and valves to provide a complete pumping system for different applications.
- 9. What are the viscosity limits for CT6 pumps?**  
 The CT6 can transfer thin as well as somewhat viscous chemicals, up to 2500 cps.
- 10. What are the standard materials of construction for the CT6?**  
 Glass filled polypropylene, Santoprene, EPDM or Viton.
- 11. What are electrical power options for CT6 pumps?**  
 Available options are for 12 volt and 115 volt, applicable for both mobile and stationary mix and load sites.
- 12. What are available port threadings?**

The standard housing (most often used in agricultural applications) has a 2" NPT male inlet and a 1" female NPT outlet. For customers requiring British threads, we offer pump housing with a 1" BSPP inlet and a 3/4" BSPP discharge connection (both female). We also offer two housing varieties with Micro Matic couplers installed in the inlet for quick, direct tank mounting. Those pumps are available with either a 1" female NPT or a 3/4" female BSSP discharge connection. More plumbing configurations are available through the use of reducing couplings and adapters.

- 13. Is the CT6 pump easy to service?**  
 Yes, because it is designed with fewer parts than the pump it replaces, and it is easy to rebuild if ever necessary.
- 14. Is CT6 easy to flush at the end of season?**  
 Yes, CT6 is easy to flush at the end of season. If the pump is not to be used for an extended period of time, it is suggested to flush any chemicals from the pump with fresh water. Flushing the pump will ensure a long, problem-free life and easy startup when the pump is needed again.
- 15. How do I calibrate the flow meter?**  
 Refer to the SEM-10 Flow Meter Manual, or call 1-800-343 PUMP (7867) for additional assistance.
- 16. Are special tools required to maintain CT6 pumps?**  
 Standard hand tools are normally adequate for performing routine maintenance on the CT6.

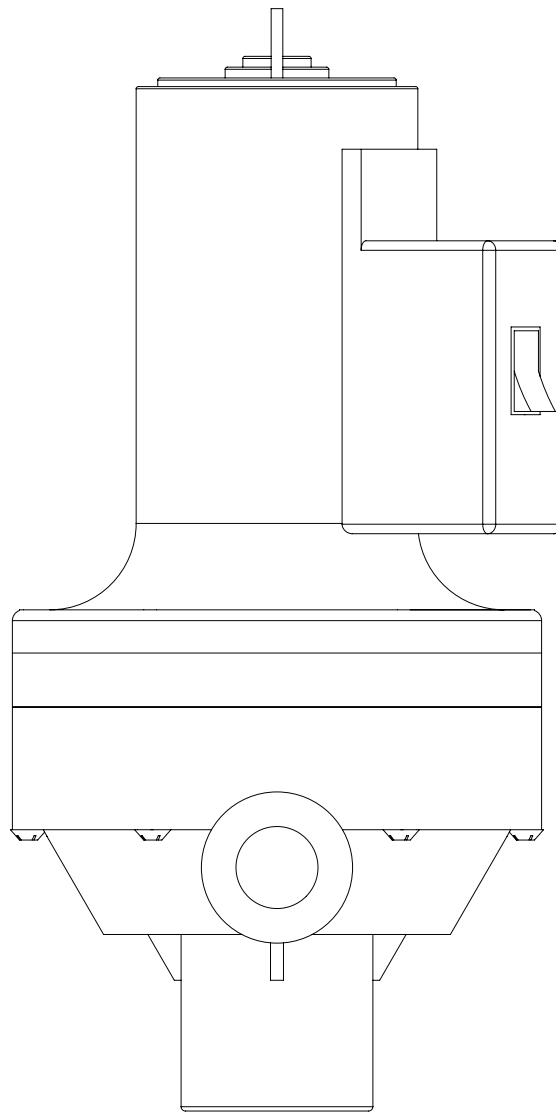


# ***User Instructions*** ***CT6 Diaphragm Pump***

***Six-piston diaphragm pump  
for chemical transfer***

*PCN 75707883 (ENGLISH)*

***Installation***  
***Operation***  
***Maintenance***



## Contents

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| 1.5 Safety .....                             | 16-3                |
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| 4.2 Starting the pump.....                   | 16-5                |
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## 1. Introduction and Safety

### 1.1 General

**⚠️ *These instructions must always be kept close to the product's operating location or directly with the product.***

Flowserve products are designed, developed, and manufactured with state-of-the-art technologies in modern facilities. The unit is produced with great care and commitment to continuous quality control, utilizing sophisticated quality techniques and safety requirements.

Flowserve is committed to continuous quality improvement and being at service for any further information about the product in its installation and operation or about its support products, repair and diagnostic services.

These instructions are intended to facilitate familiarization with the product and its permitted use. Operating the product in compliance with these instructions is important to help ensure reliability in service and avoid risks. The instructions may not take into account local regulations; ensure such regulations are observed by all, including those installing the product. Always coordinate repair activity with operations personnel, and follow all plant safety requirements and applicable safety and health laws and regulations.

**⚠️ *These instructions must be read prior to installing, operating, using and maintaining the equipment in any region worldwide. The equipment must not be put into service until all the conditions relating to safety noted in the instructions have been met.***

### 1.2 Disclaimer

***Information in these User Instructions is believed to be reliable. In spite of all the efforts of Flowserve to provide sound and all necessary information, the content of this manual may appear insufficient and is not guaranteed by Flowserve as to its completeness or accuracy.***

Flowserve manufactures products to exacting International Quality Management System Standards as certified and audited by external Quality Assurance organizations. Genuine parts and accessories have been designed, tested and incorporated into the products to help ensure their continued product quality and performance in use. As Flowserve cannot test parts and accessories sourced from other vendors, the incorrect incorporation of such parts and accessories may adversely affect the performance and safety features of the products. The failure to properly select, install or use authorized Flowserve parts and accessories is considered to be misuse. Damage or failure caused by misuse is not covered by the Flowserve warranty. In addition, any modification of Flowserve products or removal of original components may impair the safety of these products in their use.

### 1.3 Copyright

All rights reserved. No part of these instructions may be reproduced, stored in a retrieval system or transmitted in any form or by any means without prior permission of Flowserve.

### 1.4 Duty conditions

This product has been selected to meet the specifications of your purchase order. The acknowledgement of these conditions has been sent separately to the Purchaser. A copy should be kept with these instructions.

**⚠️ *The product must not be operated beyond the parameters specified for the application. If there is any doubt as to the suitability of the product for the application intended, contact Flowserve for advice, quoting the serial number.***

### 1.5 Safety

**1.5.1 Summary of safety markings:** These User Instructions contain specific safety markings where non-observance of an instruction would cause hazards. The specific safety markings are:

**⚠️ *This symbol indicates safety instructions where non-compliance would affect personal safety and could result in loss of life.***

**1.5.2 Personnel qualification and training:** All personnel involved in the operation, installation, inspection and maintenance of the unit must be qualified to carry out the work involved. If the personnel in question do not already possess the necessary knowledge and skill, appropriate training and instruction must be provided. If required, the operator may commission the manufacturer/supplier to provide applicable training.

Always coordinate repair activity with operations and health and safety personnel, and follow all plant safety requirements and applicable safety and health laws and regulations.

**⚠️ *PUMP IS NOT TO BE USED IN POTENTIALLY EXPLOSIVE ATMOSPHERES.***



## 2. Transport and Storage

### 2.1 Consignment receipt and unpacking

Immediately after receipt of the equipment, it must be verified for contents and inspected for damages in transportation. Any shortage and/or damage must be reported immediately to distributor/Flowserve Scienco and must be received within 10 days of receipt of the equipment. Later claims cannot be accepted.

Check any boxes or wrappings for any accessories or spare parts that may be packed separately with the equipment.

Each product has a unique serial number. Check that this number corresponds with that advised, and always quote this number in correspondence as well as when ordering spare parts or further accessories.

### 2.3 Storage

Normal packaging is designed to protect the pump and parts during shipment and storing.

### 2.4 Recycling at the end of product life

At the end of the service life of the product, the relevant materials and parts should be recycled or disposed of using an environmentally acceptable method and in accordance with local regulations.



Make sure that hazardous substances are disposed of safely and that the correct personal protective equipment is used. The safety specifications must be in accordance with the current local regulations at all times.

## 3 Description

### 3.1 Configurations

The CT6 is the premier chemical transfer product, offering the best solution to various customer applications. A competitive analysis demonstrates the multiple CT6 advantages. Standard and High-Flow versions of the CT6 provide for the competitive advantages in flow rate, liquid viscosity, handling and operating pressure.

Extremely simple design including housing (with the diaphragm with molded-in pistons, valves and valve plate, spacer and wobble plate assembly) and motor assembly, simplifies maintenance and field replacement.

The CT6 is designed to transfer chemicals from drums, intermediate bulk containers, and mini bulk systems, as well as other containers.

The CT6 is powerful and versatile, capable of generating a pressure up to 30 psi (2.0 bar), and to pump viscous chemicals, even at low ambient temperatures (it is recommended to avoid use below liquid freezing point).

The 12-volt motor is engineered to produce flow rate up to 13 gpm (50 lpm) at 21°C (70°F) with a 30-minute duty cycle.

For application flexibility, the pump may be vertically, horizontally or side mounted. A convenient caddy system makes it highly portable. With its durable, lightweight tubular frame, the CT6 Caddy System is designed for maximum flexibility and ease of handling for users of multiple containers.

The CT6 is offered in standard and HF (high-flow) versions. Both versions can be configured with NPT or BSPP parts. An integrated closed system with Micro Matic coupler is also an option.

The pump is chemically resistant. Polypropylene pump housings and peroxide cured EPDM valves and seals are standard. Viton and Santoprene valves and seals are optional.

### 3.2 Operating parameters

- Flows up to 13 gpm (50 lpm) for base model, and 18 gpm (68 lpm) for HF model
- Liquid pressure up to 30 psi (2.0 bar)
- Liquid temperatures up to 66°C (150°F)
- Operating current of 15 to 20 amps
- Dead head current of 25 to 29 amps

### 3.3 Available equipment and accessories

The CT6 Pump is available in multiple configurations, each with varying equipment and accessories, including:

- Electronic meters
- Standard and special hoses
- Recirculation piping
- Various fittings and adapters
- Brackets
- Dispensing Nozzles
- Dip-tubes

**Refer to the Scienco Product Reference Manual FPD-1607 to learn more about the available configurations.**

### 3.4 Materials of construction

The CT6 pump is resistant to corrosion from typical ag-chem and light industrial chemicals. Wetted materials include:

- Glass filled polypropylene
- Stainless steel
- Viton
- EPDM
- Santoprene

**NOTE: Ensure chemical compatibility between liquid pumped and the pump wetted parts before using.**

## 4. Installation and Operation

### 4.1 Unpacking the pump

Unpack the pump, and make sure that pump configuration and materials of construction are correct for your application. Make all necessary connections. Use Teflon® Tape as required.

### 4.2 Starting the pump

Ensure that hoses and fittings are tightly connected. Ensure that switch is in OFF position before making the electrical connection.

For 12V version, attach battery clips securely to the power source (battery or power supply). For the 115V version, plug power cord into a GFCI outlet.

### 4.3 Priming

If the connections are free of leaks, the pump will prime within seconds of startup.

### 4.4 Operating in different temperatures

It is not recommended to start the pump if the temperature is below 0°C (32°F) for AG and below -11°C (12°F) for DEF, or higher than 66°C (150°F) for both.

### 4.5 Stopping and shutdown

At the end of the operation, turn the pump switch OFF and disconnect the cord.

**NOTE: Pump should be drained before storing. If pump is not to be used for an extended period of time, it is suggested to flush any chemicals from the pump with fresh water. Flushing the pump will ensure a long, problem-free life and easy startup when the pump is needed again.**

## 5. Maintenance



It is the final operator's responsibility to ensure that all maintenance steps are carried out by authorized and qualified personnel who have adequately familiarized themselves with the subject matter by studying this manual in detail.

## 6. Spare Parts

The decision on what spare parts to stock varies greatly depending on many factors such as the criticality of the application, and/or the time required to buy and receive new spares. This section identifies all of the components that make up pump addressed in this manual.

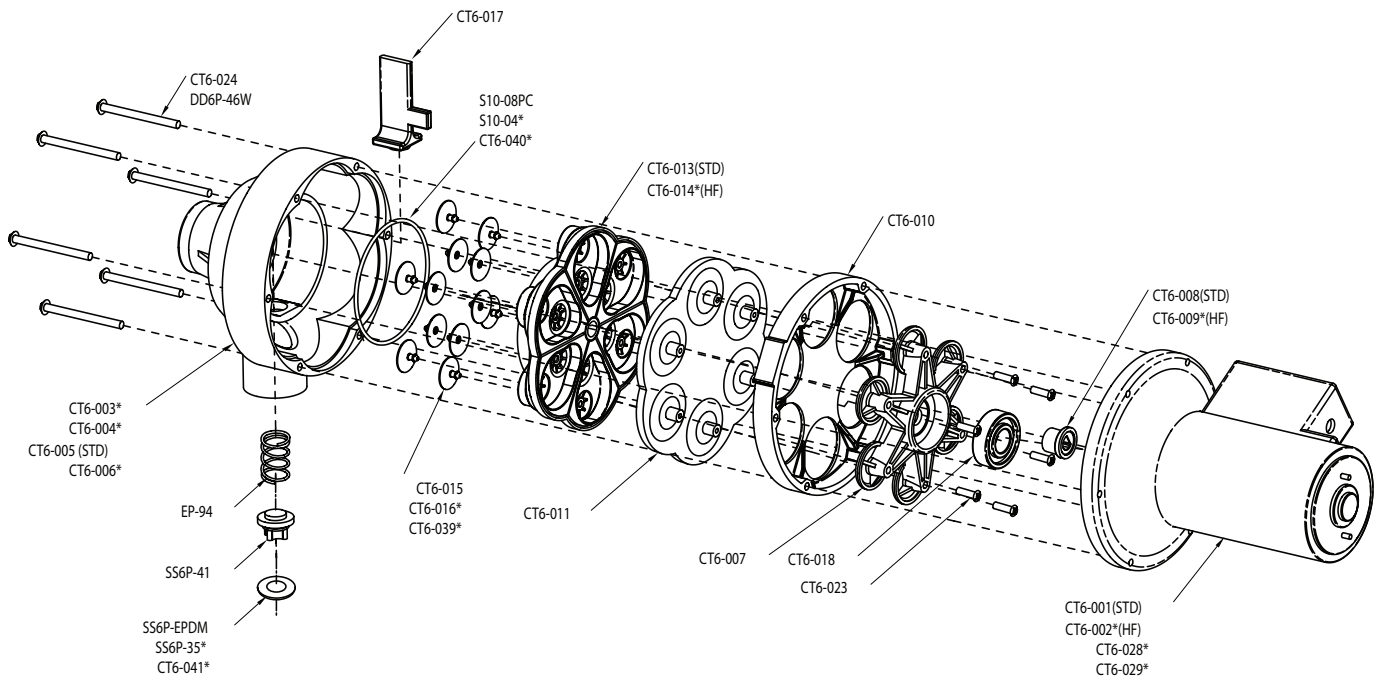
### 6.1 Ordering of spare parts

Flowserve keeps records of all pumps that have been supplied. Spare parts can be ordered from your local Flowserve sales engineer or from a Flowserve distributor or representative.

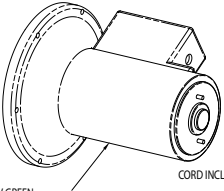
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|----------|--|
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| CT6-002* | Motor Assembly HF                          |
| CT6-003* | <b>Housing</b> - Inlet: MM, Outlet: NPT    |
| CT6-004* | <b>Housing</b> - Inlet: MM, Outlet: BSPP   |
| CT6-005  | <b>Housing</b> - Inlet: NPT, Outlet: NPT   |
| CT6-006* | <b>Housing</b> - Inlet: BSPP, Outlet: BSPP |
| CT6-007  | Wobble Plate                               |
| CT6-008  | Bushing                                    |
| CT6-009* | Bushing HF                                 |
| CT6-010  | Spacer (Aluminum)                          |
| CT6-011  | Diaphragm                                  |
| CT6-013  | Valve Plate                                |
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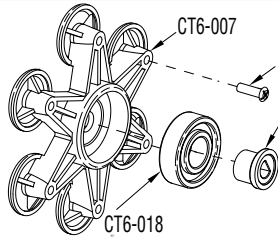
| ITEM        | DESCRIPTION               |
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| CT6-040     | O-ring, Santoprene        |
| CT6-041     | Bypass seal, Santoprene   |
| DD6P-46W    | Stainless Steel Washer    |
| SS6P-41     | Bypass valve              |
| EP-94       | Bypass valve spring       |
| SS6P-35EPDM | Bypass valve gasket       |
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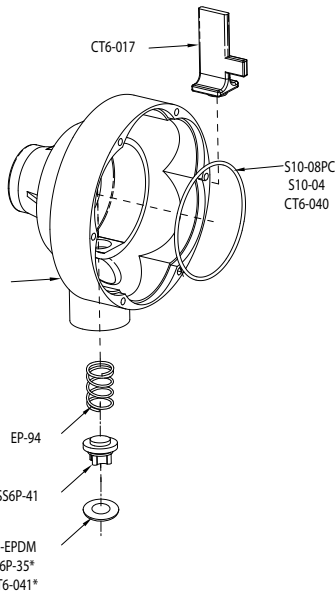
\* optional



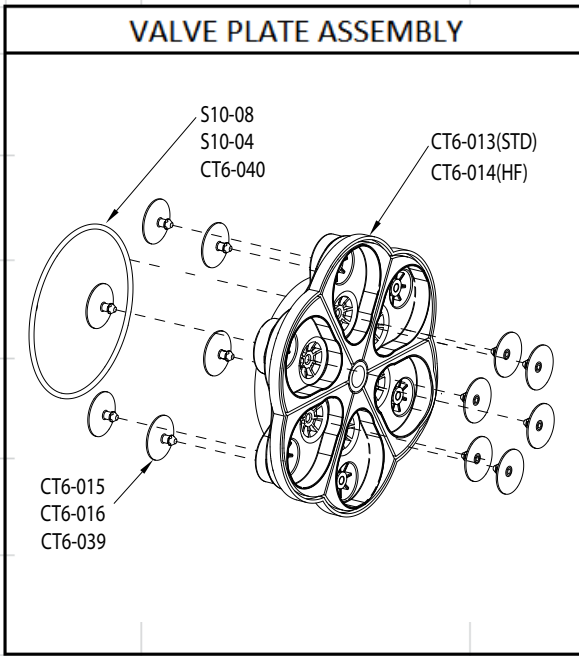
CT6 DIAPHRAGM PUMP - EXPLODED VIEW

| MOTOR ASSEMBLY   |   |         |
|--|---|---------|
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| CT6KIT-102   | CT6 HF, GRAY, INCLUDING SWITCH AND CABLE                  | CT6-002 |
| CT6KIT-103   | MOTOR ASSEMBLY, 12V CT6 BLUE, INCLUDING SWITCH AND CABLE  | CT6-028 |
| CT6KIT-104   | MOTOR ASSEMBLY, 115V CT6 BLUE, INCLUDING SWITCH AND CABLE | CT6-029 |

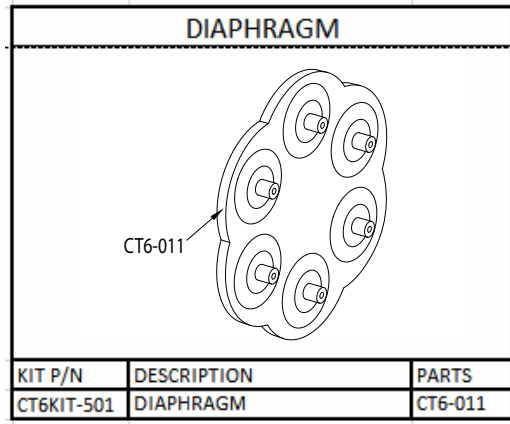
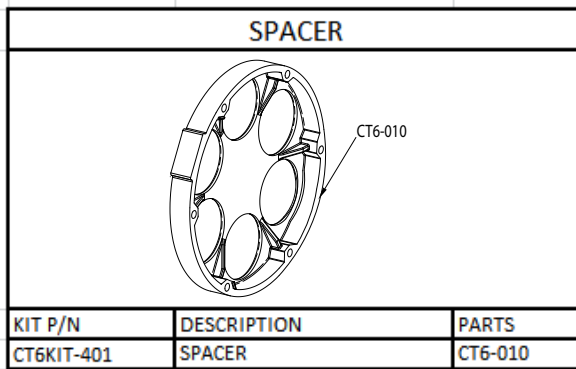
| WOBBLE PLATE ASSEMBLY  |                           |  |
|--|---------------------------|--|
|  <p>NOTE: CT6-007, CT6-018, AND CT6-008 OR 009 COME PRE-ASSEMBLED.</p> <p>CT6-007<br/>CT6-023<br/>CT6-008(STD)<br/>CT6-009(HF)<br/>CT6-018</p> |                           |  |
| KIT P/N  | DESCRIPTION               | PARTS                                    |
| CT6KIT-601   | WOBBLE PLATE ASSEMBLY     | CT6-007<br>CT6-008<br>CT6-018<br>CT6-023 |
| CT6KIT-602   | WOBBLE PLATE ASSEMBLY, HF | CT6-007<br>CT6-009<br>CT6-018<br>CT6-023 |

| PUMP HOUSING ASSEMBLY   |  |
|---|--|
|  <p>CT6-017</p> <p>S10-08PC<br/>S10-04<br/>CT6-040</p> <p>CT6-003<br/>CT6-004<br/>CT6-005<br/>CT6-006</p> <p>EP-94</p> <p>SS6P-41</p> <p>SS6P-EPDM<br/>SS6P-35*<br/>CT6-041*</p> |  |

| KIT P/N    | DESCRIPTION                                       | PARTS   | KIT P/N    | DESCRIPTION   | PARTS  |
|------------|---|---|------------|---|--|
| CT6KIT-201 | KIT, HOUSING, INLET MM, OUTLET 1"NPT, EPDM        | CT6-003<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35EPDM<br>S10-08 | CT6KIT-207 | KIT, HOUSING, INLET 2"NPT, OUTLET 1"NPT, VITON          | CT6-005<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35<br>S10-04  |
| CT6KIT-202 | KIT, HOUSING, INLET MM, OUTLET 3/4" BSPP, EPDM    | CT6-004<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35EPDM<br>S10-08 | CT6KIT-208 | KIT, HOUSING, INLET 1"BSPP, OUTLET 3/4"BSPP, VITON      | CT6-006<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35<br>S10-04  |
| CT6KIT-203 | KIT, HOUSING, INLET 2"NPT, OUTLET 1"NPT, EPDM     | CT6-005<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35EPDM<br>S10-08 | CT6KIT-209 | KIT, HOUSING, INLET MM, OUTLET 1"NPT, SANTOPRENE        | CT6-003<br>CT6-017<br>EP-94<br>SS6P-41<br>CT6-041<br>CT6-040 |
| CT6KIT-204 | KIT, HOUSING, INLET 1"BSPP, OUTLET 3/4"BSPP, EPDM | CT6-006<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35EPDM<br>S10-08 | CT6KIT-210 | KIT, HOUSING, INLET MM, OUTLET 3/4" BSPP, SANTOPRENE    | CT6-004<br>CT6-017<br>EP-94<br>SS6P-41<br>CT6-041<br>CT6-040 |
| CT6KIT-205 | KIT, HOUSING, INLET MM, OUTLET 1"NPT, VITON       | CT6-003<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35<br>S10-04     | CT6KIT-211 | KIT, HOUSING, INLET 2"NPT, OUTLET 1"NPT, SANTOPRENE     | CT6-005<br>CT6-017<br>EP-94<br>SS6P-41<br>CT6-041<br>CT6-040 |
| CT6KIT-206 | KIT, HOUSING, INLET MM, OUTLET 3/4" BSPP, VITON   | CT6-004<br>CT6-017<br>EP-94<br>SS6P-41<br>SS6P-35<br>S10-04     | CT6KIT-212 | KIT, HOUSING, INLET 1"BSPP, OUTLET 3/4"BSPP, SANTOPRENE | CT6-006<br>CT6-017<br>EP-94<br>SS6P-41<br>CT6-041<br>CT6-040 |



| KIT P/N    | DESCRIPTION                      | PARTS   |
|------------|----------------------------------|---------|
| CT6KIT-301 | VALVE PLATE ASSEMBLY, EPDM       | CT6-013 |
|            |                                  | CT6-015 |
|            |                                  | S10-08  |
| CT6KIT-302 | VALVE PLATE ASSEMBLY, VITON      | CT6-013 |
|            |                                  | CT6-016 |
|            |                                  | S10-04  |
| CT6KIT-303 | VALVE PLATE ASSEMBLY, SANTOPRENE | CT6-013 |
|            |                                  | CT6-039 |
|            |                                  | CT6-040 |
| CT6KIT-303 | VALVE PLATE ASSEMBLY, EPDM, HF   | CT6-014 |
|            |                                  | CT6-015 |
|            |                                  | S10-08  |
| CT6KIT-304 | VALVE PLATE ASSEMBLY, VITON, HF  | CT6-014 |
|            |                                  | CT6-016 |
|            |                                  | S10-04  |
| CT6KIT-302 | VALVE PLATE ASSEMBLY, SANTOPRENE | CT6-014 |
|            |                                  | CT6-039 |
|            |                                  | CT6-040 |



## Product Warranty

Flowserve Corporation (the Company) warrants that the Equipment manufactured by and delivered hereunder will be free of defects in material and workmanship for a period of twelve months from the initial Equipment startup or until eighteen months after shipment, whichever occurs first. The Purchaser shall be obligated to promptly report any failure to conform this warranty, in writing to the Company with said period. Flowserve Corporation shall, as its option, correct such non-conformity, by suitable repair to such Equipment or, furnish a replacement part F.O.B. point of shipment, provided the Purchaser has stored, installed, maintained and operated such Equipment in accordance with good industry practices and has complied with specific recommendations of the company. Accessories or Equipment furnished by the Company, but manufactured by others, shall carry whatever warranty the manufacturers have conveyed to the Company, which can be passed on to the Purchaser. The Company shall not be liable for any repairs, replacements, or adjustments to the Equipment or any costs of labor performed by the Purchaser or others without the Company's prior written approval. The effects of corrosion, erosion and normal wear and tear are specifically excluded. THE COMPANY MAKES NO OTHER WARRANTY OR REPRESENTATION OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FAIRNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

Correction by the Company of nonconformity's whether patent or latent, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of the Company for such nonconformity's, whether based on contract, warranty, negligence, indemnity, strict liability or otherwise with respect to or arising out of such Equipment.

The Purchaser shall not operate Equipment, which is considered to be defective, without first notifying the Company in writing of its intention to do so. Any such of Equipment will be at the Purchaser's sole risk and liability.

Nothing contained in this brochure is intended to extend any warranty representation, expressed or implied, regarding the products described herein, any such warranties or other terms and condition of sales of products shall be in accordance with Flowserve Pumps standard terms and conditions of sale for such products, which are available on request.

### Technical Service & Support

3732 Cook Blvd. Suite 101  
Chesapeake, VA 23323-1628 USA  
Telephone: 800-343-7867 (343-PUMP)  
Fax: 757-673-3528  
Website: [www.flowserve.com](http://www.flowserve.com)  
Email: [csb@flowserve.com](mailto:csb@flowserve.com)

***Your Flowserve factory contacts:*****Flowserve Scienco**

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Chesapeake, VA 23323-1628 USA  
Ph: +800-343-7867 (343-PUMP)  
Fax: +757-673-3528  
Website: [www.flowserve.com](http://www.flowserve.com)  
Email: [csb@flowserve.com](mailto:csb@flowserve.com)

***Your local Flowserve representative:***

To find your local Flowserve representative, please use the Sales Support Locator System found at [www.flowserve.com](http://www.flowserve.com)

**Flowserve Regional Sales Offices:****USA and Canada**

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Suite 2300  
Irving, Texas 75039-5421 USA  
Telephone +1 972 443 6500  
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20033 Desio (Milan) Italy  
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Fax +39 0362 628 882

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Flowserve Corporation  
6840 Wynnwood Lane  
Houston, Texas 77008 USA  
Telephone +1 713 803 4434  
Fax +1 713 803 4497

## WORLDWIDE TERMS AND CONDITIONS OF SALE

### 1. Applicability:

These Worldwide Terms and Conditions of Sale ("Terms") shall govern all sales of Seller's Equipment or Services to Buyer ("Order"). These Terms supersede any prior written or oral agreement, understanding, representation or promise, and any pre-printed or standard terms and conditions contained in Buyer's request for quote, purchase order, invoice, order acknowledgement, or similar document. These Terms may not be amended, supplemented, changed or modified except by concurrent or subsequent written agreement, signed by an authorized representative of Seller and Buyer. Seller's acknowledgement of Buyer's purchase order shall not constitute acceptance of any terms and conditions contained therein, regardless of how such terms and conditions may be prefaced or described.

### 2. Definitions:

"Buyer" means the company who accepted Seller's offer or is named in the Order.

"Equipment" means all equipment and parts manufactured and sold by Seller.

"Seller" means the company named on the Order for Equipment or Services.

"Service(s)" means work, direction of work, technical information or technical consulting and advice or other services furnished by Seller to Buyer.

### 3. Delivery/Suspension/Force Majeure:

For the delivery of Equipment within the United States, delivery shall be made EXW (in accordance with INCOTERMS 2010, as amended) Seller's plant. For the delivery of Equipment outside the United States, delivery shall be made FCA Seller's plant. Shipping dates are approximate and are based on prompt receipt of all necessary information. In case of delay in furnishing complete information, dates of shipment may be extended for a reasonable time. In the event Seller provides transport services, these will be quoted as a lump sum price based on destination and shipping mode.

In the event Buyer requests a delay or suspension in completion and/or shipment of the Equipment or any part thereof for any reason, the parties shall agree upon any cost and/or scheduling impact of such delay and all such costs to Buyer's account. Any delay period beyond thirty (30) days after original scheduled shipment date shall require Buyer to (i) take title and risk of loss of such Equipment, and (ii) make arrangements for storage of such Equipment with the Seller or other party. Seller's invoice, which is contractually based on shipment, shall be issued upon Seller's readiness to ship the Equipment.

Seller shall not be liable for delay in delivery due to causes beyond its reasonable control including, but not limited to, acts of God, acts of government, acts of Buyer, fires, labor disputes, boycotts, floods, epidemics, quarantine restrictions, war, insurrection, terrorism, riot, civil or military authority, freight embargoes, transportation shortages or delays, unusually severe weather or inability to obtain necessary labor, materials or manufacturing facilities due to such causes. In the event of any such delay, the date of delivery shall be extended for a length of time equal to the period of the delay.

### 4. Warranty:

Subject to the limitations in Section 17 herein, Seller warrants that the Equipment shall be free from defects in material, workmanship and title. If it appears within twelve (12) months from the initial Equipment startup or until eighteen (18) months after shipment, whichever occurs first, that the Equipment or any part thereof does not conform to this warranty, and Buyer so notifies Seller within a reasonable time after discovery, Seller shall thereupon promptly correct such nonconformity by repair or replacement EXW Seller's factory or service center. Seller's sole obligation and Buyer's sole remedy under this warranty is repair or replacement at Seller's election. Seller's warranty obligation for Services shall be the earlier of either ninety (90) days from the date of initial startup or six (6) months after completion of the Service work. Seller shall not be responsible for any on-site costs, including removal and reinstallation of any warranted Equipment. Buyer agrees to provide Seller reasonable and clear access to its Equipment which may include removal of materials or structures as well as supplying any equipment, materials or structures which are necessary to provide reasonable access to the Equipment being repaired or replaced. All Equipment repaired or replaced will be re-warranted only for the remainder of the original warranty period. **THE EXPRESS WARRANTY SET FORTH HEREIN IS THE EXCLUSIVE WARRANTY OF SELLER, AND NO OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE, SHALL APPLY.** Seller is not responsible for repairs or alterations made by others without mutual written agreement between Seller and Buyer. Seller does not warrant the Equipment or any repair/replacement part against the effects of erosion, corrosion, or normal wear and tear due to operation or the environment. The warranty and remedies set forth herein are conditioned upon proper storage, installation, use and maintenance of the Equipment in all material respects, and in accordance with Seller's written recommendations. Replacement parts or repairs furnished under this warranty shall be subject to the warranty provisions herein for the remaining original warranty period.

### 5. Payment:

All prices are net cash thirty (30) days from date of Seller's invoice, unless otherwise stated in Seller's proposal, quotation or offer. Should Buyer for any reason default in the payment of the contract of purchase, Buyer agrees to pay all collection costs, attorney fees and expenses incurred in collecting payment, including interest on the amount due at the maximum legal rate. All transportation, insurance and similar charges incident to delivery shall be paid by Buyer. Seller shall issue its invoice upon shipment, or upon notice to Buyer that Seller is ready to ship, whichever is earlier. Depending on the value of the order, Seller may at its sole discretion require progress payments.

If Buyer's financial condition is or becomes unsatisfactory to Seller, Seller reserves the right to: (a) require payment from Buyer on a Cash In Advance (CIA) basis; (b) require a letter of credit or other acceptable security before shipment; or (c) cancel shipment at any time prior to delivery of the Equipment without further obligation or liability on the Seller's part.

### 6. Changes:

Buyer may request modifications as to the amount, scope and/or nature of the Equipment to be supplied by a written change request. If, in the opinion of Seller, any modification will affect the agreed fixed price and/or time of delivery, Seller will notify Buyer thereof in writing and will not be obligated to perform any modification unless agreed to by Seller. Buyer shall confirm that such change is authorized and accepted by issuing an Order revision.

### 7. Buyer Cancellation:

Buyer may cancel this Order only upon written notice and payment to Seller of reasonable and proper cancellation charges. Notwithstanding the foregoing, Buyer reserves the right to cancel any portion of an Order affected by any insolvency or suspension of Seller's operations or any petition filed or proceeding commenced by or against Seller under any state or federal law relating to bankruptcy, arrangement, reorganization, receivership or assignment for the benefit of creditors.

### 8. Set-off:

All amounts that Buyer owes Seller under an Order shall be due and payable according to the terms of an Order. Buyer is prohibited from, and shall not set off such amounts or any portion thereof, whether or not liquidated, against sums which Buyer asserts are due it, its parent affiliates, subsidiaries or other divisions or units under other transactions with Seller, its parent affiliates, subsidiaries or other divisions or units.

### 9. Non-Disclosure and Non-Use of Sellers' Information:

Buyer agrees that it will not use Seller's data for the manufacture or procurement of Equipment which are the subject of an Order or any similar Equipment, or cause said

*continued*



Equipment to be manufactured by, or procured from, any other source or reproduce said data and information or otherwise appropriate them without the written authorization of the Seller. Buyer agrees that it will not disclose or make available to any third party any of Seller's data or other information pertaining to this Order which is proprietary to Seller without obtaining Seller's prior written consent.

**10. Special Tooling and Data:**

Unless otherwise agreed in writing, all material, software, data processes, equipment, facilities and special tooling, which term includes but is not limited to jigs, dies, fixtures, molds, patterns, special taps, special gages, special test equipment, other special equipment and manufacturing aids and replacements thereof, used in the manufacture of the Equipment covered by an Order shall be and remains the property of Seller. Seller retains all rights, title and interest in drawings, engineering instructions, specifications, and all other written data, if any, furnished and/or specified to be supplied with the Equipment.

**11. Export/Import**

Buyer agrees that it will comply with all applicable import and export control laws and/or regulations, including without limitation those of the United States and/or other jurisdictions from which the Equipment and/or technology may be supplied or to which the Equipment and/or technology may be shipped. In no event shall Buyer use, transfer, release, import, export or re-export the Equipment and/or technology in violation of such applicable laws and/or regulations.

**12. Taxes:**

Seller's price, unless otherwise agreed, shall be fixed and does not include, and Seller is not responsible for, payment of any tax levied for sales, use, excise, value-added, goods and services, business (franchise or privilege) or any duties, charges or other such taxes. Seller is only responsible for any tax imposed on Seller, by taxing authorities in Seller's jurisdiction, which are based on Seller's revenue, income, net income, net assets, net worth, or capital or any taxes imposed in lieu thereof. If Seller is required to pay any taxes or other charges that are the responsibility of the Buyer, then Buyer shall promptly reimburse Seller those amounts.

**13. Assignment:**

Neither party shall assign an Order or any portion thereof without the advance, written consent of the other party, which consent shall not be unreasonably withheld.

**14. Waiver/Severability:**

Failure by Seller to assert all or any of its rights upon any breach of an Order shall not be deemed a waiver of such rights either with respect to such breach or any subsequent breach, nor shall any waiver be implied from the acceptance of any payment of service. No waiver of any right shall extend to or affect any other right Seller may possess, nor shall such waiver extend to any subsequent similar or dissimilar breach.

If any portion of these Terms are determined to be illegal, invalid, or unenforceable, for any reason, then such provision shall be deemed stricken for purposes of the dispute in question and all other provisions shall remain in full force and effect.

**15. Applicable Law/Disputes:**

This Order shall be interpreted in accordance with the laws of the jurisdiction in which the Seller's facility accepting the Order hereunder is located, exclusive of any choice of law provisions. The Seller and Buyer expressly agree to exclude from this Order the United Nations Convention on Contracts for the International Sale of Goods, 1980, and any successor thereto and the Contracts (Rights of Third Parties) Act of 1999.

Except as otherwise specifically agreed in writing by Buyer and Seller, any dispute relating to an Order placed by a Buyer incorporated in the United States which is not resolved by the parties shall be adjudicated by a court of competent jurisdiction in the state of Texas. All disputes arising out of or in connection with an Order placed by a Buyer incorporated outside the United States that shall be finally settled by binding arbitration in London, England, under the Rules of Arbitration of the International Chamber of Commerce then in effect by one or more arbitrators appointed in accordance with said Rules.

**16. Compliance With Laws/Anti-bribery:**

Seller and Buyer agree to comply with all applicable laws, regulations, codes and standards, including but not limited to those of the United States and other jurisdictions where the parties conduct business. Additionally, Buyer has not and will not offer, promise, authorize or make, directly or indirectly, any payments (in money or any other item of value), contributions or gifts to any non-U.S. government agency, department, official or government owned or controlled entity in order to obtain or retain business, or secure any other improper business advantage, which would violate the U.S. Foreign Corrupt Practices Act and/or any other applicable anti-bribery laws.

**17. Limitation of Liability/Exclusion of Consequential Loss:**

The remedies set forth herein are exclusive, and the total liability of the Seller with respect to this Order, or any breach thereof, whether based on contract, warranty, tort (including negligence), indemnity, strict liability or otherwise, shall not exceed the Order price of the specific Equipment or Service which gives rise to the claim.

In all cases where Buyer claims damages allegedly arising out of defective or nonconforming Equipment or Services, Buyer's exclusive remedies and Seller's sole liability shall be those specifically provided for under Section 4 "Warranty."

**IN NO EVENT, WHETHER ARISING BEFORE OR AFTER COMPLETION OF ITS OBLIGATIONS UNDER THE CONTRACT, SHALL SELLER BE LIABLE FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES OF ANY KIND (INCLUDING BUT NOT LIMITED TO LOSS OF USE, REVENUE OR PROFITS, INVENTORY OR USE CHARGES, COST OF CAPITAL, OR CLAIMS OF CUSTOMERS) INCURRED BY THE BUYER OR ANY THIRD PARTY.**

**18. General Provisions:**

(a) No Action, regardless of form, arising out of transactions under the Order, may be brought by the Buyer more than one (1) year after the cause of action has accrued.

(b) Any modification to these Terms must be set forth in a written instrument signed by a duly authorized representative of Seller.

(c) In the event Buyer has reason to believe the Equipment could be subject to a claim for damages or personal injury, Buyer shall immediately provide Seller with written notice of such claim, and shall provide Seller reasonable opportunity to inspect said Equipment and/or investigate the basis for such potential claim.

(d) **UNLESS OTHERWISE SPECIFICALLY PROVIDED IN SELLER'S QUOTATION, EQUIPMENT AND SERVICES HEREUNDER ARE NOT INTENDED FOR USE IN ANY NUCLEAR OR NUCLEAR RELATED APPLICATIONS. IF SELLER'S QUOTATION EXPRESSLY STATE THAT THE EQUIPMENT AND SERVICES ARE INTENDED FOR NUCLEAR OR NUCLEAR RELATED APPLICATIONS, SELLER'S ADDENDUM (P-62) FOR NUCLEAR LIABILITY PROTECTION IS HEREBY INCORPORATED.** Buyer (i) accepts the Equipment and Services in accordance with the restriction set forth in the immediately preceding sentences, (ii) agrees to communicate such restriction in writing to any and all subsequent purchasers or users, and (iii) agrees to defend, indemnify and hold harmless Seller from any and all claims, losses, liability, suits, judgments and damages, including incidental and consequential damages, arising from the use of the Equipment or Services in any nuclear or nuclear related applications, whether the cause of action be based in tort, contract or otherwise, including allegations that the Seller's liability is based on negligence or strict liability.

**19. Translations/Governing Language:**

English shall be the legal language of this Order, and all parties waive any right to use and/or rely upon any other language, translation or interpretation. The parties specifically agree that in the case of any inconsistencies or interpretation disputes, the English language version shall control.