



FLOW CONTROL SYSTEMS



SAFETY TANK
SOLUTIONS

MADE IN

USA



Company Information

Now in its third generation PT began as a small, family-owned, machining job shop in 1951, in Enid, Oklahoma. Today, PT is an American-made manufacturer and global supplier of high quality cam and-groove quick connect/disconnect couplings, Flow Control Systems® from the Safety Tank Solutions® product line for tank trucks; Punch-Lok® clamps and banding; crimping sleeves and ferrules for hoses, and other hose assembly needs; nozzles, swivels, valves, adapters, vapor recovery equipment, vents, caps and more.

PT's goal to be the single source for all your pattern development, casting, precision machining, fabrication, heat treat and plastic injection molding needs. For more information about PT visit www.ptcoupling.com.

Why PT's **SAFETY TANK** SOLUTIONS?

PT believes in providing safety to both end users and the environment through our product solutions and services. The Safety Tank Solutions® family of products designed by PT, has unique attributes that provide both safe applications and unique problem-solving benefits to end users in the transportation industry. Either through the design of the product itself or through services, PT is committed to keeping operators in this industry assured that they are using the best solutions possible.

PT's history is deeply rooted in providing the hose industry quality quick disconnect fittings. This long-standing quality standard extends to our various transportation products. Following the same quality controls, our API Adapters, Drop Fittings, Drop Elbows, Vapor Recovery Products, and more are all verified at each stage of the manufacturing process to ensure proper material construction and design integrity.

WARRANTY - Limited Warranty

PT Coupling Company (PT) warrants the products we manufacture and which are represented by PT online or in PT print advertising material to be free from defects in material and workmanship under normal use, service and operating conditions for a period of one (1) year from the date of shipment. This warranty is limited to the repair or replacement of such parts as shall appear to PT upon inspection to have been defective in material or workmanship provided such products are returned to a local PT Warehouse or at PT's sole discretion to the PT factory accompanied by a properly completed Returned Goods Authorization (RGA) form (supplied by PT) within 30 days of the date a defect in material and workmanship is discovered. PT's warranty does not apply to a) any part or product which has been subject to any of the following to include but not limited to: abuse, misapplication, neglect or excessive wear; b) any part or product which has been altered or repaired by anyone other than PT; and c) any part or product which would classify as a wear item under normal service which includes but is not limited to gaskets, o-rings, and washers. Warranty parts must be shipped prepaid motor freight or UPS and packed with enough care as to not cause any additional damage to the parts in question. No claim for breach of warranty shall be valid unless received by PT prior to the expiration of the applicable warranty period.

THERE IS NO WARRANTY OF MERCHANTABILITY FOR FITNESS FOR ANY PARTICULAR PURPOSE NOR IS THERE ANY OTHER WARRANTY, EXPRESS OR IMPLIED EXCEPT AS SPECIFICALLY STATED HEREIN. PT SHALL IN NO EVENT BE LIABLE FOR SPECIAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES OR ANY NATURE OR KIND UNDER ANY THEORY OR RECOVERY ARISING OUT OF OR RELATED TO THE PRODUCT OR OTHER GOODS SOLD HERE UNDER INCLUDING, BUT NOT LIMITED TO, DELAYS, LOSS OF USE, LOSS OF DATA, LOSS OF PROFITS, OR LOSS OF PRODUCTION, EVEN IF PT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

PT's liability to Buyer shall be limited in all cases as set forth herein. This warranty is in lieu of and excludes all other representation of warranties. PT reserves the right to make changes in design and improvements wherever it is believed the efficiency of the Products will be improved, but without incurring an obligation to incorporate such improvements in any product which has been shipped or is in service.



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Why Flow Control Systems?

The flow control systems offered by PT have some of the safest features to protect the environment and driver during trans-loading operations. The Flow Control Systems of the Safety Tank Solutions product line, offered by PT, facilitate instantaneous product feedback during PTO driven trans-loading operations.

The Flow Control Systems are a specially engineered assembly of fittings that control the direction of flow driven by either a vane or gear pump off the PTO. These fittings come in one shipment in one box, ready to be assembled and fully assembled in less than 30 minutes. The Flow Control Systems have a variety of optional fittings to help facilitate the overall construction of the trans-loading system.

The Flow Control System are superior to other pumping systems on the market, in that they provide tactile feedback to the driver through the handle, the systems are fully reversible without changing the pump direction, the pump flows at one speed: one rotation, and the systems help prevent hose blowouts during the trans-loading process with relief valve protection during both directions of flow.

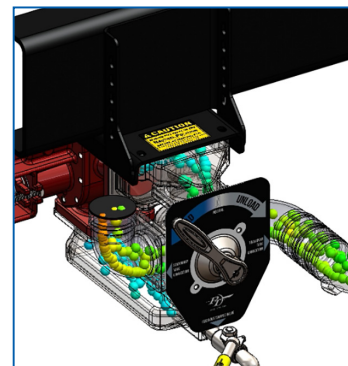
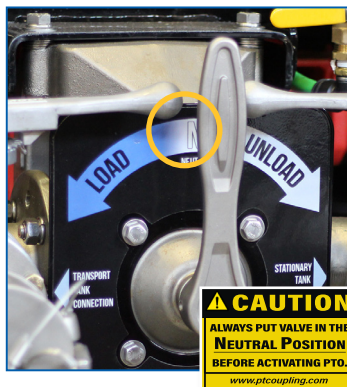
How It Works

The Flow Control Systems are designed to be driver friendly. Every system features a similar look and operating procedures. The difference between systems are the mounting locations and the pump that drives the system.

The Flow Control Systems work by mounting the Flow Control System assembly to the side of a truck or trailer. The pump of the Flow Control System is connected to the trucks PTO either driveline or hydraulically driven.

With the Flow Control System in neutral, the driver engages the PTO and media begins circulating within the pump. The driver may then control what action is necessary to complete the job: either load or unload the tanks.

From Mounting to Production



Flow Control System Mounted on Tank or Truck to connect to PTO (drive-line or hydraulically)

Driver verifies system in NEUTRAL position

Driver engages PTO

Flow through system

Communicating with the Assembly

During a normal trans-unloading process with hoses, the driver has little to no feedback as to the status of their hose assembly or valves to which they are connected. The Flow Control Systems offered by PT revolutionize the load/unload process by way of tactile feedback.

When the PTO is activated with an Flow Control System installed on the truck, no pressure is applied to any valve throughout the trans-load process* while the handle is in neutral. Media is continually circulating within the assembly, but there is no pressure applied to any valve.

When the driver goes to move the handle of the 4-Way Valve on the assembly, if there is any closed valve – the driver will immediately feel the excess pressure within the assembly. This excess pressure provides tactile feedback to the driver, giving them the awareness that something is awry within their connections.

Without this tactile feedback, a driver could easily blow a hose and create a negative environmental situation.



Flow Control Systems

Listed below are PT's product offering of the Flow Control Systems.

ALL FLOW CONTROL SYSTEMS					
Item No.	Description	Pump	Application	Mounting Location	Reference Page
100414	FCS-V3N - 3" Vane Pump	3" Blackmer Vane TXD3E or equivalent	Refine/Downstream	Curb-side or Driver-side	p. 6
140400	Chem System - 3" Gear Pump	3" Roper 3622 or equivalent	Oil/Chemical	Curb-side or Driver-side	p. 8
390011	FCS-HVC - 4" Gear Pump	4" Roper 3648 or equivalent	Crude/Upstream	Curb-side or Driver-side	p. 7

★ Each Flow Control System offered by PT comes with a variety of fitting options to provide different attachment methods and other cost-effective solutions. After selecting the system that best

matches your application, select two optional fittings for your attachment methods to the trailer and the tank. See p. 9 for fitting options.

Watch the Animation

To learn more, go to PT Coupling's YouTube page, where we have videos on the Flow Control Systems explaining the walkthrough of how to operate the systems.



SCAN TO WATCH ON YOUTUBE!



www.youtube.com/@PTCouplingCoEnid



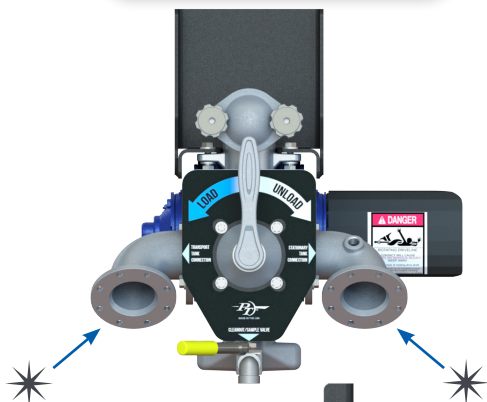


DOWNSTREAM PRODUCTS: FCS-V3N Vane System

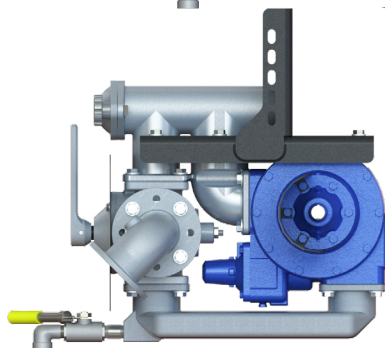
PT's FCS-V3N Vane System is a 72 lb. (without pump) assembly that is designed for loading and unloading refined fuels utilizing a 3" vane pump. While the FCS-V3N system is truck mounted on the driver's side or curb side, the system is available with a crossover kit that allows for trans-loading from the opposite rail. The FCS-V3N System is PT's longest running Safety Pumping System on the market, helping protect drivers and the environment for years without incident, offering zero-retain, tactile feedback, 100% o-ring mounting surfaces (no gaskets).

100414

FRONT PERSPECTIVE

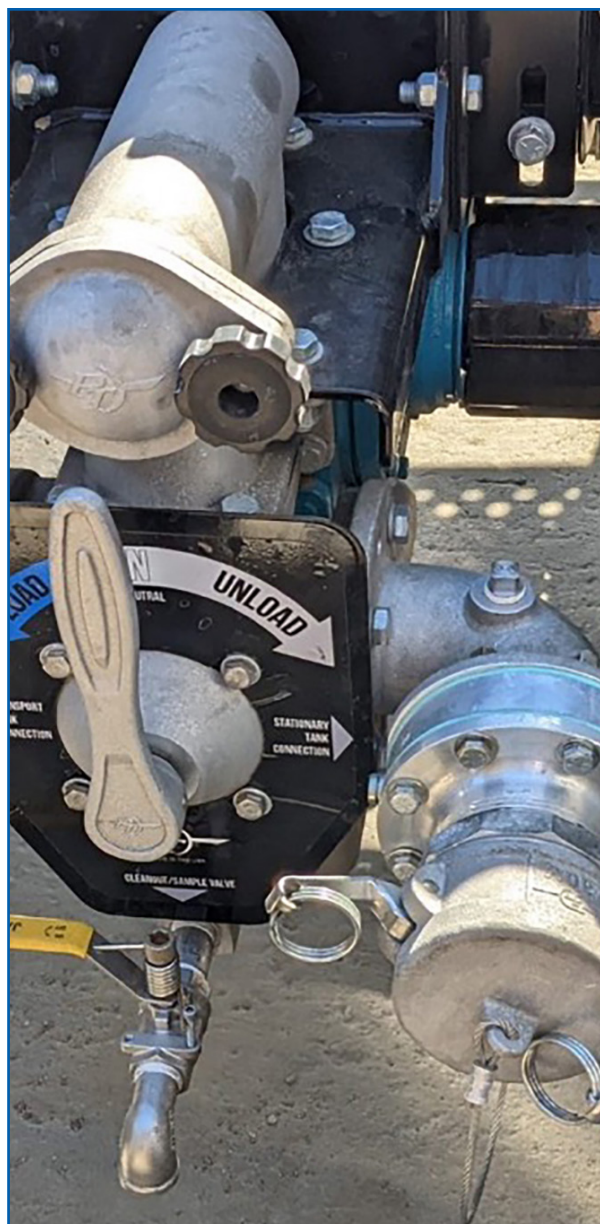


SIDE PERSPECTIVE



* FITTING OPTIONS:

The fitting options shown on all systems, are not standard to each kit. See available fitting options on p. 9 to create the ideal Flow Control System for your needs.



Item No.	100414
System Description	FCS-V3N Vane System
Dimensions Inches (XYZ)	SEE DIMENSIONS P. 12-13
Weight (without Pump)	72 lbs.
Housing Material	Aluminum
Elastomers	FKM
Pump Selection	FKM 3" Blackmer Vane TXD3E
Gallons per Minute	240

PUMP SOLD SEPARATELY
GPM BASED ON 640 RPM RATING



UPSTREAM PRODUCTS: FCS-HVC Crude System

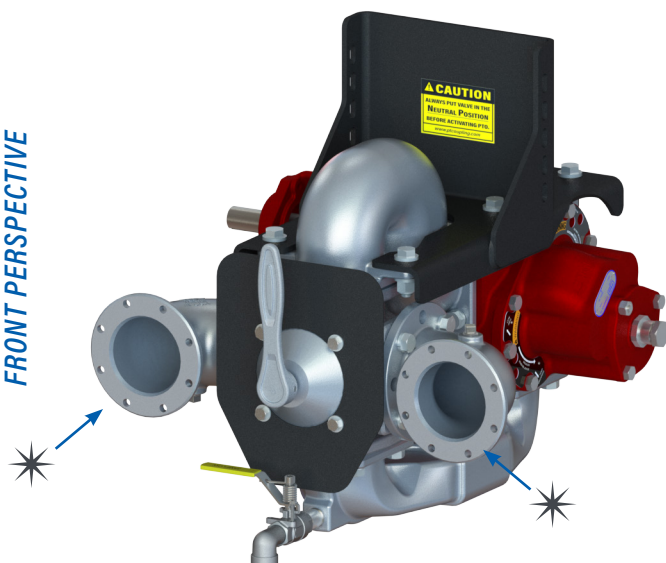
The newest design for downstream loading and unloading, this is the highest volume system made to date. The pump 100% drains, and can be operated in either direction while the pump runs in one rotation. Higher ground clearance while providing a smaller footprint on the frame, raising the connection points for the drive, 100% o-ring mounting surfaces (no gaskets). *Patent Pending.*

390011

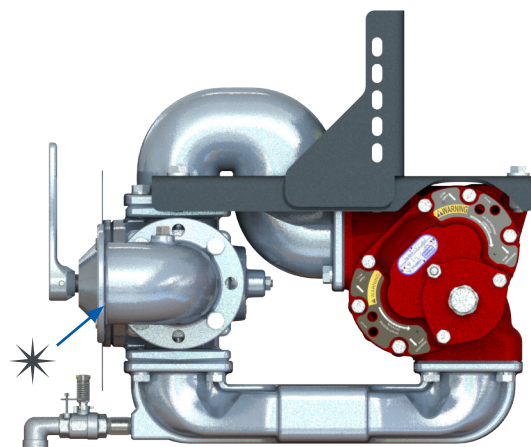
* FITTING OPTIONS:

The fitting options shown on all systems, are not standard to each kit. See available fitting options on p. 9 to create the ideal Flow Control System for your needs.

FRONT PERSPECTIVE



SIDE PERSPECTIVE



Item No.	390011
System Description	FCS-HVC PUMP SYSTEM KIT
Dimensions Inches (XYZ)	SEE DIMENSIONS P. 12-13
Weight (without Pump)	100 lbs.
Housing Material	Aluminum
Elastomers	BUNA N
Pump Selection	ROPER 3648 or equivalent
Gallons per Minute	400

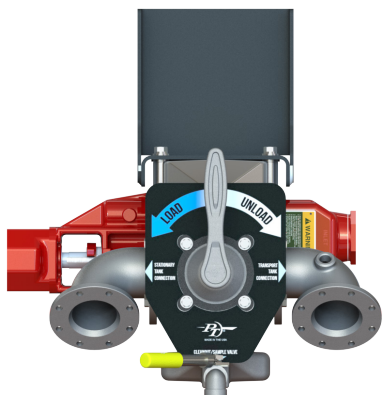
PUMP SOLD SEPARATELY
GPM BASED ON 900 RPM RATING

CHEMICALS & OILS: Chem System

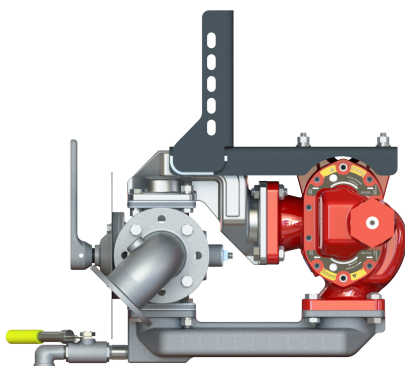
For the chemical systems, 316 Stainless Steel, provides all the benefits of the pump system assemblies for corrosive and chemical applications. The Chem System is designed to have a smaller footprint on the truck while raising the connection points and 100% drainage, with o-ring seals on all mating flanges (no more gaskets).

140400

FRONT PERSPECTIVE



SIDE PERSPECTIVE



Item No.	140400
System Description	Chem System
Dimensions Inches (XYZ)	SEE DIMENSIONS P. 12-13
Weight (without Pump)	124 lbs.
Housing Material	Stainless Steel
Elastomers	FKM
Pump or equivalent	3" Roper 3622 or equivalent
Gallons per Minute	160

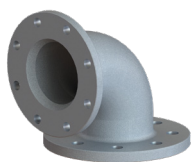
PUMP SOLD SEPARATELY
GPM BASED ON 750 RPM RATING





FITTING OPTIONS: Aluminum (Stock), Stainless Steel (MTO)

The Fitting options within the PT Safety Tank Solutions® are chosen based upon the end users' transportation media needs. Fitting options are sold in addition to the Flow Control System kit.



30BPFX30TTF

BLACKMER PUMP FLANGE X TTMA FLANGE				
Item No.	Part Name	Type	Description	Material
SPS100419	30BPFX30TTF	ELBOW	3.00" BLACKMER PUMP FLANGE X 3.00" TTMA FLANGE	Aluminum
SPS100385	30BPFX40TTFL	ELBOW	3.00" BLACKMER PUMP FLANGE X 4.00" TTMA FLANGE	Aluminum
140419	30BPFX40TTF	ELBOW	3.00" BLACKMER PUMP FLANGE X 4.00" TTMA FLANGE	Stainless Steel



30BPFX30NPTM



SPS30X40NPTM ELB

BLACKMER PUMP FLANGE X MALE NPT				
Item No.	Part Name	Type	Description	Material
SPS100026	30BPFX30NPTM	STRAIGHT	3.00" BLACKMER PUMP FLANGE X 3.00" MALE NPT	Aluminum
SPS100418	30BPFX40NPTM	STRAIGHT	3.00" BLACKMER PUMP FLANGE X 4.00" MALE NPT	Aluminum
SPS100386	30BPFX40NPTM ELB	90° ELBOW	3.00" BLACKMER PUMP FLANGE X 4.00" MALE NPT 90° ELBOW	Aluminum



30BPFX30A



30BPFX40A ELB

BLACKMER PUMP FLANGE X ADAPTER				
Item No.	Part Name	Type	Description	Material
SPS100025	30BPFX30A	STRAIGHT	3.00" BLACKMER PUMP FLANGE X 3.00" ADAPTER	Aluminum
140432	30BPFX30A	STRAIGHT	3.00" BLACKMER PUMP FLANGE X 3.00" ADAPTER	Stainless Steel
SPS100417	30BPFX40A	STRAIGHT	3.00" BLACKMER PUMP FLANGE X 4.00" ADAPTER	Aluminum
SPS100420	30BPFX40A ELB	ELBOW	3.00" BLACKMER PUMP FLANGE X 4.00" ADAPTER 90° ELBOW	Aluminum

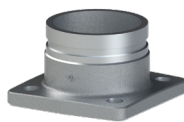


30BPFX30VG

BLACKMER PUMP FLANGE X PIPE GROOVE				
Item No.	Part Name	Type	Description	Material
SPS100052	30BPFX30VG	STRAIGHT	3.00" BLACKMER PUMP FLANGE X 3.00" PIPE GROOVE	Aluminum
SPS100416	30BPFX40VG	STRAIGHT	3.00" BLACKMER PUMP FLANGE X 4.00" PIPE GROOVE	Aluminum



40RPFX40TTF ELB



40RPFX40VG

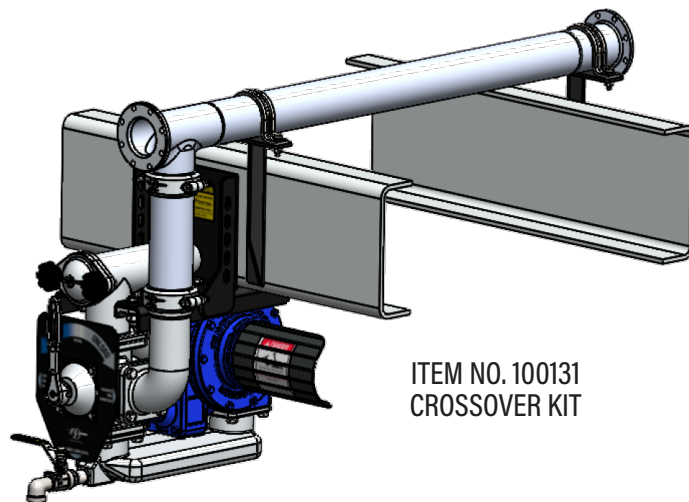
ROPER PUMP FLANGE X TTMA FLANGE				
Item No.	Part Name	Type	Description	Material
390019	40RPFX40TTF ELB	ELBOW	4.00" ROPER PUMP FLANGE X 4.00" TTMA FLANGE	Aluminum
390020	40RPFX40VG	STRAIGHT	4.00" ROPER PUMP FLANGE X 4.00" PIPE GROOVE	Aluminum



FITTING OPTIONS: Crossover Kits

Available in aluminum or carbon steel, the Crossover Kit's are available for trans-loading applications where the driver is unloading/loading media on the opposite side of the truck where the system is mounted. Use on the Standard Safety Pumping System and the new Flow Control System.

CROSSOVER KIT FOR 100414	
Item No.	Description
100131	ALUMINUM CROSSOVER KIT



ITEM NO. 100131
CROSSOVER KIT

FITTING OPTIONS: Crossover Kits

Optional
Groove X
Groove in
Sizes 5" or 7.5"



CROSSOVER KIT

CROSSOVER KIT	
Item No.	Description
100456	ALUM CROSSOVER KIT
LENGTH OPTIONS FOR CROSSOVER KIT	
Item No.	Description
100116	30VG X 30VG (5" LONG)
100103	30VG X 30VG (7.5" LONG)



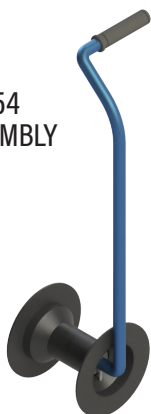
ITEM NO. 100456
CROSSOVER KIT

ACCESSORIES

PT's Safety Tank Solutions® has many variations of accessories to help with your liquid transfer or other application needs. From help draining hoses to creating secure connections, see all the hose or tank truck accessory options we offer online at www.ptcoupling.com.



ITEM NO. 89005154
HOSE DRAINER ASSEMBLY



U.S. PATENT NUMBER:
6918415 B1

HOSE DRAINER™		
Item No.	Description	Qty.
89005154	HOSE DRAINER ASY	1
8000000803	HOSE DRAINER BULK PACK	5

ERGONOMICALLY WRONG!



BAD POSTURE = BACK INJURIES/INEFFICIENT!

ERGONOMICALLY CORRECT!



GOOD POSTURE = REDUCED BACK INJURIES/EFFICIENT!

OTHER ACCESSORIES

Examples of more PT product solutions are featured here with PT's Aluminum Long B Coupler, equipped with a Safety Bump®, Safety Lock®, and lanyard, which offers a secure protection on your hose assembly. To learn more about these product lines scan the QR codes below or go online to www.ptcoupling.com.

SCAN TO LEARN MORE!

Safety Bump®,
Safety Lock®,
& Lanyard Flyer



Long B Coupler Flyer



Lanyard →



← Safety Bump®

← Long B Coupler

← Safety Lock®

SAFETY TANK
SOLUTIONS

Dimensions for Full Flow Systems

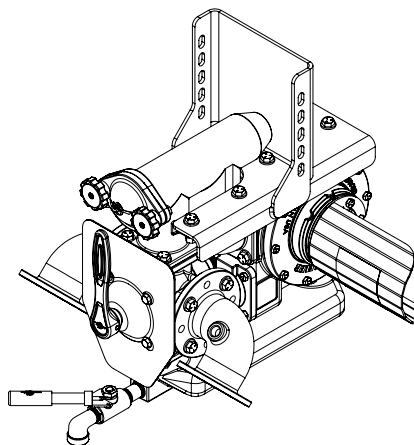
For proper mounting of the full flow control system dimensions, check the following dimensions for your fleets needs. To ensure there is enough space necessary for your truck or trailer, see the dimensions below for reference.

100414

100414* (FCS-V3N VANE KIT)

Dimensions	Inches
X	17
Y	26
Z	25

Measurements include pump

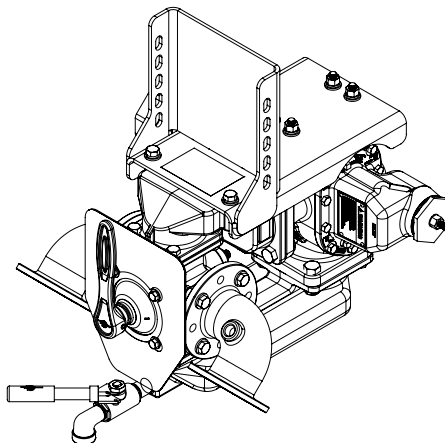


140400

140400* (CHEM SYSTEM KIT)

Dimensions	Inches
X	21
Y	29
Z	25

Measurements include pump

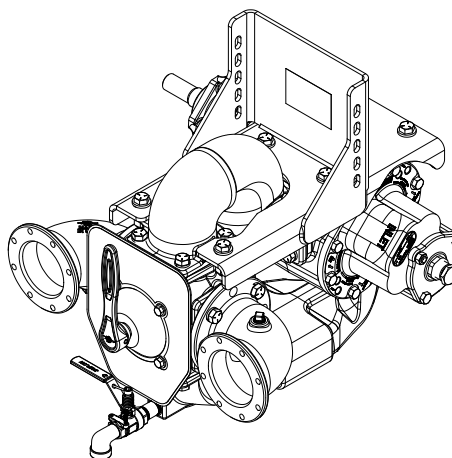


390011

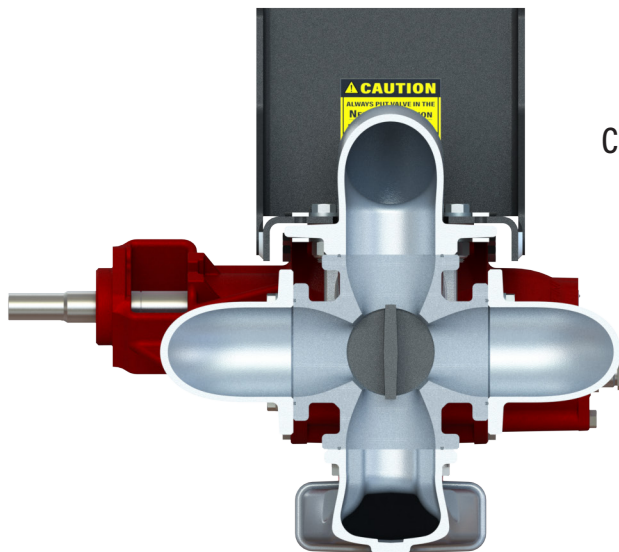
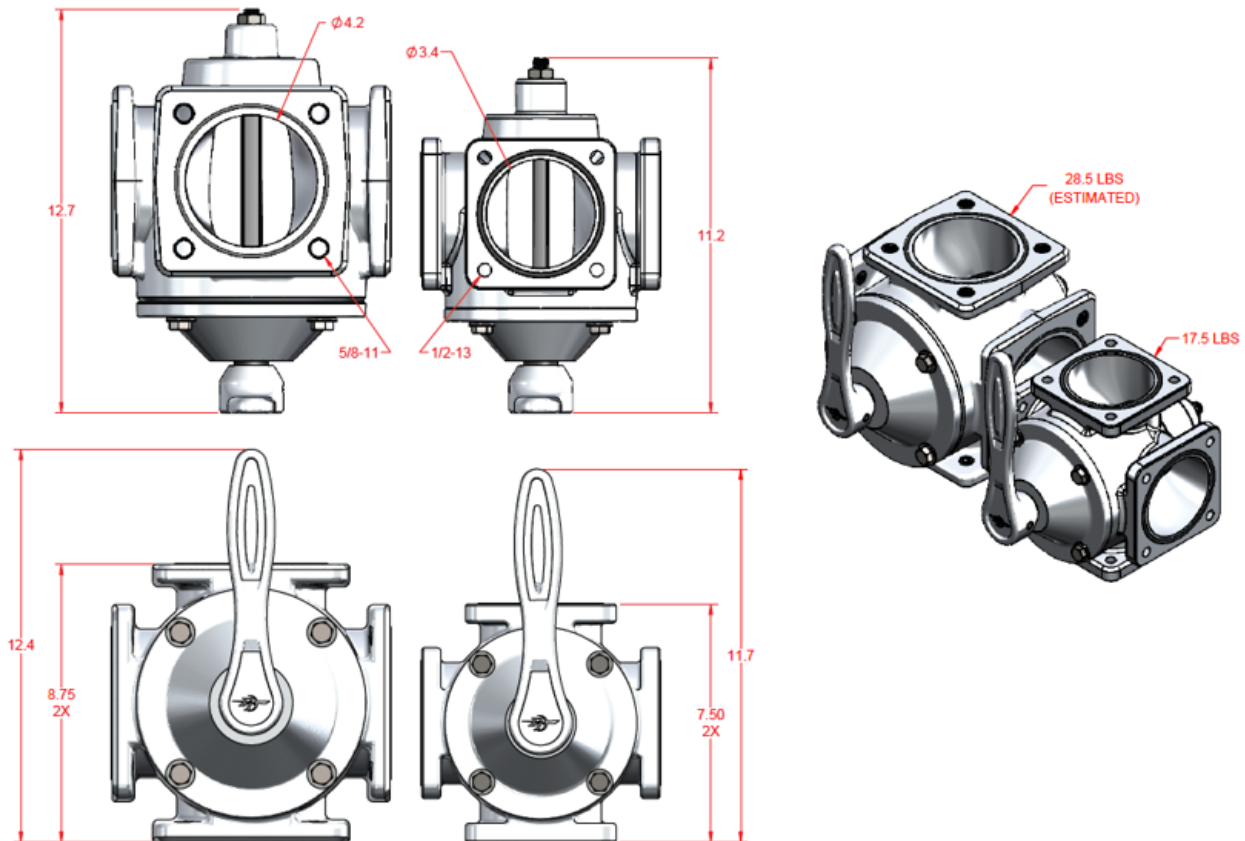
390011* (FCS-HVC PUMP SYS KIT)

Dimensions	Inches
X	26
Y	29
Z	25

Measurements include pump



Dimensions for RPF 4-Way (left) and the BPF 4-Way (right)



CUTAWAY FLOW ANALYSIS
ITEM NO. 390011



How to Order

Since 1951, PT has grown to manufacture and distribute hose fittings for a variety of stringent applications across the globe. The design and construction of these fittings and hose retention products are of superior quality. PT has grown into an internationally recognized supplier of hose fittings for companies seeking high-quality products at fair prices.

PLACE AN ORDER

PT only sells their products through distributors. Orders should be placed in your local region. Extensive inventories of quick connect/disconnect couplings and replacement parts are maintained in our warehouses to insure immediate shipment and delivery to our customers anywhere in the world. If your operations require a product not shown in this catalog, we will gladly work with you, our customer, in the custom design and manufacture of a product to meet your fitting specification.

It is the responsibility of the end user to communicate to the distributor the application and operating conditions the parts will be subjected to. It is up to the distributor to supply the right part for the application. PT is available to help you with a proper recommendation.

In any type of application care must be taken to insure proper connection and a positive seal. Improperly fitted or applied connections can result in a serious accident and/or down time. Under no circumstances shall the pressure rating of the couplings be exceeded.

For prompt, efficient processing of your order, please follow this procedure:

1. If ordering online follow steps above.
2. Specify Distributor Account #
3. Specify PT Item # or Part Name
4. Specify Size and Material
5. Specify Quantity

SHIPPING TERMS AND CONDITIONS

All orders are solicited and accepted with the understanding that the purchaser agrees to the following terms and conditions:

1. Orders are subject to approval and acceptance by PT at the home office in Enid, OK.
2. Minimum order is \$35.00.
3. PT attempts to ship all orders as promptly and efficiently as possible, however, orders are accepted with the express understanding that PT Coupling will not be liable for any losses or damages resulting from any delays in shipment or delivery.
4. Orders are subject to all government regulations, present and future.
5. Prices and design of products are subject to change without notice. Billings will be made at prices in effect at time of shipment.
6. Shortage of shipments must be reported within 5 days after receipt of goods.
7. Quotes are valid for 2 weeks.
8. Custom made parts are non-returnable. If there is no list price, parts are considered custom made. Once custom made parts are in production, there will be a cancellation fee if the order is canceled.

RETURN OF GOODS OR DAMAGED GOODS TO PT

If for any reason, you desire to return goods to PT:

Products being returned for credits must be new and in resalable condition. A minimum handling charge of 15% is deducted from the price now in effect or purchase price, whichever is lower. This handling charge, is necessary because of our practice of individually inspecting and testing every item returned and to cover the usual costs of handling returned goods. Any return goods that have been in use, must have MATERIAL SAFETY DATA SHEETS (MSDS) attached to the packing slip on the exterior of the shipping container. If not present, parts will be returned unopened. All return goods require a Return Material Authorization (RMA) before credit will be given. Any returns without proper documentation will be returned to the customer at their expense.





CALL 800-654-0320 / EMAIL: INFO@PTCOUPLING.COM

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HOSE SAFETY INSTITUTE
MEMBER

ISO 9001:2015
CERTIFIED
COMPANY

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NATIONAL TRUCK TRUCK CARRIERS

 **PEI**

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