

Pacific Service & Supply Co., Inc.

28525 N.W. Fern Flat Rd.

North Plains, Oregon 97133

Voice: (503)647-5869 Fax: (503)647-0105

Odor Control Chemical Feed System

The chemical feed system will allow any of a number of chemicals to feed into the pump station wet well as a time controlled & manually adjusted drip feed or into the actual force main at a rate automatically based on process flow rates. Such a system will allow usage of any of a number of chemicals to achieve the desired odor reduction as well as minimizing chemical usage. Please refer to the attached drawing #374 R6 for a system schematic.

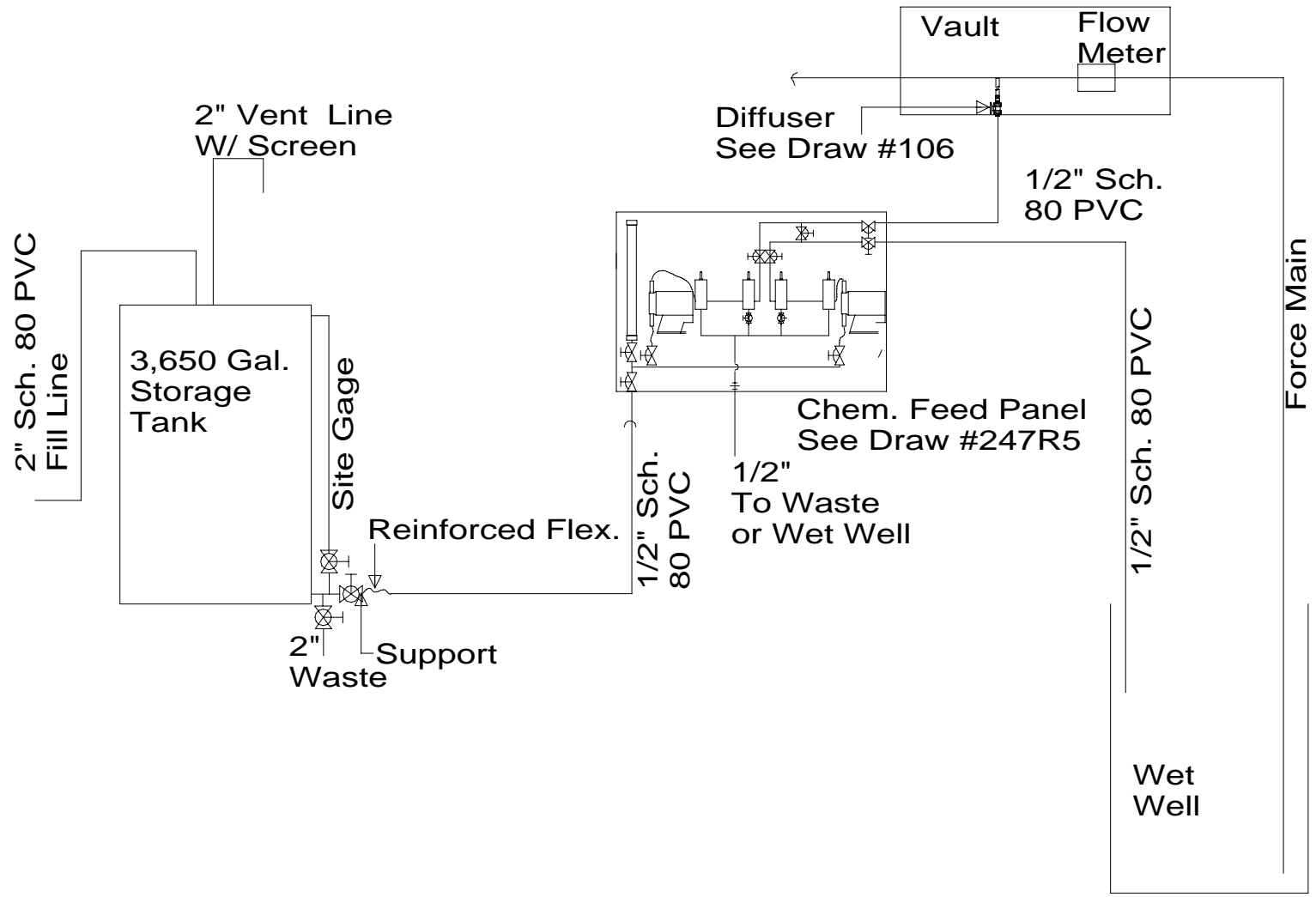
2 chemical feed pumps will be provided. The pumps and accessories will be supplied pre-mounted and plumbed on a PVC wall panel. The valving on the panel will allow either pump to feed either point of application or for the pumps to feed both points of simultaneously. The pumps will also act as back-ups for each other.

Integral to the proposed Grundfos chemical feed pumps is the ability to:

- Digitally display the actual chemical feed rate in either gallons or liters per hour.
- Control chemical feed rates either directly or inversely to a 4-20 mA flow signal.
- Respond to a remote dry switch closure for start/stop operation. That switch can either open or close when chemical pump actuation is desired.
- Run, at a pre-set flow rate, for set periods of time on a set schedule. I.E. chemical batching, similar to a 2 timer system.
- Provide a single pole, double throw pump failure alarm switch contact for actuation of remote annunciation. (Alarms upon loss of chemical flow.)

These functions are all integral to the chemical pump itself. No additional control panel is required.

A 3,650 Gallon crosslinked polyethylene chemical storage tank will be installed for chemical storage. A tank of this size will accommodate deliveries of full loads of odor control chemical to minimize chemical cost. The tank includes a 2" external/internal fill assembly, 2" "U" vent, a clear PVC site gage, engineered seismic restraint system, 2" drain and manway access. The tank is engineered for fluids of up to a 1.9 specific gravity.



All rigid pipe - Sch. 80 PVC

Pacific Service & Supply Co., Inc.

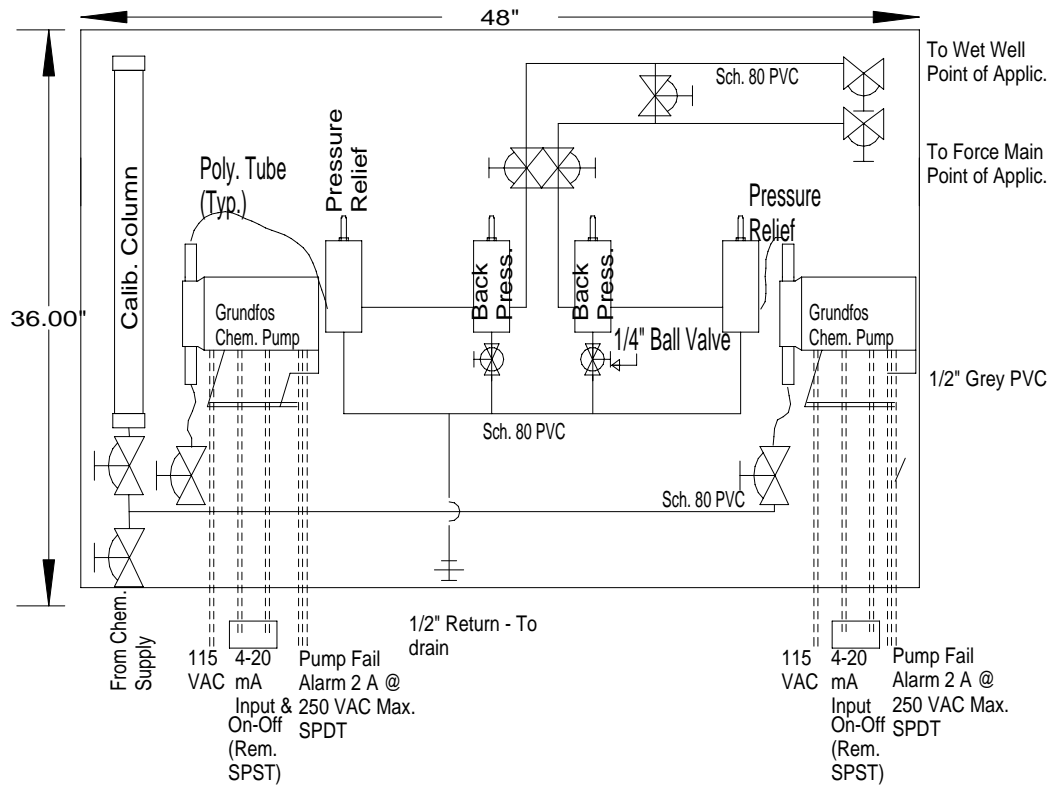
28525 N.W. Fern Flat Rd.
 Cornelius, Oregon 97113 (503)647-5869

Pump Station Odor Control
 Chemical Feed Schematic

Scale:
 NTS

Date:
 5/19/05

Drawing #:
 CL2-DW/374 R6



EQUIPMENT SCHEDULE:

Chemical Pumps -

Grundfos DME Series 4.88 GPH/87 PSI

Back Pressure & Pressure relief valves

Griffco, 1/2" PVC

Callibration Column

Koflo 250 MI

Valves

PVC True Union Ball Valves.

All Panel Piping 1/2" Sch. 80 PVC Unless Noted
 Suction, Discharge, Return, Flushing water connections
 Female solvent weld union
 Fabricate with sufficient unions to allow easy removal
 of all components.

Pacific Service & Supply Co., Inc.

28525 N.W. Fern Flat Rd.
 Cornelius, Oregon 97113 (503)647-5869

Wastewater Pump Station
 Odor Control Chemical Feed Panel

Scale:
 NTS

Date:
 8/10/06

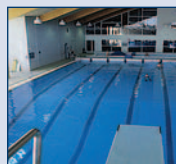
Drawing #:
 panels/247 R5



Hydraulic Services & Supply Co., Inc.
P.O. Box 1000, St. Louis, MO 63101-1000

Odor Control Chemical Feed Pump
Model 19-6
Capacity: 4.88 GPH/87 PSI
1,000:1 turndown
With fail alarm (DPDT relay)
Quantity: 2

GRUNDFOS DME



DIGITAL DOSING™

DME

0.00066 to 12.68 g/h (48 l/h)

The DME series of high-precision diaphragm pumps are the cornerstone of the highly successful Digital Dosing series from Grundfos. They were the first to combine high-precision dosing with unprecedented user-friendliness, and they remain the best in the business today.

The DME 0.00066 g/h – 12.68 g/h (2.5 ml/h – 48 l/h) pumps use stepper-motor technology in an entirely new way. The variable-speed motor remains in contact with the diaphragm throughout the entire discharge/suction cycle, controlling its speed at all times. This ensures a much greater level of control compared to traditional dosing pumps.

User-friendly dosing

The Digital Dosing range eliminates the need for complicated calculations associated with other dosing equipment. In effect, the simple user interface lets you be your own dosing specialist, using a minimal number of buttons to give access to an impressive range of control features.

Variable speed for smooth dosing

The ingenious stepper motor runs continually, ensuring that the discharge phase extends throughout the full period between suction phases. This gives a better, more even mix. The motor automatically adjusts the dosing speed to provide the right amount of additive at all times.

Full stroke length at all times

Grundfos uses a full stroke length every time, thereby improving accuracy and efficiency. The stroke speed is carefully adjusted to ensure even concentrations of additive in your media.

Turndown ratio 1:1000

The Digital Dosing range is designed to give you superior flexibility and accuracy with a minimal number of pump variants. With a turndown ratio of 1:1000, the DME range will remain accurate even when dosing in very small amounts.

Anti-cavitation

The variable speed of the DME pumps facilitates a unique anti-cavitation function for high-viscosity liquids. This function gives you slower suction speed (70% of the maximum speed), thereby ensuring optimal priming and pumping of even the most difficult liquids.

Calibration

With Digital Dosing, calibration is easier and faster than ever. Simply place a graduated glass under the pump and activate the calibration program. The pump will perform 100 strokes and indicate how much it thinks it has pumped. Adjust the figure by entering the correct numbers if necessary. After this dosage can be adjusted without recalibrating the pump.

14 different languages

As part of the Digital Dosing series, Grundfos DME pumps can be set to one of 14 different languages, making them perfect for integration in products aimed at a worldwide market.

Counter

The built-in counter function provides easy access to information about the accumulated number of strokes, accumulated operating hours and flow, as well as the total number of times the pump is switched on.

Several material variants

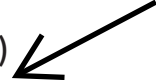
The DME pump heads are available in several different materials to suit your situation: ~~stainless steel, PVDF, and~~ polypropylene for an environmentally friendly and cost-efficient alternative.

Dimensions [in (mm)]



	DME 2	DME 8	DME 12	DME 19	DME 48
A		5 7/16 (137)		7 9/16 (192)	
B		9 7/16 (239)		7 11/16 (194)	
C		1 7/16 (36)		5/8 (15)	
D		6 5/8 (168)		7 7/16 (188)	

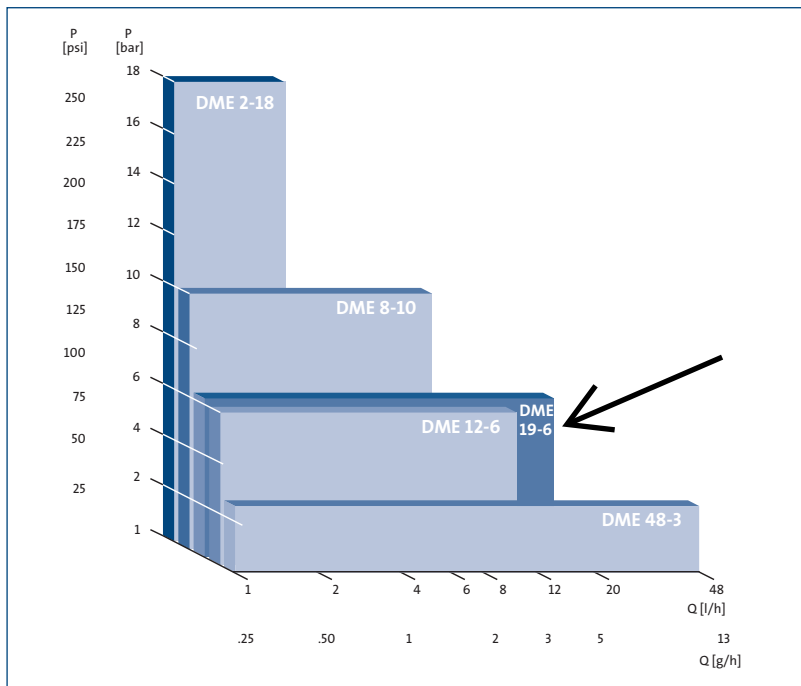
Product range and performance data DME 0.00066 - 12.68 g/h (2.5 ml/h - 48 l/h)



Pump type		DME 2-18	DME 8-10	DME 12-6	DME 19-6	DME 48-3
Capacity at max. pressure	g/h (l/h)	0.66 (2.5)	1.98 (7.5)	3.17 (12)	4.89 (18.5)	12.68 (48)
Max. pressure	psi (bar)	261 (18)	145 (10)	87 (6)	89.9 (6.2)	37.7 (2.6)
Setting range		1:1000	1:1000	1:1000	1:1000	1:1000

Stroke frequency	spm	180				
Suction lift	ft (m)	19.7 (6)				
Viscosity	cps	500				
Power supply	V, Hz	1×100-240, 50-60 Hz				
Accuracy	%	±1% repeatability - full range				

Performance range



Additional features

Pulse

The pump is dosing according to an external pulse signal, e.g. from an external water meter.

Analog

The pump is dosing according to an external analog signal. The dosage is proportional to the input value in mA.

Timer

Integrated timer function, which enables the pump to dose a specific entered batch at maximum capacity according to the timer settings.

Batch

The pump doses a specific entered batch at maximum set capacity when receiving an external pulse signal.

Lock

Protect the pump settings by enabling the electronic lock.

L-DD-SL-012 | Rev. 2/04
 PRINTED IN USA

Subject to alterations



Griffco Valve Inc.

3 North Main Street
Middleport, NY 14105
Phone: 1 800-474-3326
Fax: 1 716-735-3166

T-SERIES PRESSURE RELIEF VALVES



Griffco diaphragm pressure relief valves are designed to protect chemical feed systems from over pressure damage caused by defective equipment or a blockage in the chemical feed line. Robust construction ensures reliability in the rigorous service of municipal and industrial applications. Wetted materials include: **PVC**, **CPVC**, **PP**, **PVDF**, **PTFE**, **316 SS**, **A 20** and **Hast. C**. Available sizes: ~~1/4"~~ 1/2".

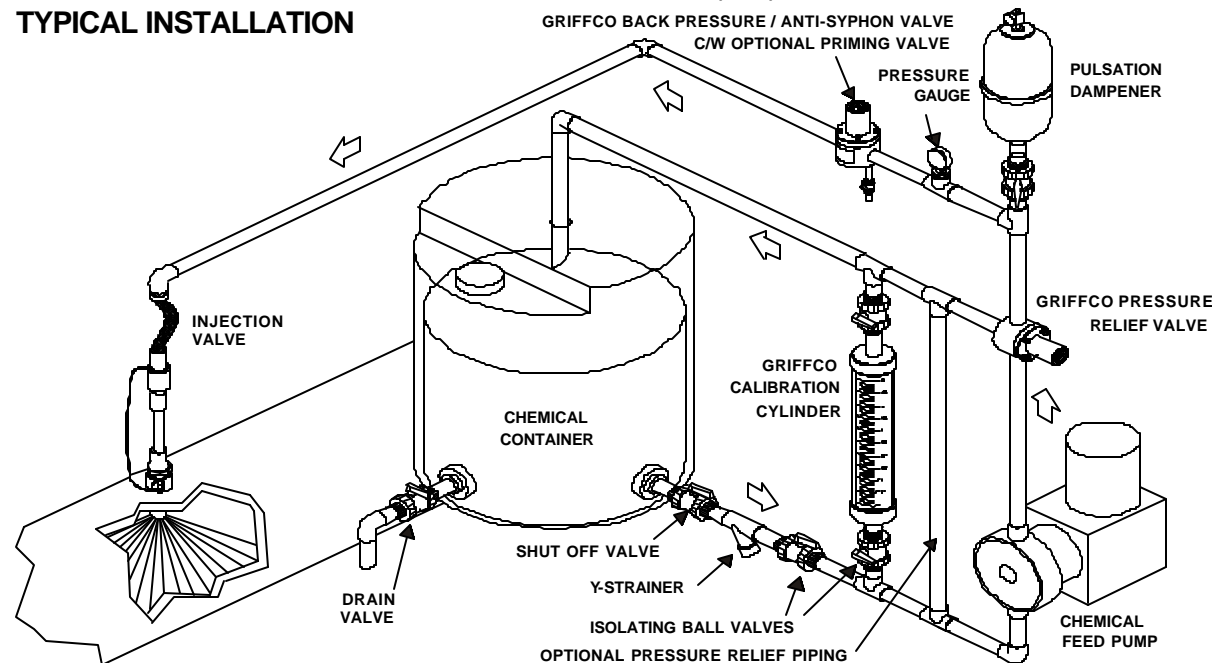
Features:

- High Reliability / Low Cost
- No Bolts on Plastic Models
- Compact Size for OEM Applications
- Adjustable 10 - 150 PSI
- Optional 350 PSI Rated Valve
- 3 Port, 2 Port, & 90° Configuration
- Robust, Machined Construction
- Vulcanised PTFE/EPDM Diaphragm
- Wide Range of Materials

Operation:

Griffco diaphragm pressure relief valves operate when the pressure in the chemical system exceeds the preset pressure of the valve. The diaphragm is held against the valve seat by an internal spring. When the preset pressure is exceeded the diaphragm is forced up and the chemical flows out the relief port, back to the chemical tank or to the suction side of the pump. The valves are pre-set at 50 psi, however they are field adjustable from 10 - 150 psi, (optional 350 psi) via the adjustment screw. The relief valve should be set approximately 15 psi higher than the system pressure. Installation should be made as close to the pump as possible, without any valves or accessories between the relief valve and the pump. Consult your pump manufacturer for his recommendations.

TYPICAL INSTALLATION



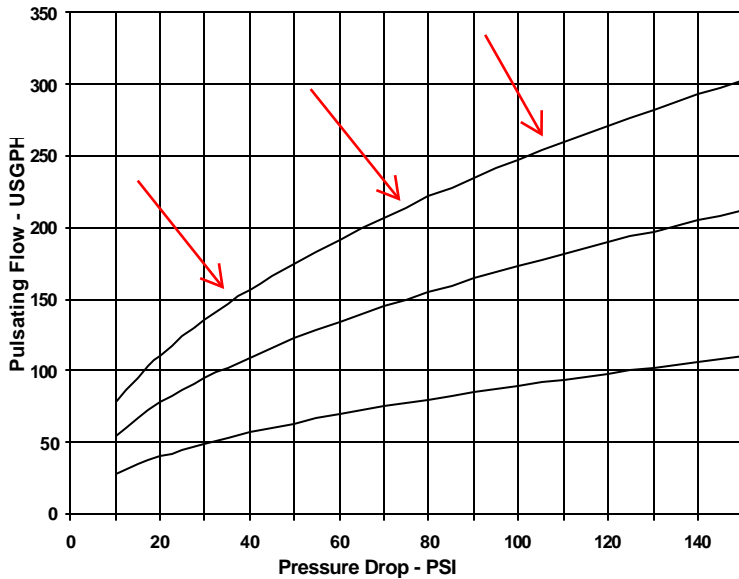
CALL 1 - 800 - GRIFFCO

Bulletin # PRT1003-2002

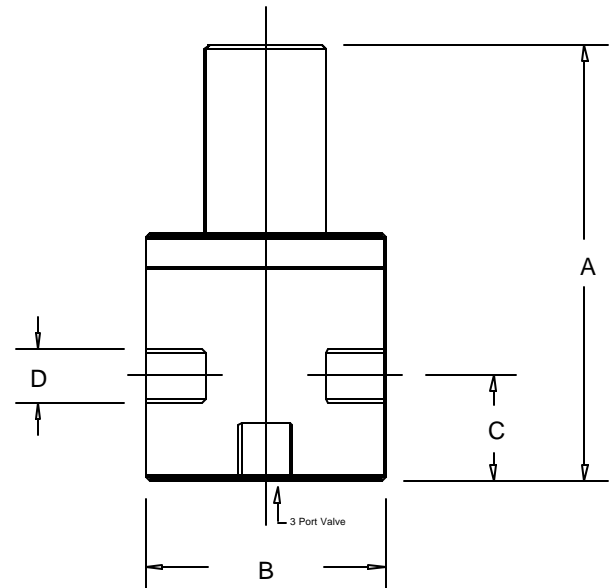
Technical Data:

Sizes: Model PRT		1/4", 3/8", 1/2"			
Connections:		NPT and Socket (3 port, 2 port & 90° Configuration)			
Pressure Adjustment		10-50 psi, 10-150 psi, 50-350 psi			
Flow Rates @ 150 psi		Shipping Weight: lbs			
Size	Pulsating	Continuous	Plastic	Metal / Plastic Top	Metal / Metal Top
1/4"	100 USgph	5 USgpm	1.0	2.5	3.0
3/8"	200 USgph	10 USgpm	1.0	2.5	3.0
1/2"	300 USgph	15 USgpm	1.0	3.0	3.5
Max Temperature: (°F)		Plastic: 140° ; Metal: 300° ; (Peak Short Term 390°)			
Materials of Construction:					
Diaphragm		PTFE / EPDM ; Optional: Viton & PTFE / Viton			
Valve Top		Standard: PVC (Threaded to Plastic Valves, Bolted to Metal Valves) Optional: CPVC, Steel, 316 SS, (Alloy tops fit alloy valves ONLY)			
Valve Body		PVC, CPVC, PP, PTFE, PVDF, 316 SS, A 20, Hast. C, Others on Request			

Performance Curves:



Dimensions:



Product Codes For Ordering:

PRT

1	2	3
1 = Size	2 = Material	3 = Options
025 - 1/4"	P - PVC	V - Viton Diaphragm
038 - 3/8"	CP - CPVC	2P - 2 Port Configuration
050 - 1/2"	PP - Polypro	90 - 90° Configuration
	T - PTFE	OS - Optional Steel Top
	K - PVDF	OSS - Optional 316 SS Top
	S - 316 SS	MS - 50 - 350 psi Valve, Steel Top
	A - Alloy 20	MSS - 50 - 350 psi; 316 SS Top
	C - Hastalloy C	S - Socket Connections

D	A	B	C
1/4"	3.90	2.375	0.75
3/8"	3.90	2.375	0.75
1/2"	4.60	2.375	1.10

Note: Options OS, OSS, MS, & MSS are only for use on 316SS, A20, & Hast C Valves.

For more detailed information visit us at www.griffcovalve.com



Griffco Valve Inc.

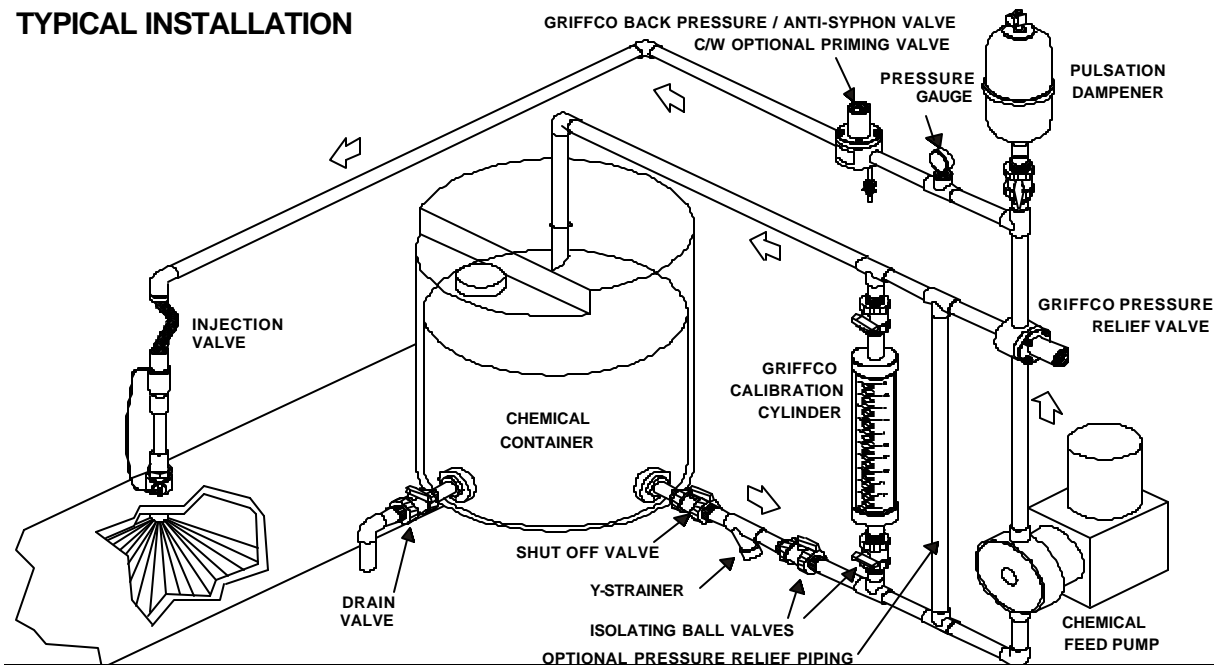
3 North Main Street
Middleport, NY 14105
Phone: 1 800-474-3326
Fax: 1 716-735-3166

T-SERIES BACK PRESSURE VALVES



Griffco diaphragm back pressure valves are designed to enhance the performance of chemical feed systems by applying a continuous back pressure to the chemical feed pump, while also acting as an anti-syphon valve. Robust construction ensures reliability in the rigorous service of municipal and industrial applications. Wetted materials include: **PVC, CPVC, PP, PVDF, PTFE, 316 SS, A 20 and Hast. C.** Available sizes: **1/4" - 1/2"**.

TYPICAL INSTALLATION



Features:

- High Reliability / Low Cost
- No Bolts on Plastic Models
- Compact Size for OEM Applications
- Adjustable 10 - 150 PSI
- Optional 350 PSI Rated Valve
- Anti-Siphon Function
- Robust, Machined Construction
- Vulcanised PTFE/EPDM Diaphragm
- Wide Range of Materials

Operation:

Griffco diaphragm back pressure valves apply positive discharge pressure to a metering pump system to prevent siphoning and eliminate varying dosage rates caused by fluctuating downstream pressure. The diaphragm is held against the valve seat by an internal spring. When the preset pressure is exceeded, the diaphragm is forced up and chemical flows through the valve to the injection point. The valves are preset for 50 psi, however they are field adjustable from 10 - 150 psi via the adjustment screw. Installation should be as close to the injection point as possible to prevent chemical line drainage, and it is most important that all chemical system equipment such as pulsation dampeners and pressure gauges are between the pump and back pressure valve.

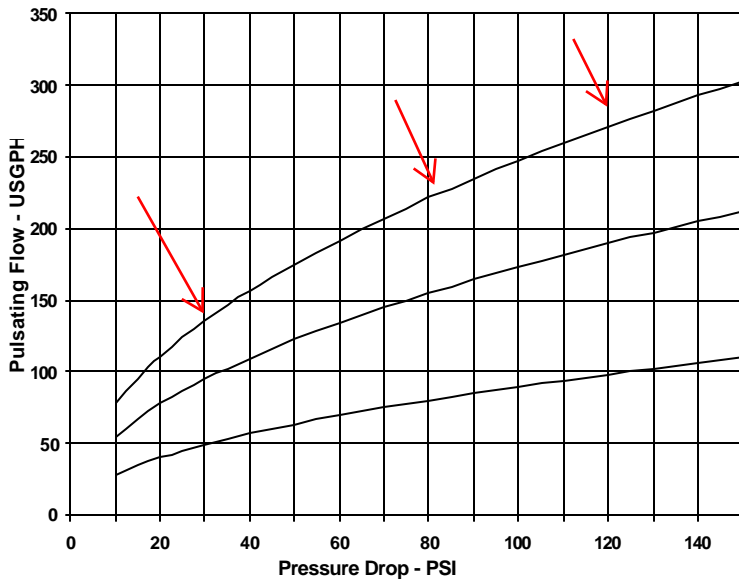
CALL 1 - 800 - GRIFFCO

Bulletin # BPV1003-2001

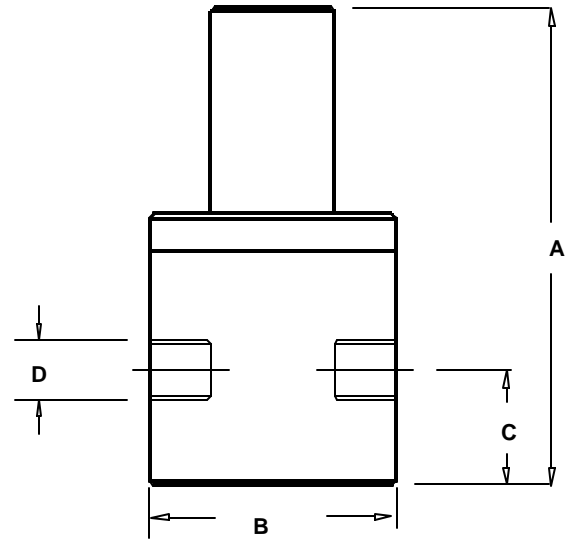
Technical Data:

Sizes: Model BPT		1/4", 3/8", 1/2"			
Connections:		NPT and Socket			
Pressure Adjustment		10-50 psi, 50-350 psi			
Flow Rates @ 150 psi		Shipping Weight: lbs			
Size	Pulsating	Continuous	Plastic	Metal / Plastic Top	Metal / Metal Top
1/4"	100 USgph	5 USgpm	1.0	2.5	3.0
3/8"	200 USgph	10 USgpm	1.0	2.5	3.0
1/2"	300 USgph	15 USgpm	1.0	3.0	3.5
Max Temperature: (°F)		Plastic: 140°; Metal: 300°; (Peak Short Term 390°)			
Materials of Construction:					
Diaphragm		PTFE / EPDM, Optional: Viton & PTFE / Viton			
Valve Top		Standard: PVC (Threaded to Plastic Valves, Bolted to Metal Valves) Optional: CPVC, Steel, 316 SS, (Alloy tops fit alloy valves ONLY)			
Valve Body		PVC, CPVC, PP, PTFE, PVDF, 316 SS, A 20, Hast. C, Others on Request			

Performance Curves:



Dimensions:



Product Codes For Ordering:

BPT

1 = Size	2 = Material	3 = Options	"AR" = 1/4" Ball valve on bottom -- Provides bypass function
025 - 1/4" 038 - 3/8" 050 - 1/2"	P - PVC CP - CPVC PP - Polypro T - PTFE K - PVDF S - 316 SS A - Alloy 20 G - Hastalloy C	V - Viton Diaphragm S - Socket Connections F - Flanged Connections OS - Optional Steel Top OSS - Optional 316 SS Top MS - 50 - 350 psi Valve, Steel Top MSS - 50 - 350 psi; 316 SS Top AR - Optional Air Release Port	

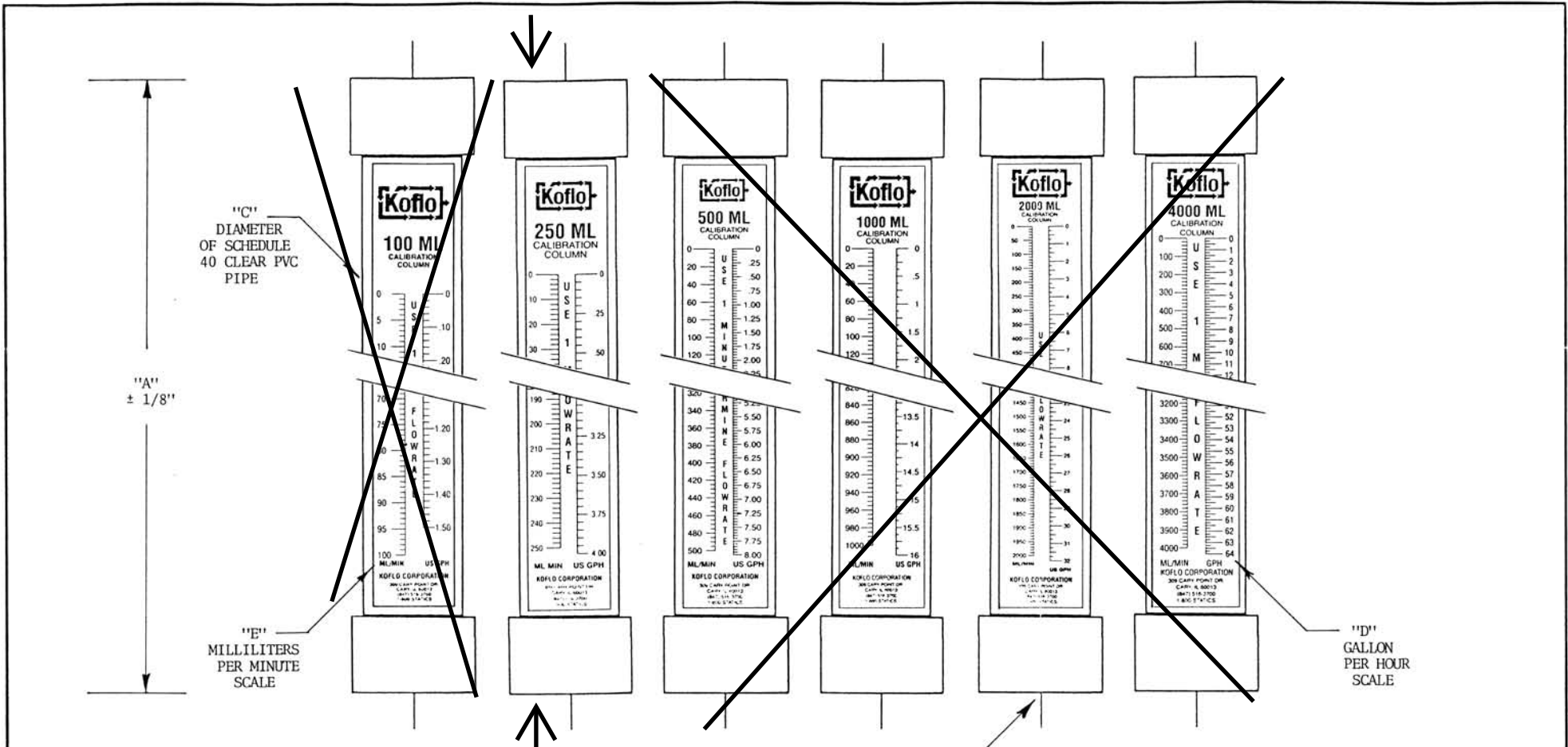
D	A	B	C
1/4"	3.90	2.375	0.75
3/8"	3.90	2.375	0.75
1/2"	4.60	2.375	1.10

Note: Options OS, OSS, MS, & MSS are only for use on 316SS, A20, & Hast C Valves.

For more detailed information visit us at www.griffcovalve.com

Calibration Columns

Drawing

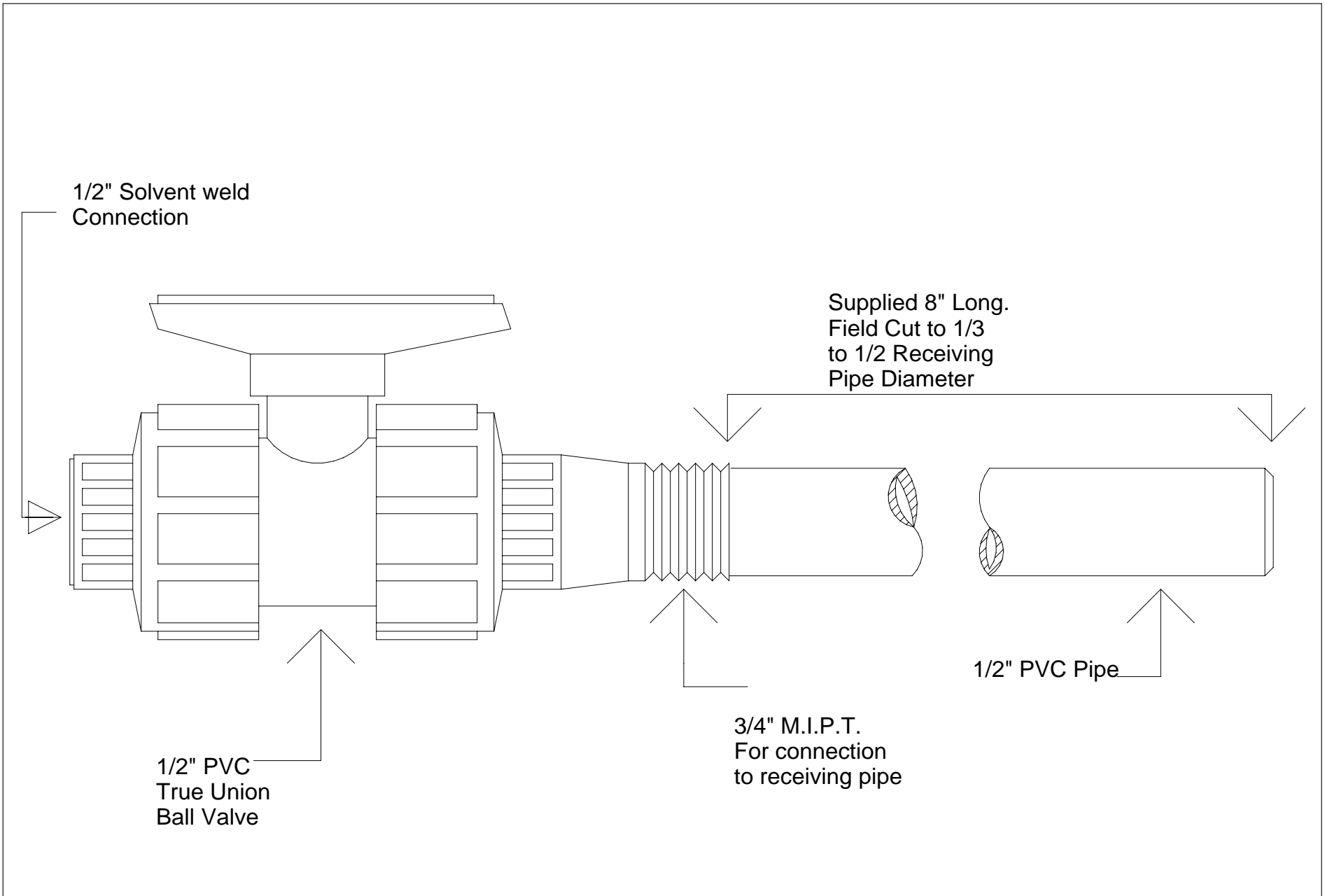


SIZE	"A"	"B"	"C"	"D"	"E"
100 ML	12-1/2"	1/2"	1"	1.5"	100
250 ML	16-1/4"	1/2"	1-1/4"	4.0"	250
500 ML	16"	3/4"	2"	8.0"	500
1000 ML	25"	3/4"	2"	16.0"	1000
2000 ML	24"	1"	3"	32.0"	2000
4000 ML	34"	1"	3 1/2"	64.0"	4000

NOTE: USE ONE (1) MINUTE TEST TO DETERMINE FLOWRATE

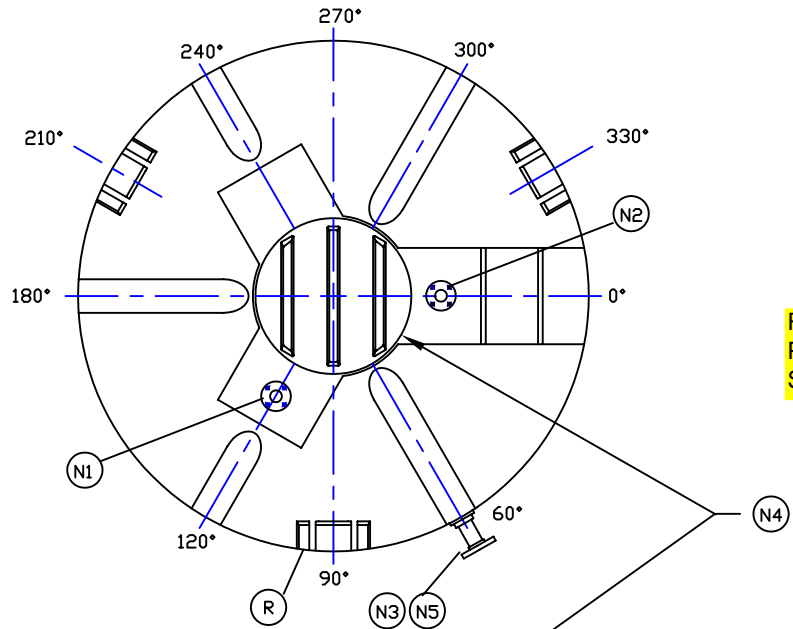
Koflo Corporation
 309 CARY POINT DR.
 CARY, IL 60013

SCALE: NONE	APPROVED BY	DRAWN BY A.R.F.
DATE: 12/21/92		REVISED 6/22/01
CUSTOMER:		REVISED 6/17/04
MODEL NO:	DRAWING NUMBER	
	STANDARD CALIBRATION COLUMNS	
		KD-1029



Pacific Service & Supply Co., Inc.
 28525 N.W. Fern Flat Rd.
 Cornelius, Oregon 97113 (503)647-5869

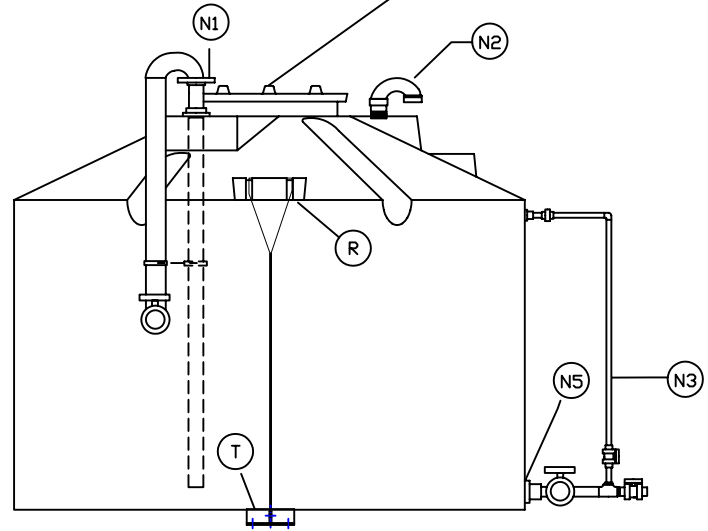
Main Connection Diffuser for Chemical Feeding		
Scale: NTS	Date: 2/88	Drawing #: CL2-DW106



Restraint System
Per Bldg code for
Specific Location

NOZZLE SCHEDULE & ACCESSORIES					
SERVICE	MK	SIZE	FITTING	DEG	ELEV
FILL	N1	2"	BULKHEAD FITTING/PVC W/GSKT/VITON W/INT/EXT DROP PIPE/PVC 2" TRU UNION BALL VALVE	120°	DOME
VENT	N2	3"	PVC U-VENT	0°	DOME
LEVEL GAUGE	N3	3/4"	BULKHEAD NPT FITTING/PVC 3/4" PVC LEVEL GAUGE 3/4" PVC ISOLATION VALVES	60°	6'
LID	N4	24"	THREADED	0°	DOME
OUTLET/ DRAIN	N5	2"	BOLTED NPT FITTING/PVC W/BOLTS/SS W/GSKT/EPDM	60°	6'
RESTRAINT SYSTEM	T	--	SEISMIC ZONE 4 RESTRAINT SYSTEM CONSISTING OF: (3) AC-12 BASE CLIPS CLAMPS, THIMBLES, 304SS 3/8" CABLE	90° 210° 330°	TOP & BTM
LIFTING LUGS	R	--	MOLDED-IN LIFTING LUGS	90° 210° 330°	TOP SIDE WALL

Fitting Placement/
Orientation may be
modified for
specific project



NOTES

1. THIS IS A COMPUTER GENERATED DWG. DO NOT REVISE BY HAND.
2. DIMENSIONS WILL VARY ±3% DUE TO VARIATIONS IN MULTIPLE MOLDS & CONDITIONS PREVALENT DURING MANUFACTURE & USAGE.
3. MOLDED IN GALLONAGE @ 0° IN 500 GAL INCREMENTS STARTING @ 500 GAL UP TO 3500 GAL. AVOID WHEN PLACING FITTINGS.

CALCULATED CAPACITIES/ VOLUME IN U.S. GALLONS		
DESIGN CAP	DOME VOL	TOTAL VOL
3692	500	4192

CONFIDENTIAL PROPERTY OF
POLY PROCESSING COMPANY
NOT FOR REPRINT OR USE
WITHOUT PERMISSION

NOTE:
MUST USE FLEXIBLE
CONNECTIONS ALL
LOWER SIDEWALL
FITTINGS

DWG TITLE			
3650 GALLON UPRIGHT TANK			
SCALE:	3/8"=1'-0"		DR: J MEENA
DATE:	8/18/2005		CK:
		SHEET	COMPUTER FILE
		1 OF 1	11003650
			REV

FITTING AND ACCESSORY REFERENCE CHART



Flexible Connection
(HOSE W/MNPT UHMWPE)



Interconnect
(FLX INCNT ASMLY)

For site
gage return
- top



Bulkhead Fitting
(BHF)



Flange Adapter
(FLG ADPT)



**Siphon Leg
or Dip Tube**

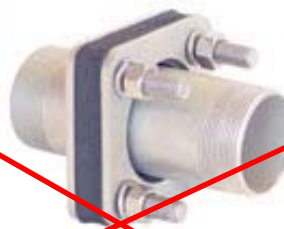
Discharge Fitting
On Sidewall



**Bolted Flanged
Bulkhead Fitting**
(BLTD FLG BHF)



**SS Bulkhead Fitting
Coupling**
(SS BHF ASMLY CPL)



**SS Bulkhead Fitting
Full Nipple**
(SS BHF ASMLY FL
NPL)



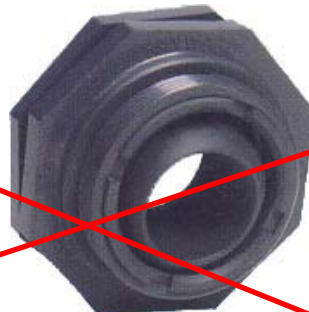
**SS Bulkhead
Fitting -
Half Nipple**
(SS BHF HALF
NIPPLE)



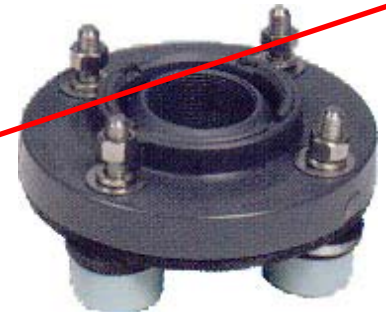
**Bolted Flange
Fitting**
(BLTD FLG FTG)



**Bolted Spool Fitting
with Gussets**
(BLTD SPOOL FTG)



**Self Aligning
Universal Ball
Dome - BHF Style**
(UBD FTG BHF STYLE)



**Self Aligning
Universal Ball Dome -
Flange Style**
(UBD FTG FLG STYLE)

FITTING AND ACCESSORY REFERENCE CHART

Providing Solutions Through Innovation

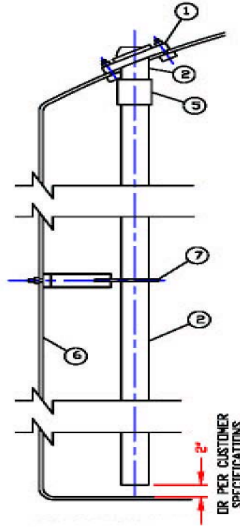
www.polyprocessing.com
1-866-590-6845



~~Through-The-Dome
Vertical Fitting with
Optional Flange
Adapter
(DOME FTG TTD STYLE)~~



Fill Line Assembly with
Optional Ball Valve,
~~Quick Adapter & Cap~~



Internal Drop
Pipe



Pipe Support



~~Bolted Manway
Cover
(CVR ASMBLY)~~



~~Combination
Manway Cover
(CVR ASMBLY COM)~~



~~Weighted Hinged Manway
Cover
(CVR ASMBLY HINGED)~~



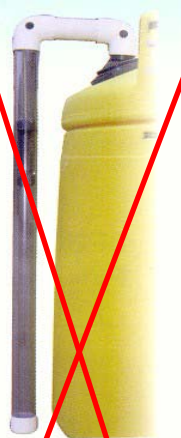
~~Mushroom
Vent~~



U-Vent



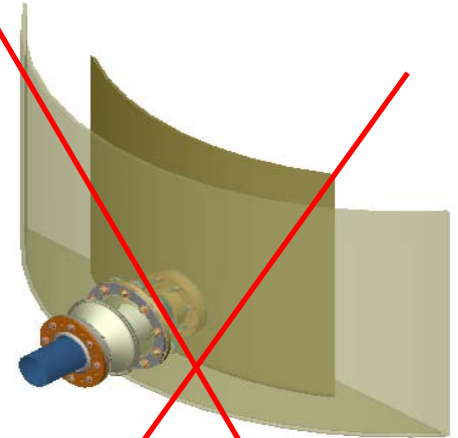
PVC Liquid
Level Gauges
(LEVEL GAGE
STD TYPE)



~~Reverse
Float Level
Gauges
(LEVEL GAGE
FLT TYPE)~~



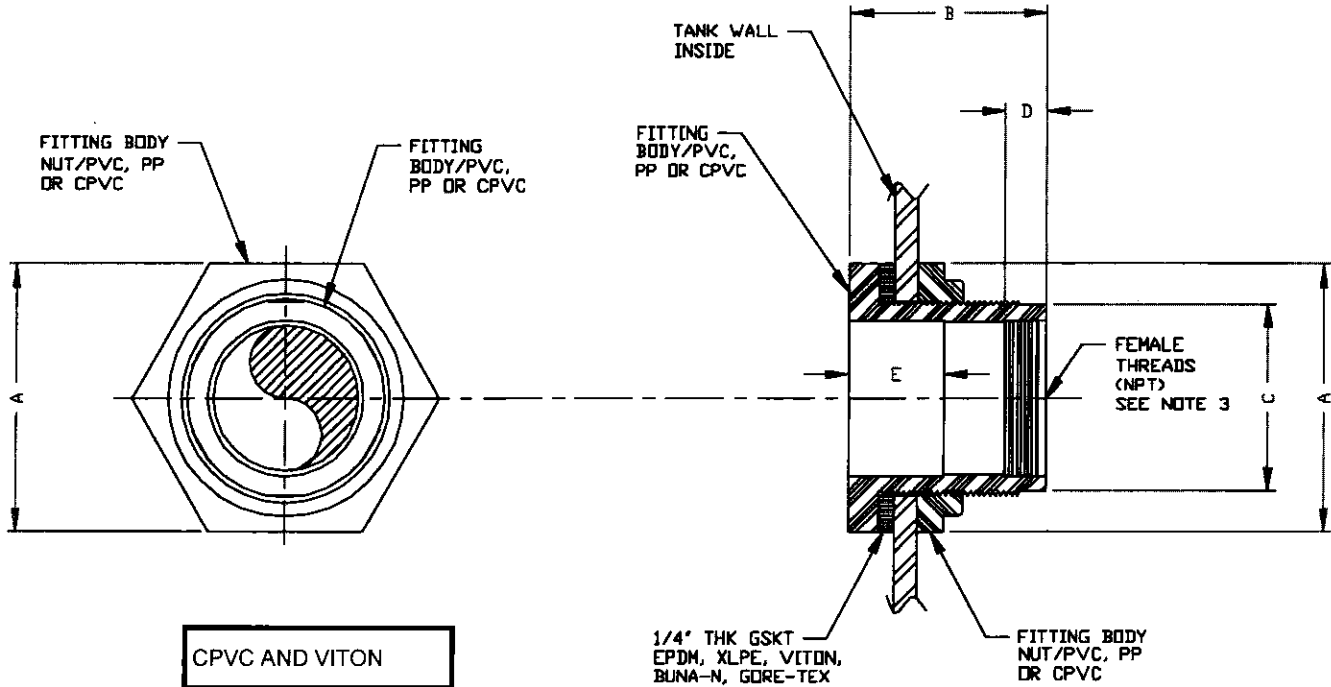
~~IMFO®
Integrally Molded Flanged
Outlet~~



~~SAFE-Tank® Transition
Fitting
(TRNS FTG BELLOW
STYLE)~~

NON-CONTROLLED COPY INFORMATION SUBJECT TO CHANGE WITHOUT NOTICE COPY WILL NOT BE UPDATED	COPY ISSUED BY..... COPY ISSUED ON.....
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Site Gage Return - Top of tank



CPVC AND VITON

PIPE SIZE (NPT)	DIM A	DIM B	DIM C	DIM D	DIM E
1/2"	2"	2 3/4"	1 3/8"	3/4"	7/8"
3/4"	2 3/8"	2 7/8"	1 5/8"	3/4"	1"
1"	2 9/16"	2 7/8"	1 7/8"	1 3/16"	1 1/8"
1 1/4"	3"	3"	2 3/8"	3/4"	1 1/4"
1 1/2"	3"	3"	2 3/8"	13/16"	1 7/16"
2"	4 3/8"	3 1/4"	3 1/4"	15/16"	1 9/16"
3"	6"	3 5/8"	4 1/2"	1 1/16"	1 7/8"
4"	8 3/4"	4 3/4"	5 3/4"	1 1/2"	1 1/2"

NOTES

- THIS IS A COMPUTER GENERATED DWG. DO NOT REVISE BY HAND.
- PLASTIC BULKHEAD FITTINGS (EXCEPT 4") MAY BE USED ON THE TANK SIDE WALL, IN THE BOTTOM, OR ON THE CENTER OF THE DOME. PLASTIC BULKHEAD FITTINGS MAY ALSO BE USED ELSEWHERE ON THE DOME IF IT IS NOT NECESSARY THAT THE FITTING BE VERTICAL TO THE BASE OF THE TANK AS THE FITTING WILL FOLLOW THE CURVE OF THE DOME.
- PVC FITTING MAY BE SPECIAL ORDERED WITH THREADS ON BOTH ENDS. PP IS THREADED ON BOTH ENDS. CPVC IS S X T ONLY.
- 3" AND 4" FITTINGS ARE OCTAGONAL.

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DWG TITLE PLASTIC BULKHEAD FITTING (HAYWARD)			
SCALE: 6"=1'-0"		Checked By: MB WILKERSON	DR: MB WILKERSON
DATE: 8/30/00		Company: POLY PROCESSING	CK: J. BRANTLEY
SHEET	COMPUTER FILE	REV	
1 OF 1	BHF	-	

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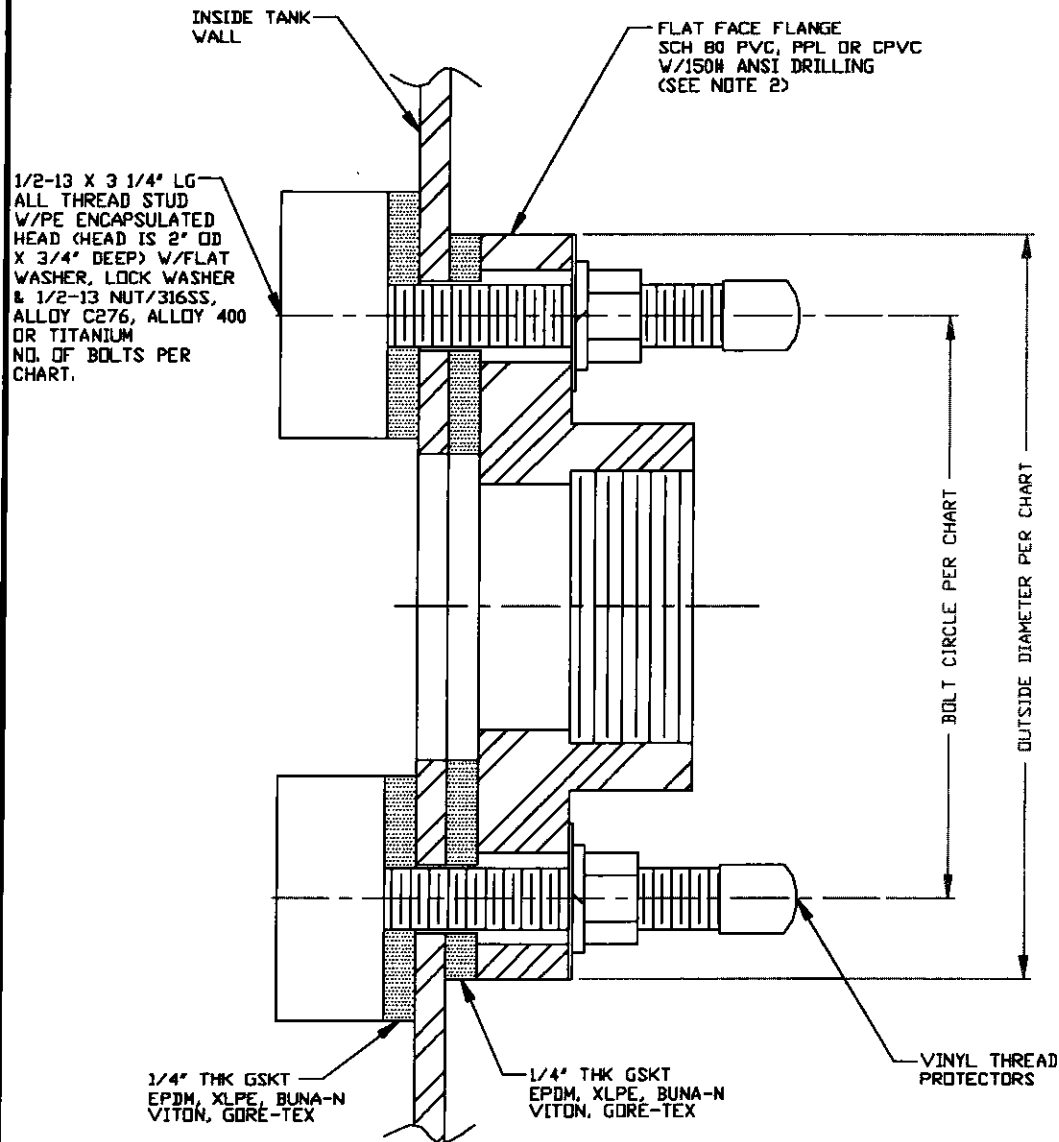
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COPY WILL NOT BE UPDATED

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PIPE SIZE	OUTSIDE DIAMETER	BOLT CIRCLE	NUMBER BOLTS
1"	4 1/4"	3 1/8"	4
1 1/2"	5"	3 7/8"	4
2"	6"	4 3/4"	4
3"	7 1/2"	6"	8
4"	9"	7 1/2"	8
6"	11"	9 1/2"	8



Chemical Outlet - Bottom sidewall of tank

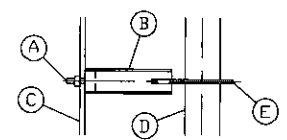
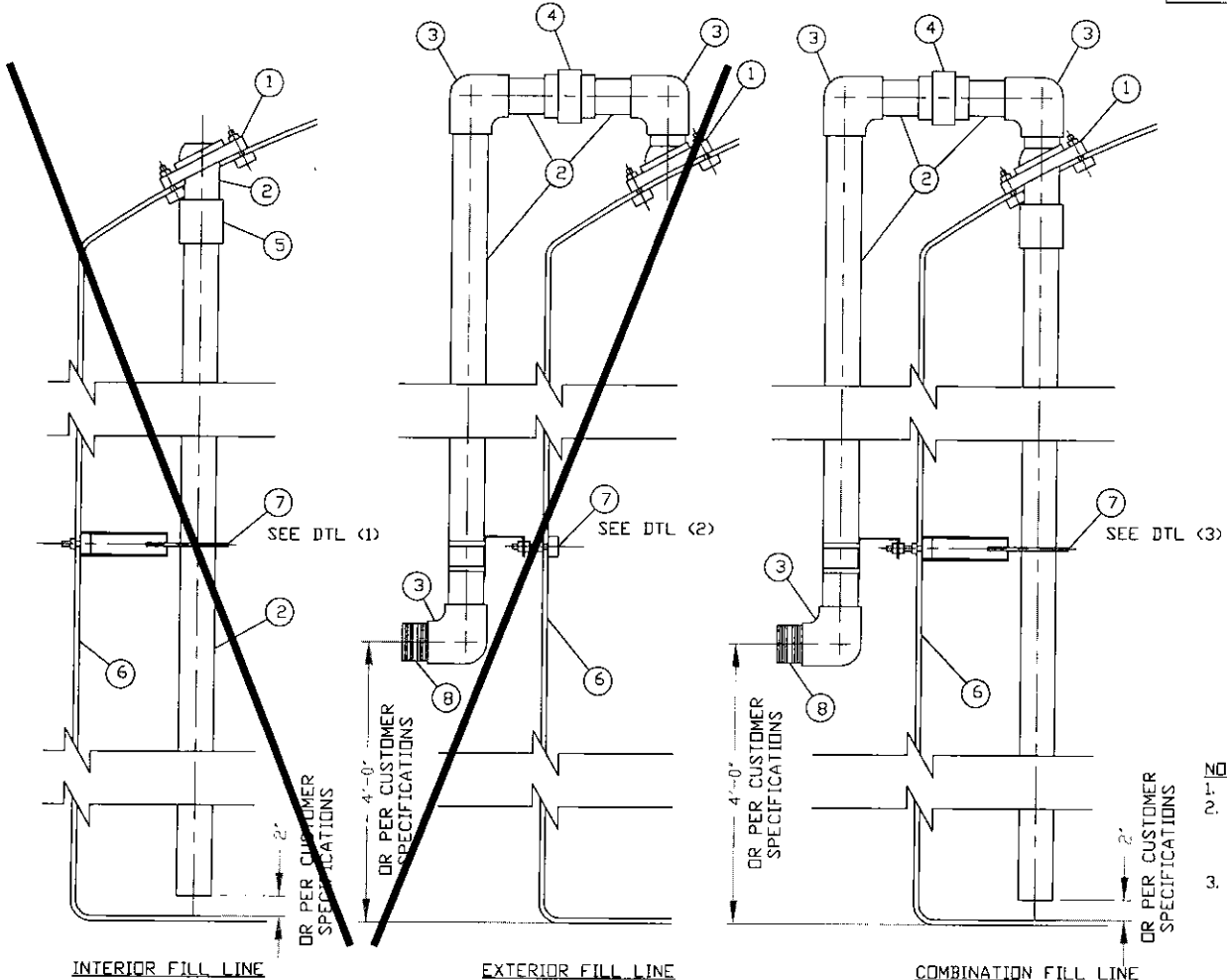
NOTES

1. THIS IS A COMPUTER GENERATED DWG. DO NOT REVISE BY HAND.
2. 1" THRU 4" FLANGES WILL BE THREADED UNLESS SPECIFIED OTHERWISE.
3. BOLTED FLANGE FITTINGS MAY BE USED ON THE TANK SIDE WALL, IN THE BOTTOM, OR IN THE CENTER OF THE DOME. BOLTED FLANGE FITTINGS MAY ALSO BE USED ELSEWHERE ON THE DOME IF IT IS NOT NECESSARY THAT THE FITTING BE VERTICAL TO THE BASE AS THE FITTING WILL FOLLOW THE CURVE OF THE DOME.

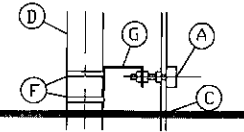
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DWG TITLE		POLY PROCESSING		
BOLTED FLANGE FITTING		<small>Control Systems for the Poly Processing Plant 714 682 2222</small>		
SCALE: FULL	DATE: 8/17/00	DR: MB WILKERSON	CK: J. BRANTLEY	REV: -
SHEET 1 OF 1		COMPUTER FILE	BLTDFLG	

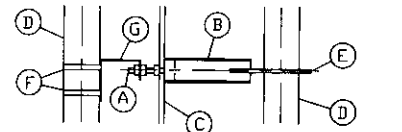
REV 'A' REMOVED NOTES IN PARTS LIST BY:MBW 11/6/01 CK:JB
 REV 'B' NOTE 2 DID SAY '6" PIPE SIZE', ADDED NOTE 3 BY:MBW 11/6/01 CK:JB



DTL (1) INTERIOR FILL LINE SUPPORT



DTL (2) EXTERIOR FILL LINE SUPPORT



DTL (3) COMBINATION FILL LINE SUPPORT

- (A) 1/2-13 STUD W/PE ENCAPSULATED HEAD
- (B) 2" SCH 80 PIPE/PE
- (C) TANK WALL
- (D) PIPE
- (E) 3/8" THK PLATE/PE
- (F) PIPE CLAMPS/SS OR PPL
- (G) BRACKET/304SS
- (7) PIPE SUPPORT BRACKET DETAILS

NOTES ^B

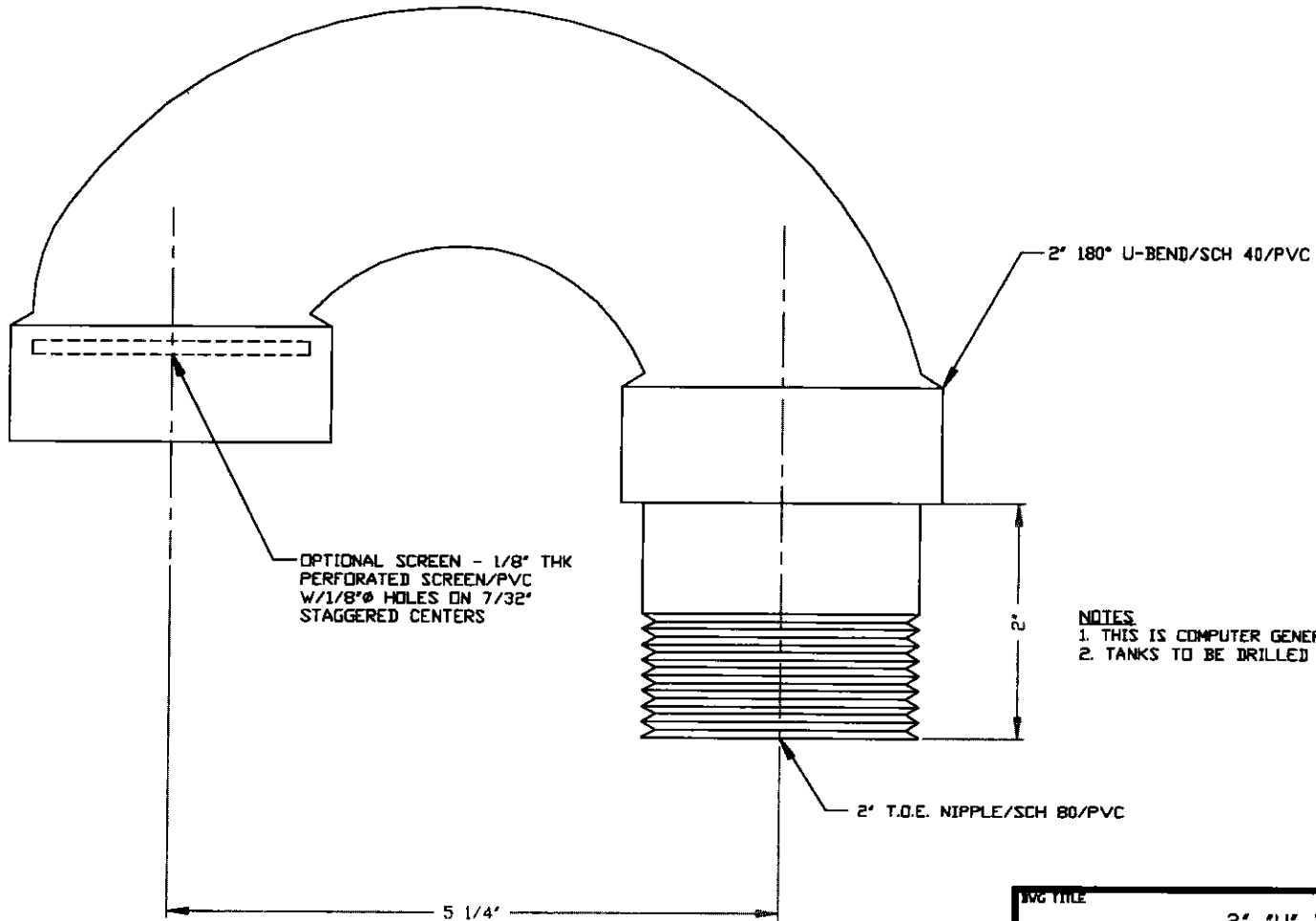
- THIS IS A COMPUTER GENERATED DWG. DO NOT REVISE BY HAND.
- DROP PIPE ASSEMBLIES AVAILABLE IN 1" TO 4" PIPE SIZE. PIPING AVAILABLE IN PVC OR PPL. BOLTING AVAILABLE IS 316SS, ALLOY C276, TITANIUM, ALLOY 400. GASKETS AVAILABLE IN EPDM, VITON, XLPE, & BUNA-N.
- CONTACT FACTORY FOR INFORMATION CONCERNING 6" PIPE SIZE

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- (1) UNIVERSAL BALL DOME FTG W/BOLTS W/GSKTS
NOTE: 1" HAS NO BOLTS
- (2) SCH 80 PIPE
NOTE: MAY BE THREADED
- (3) SCH 80 90° ELL
- (4) UNION ^A
- (5) SCH 80 COUPLING (S X T)
- (6) TANK WALL
- (7) PIPE SUPPORT BRACKET
- (8) SHORT NIPPLE (T X T)

DWG TITLE		FILL LINE ASSEMBLIES	
SCALE:	1"=1'-0"	POLY PROCESSING Company Central Region P.O. Box 4100 (71811) 2501 Old Shreveport Rd. Harvey, LA 70059 (504) 343-2500 FAX (504) 343-0795	DR: MB WILKERSON
DATE:	8/16/00		CK: J. BRANTLEY
		SHEET	COMPUTER FILE
		1 OF 1	FILLASMBY B

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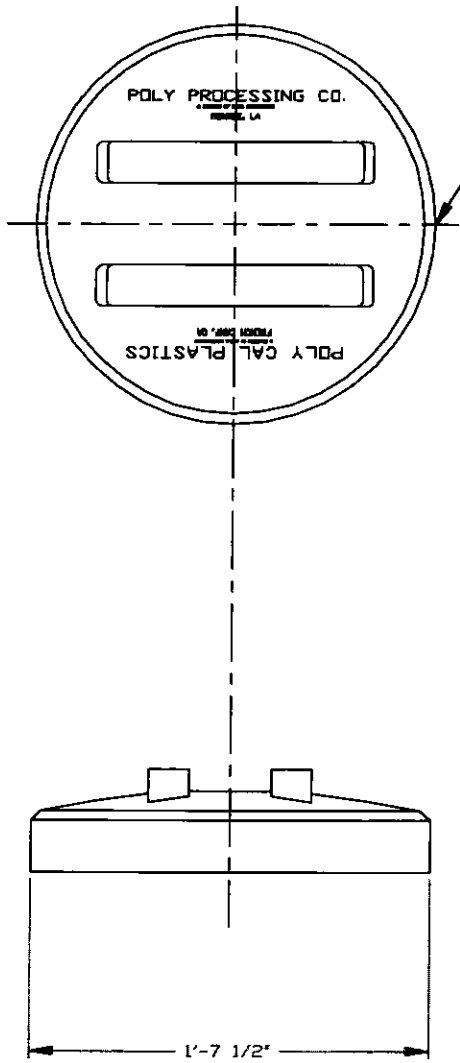


NOTES
 1. THIS IS COMPUTER GENERATED DWG. DO NOT REVISE BY HAND.
 2. TANKS TO BE DRILLED & TAPPED FOR 2" PIPE SIZE.

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DWG TITLE		2" "U" VENT/PVC	
SCALE	FULL		DR: MB WILKERSON
DATE	9/6/00		CK: J. BRANTLEY
		SHEET	COMPUTER FILE
		1 OF 1	2UVENTPVC -

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17' BUTTRESS THREAD CAP
 BLACK PE 12" Size to match tank capacity

NOTES
 1. THIS IS A COMPUTER GENERATED DVG. DO NOT REVISE BY HAND.
 2. PPC STOCK NO. 455B.

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DWG TITLE			
17' BUTTRESS THREAD CAP			
SCALE:	2"=1'-0"	POLY PROCESSING	DRG MB WILKERSON
DATE:	10/4/00		CHK J. BRANTLEY
	SHEET	COMPUTER FILE	REV
	1 OF 1	17BTC	-

LIMITED WARRANTY
Poly Processing Company

FOR SHERIDAN, OR PROJECT

Poly Processing Company Product	Warranty Period
CROSSLINKED POLYETHYLENE TANKS for all suitable applications except those listed below	5 yrs
IMFO® TANKS STORING SODIUM HYPOCHLORITE 9 – 15 wt% (refer to PPC Position Statement) HDXLPE w/ OR-1000™ 1.9 spg rating	5 yrs
NON-IMFO® TANKS STORING SODIUM HYPOCHLORITE 9 – 15 wt% (refer to PPC Position Statement) 2000 gallons and larger: HDXLPE w/ OR-1000™ 1.9 spg rating Less than 2000 gallons: HDXLPE 1.9 spg rating	3 yrs
TANKS STORING SULFURIC ACID ≥ 80% CONCENTRATION (refer to PPC Position Statement) SAFE-TANK® to 8700 gallons: HDXLPE w/ OR-1000™ 2.2 spg rating Vertical tanks 1000 - 6600 gallons: HDXLPE w/ OR-1000™ 2.2 spg rating Vertical tanks less than 1000 gallons: HDXLPE 1.9 spg rating	3 yrs
TANKS STORING HYDROCHLORIC ACID ≤ 37% CONCENTRATION (refer to PPC Position Statement) HDXLPE w/ OR-1000™ 1.9 spg rating	5 yrs
TANKS STORING HYDROCHLORIC ACID ≤ 37% CONCENTRATION (refer to PPC Position Statement) HDXLPE 1.9 spg rating	3 yrs
LINEAR POLYETHYLENE TANKS for all suitable applications except for those listed above	3 yrs

Poly Processing Company's warranty consists of repair or replacement of defective product. Owner and/or user may be requested to provide a cleaned section of the product in question for evaluation. Product disposal or alternate use is the owner and/or user's responsibility. Warranty begins at date of shipment from PPC plant. Parts and ancillary items are warranted for ninety (90) days.

Poly Processing Company's liability is limited to either repair or replacement of its product. By accepting delivery of the product, owner and/or user waives any claim against PPC for incidental or consequential damages as they relate to lost profits or sales or to injury of persons or property, including secondary containment. Owner and/or user accepts full responsibility for providing secondary containment appropriate and adequate for the stored material.

This warranty will be nullified if:

1. Product has been used in manner other than its originally declared purpose or if PPC tank recommendations have not been followed.
2. Product has not been installed, used, and maintained in accordance with a) all federal, state, and local laws and regulations; b) generally accepted best practices within the applicable industry; c) guidelines set forth in the PPC Installation Manual and/or in PPC Position Statements.
3. Product has been altered or repaired by unauthorized personnel.
4. Notification of the defect has not been made in writing within the warranty period.
5. Invoice for product has not been paid.
6. Product has been subjected to misuse, negligence, fire, accident, act of war, or act of God.

The limited warranty described herein is Poly Processing Company's sole warranty and the complete, final and exclusive statement of the terms of the warranty. Owner and/or user may not rely on any oral statement or representations. This warranty is neither assignable nor transferable.

Issued: September 1, 2003