Kohrs Lonnemann Heil Engineers, Inc.

Fort Thomas Office
1538 Alexandria Pike, Suite 11
Ft. Thomas, KY 41075
859-442-8050 telephone
859-442-8058 fax

Product Data

Project Name:	Sharonville Convention Center Expansion	**Submittal Code:**	232123.00-PD-00	**REV:** 00
Document Set:	Bid/Construction			
KLH Project #:	21108.00-Bid	**Received Date:**	02/15/2022	
Section Name:	Hydronic Pumps			
Section Number:	232123.00			
Submitted By:	CT Consultants, Inc.			
Authored By:	Driekast Piping Corp			
Client Name:	CT Consultants, Inc.			

SUBMITTAL REVIEW

[X] **Exceptions Noted**

By: Daniel R. Sharp **Date:** 03/14/2022

ENGINEER'S REVIEW IS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. COMMENTS DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR REMAINS RESPONSIBLE FOR ACCURACY OF QUANTITIES, DIMENSIONS, DETAILS AND COORDINATION WITH OTHER TRADES.

CTP-4

1.1 Actual pump flow shall be 825 gpm at 50 Ft Head pressure to accommodate 10% flow (75 gpm) required for bypass flow through solids separator.

CWP-3

2.1 No exceptions.

PCWP-4

3.1 No exceptions.

End of Submittal Review

Note: Additional submittals are not required where "Exceptions Noted" is indicated. It will be assumed however that all necessary corrections will be executed. Provide as-built record copies within OM Manuals at project close-out (not before) for all affected submittals.

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DRIEKAST PIPING CORP

11290 SEBRING DRIVE CINCINNATI, OHIO 45240

PH. (513) 674-9110 FAX (513) 674-9113

SUBMITTAL

Project Name: Sharonville Convention Center Expansion		
Project Address: 11355 Chester Road	City, State: Cincinnati	Zip Code: 41016

General Contractor: Megan Construction			
Project Manager: Wes Dorger		Prepared By: Wes Dorger	
HVAC ☐	Plumbing ☐	Submittal #:	Date:1/10/2022
Specification #: 23-2123		Description: Hydronic Pumps and Pump Specialties	

Reviewed ☐

Reviewed as Noted ☐

Revise & Resubmit ☐

Qty	Description & Tag
	Tag: CTP-4
1	B&G Base Mounted Pump Series e-1510, Model e-1510, 4 BD, SS, 15 HP, 1800 RPM, EPR Seal, ODP, Premium w/Aegis SGR, 230/460/3/60 Motor, 750 GPM, 50 FT TDH
1	B&G GF-3X Suction Diffuser Plus, 6” x 5” Flange
1	B&G 3DS-10B Triple Duty Valve Straight Pattern 10” Flange
2	Metraflex SLPC-10 Inch flange stainless steel flex connector
1	Vibration Eliminator Inertia Base with 1.0-inch spring isolators
	Tag: CWP-3
1	B&G Base Mounted Pump Series e-1510, Model e-1510, 5 GB, SS, 50 HP, 1800 RPM, ODP, Premium w/Aegis SGR, 230/460/3/60 Motor, 912 GPM, 120 FT TDH
1	B&G HG-3X Suction Diffuser Plus, 8” x 6” Flange
1	B&G 3DS-8S Triple Duty Valve Straight Pattern 8” Flange
2	Metraflex SLPC-8-inch flange stainless steel flex connector
1	Vibration Eliminator Inertia Base with 1.0-inch spring isolators
	Tag: PCWP-4
1	B&G In-Line Pump Series e-80, Model 5 x 5 x 7B, SS, 5 HP, 1800 RPM, with 6" Impeller, EPR Seal, ODP, Premium w/Aegis SGR, 230/460/3/60 Motor, 425 GPM, 25 FT TDH
1	B&G 3DS-8S Triple Duty Valve Straight Pattern 8” Flange
1	Metraflex LPD-8-inch flanged cast iron wye strainer

Job Name: **Sharonville Convention Center**
Engineer: **KLH Engineering**
Contractor: **Driekast Piping**

blackmore and glunt, inc.

11435 Williamson Rd. **Cincinnati, OH 45241** **PH: 513.489.5225**

Prepared By: **Eric Meyer** **Date: 1/4/2022**

Bell & Gossett
a xylem brand

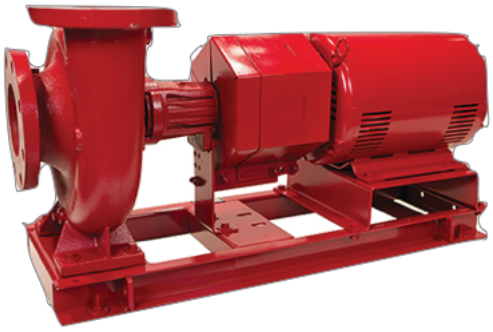
Submittal

Job/Project: Sharonville Convention Center	**Representative:** Blackmore and Glunt, Inc. - Cincinnati	
ESP-Systemwize: WIZE-2B6C87 **Created On:** 01/04/2022	**Phone:**	
Location/Tag: CTP-4	**Email:**	
Engineer: KLH Engineering	**Submitted By:** Eric Meyer	**Date:** 1/4/2022
Contractor: Driekast Piping	**Approved By:**	**Date:**

Base Mounted End Suction Pump

Series: e-1510

Model: 4BD



Features & Design

- ANSI/OSHA Coupling Guard
- Center Drop Out Spacer Coupling
- Fabricated Heavy Duty Baseplate
- Internally Self-Flushing Mechanical Seal

*The Bell & Gossett Series e-1510 is available in 26 sizes and a variety of configuration options that enable customization and flexibility to fit a broad range of operating conditions.

http://bellgossett.com/pumps-circulators/end-suction-pumps/e-1510/

Pump Selection Summary

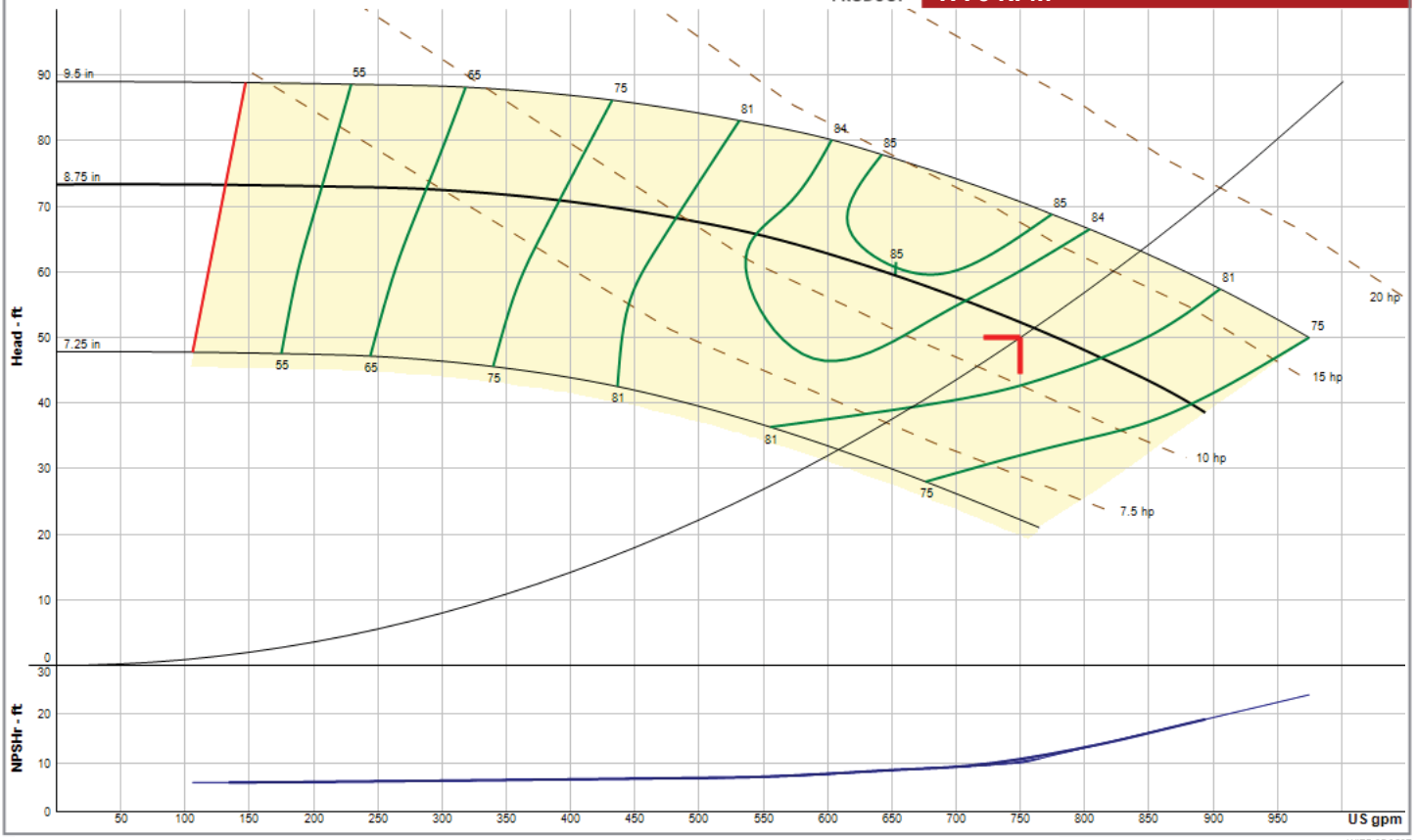
Duty Point Flow	750.0 US gpm
Duty Point Head	50.0 ft
Control Head	0.0 ft
Duty Point Pump Efficiency	82.5 %
Part Load Efficiency Value (PLEV)	0.0 %
Impeller Diameter	8.75 in
Motor Power	15 hp
Duty Point Power	11.8 bhp
Motor Speed	1800 rpm
RPM @ Duty Point	1770 rpm
NPSHr	11.6 ft
Minimum Shutoff Head	73.4 ft
Minimum Flow at RPM	131 US gpm
Flow @ BEP	653 US gpm
Fluid Temperature	68 °F
Fluid Type	Water
Weight *(approx. - consult rep for exact)*	470 lbs
Pump Floor Space Calculation	5.49 ft²

Performance Curve

Energy Efficiency Ratings:
Pump & Motor PEIcl: 0.93 ERcl: 7
Pump, Motor & Drive: PEIvl: 0.45 ERvl: 55

PREMIUM EFFICIENCY PRODUCT

e-1510
4BD
1770 RPM



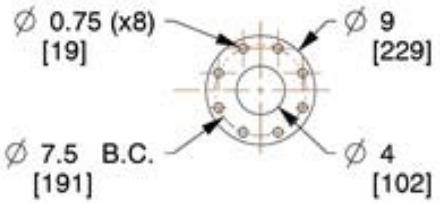
Performance curve meets 14.6 / ISO 9906 acceptance criteria

Materials Of Construction

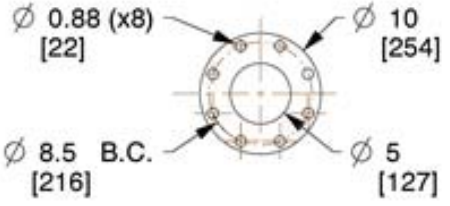
Pump Information\Construction	
Pump Series	e1510
Pump Size	4 BD
Seal Type	Standard Seal
Seal Material	EPR/Carbon/Tungsten Carbide/SS
Material of Construction	Stainless Steel
Impeller Diameter	8.75 inches
Sleeve Material	Stainless Steel Sleeve

Motor Details	
Motor Power	15
Motor Speed	1800
Frequency	60
Phase	3
Voltage	230/460
Frame	254T
Enclosure	ODP
Motor Manufacturer	BG Choice
Motor Status	STK
Motor Comments	NEMA Premium w/Shaft Grounding Rings

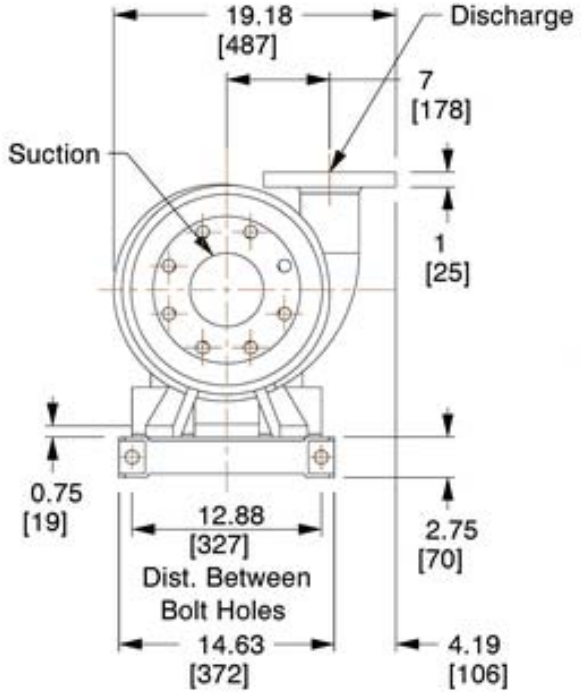
Selected Options	
Selected Option 1	Stainless Steel Shaft

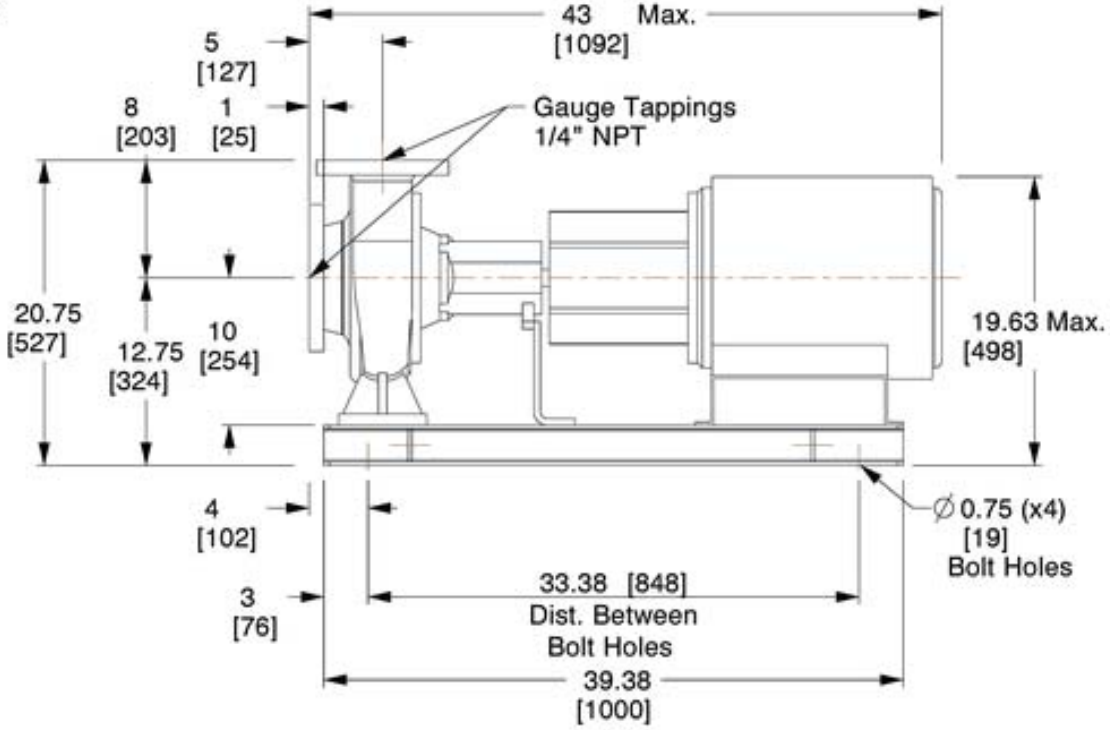


4" DISCHARGE FLANGE
ANSI 125#



5" SUCTION FLANGE
ANSI 125#





Bell & Gossett
a xylem brand

8200 N. Austin Ave.
Morton Grove, IL 60053, USA

Dimensions are subject to change

Not to be used for construction unless certified

BG-E1510-4BD-SS-254T-S

Series e-1510 Centrifugal Pumps - Base Mounted

Seal Type: Standard Seal | Motor Frame: 254T | Frame Type: S | Flange: ANSI 125#

Dimensions : IN (mm)	Scale : N.T.S.	Submittal # : B-880.24B

Standard Mechanical Configuration

Standard Mechanical Seal	SM, LG, & XL Bearing Frames	ES Bearing Frame
Temperature Range	-20 to 225°F	-20 to 225°F
Maximum Pressure	175 PSI	175 PSI
pH Limitations	7.0 - 9.0	7.0 - 9.0
Elastomer	Buna	Buna
Rotating Face	Carbon	Carbon
Stationary Face	Ceramic	Silicon Carbide
Hardware	Stainless Steel / Brass	Stainless Steel

Mechanical Seal Options	SM, LG, & XL Bearing Frames		
Temperature Range	-20 to 250°F	-10 to 225°F	-20 to 250°F
Maximum Pressure	175 PSI	175 PSI	175 PSI
pH Limitations	7.0 - 11.0	7.0 - 9.0	7.0 - 12.5.0
Elastomer	EPR (Ethylene Propylene Rubber)	FKM (Viton™ or Fluoroelastomer)	EPR (Ethylene Propylene Rubber)
Rotating Face	Carbon	Carbon	Silicon Carbide
Stationary Face	Tungsten Carbide	Ceramic	Silicon Carbide
Hardware	Stainless Steel / Brass	Stainless Steel	Stainless Steel

Mechanical Seal Options	ES Bearing Frame		
Temperature Range	-20 to 250°F	-10 to 225°F	-20 to 250°F
Maximum Pressure	175 PSI	175 PSI	175 PSI
pH Limitations	7.0 - 11.0	7.0 - 9.0	7.0 - 12.5.0
Elastomer	EPR (Ethylene Propylene Rubber)	FKM (Viton™ or Fluoroelastomer)	EPR (Ethylene Propylene Rubber)
Rotating Face	Silicon Carbide	Carbon	Silicon Carbide
Stationary Face	Tungsten Carbide	Silicon Carbide	Silicon Carbide
Hardware	Stainless Steel / Brass	Stainless Steel	Stainless Steel

Stuffing Box Configuration

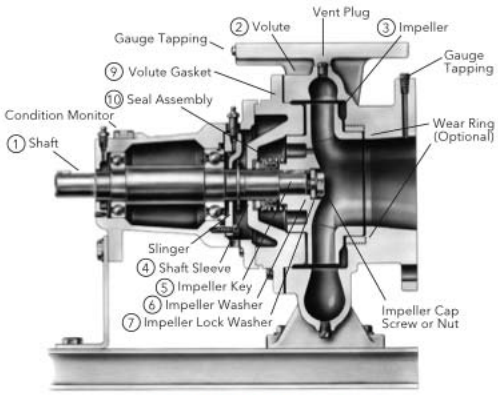
Mechanical Seal	SM, LG, & XL Bearing Frames
Temperature Range	-20 to 250°F*
Maximum Pressure	175 PSI (Optional 250 PSI)
pH Limitations	7.0 - 11.0
Elastomer	EPR (Ethylene Propylene Rubber)
Rotating Face	Tungsten Carbide
Stationary Face	Carbon
Hardware	Stainless Steel

Packing Option	
Temperature Range	0 to 250°F
Maximum Pressure	175 PSI
pH Limitations	7.0 - 9.0
Material	Braided Graphite Impregnated PTFE

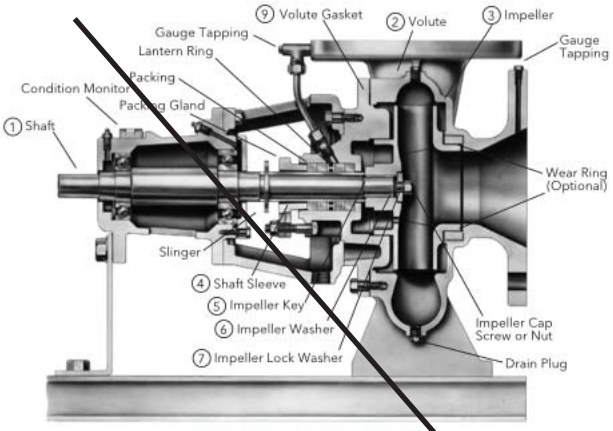
* For operating temperatures above 250°F a cooled flush is required and is recommended for temperatures above 225°F for optimum seal life. On closed systems cooling is accomplished by inserting a small heat exchanger in the flush line to cool the seal flushing fluid.

Flush-line Filters and Sediment Separators are available on special request.

Materials of Construction



Standard Configuration



Optional - S Configuration

Description	SM, LG, & XL Bearing Frames	ES Bearing Frame
1 Shaft	ASTM 108 Grade 1144	ASTM 108 Grade 1144
2 Volute	Cast Iron ASTM A48 Class 30B	Cast Iron ASTM A48 Class 30B
3 Impeller	ASTM A743 Grade CF8 - 304 Stainless Steel	ASTM A743 Grade CF8 - 304 Stainless Steel
4 Shaft Sleeve	ASTM 312 Grade TP304 - 304 Stainless Steel	ASTM 312 Grade TP304 - 304 Stainless Steel
5 Impeller Key	#304 Stainless Steel	NA
6 Impeller Washer	Steel	NA
7 Impeller Lock Washer	#304 Stainless Steel (18-8 XL FRM)	NA
8 Impeller Cap Screw	#304 Stainless Steel	NA
8 Impeller Nut	NA	316 Stainless Steel
9 Volute Gasket	Cellulose Fiber	Cellulose Fiber
10 Seal Assembly	Reference Seal Data Tables	Reference Seal Data Tables

Pump Options

- Stainless Steel Volute Wear Ring
- Galvanized Steel Drip Pan
- Stainless Steel Shaft
- Flexnord Omega Spacer Coupling
- Falk T31 Spacer Coupling
- External Flush Line
- Stuffing Box Configuration
- Epoxy Coated Internal Cast Iron Components
- Special Impeller Balancing (ISO 1940 G2.5 or G1.0)
- Certified Performance Tests (Per HI Standard 14.6)
- 250 PSI Working Pressure

xylem
Let's Solve Water

Xylem Inc.
8200 N. Austin Avenue, Morton Grove, IL 60053
Phone: (847)966-3700 Fax: (847)965-8379
www.bellgossett.com

Bell & Gossett
a xylem brand

Submittal

Job/Project: Sharonville Convention Center		**Representative:** Blackmore and Glunt, Inc. - Cincinnati	
ESP-Systemwize: WIZE-2B6C87	01/04/2022	**Phone:**	
Location/Tag: For CTP-4		**Email:**	
Engineer: KLH Engineering		**Submitted By:** Eric Meyer	**Date:** 1/4/2022
Contractor: Driekast Piping		**Approved By:**	**Date:**

Suction Diffuser Plus

Bell & Gossett Model: GF-3X

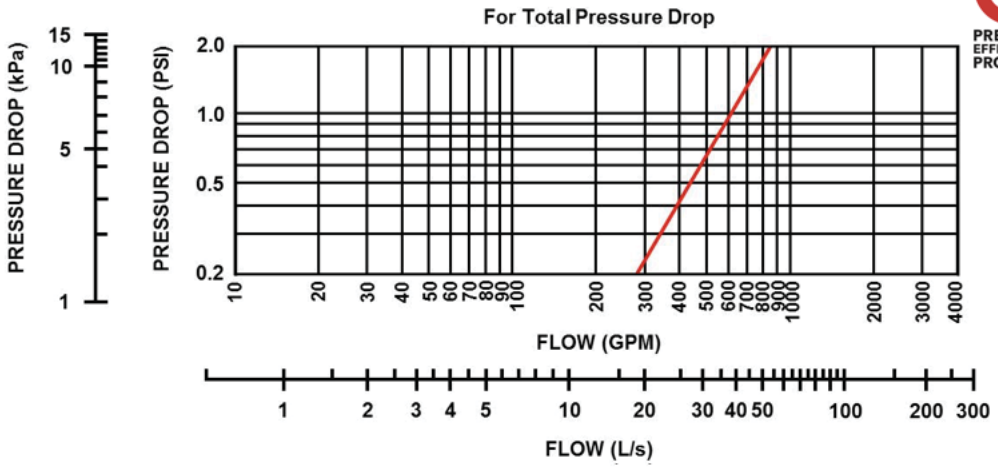
The Bell & Gossett Suction Diffuser Plus is designed for direct application to the pump suction and provides ideal flow conditions for the pump, providing NPSH requirements are met. Its integrated Flow Cone directs flow through the unit and into the pump suction while working with the full length straightening vanes to create a more uniform flow profile. The orifice cylinder has a free area equal to five times the cross section of the pump suction opening and serves as a coarse strainer to protect the pump from large sediment. Type X-For Closed Systems

http://bellgossett.com/hydronic-plumbing-accessories/pump-accessories/suction-diffuser/

Suction Diffuser Selection

Model	GF-3X
System Size	6.0 in
Pump Size	5.0 in
Pressure Drop @ Design Flow	0.0'
Connection Type	Flanged/Flanged
Cv	625
Fluid Type	Water
Fluid Temp	68 °F

Performance characteristics:



PREMIUM EFFICIENCY PRODUCT

GF-3X

Materials of construction

Body	Cast Iron
Inlet Vanes	Steel
Orifice Cylinder	Steel
Start-up Strainer	16 Mesh Bronze

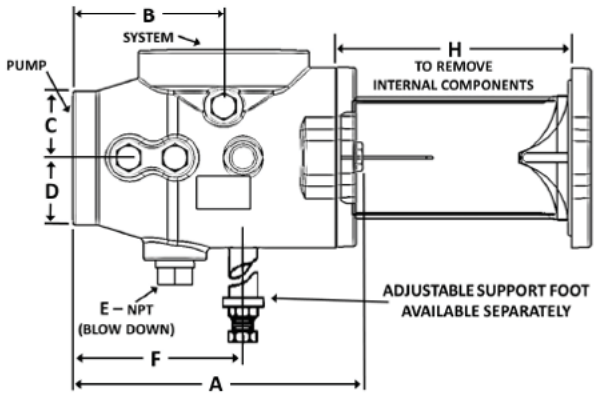
Operating Data

Max Working Pressure	175 psi
Max Temp	250°F

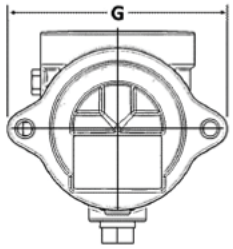
Dimensional data:

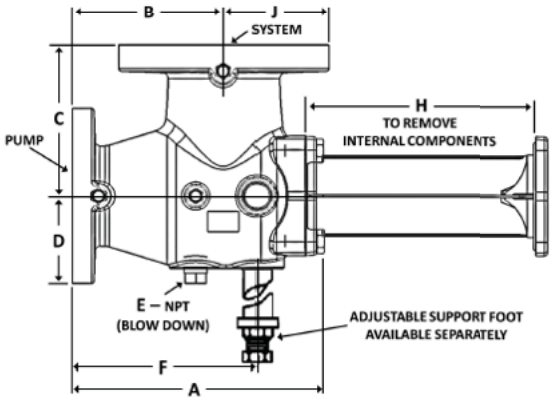
not for construction

'Dimensions include orifice cylinder + 2-1/2 (64) inch clearance.



Threaded x Threaded Models





Flange x Flange Models

DIMENSIONS – INCHES (mm)

Model No.	System Side		Pump Side		A	B	C	D	E	F	G	H	J	Orifice Cylinder Free Area in^2 (cm^2)	Approx. Shpg. Wt. Lbs. (Kg)
GF-3	6 (152.4)	F	5 (127)	F	15.67 (398)	8 (203)	8 (203)	5 (127)	3/4 (19)	10.46 (266)	N/A	13.84 (351.5)	5.50 (140)	90 (581)	105 (43)

Bell & Gossett
a xylem brand

Submittal

Job/Project: Sharonville Convention Center		**Representative:** Blackmore and Glunt, Inc. - Cincinnati	
ESP-Systemwize: WIZE-2B6C87	01/04/2022	**Phone:**	
Location/Tag: For CTP-4		**Email:**	
Engineer: KLH Engineering		**Submitted By:** Eric Meyer	**Date:** 1/4/2022
Contractor: Driekast Piping		**Approved By:**	**Date:**

Triple Duty Valve

Bell & Gossett Model: 3DS-10B

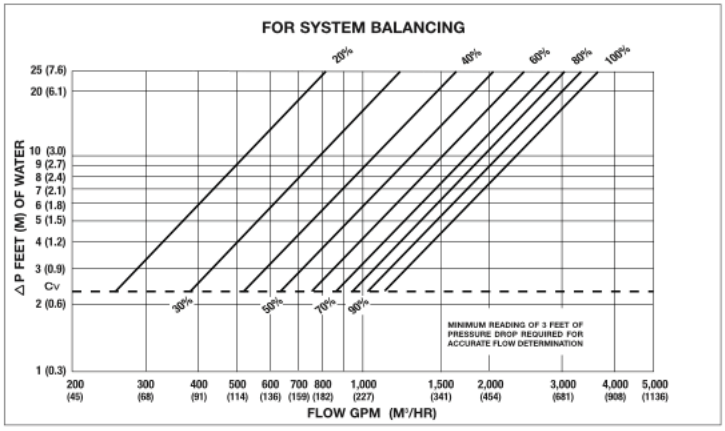
The Triple Duty Valve is a quiet operating heavy-duty valve which performs all of the functions normally required on the discharge side of hydronic system pumps. The valve serves as a nonslam check valve as needed for zoned pumping, parallel and standby pumping, and condenser water applications. The spring loaded disk prevents valve chatter, and assures positive shutoff.. The Triple Duty Valve is also equipped with Model RV-125A readout valves for more accurate system balance. The calibrated nameplate allows the valve to be returned to the original balance position after shutoff.

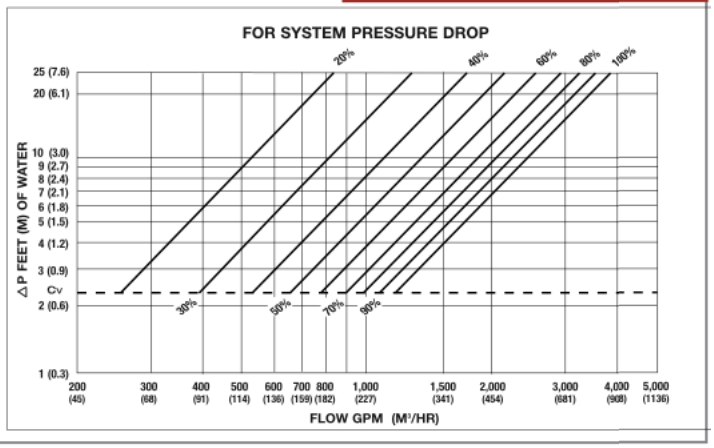
Triple Duty Valve Selection

Model	3DS-10B
Size	10.0 in
Pressure Drop @ Design Flow & Designated Stem Position	0.0'
Stem Position	60%
Connection Type	Flanged
Cv @ Designated Step Position	775

Performance Characteristics:

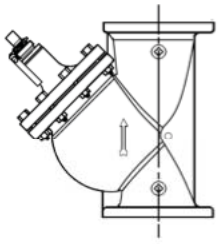
3DS-10B





Materials of construction

Body:	Cast Iron with Bronze seat
Disc	Brass with EPDM Seat Insert
Stem	Stainless Steel
Spring	Stainless Steel
Packing	Teflon-Graphite (asbestos-free)
Gasket	Non-Asbestos
Readout Valve	Brass with EPT insert, check valve & gasket



PROPER INSTALLATION
SHOWING STEM UPRIGHT

Operating Limits

Max Working Pressure (standard)	175 psi
Max Temp (standard)	250°F

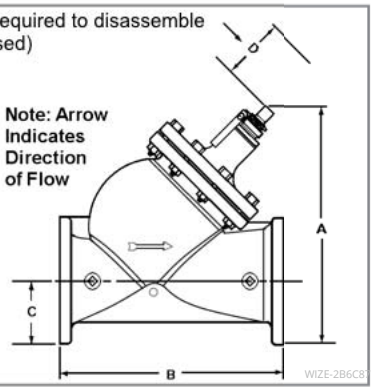
Dimensional Data:

not for construction

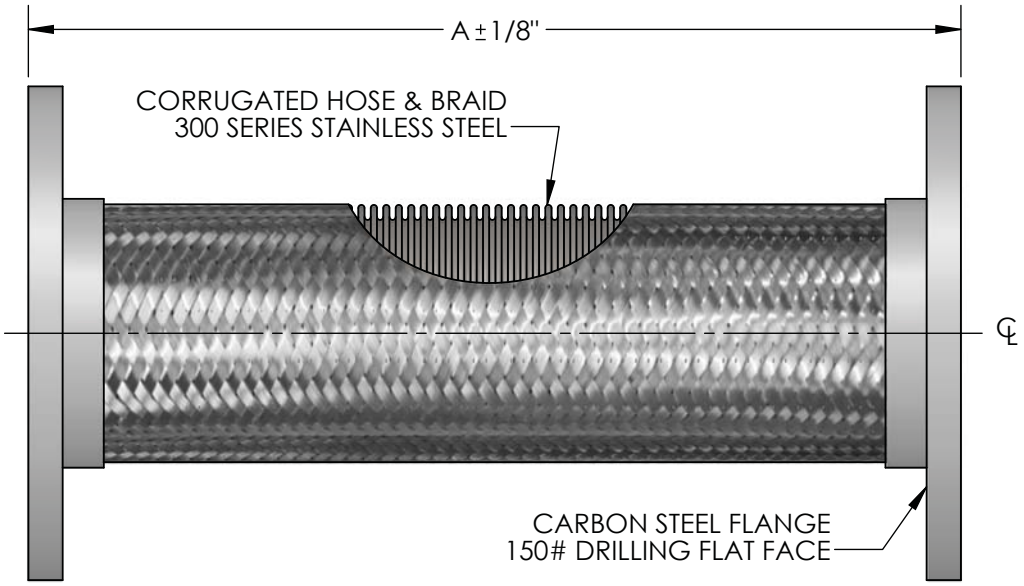
DIMENSIONS IN INCHES (mm)						APPROX. SHPG. WT. LBS. (Kg)
	A					
FLANGE SIZE*	OPEN	CLOSED	B	C	D	
10 (254.0)	26.02 (660.90)	24.42 (620.40)	25.50 (647.70)	8.00 (203.20)	10.38 (263.70)	380 (172)

*STANDARD 125 PSIG (862 kPa) ANSI FLANGES.
Dimensions are subject to change. Not to be used for construction purposes unless certified.

Distance required to disassemble (valve closed)



MODEL SLPC
FLANGED FLEXIBLE PUMP CONNECTOR

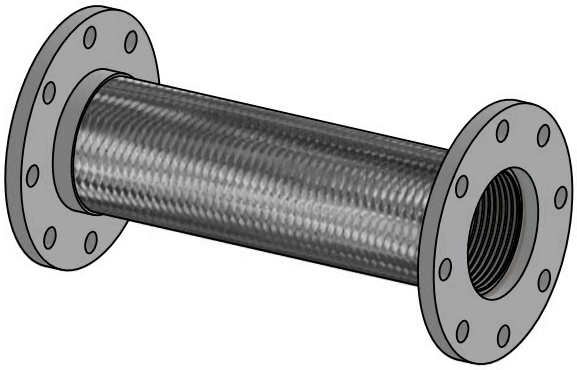


QTY	PART NUMBER	PIPE SIZE		A	PRESSURE RATING (PSI)*	WEIGHT (LBS)	PROJECT INFORMATION
		INCH	MM				
	SLPC0250	2-1/2"	65	10-1/4"	387	13	
	SLPC0300	3"	80	10-5/8"	316	14	
	SLPC0400	4"	100	11-3/4"	232	19	
	SLPC0500	5"	125	13-5/8"	191	27	
	SLPC0600	6"	150	14-1/8"	165	30	
	SLPC0800	8"	200	15-3/8"	234	62	
2	SLPC1000	10"	250	17-3/4"	230	68	For CTP-4
	SLPC1200	12"	300	18-3/8"	161	106	
	SLPC1400	14"	350	20"	150	118	

*FOR SAFE WORKING PRESSURE ABOVE 70°F, MULTIPLY THE PRESSURE SHOWN AT 70°F TIMES THE CORRECTION FACTOR OF THE REQUIRED TEMPERATURE.

TEMPERATURE (°F)	FACTOR
70	1.0
200	.91
300	.85
400	.78
500	.77
600	.76

MAX INTERMITTENT OFFSET FROM CENTERLINE 3/8"
MAX PERMANENT OFFSET FROM CENTERLINE 3/4"



NSF 372 - LEAD FREE

The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight. Material complies with state codes and standards, where applicable, requiring reduced lead content.

CUSTOMER: Driekast Piping

PROJECT: Sharonville Convention Center

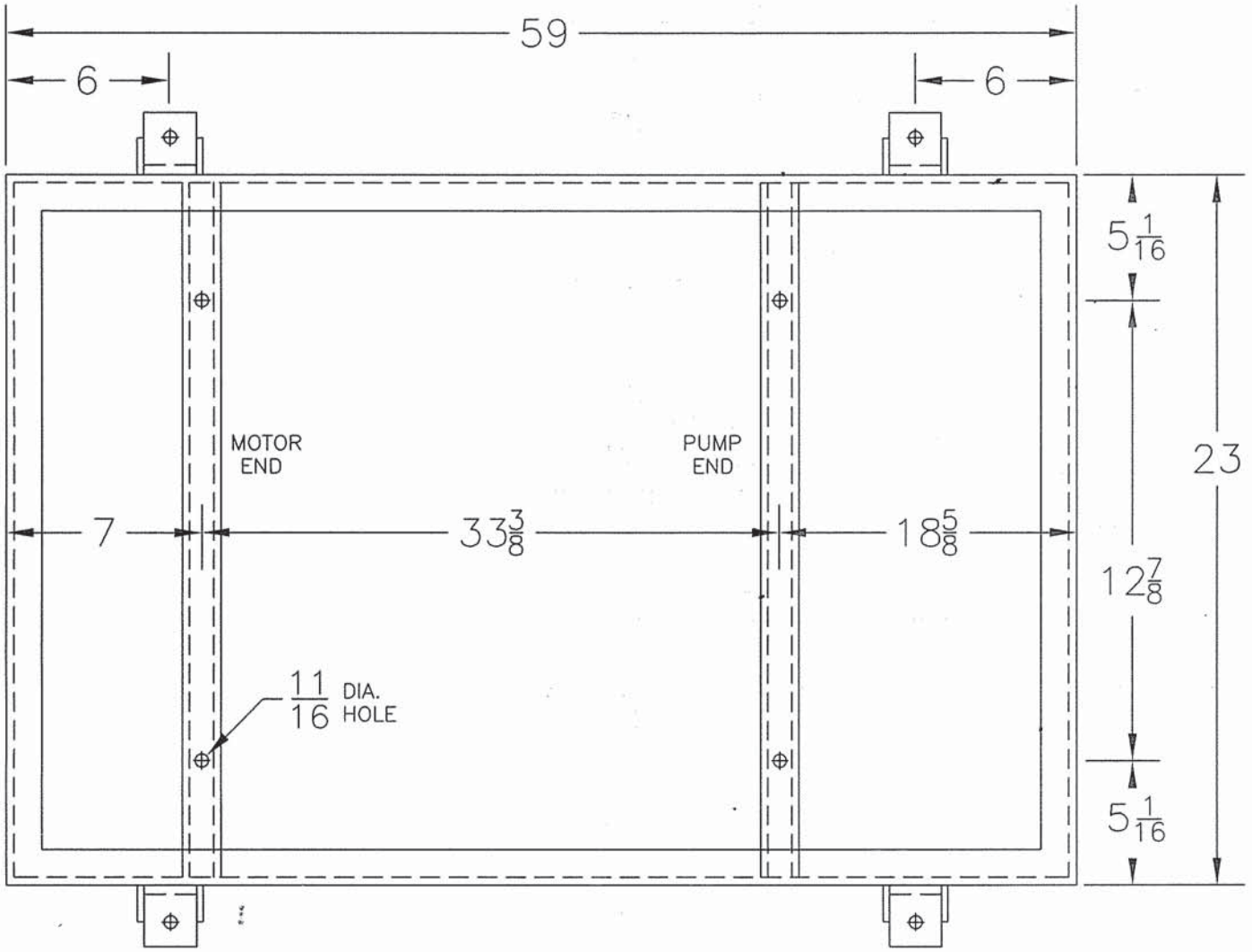
ENGINEER: KLH Engineering

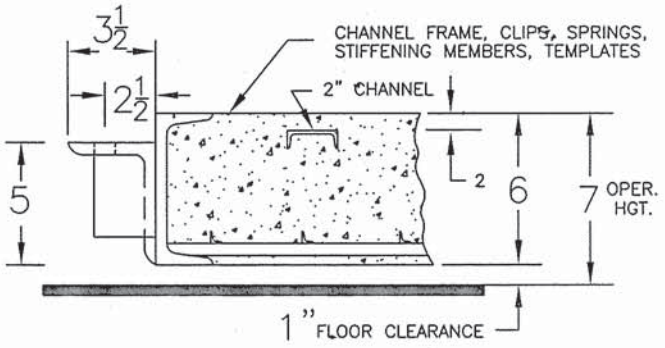
REV.	1	TEMP FACTOR UPDATED	DATE 12/28/2016

Metraflex for pipes in motion
2323 W. HUBBARD ST.
CHICAGO, IL 60612
TEL: 312-738-3800
FAX: 312-738-0415
WWW.METRAFLEX.COM

MODEL SLPC
FLANGED FLEXIBLE PUMP CONNECTOR

DRAWN BY: **DKISH**	DATE: **1/10/2014**
APPROVED: **JC**	DATE: **1/10/2014**
SCALE: N/A	DRAWING NUMBER: SLPC-1





FOR DETAILS OF ISOLATOR REFER TO V.E. DWG. NO. -SP

BASE TO BE FILLED WITH CONCRETE AT JOBSITE BY OTHERS. SEE DWG. N01051-ES FOR INSTALLATION INSTRUCTIONS.

STIFFENING SCHEDULE

6 PCS. 22 11/16 LG.

2 PCS. 58 11/16 LG.

1"x1"◁

WEIGHT DATA

WEIGHT OF CONCRETE	705 #
WEIGHT OF EQUIPMENT	650 #
WEIGHT OF FRAME, BARS & TEMPLATES	90 #
TOTAL WEIGHT	1445 #

SPRING ISOLATORS

2-OST3-F35 Motor End

2-OST3-F36 Pump End

1 BASES REQ'D.

TAG: CTP-4

PUMP: B&G e-1510 4BD (4 x 5)

MOTOR FRAME	MOTOR H.P.
254T	15
EQUIP. RPM 1750	APPROX. DEFL. 1.0"
EFFICIENCY. 98%	

NO.	REVISION	DATE

VIBRATION ELIMINATOR CO. INC.
15 Dixon Avenue
Copiague, NY 11726
PH. (631)841-4000 FAX (631)841-0020

JOB. Sharonville Convention Center

CONTR. Driekast Piping

PO.NO.:

DWG. NO. - 1

Drawn: L.R.	Checked: kt	Date: 1-5-21

TYPE "OST" STABLE, FREE-STANDING SPRING

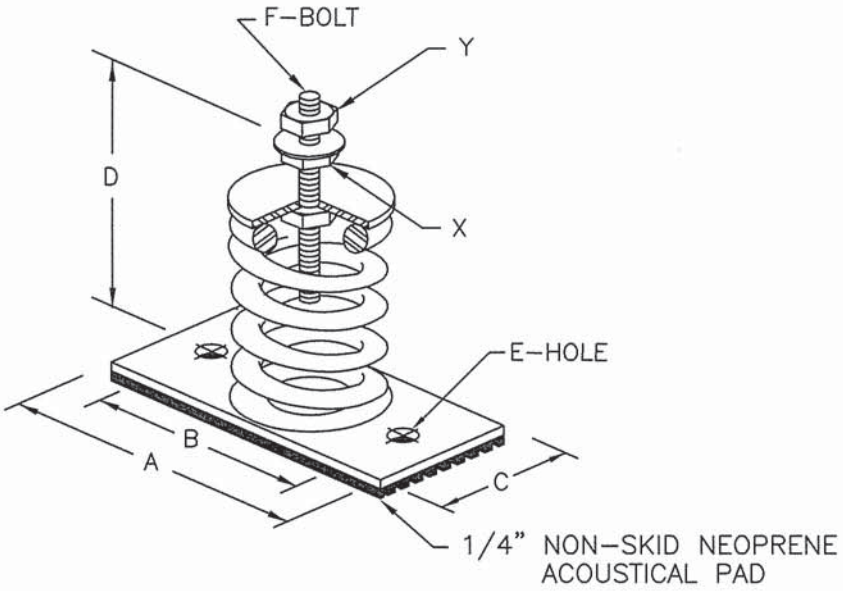
ISOLATOR TYPE	COLOR	RATED LOAD	RATED DEFL.	A	B	C	D	E	F
F30	SILVER	155 #	1.85"						
F31	YELLOW	220 #	1.70"						
F32	RED	310 #	1.55						
F33	WHITE	420 #	1.40"						
F34	GREEN	540 #	1.25"						
F35	BLUE	710 #	1.15"						
OST3 F36	ORANGE	900 #	1.05"	6	5	3	6	9/16	5/8
F37	GOLD	1030 #	1.00"						
F38	SILVER	1275 #	1.00"						
F39	YELLOW	1630 #	1.00"						
F40	WHITE	2100 #	1.00"						
F41	GREEN	3000 #	1.00"						

All springs are free standing and laterally stable. (Meeting a minimum of 0.8 ratio of spring diameter to compressed height.)
All springs are designed to provide additional travel of 50% of rated load.
All hardware zinc-electroplated.

Entire isolator painted blue.
Color coding is identified by colored lablel.

INSTALLATION INSTRUCTIONS

1. ELEVATE EQUIPMENT TO OPERATING HEIGHT AND INSERT BLOCKS TO HOLD IN THIS POSITION.
2. POSITION ISOLATORS UNDER THE EQUIPMENT AT APPROPRIATE LOCATIONS BY INSERTING TOP PORTION OF LEVELING BOLT "F" INTO HOLE IN EQUIPMENT. THE ISOLATORS MUST BY INSTALLED ON A LEVEL SURFACE AND VERTICALLY ALIGNED TO PREVENT DISTORTION OF THE SPRING.
3. PROCEED TO ADJUST THE ISOLATORS BY TURNING LEVELING NUT "X" COUNTER-CLOCKWISE, SEVERAL TURNS AT A TIME ALTERNATELY ON EACH ISOLATOR.
4. CONTINUE TURNING ADJUSTIG NUT "X" IN THIS MANNER UNTIL LOAD IS TRANSFERRED ONTO THE SPRINGS AND EQUIPMENT IS RAISED UNIFORMLY OFF THE BLOCKS. THEN REMOVE BLOCKS.
5. TURN LOCK NUT "Y" ONTO LEVELING BOLT "F" AND LOCK IT SECURELY IN PLACE AGAINST THE TOP OF THE EQUIPMENT LEG OR MOUNTING FRAME.
6. ISOLATORS ARE NOW PROPERLY ADJUSTED AND READY FOR THE EQUIPMENT TO BE OPERATED.



VISCMA

JOB : Sharonville Convention Center
CONTRACTOR : Driekast Piping
P.O. NO. :

VIBRATION ELIMINATOR CO., INC.
15 Dixon Avenue
Copiague, New York 11726
TEL. (631) 841-4000 Fax (631) 841-0020

Dwg. No.: - SP

Installation Instructions for 'SN' Inertia Frames

V. E. Dwg. No.
N01051-ES
11-05-2001

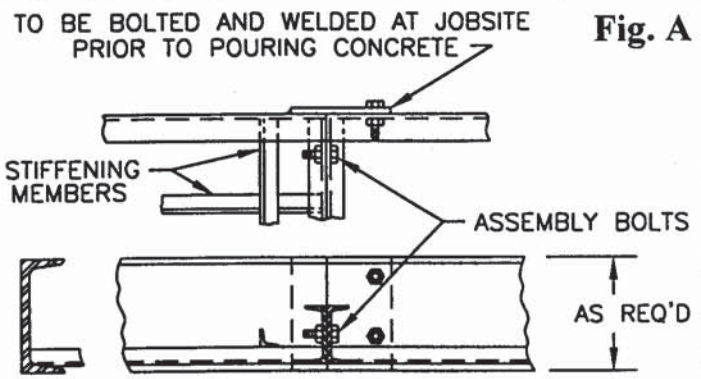
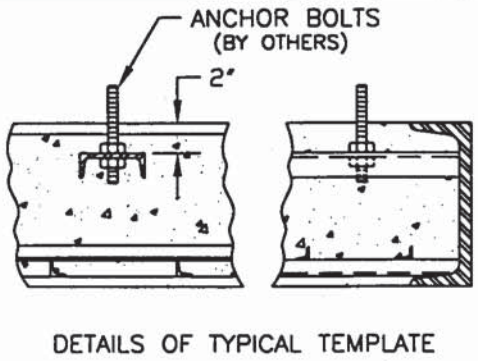


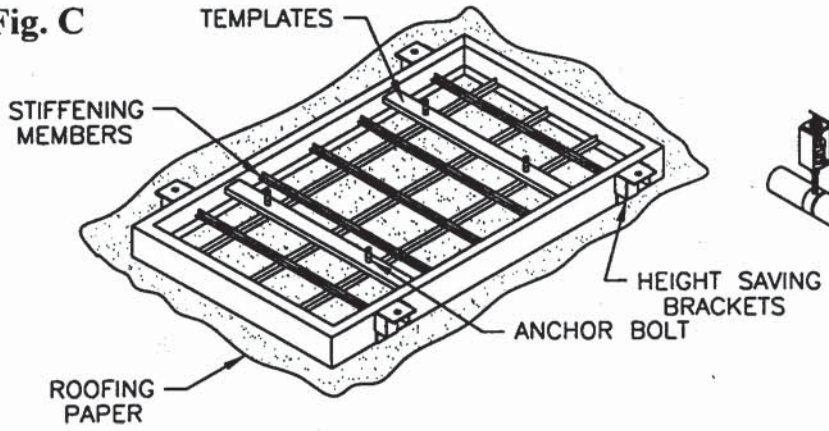
Fig. A



DETAILS OF TYPICAL TEMPLATE

Fig. B

Fig. C



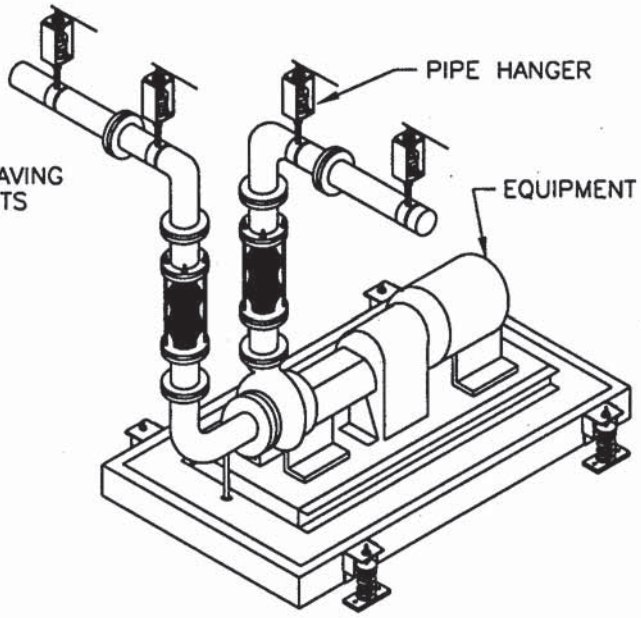


Fig. E

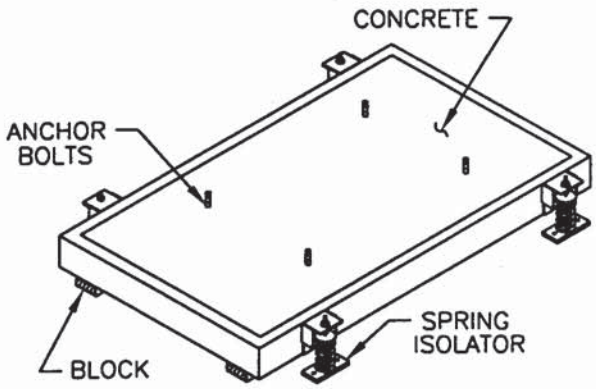


Fig. D

1.) Prior to pouring concrete, cover floor area with plastic sheathing or roofing paper. Overlap a minimum of three inches to prevent seepage. (Figure C)
2.) Set frame on top of paper. If shipped in more than one section, assemble and weld sections together as shown in Figure A.
3.) Insert and lock anchor bolts in templates as shown Figure B.
4.) Pour concrete into frame until level with top. (Figure D)
5.) After concrete has set, elevate frame as specified on base drawing and insert blocks to hold in this position. (Figure D) (Do not use height saving brackets as rigging or jacking lugs.).
6.) Proceed to install equipment.
7.) After equipment is installed, locate isolators under brackets (Figure E) and proceed to level springs in accordance with installation instructions.
8.) After the base is level and load is transferred to springs, install pipe hangers and flexible connectors.
9.) Adjust pipe hangers to insure they are supporting pipe. Install control rods on neoprene connectors to prevent elongation. (Figure F)
10.) Remove blocks.
11.) Equipment is now ready to be operated.

Vibration Eliminator Co., Inc. • 15 Dixon Avenue • Copiague, New York 11726
Tel. 631.841.4000 Fax. 631.841.0020

Bell & Gossett
a xylem brand

Submittal

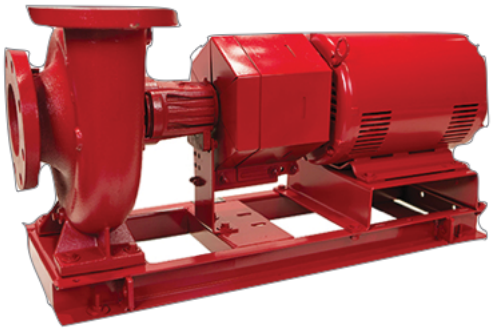
Job/Project: Sharonville Convention Center	**Representative:** Blackmore and Glunt, Inc. - Cincinnati	
ESP-Systemwize: WIZE-2B6C87 **Created On:** 01/04/2022	**Phone:**	
Location/Tag: CWP-3	**Email:**	
Engineer: KLH Engineering	**Submitted By:** Eric Meyer	**Date:** 1/4/2022
Contractor: Driekast Piping	**Approved By:**	**Date:**

Base Mounted End Suction Pump

Series: e-1510
Model: 5GB

Features & Design

- ANSI/OSHA Coupling Guard
- Center Drop Out Spacer Coupling
- Fabricated Heavy Duty Baseplate
- Internally Self-Flushing Mechanical Seal



*The Bell & Gossett Series e-1510 is available in 26 sizes and a variety of configuration options that enable customization and flexibility to fit a broad range of operating conditions.

http://bellgossett.com/pumps-circulators/end-suction-pumps/e-1510/

Pump Selection Summary

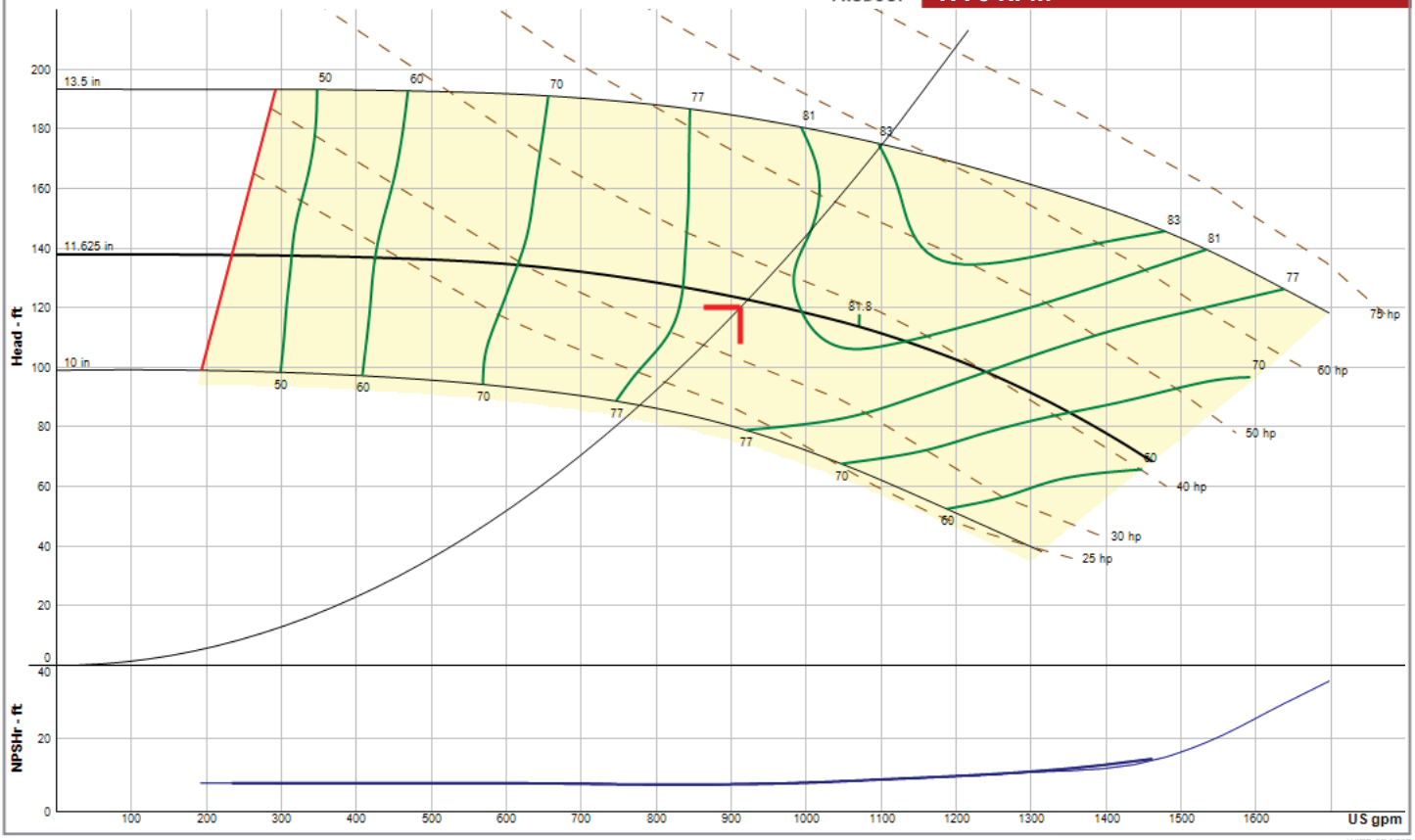
Duty Point Flow	912.0 US gpm
Duty Point Head	120.0 ft
Control Head	0.0 ft
Duty Point Pump Efficiency	79.2 %
Part Load Efficiency Value (PLEV)	0.0 %
Impeller Diameter	11.625 in
Motor Power	50 hp
Duty Point Power	35.8 bhp
Motor Speed	1800 rpm
RPM @ Duty Point	1770 rpm
NPSHr	7.67 ft
Minimum Shutoff Head	138 ft
Minimum Flow at RPM	246 US gpm
Flow @ BEP	1070 US gpm
Fluid Temperature	68 °F
Fluid Type	Water
Weight *(approx. - consult rep for exact)*	1135 lbs
Pump Floor Space Calculation	11.27 ft²

Performance Curve

Energy Efficiency Ratings:
Pump & Motor PEIcl: 0.94 ERcl: 6
Pump, Motor & Drive: PEIvl: 0.46 ERvl: 54

PREMIUM EFFICIENCY PRODUCT

e-1510
5GB
1770 RPM



Performance curve meets 14.6 / ISO 9906 acceptance criteria

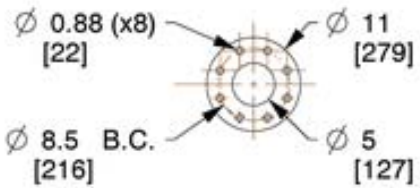
WIZE-2B6C87

Materials Of Construction

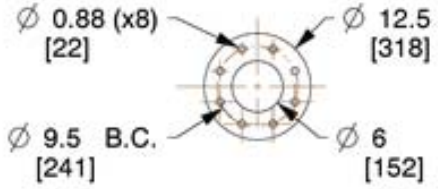
Pump Information\Construction	
Pump Series	e1510
Pump Size	5 GB
Seal Type	Standard Seal
Seal Material	EPR/Carbon/Tungsten Carbide/SS
Material of Construction	Stainless Steel
Impeller Diameter	11.625 inches
Sleeve Material	Stainless Steel Sleeve

Motor Details	
Motor Power	50
Motor Speed	1800
Frequency	60
Phase	3
Voltage	230/460
Frame	326T
Enclosure	ODP
Motor Manufacturer	BG Choice
Motor Status	STK
Motor Comments	NEMA Premium w/Shaft Grounding Rings

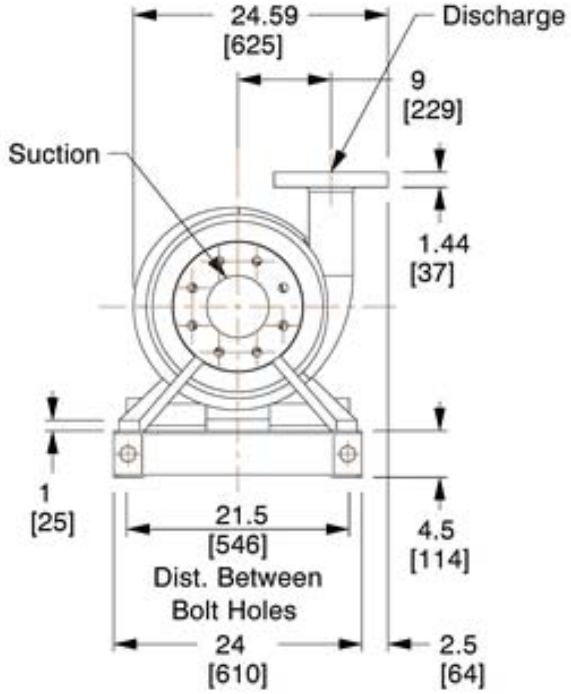
Selected Options	
Selected Option 1	Stainless Steel Shaft

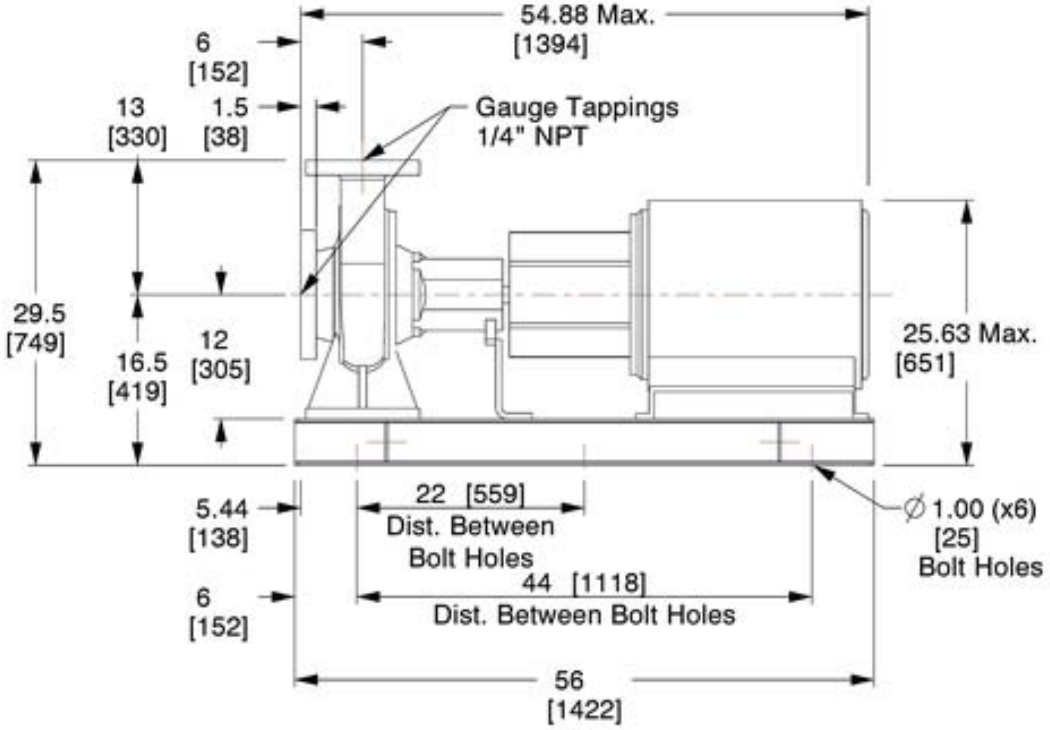


5" DISCHARGE FLANGE
ANSI 125#



6" SUCTION FLANGE
ANSI 125#





Bell & Gossett
a xylem brand

8200 N. Austin Ave.
Morton Grove, IL 60053, USA

Dimensions are subject to change

Not to be used for construction unless certified

BG-E1510-5GB-SS-326T-L

Series e-1510 Centrifugal Pumps - Base Mounted

Seal Type: Standard Seal | Motor Frame: 326T | Frame Type: L | Flange: ANSI 125#

Dimensions : IN (mm)	Scale : N.T.S.	Submittal # : B-880.46C

Standard Mechanical Configuration

Standard Mechanical Seal	SM, LG, & XL Bearing Frames	ES Bearing Frame
Temperature Range	-20 to 225°F	-20 to 225°F
Maximum Pressure	175 PSI	175 PSI
pH Limitations	7.0 - 9.0	7.0 - 9.0
Elastomer	Buna	Buna
Rotating Face	Carbon	Carbon
Stationary Face	Ceramic	Silicon Carbide
Hardware	Stainless Steel / Brass	Stainless Steel

Mechanical Seal Options	SM, LG, & XL Bearing Frames		
Temperature Range	-20 to 250°F	-10 to 225°F	-20 to 250°F
Maximum Pressure	175 PSI	175 PSI	175 PSI
pH Limitations	7.0 - 11.0	7.0 - 9.0	7.0 - 12.5.0
Elastomer	EPR (Ethylene Propylene Rubber)	FKM (Viton™ or Fluoroelastomer)	EPR (Ethylene Propylene Rubber)
Rotating Face	Carbon	Carbon	Silicon Carbide
Stationary Face	Tungsten Carbide	Ceramic	Silicon Carbide
Hardware	Stainless Steel / Brass	Stainless Steel	Stainless Steel

Mechanical Seal Options	ES Bearing Frame		
Temperature Range	-20 to 250°F	-10 to 225°F	-20 to 250°F
Maximum Pressure	175 PSI	175 PSI	175 PSI
pH Limitations	7.0 - 11.0	7.0 - 9.0	7.0 - 12.5.0
Elastomer	EPR (Ethylene Propylene Rubber)	FKM (Viton™ or Fluoroelastomer)	EPR (Ethylene Propylene Rubber)
Rotating Face	Silicon Carbide	Carbon	Silicon Carbide
Stationary Face	Tungsten Carbide	Silicon Carbide	Silicon Carbide
Hardware	Stainless Steel / Brass	Stainless Steel	Stainless Steel

Stuffing Box Configuration

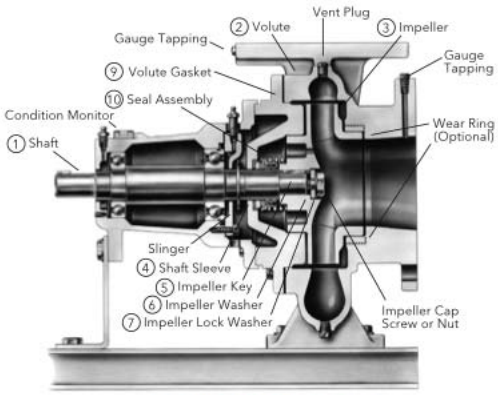
Mechanical Seal	SM, LG, & XL Bearing Frames
Temperature Range	-20 to 250°F*
Maximum Pressure	175 PSI (Optional 250 PSI)
pH Limitations	7.0 - 11.0
Elastomer	EPR (Ethylene Propylene Rubber)
Rotating Face	Tungsten Carbide
Stationary Face	Carbon
Hardware	Stainless Steel

Packing Option	
Temperature Range	0 to 250°F
Maximum Pressure	175 PSI
pH Limitations	7.0 - 9.0
Material	Braided Graphite Impregnated PTFE

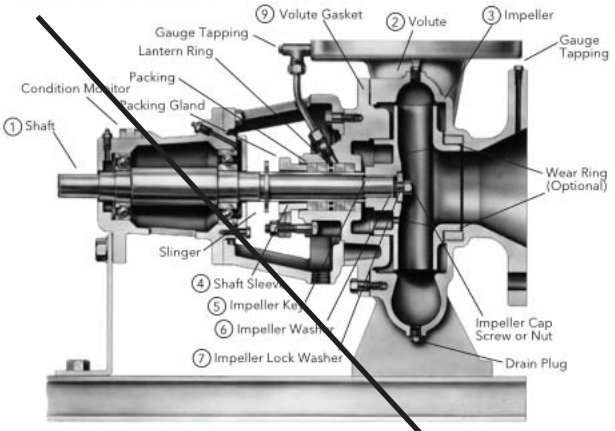
* For operating temperatures above 250°F a cooled flush is required and is recommended for temperatures above 225°F for optimum seal life. On closed systems cooling is accomplished by inserting a small heat exchanger in the flush line to cool the seal flushing fluid.

Flush-line Filters and Sediment Separators are available on special request.

Materials of Construction



Standard Configuration



Optional - S Configuration

Description	SM, LG, & XL Bearing Frames	ES Bearing Frame
1 Shaft	ASTM 108 Grade 1144	ASTM 108 Grade 1144
2 Volute	Cast Iron ASTM A48 Class 30B	Cast Iron ASTM A48 Class 30B
3 Impeller	ASTM A743 Grade CF8 - 304 Stainless Steel	ASTM A743 Grade CF8 - 304 Stainless Steel
4 Shaft Sleeve	ASTM 312 Grade TP304 - 304 Stainless Steel	ASTM 312 Grade TP304 - 304 Stainless Steel
5 Impeller Key	#304 Stainless Steel	NA
6 Impeller Washer	Steel	NA
7 Impeller Lock Washer	#304 Stainless Steel (18-8 XL FRM)	NA
8 Impeller Cap Screw	#304 Stainless Steel	NA
8 Impeller Nut	NA	316 Stainless Steel
9 Volute Gasket	Cellulose Fiber	Cellulose Fiber
10 Seal Assembly	Reference Seal Data Tables	Reference Seal Data Tables

Pump Options

- Stainless Steel Volute Wear Ring
- Galvanized Steel Drip Pan
- Stainless Steel Shaft
- Flexnord Omega Spacer Coupling
- Falk T31 Spacer Coupling
- External Flush Line
- Stuffing Box Configuration
- Epoxy Coated Internal Cast Iron Components
- Special Impeller Balancing (ISO 1940 G2.5 or G1.0)
- Certified Performance Tests (Per HI Standard 14.6)
- 250 PSI Working Pressure

xylem
Let's Solve Water

Xylem Inc.
8200 N. Austin Avenue, Morton Grove, IL 60053
Phone: (847)966-3700 Fax: (847)965-8379
www.bellgossett.com

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Submittal

Job/Project: Sharonville Convention Center		**Representative:** Blackmore and Glunt, Inc. - Cincinnati	
ESP-Systemwize: WIZE-2B6C87	01/04/2022	**Phone:**	
Location/Tag: For CWP-3		**Email:**	
Engineer: KLH Engineering		**Submitted By:** Eric Meyer	**Date:** 1/4/2022
Contractor: Driekast Piping		**Approved By:**	**Date:**

Suction Diffuser Plus

Bell & Gossett Model: HG-3X

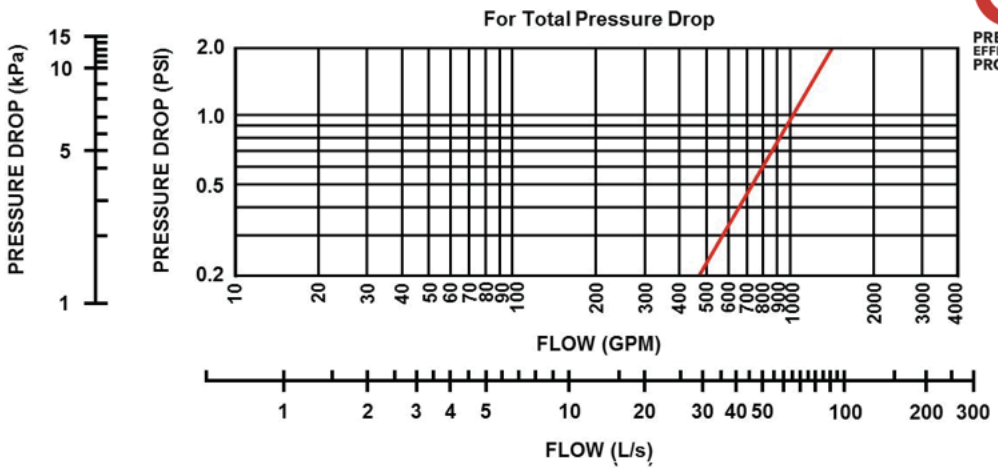
The Bell & Gossett Suction Diffuser Plus is designed for direct application to the pump suction and provides ideal flow conditions for the pump, providing NPSH requirements are met. Its integrated Flow Cone directs flow through the unit and into the pump suction while working with the full length straightening vanes to create a more uniform flow profile. The orifice cylinder has a free area equal to five times the cross section of the pump suction opening and serves as a coarse strainer to protect the pump from large sediment. Type X-For Closed Systems

http://bellgossett.com/hydronic-plumbing-accessories/pump-accessories/suction-diffuser/

Suction Diffuser Selection

Model	HG-3X
System Size	8.0 in
Pump Size	6.0 in
Pressure Drop @ Design Flow	0.0'
Connection Type	Flanged/Flanged
Cv	1050
Fluid Type	Water
Fluid Temp	68 °F

Performance characteristics:



PREMIUM EFFICIENCY PRODUCT

HG-3X

Materials of construction

Body	Cast Iron
Inlet Vanes	Steel
Orifice Cylinder	Steel
Start-up Strainer	16 Mesh Bronze

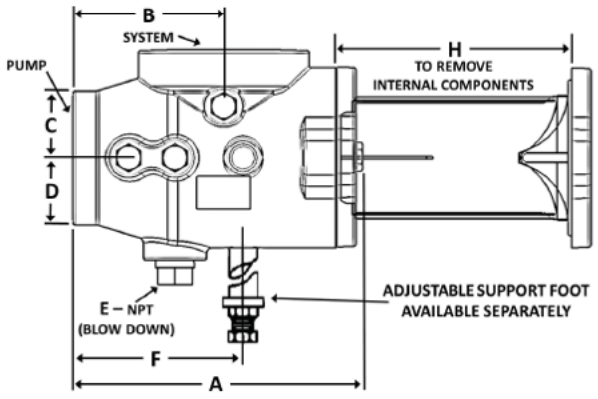
Operating Data

Max Working Pressure	175 psi
Max Temp	250°F

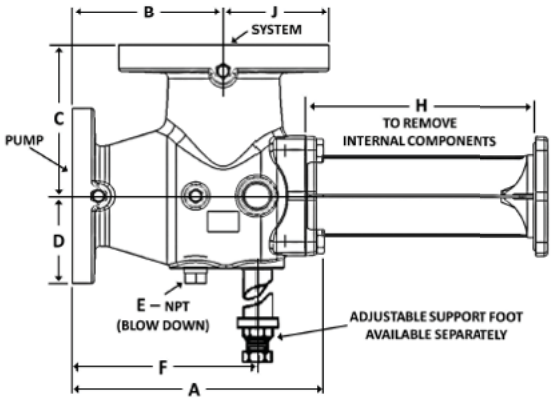
Dimensional data:

not for construction

'Dimensions include orifice cylinder + 2-1/2 (64) inch clearance.



Threaded x Threaded Models



Flange x Flange Models

DIMENSIONS – INCHES (mm)

Model No.	System Side		Pump Side		A	B	C	D	E	F	G	H	J	Orifice Cylinder Free Area in^2 (cm^2)	Approx. Shpg. Wt. Lbs. (Kg)
HG-3	8 (203.2)	F	6 (152.4)	F	15.82 (402)	9 (229)	9 (229)	5.50 (140)	3/4 (19)	11 (279)	N/A	14.75 (374.7)	6.75 (171)	127 (819)	150 (68)

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Submittal

Job/Project: Sharonville Convention Center		**Representative:** Blackmore and Glunt, Inc. - Cincinnati	
ESP-Systemwize: WIZE-2B6C87	01/04/2022	**Phone:**	
Location/Tag: For CWP-3		**Email:**	
Engineer: KLH Engineering		**Submitted By:** Eric Meyer	**Date:** 1/4/2022
Contractor: Driekast Piping		**Approved By:**	**Date:**

Triple Duty Valve

Bell & Gossett Model: 3DS-8S

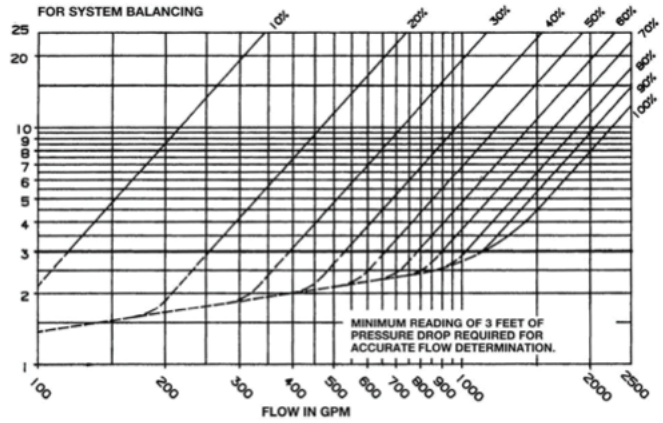
The Triple Duty Valve is a quiet operating heavy-duty valve which performs all of the functions normally required on the discharge side of hydronic system pumps. The valve serves as a nonslam check valve as needed for zoned pumping, parallel and standby pumping, and condenser water applications. The spring loaded disk prevents valve chatter, and assures positive shutoff.. The Triple Duty Valve is also equipped with Model RV-125A readout valves for more accurate system balance. The calibrated nameplate allows the valve to be returned to the original balance position after shutoff.

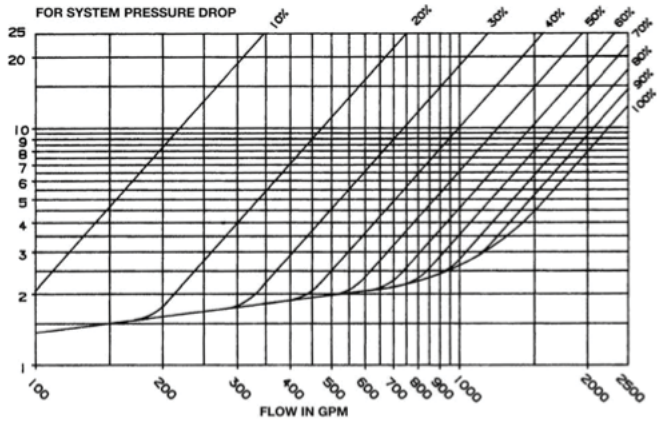
Triple Duty Valve Selection

Model	3DS-8S
Size	8.0 in
Pressure Drop @ Design Flow & Designated Stem Position	0.0'
Stem Position	60%
Connection Type	Flanged
Cv @ Designated Stem Position	700

Performance Characteristics:

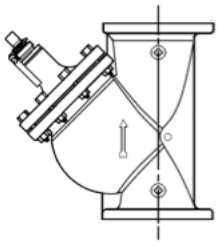
3DS-8S





Materials of construction

Body:	Cast Iron with Bronze seat
Disc	Brass with EPDM Seat Ring
Stem	Stainless Steel
Spring	Stainless Steel
Packing	Teflon-Graphite (asbestos-free)
Gasket	Non-Asbestos
Readout Valve	Brass with EPT insert, check valve & gasket



PROPER INSTALLATION
SHOWING STEM UPRIGHT

Operating Limits

Max Working Pressure (standard)	175 psi
Max Temp (standard)	250°F

Dimensional Data:

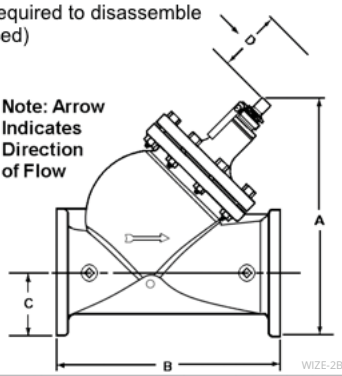
not for construction

DIMENSIONS IN INCHES (mm)							APPROX. SHPG. WT. LBS. (Kg)
FLANGE SIZE*	A		B	C	D	E	
	OPEN	CLOSED					
8 (203.2)	24-3/4 (629)	23-1/4 (591)	21-1/2 (546)	6-3/4 (172)	20-7/16 (519)	10-3/8 (264)	316 (144)

*STANDARD 125 PSIG (862 kPa) ANSI FLANGES.
Dimensions are subject to change. Not to be used for construction purposes unless certified.

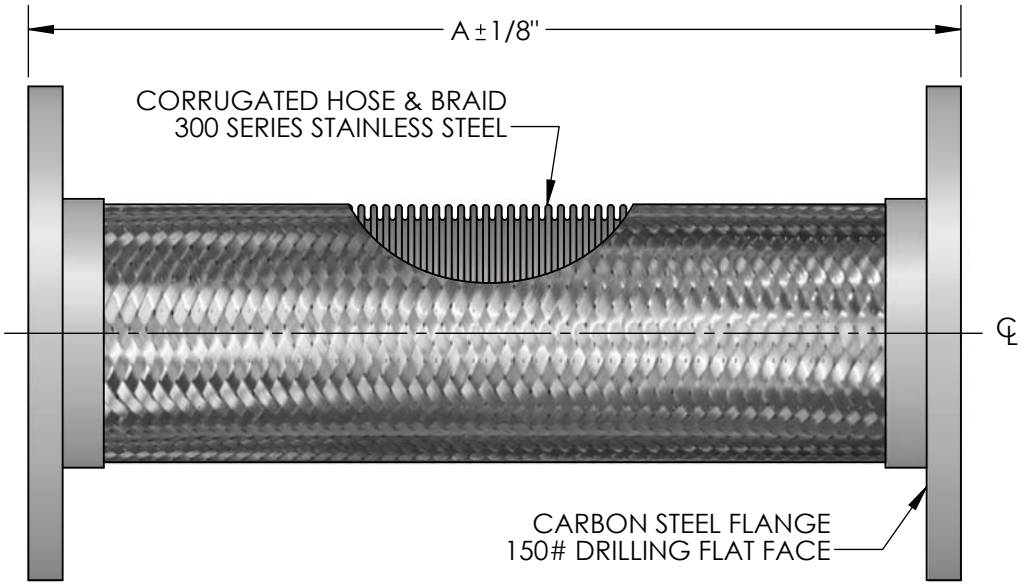
Distance required to disassemble (valve closed)

Note: Arrow Indicates Direction of Flow



WIZE-2B6C87

MODEL SLPC
FLANGED FLEXIBLE PUMP CONNECTOR

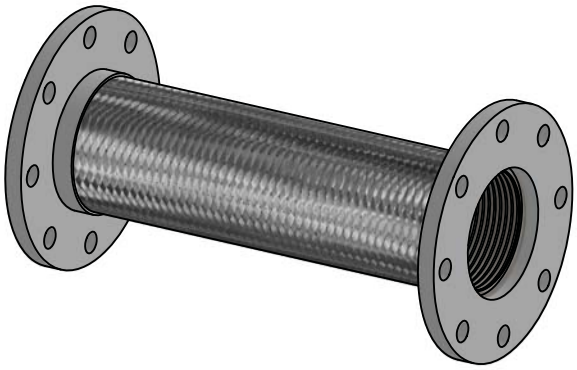


QTY	PART NUMBER	PIPE SIZE		A	PRESSURE RATING (PSI)*	WEIGHT (LBS)	PROJECT INFORMATION
		INCH	MM				
	SLPC0250	2-1/2"	65	10-1/4"	387	13	
	SLPC0300	3"	80	10-5/8"	316	14	
	SLPC0400	4"	100	11-3/4"	232	19	
	SLPC0500	5"	125	13-5/8"	191	27	
	SLPC0600	6"	150	14-1/8"	165	30	
2	SLPC0800	8"	200	15-3/8"	234	62	For CWP-3
	SLPC1000	10"	250	17-3/4"	230	68	
	SLPC1200	12"	300	18-3/8"	161	106	
	SLPC1400	14"	350	20"	150	118	

*FOR SAFE WORKING PRESSURE ABOVE 70°F, MULTIPLY THE PRESSURE SHOWN AT 70°F TIMES THE CORRECTION FACTOR OF THE REQUIRED TEMPERATURE.

TEMPERATURE (°F)	FACTOR
70	1.0
200	.91
300	.85
400	.78
500	.77
600	.76

MAX INTERMITTENT OFFSET FROM CENTERLINE 3/8"
MAX PERMANENT OFFSET FROM CENTERLINE 3/4"



NSF 372 - LEAD FREE

The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight. Material complies with state codes and standards, where applicable, requiring reduced lead content.

CUSTOMER: Driekast Piping

PROJECT: Sharonville Convention Center

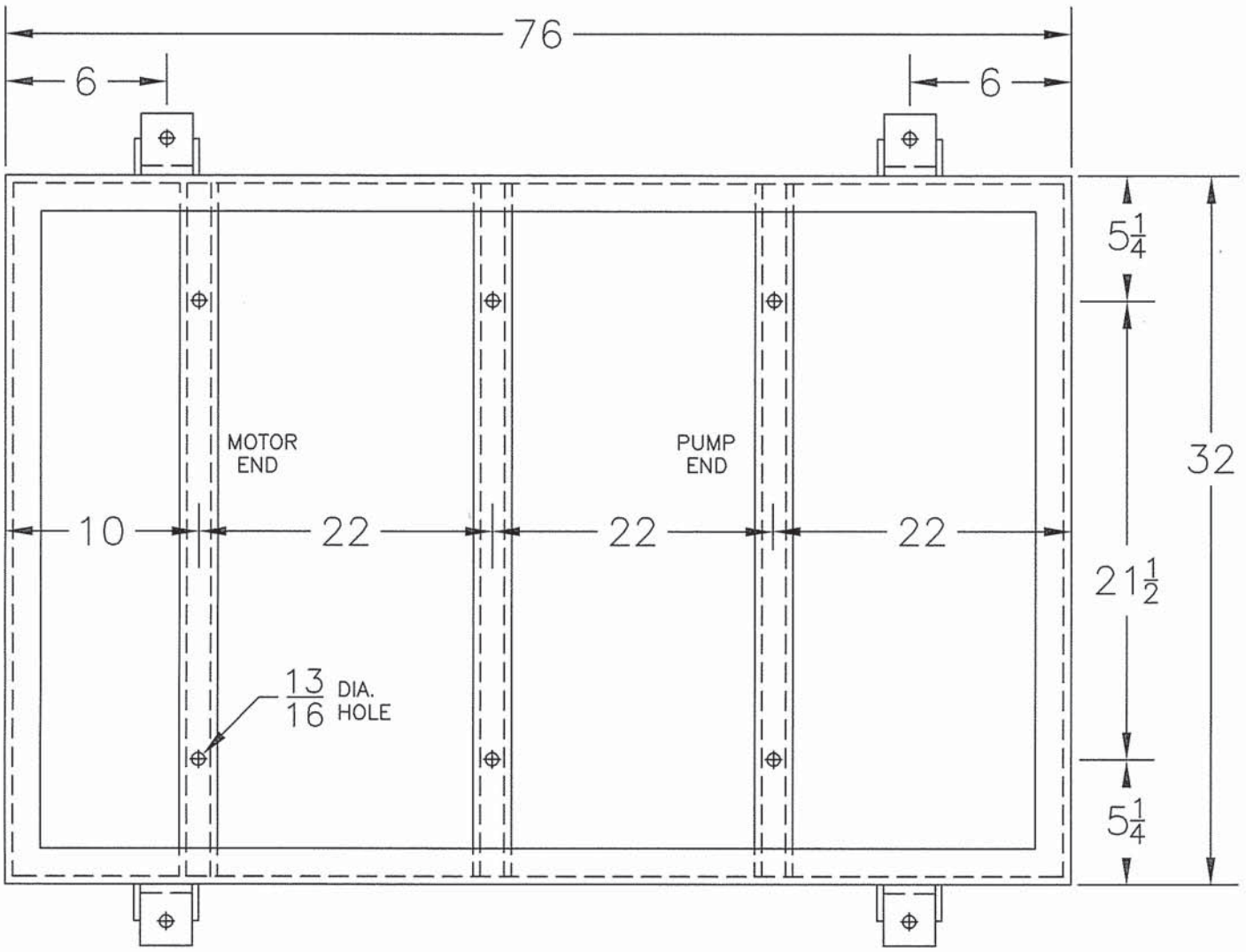
ENGINEER: KLH Engineering

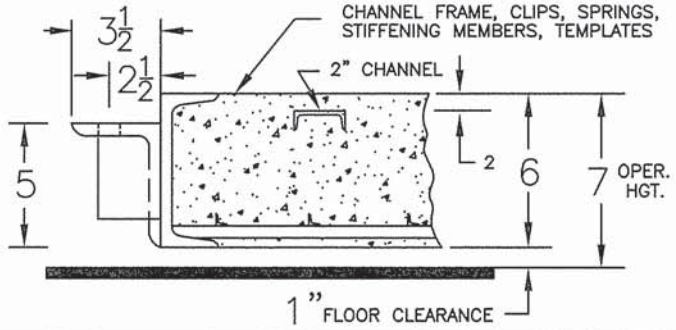
REV.	1	TEMP FACTOR UPDATED	DATE 12/28/2016

Metraflex for pipes in motion
2323 W. HUBBARD ST.
CHICAGO, IL 60612
TEL: 312-738-3800
FAX: 312-738-0415
WWW.METRAFLEX.COM

MODEL SLPC
FLANGED FLEXIBLE PUMP CONNECTOR

DRAWN BY: **DKISH**		DATE:	**1/10/2014**
APPROVED: **JC**		DATE:	**1/10/2014**
SCALE: N/A	DRAWING NUMBER: SLPC-1		





FOR DETAILS OF ISOLATOR REFER TO V.E. DWG. NO. -SP

BASE TO BE FILLED WITH CONCRETE AT JOBSITE BY OTHERS. SEE DWG. **N01051-ES** FOR INSTALLATION INSTRUCTIONS.

STIFFENING SCHEDULE

7 PCS. 31 11/16 LG.

3 PCS. 75 11/16 LG.

1"x1"∢

WEIGHT DATA

WEIGHT OF CONCRETE	1265 #
WEIGHT OF EQUIPMENT	1240 #
WEIGHT OF FRAME, BARS & TEMPLATES	125 #
TOTAL WEIGHT	2630 #

SPRING ISOLATORS

2-0ST3-F38 Motor End

2-0ST3-F39 Pump End

1 BASES REQ'D.

TAG: CWP-3

PUMP: B&G e-1510 5GB (5 x 6)

MOTOR FRAME	MOTOR H.P.
326T	50
EQUIP. RPM 1800	APPROX. DEFL 1.0"
EFFICIENCY. 98%	

NO.	REVISION	DATE

VIBRATION ELIMINATOR CO. INC.
15 Dixon Avenue
Copiague, NY 11726
PH. (631)841-4000 FAX (631)841-0020

JOB. Sharonville Convention Center

CONTR. Driekast Piping

PO.NO.:

DWG. NO. - 2

Drawn: L.R.	Checked: kt	Date: 1-5-21

TYPE "OST" STABLE, FREE-STANDING SPRING

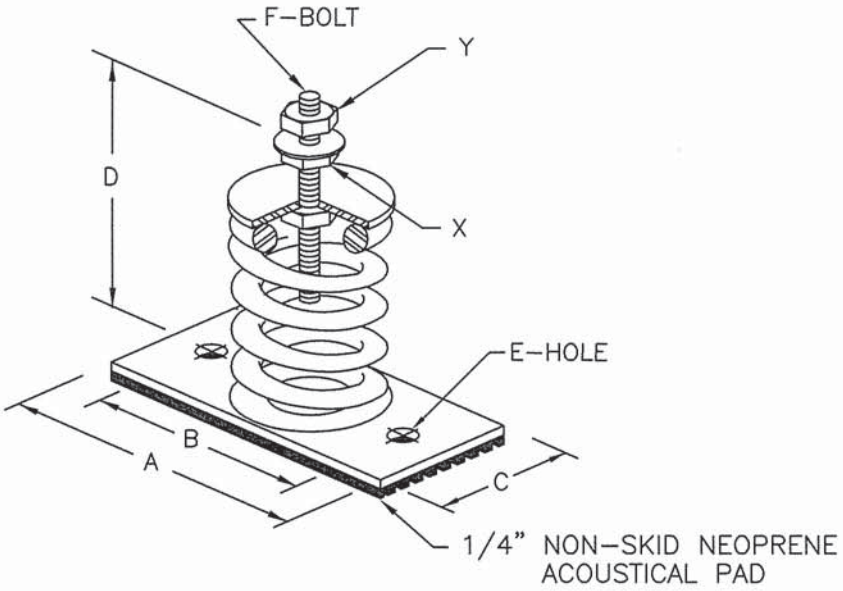
ISOLATOR TYPE		COLOR	RATED LOAD	RATED DEFL.	A	B	C	D	E	F
OST3	F30	SILVER	155 #	1.85"	6	5	3	6	9/16	5/8
	F31	YELLOW	220 #	1.70"						
	F32	RED	310 #	1.55						
	F33	WHITE	420 #	1.40"						
	F34	GREEN	540 #	1.25"						
	F35	BLUE	710 #	1.15"						
	F36	ORANGE	900 #	1.05"						
	F37	GOLD	1030 #	1.00"						
	F38	SILVER	1275 #	1.00"						
	F39	YELLOW	1630 #	1.00"						
	F40	WHITE	2100 #	1.00"						
	F41	GREEN	3000 #	1.00"						

All springs are free standing and laterally stable. (Meeting a minimum of 0.8 ratio of spring diameter to compressed height.)
All springs are designed to provide additional travel of 50% of rated load.
All hardware zinc-electroplated.

Entire isolator painted blue.
Color coding is identified by colored lablel.

INSTALLATION INSTRUCTIONS

1. ELEVATE EQUIPMENT TO OPERATING HEIGHT AND INSERT BLOCKS TO HOLD IN THIS POSITION.
2. POSITION ISOLATORS UNDER THE EQUIPMENT AT APPROPRIATE LOCATIONS BY INSERTING TOP PORTION OF LEVELING BOLT "F" INTO HOLE IN EQUIPMENT. THE ISOLATORS MUST BY INSTALLED ON A LEVEL SURFACE AND VERTICALLY ALIGNED TO PREVENT DISTORTION OF THE SPRING.
3. PROCEED TO ADJUST THE ISOLATORS BY TURNING LEVELING NUT "X" COUNTER-CLOCKWISE, SEVERAL TURNS AT A TIME ALTERNATELY ON EACH ISOLATOR.
4. CONTINUE TURNING ADJUSTIG NUT "X" IN THIS MANNER UNTIL LOAD IS TRANSFERRED ONTO THE SPRINGS AND EQUIPMENT IS RAISED UNIFORMLY OFF THE BLOCKS. THEN REMOVE BLOCKS.
5. TURN LOCK NUT "Y" ONTO LEVELING BOLT "F" AND LOCK IT SECURELY IN PLACE AGAINST THE TOP OF THE EQUIPMENT LEG OR MOUNTING FRAME.
6. ISOLATORS ARE NOW PROPERLY ADJUSTED AND READY FOR THE EQUIPMENT TO BE OPERATED.



VISCMA

JOB : Sharonville Convention Center
CONTRACTOR : Driekast Piping
P.O. NO. :

VIBRATION ELIMINATOR CO., INC.
15 Dixon Avenue
Copiague, New York 11726
TEL. (631) 841-4000 Fax (631) 841-0020

Dwg. No.: - SP

Installation Instructions for 'SN' Inertia Frames

V. E. Dwg. No.
N01051-ES
11-05-2001

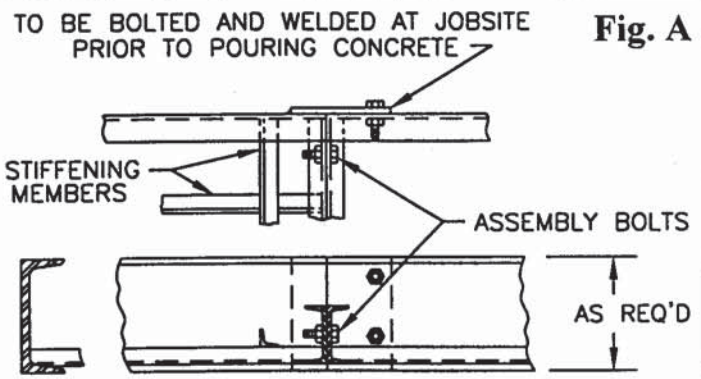
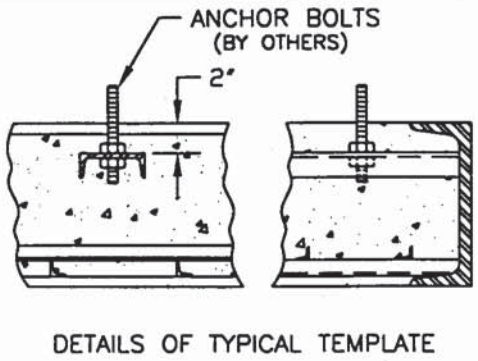


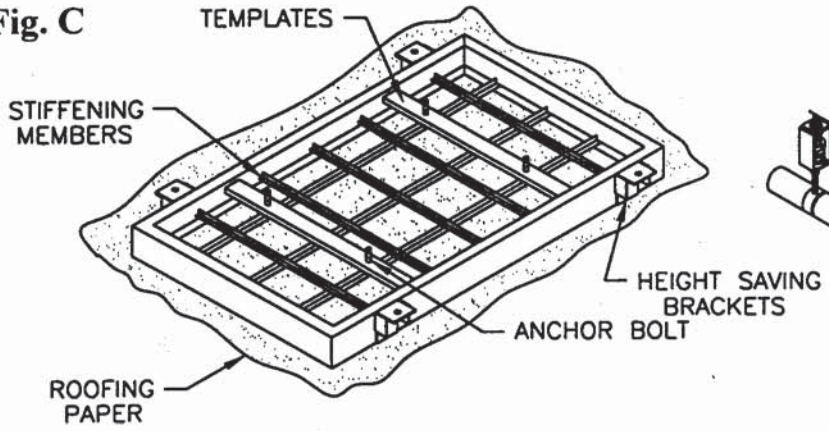
Fig. A



DETAILS OF TYPICAL TEMPLATE

Fig. B

Fig. C



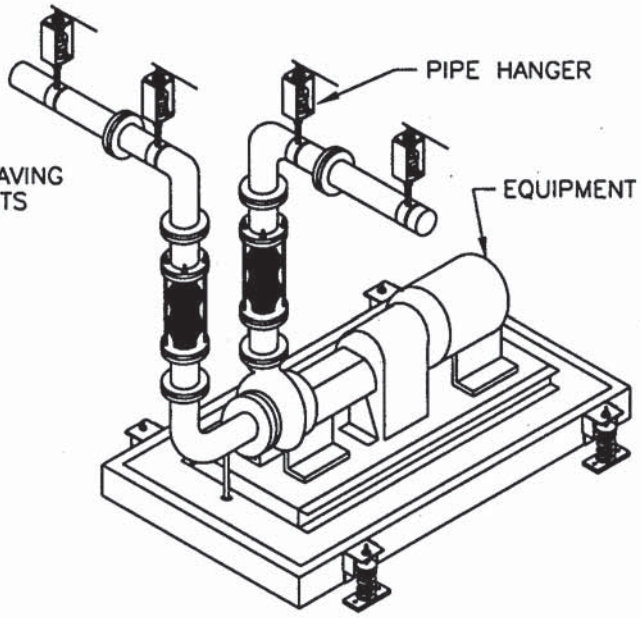


Fig. E

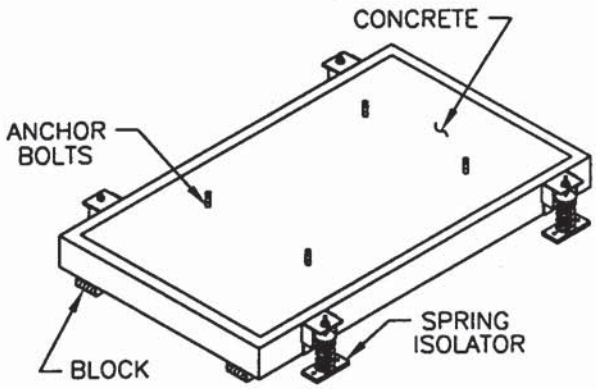


Fig. D

1.) Prior to pouring concrete, cover floor area with plastic sheathing or roofing paper. Overlap a minimum of three inches to prevent seepage. (Figure C)
2.) Set frame on top of paper. If shipped in more than one section, assemble and weld sections together as shown in Figure A.
3.) Insert and lock anchor bolts in templates as shown Figure B.
4.) Pour concrete into frame until level with top. (Figure D)
5.) After concrete has set, elevate frame as specified on base drawing and insert blocks to hold in this position. (Figure D) (Do not use height saving brackets as rigging or jacking lugs.).
6.) Proceed to install equipment.
7.) After equipment is installed, locate isolators under brackets (Figure E) and proceed to level springs in accordance with installation instructions.
8.) After the base is level and load is transferred to springs, install pipe hangers and flexible connectors.
9.) Adjust pipe hangers to insure they are supporting pipe. Install control rods on neoprene connectors to prevent elongation. (Figure F)
10.) Remove blocks.
11.) Equipment is now ready to be operated.

Vibration Eliminator Co., Inc. • 15 Dixon Avenue • Copiague, New York 11726
Tel. 631.841.4000 Fax. 631.841.0020

Bell & Gossett
a xylem brand

Submittal

Job/Project: Sharonville Convention Center	**Representative:** Blackmore and Glunt, Inc. - Cincinnati	
ESP-Systemwize: WIZE-2B6C87 **Created On:** 01/04/2022	**Phone:**	
Location/Tag: PCWP-4	**Email:**	
Engineer: KLH Engineering	**Submitted By:** Eric Meyer	**Date:** 1/4/2022
Contractor: Driekast Piping	**Approved By:**	**Date:**

Close Coupled In-Line Centrifugal Pump

Series: e-80
Model: 5x5x7B

Features & Design

- Best in Class Hydraulic Performance
- Low Operating and Maintenance Cost
- Horizontal or Vertical Installation

The Series e-80 is a highly efficient, heavy duty, close coupled pump designed for horizontal or vertical in-line mounting. The e-80 is available in stainless steel fitted construction, with flows up to 2500 GPM, heads to 380 feet.

http://bellgossett.com/pumps-circulators/in-line-pumps/series-e-80/

Pump Selection Summary

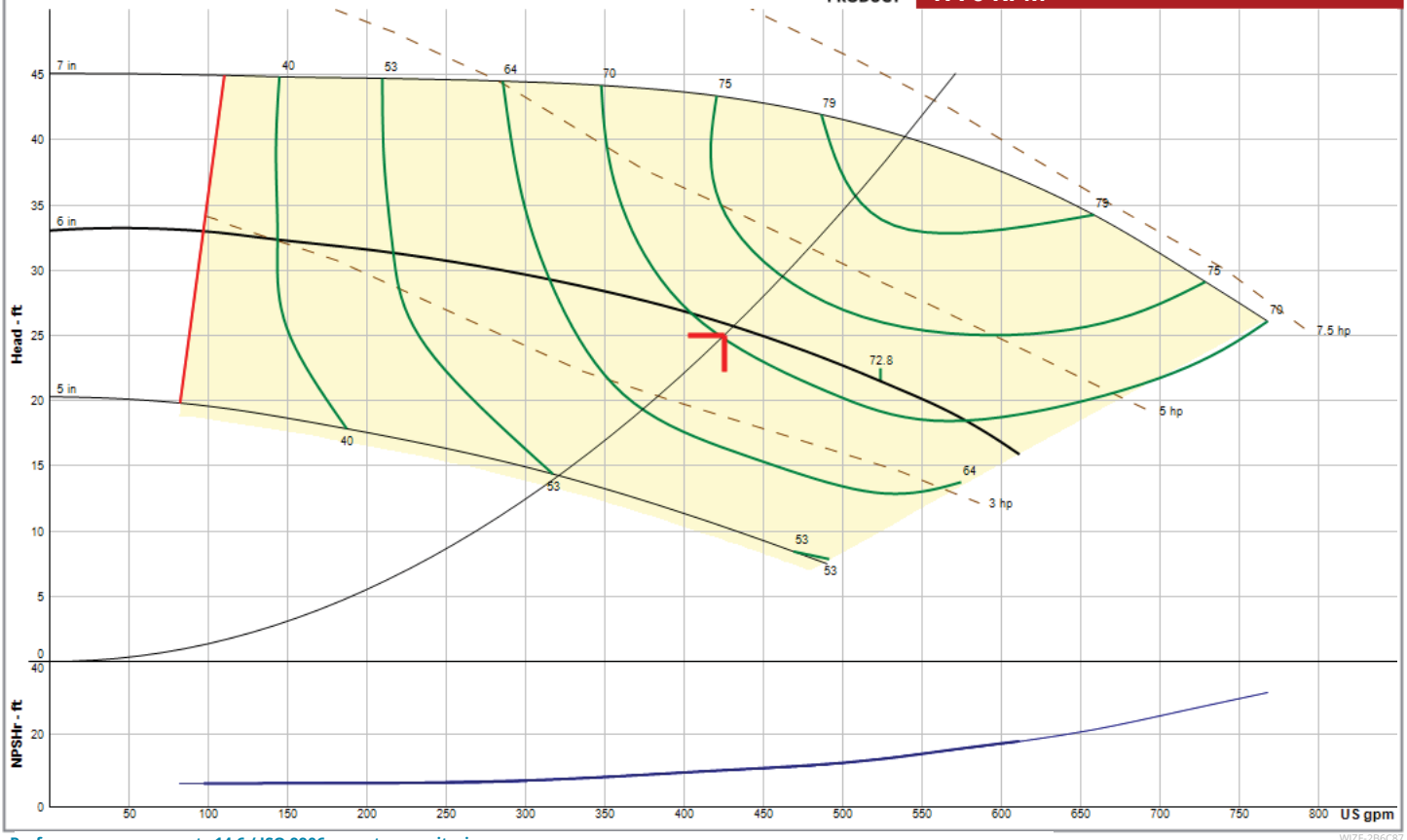
Duty Point Flow	425.0 US gpm
Duty Point Head	25.0 ft
Control Head	0.0 ft
Duty Point Pump Efficiency	70.6 %
Part Load Efficiency Value (PLEV)	0.0 %
Impeller Diameter	6 in
Motor Power	5 hp
Duty Point Power	3.9 bhp
Motor Speed	1800 rpm
RPM @ Duty Point	1770 rpm
NPSHr	10.4 ft
Minimum Shutoff Head	33.1 ft
Minimum Flow at RPM	105 US gpm
Flow @ BEP	524 US gpm
Fluid Temperature	68 °F
Fluid Type	Water
Weight *(approx. - consult rep for exact)*	275 lbs
Pump Floor Space Calculation	3.84 ft²

Performance Curve

Energy Efficiency Ratings:
Pump & Motor PEIcl: 0.97 ERcl: 3
Pump, Motor & Drive: PEIvl: 0.48 ERvl: 52

PREMIUM EFFICIENCY PRODUCT

e-80
5x5x7B
1770 RPM

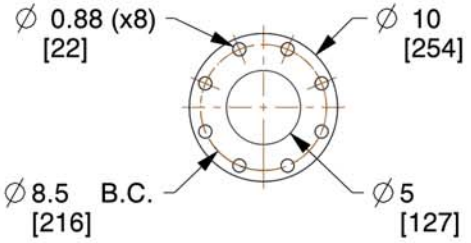


Performance curve meets 14.6 / ISO 9906 acceptance criteria

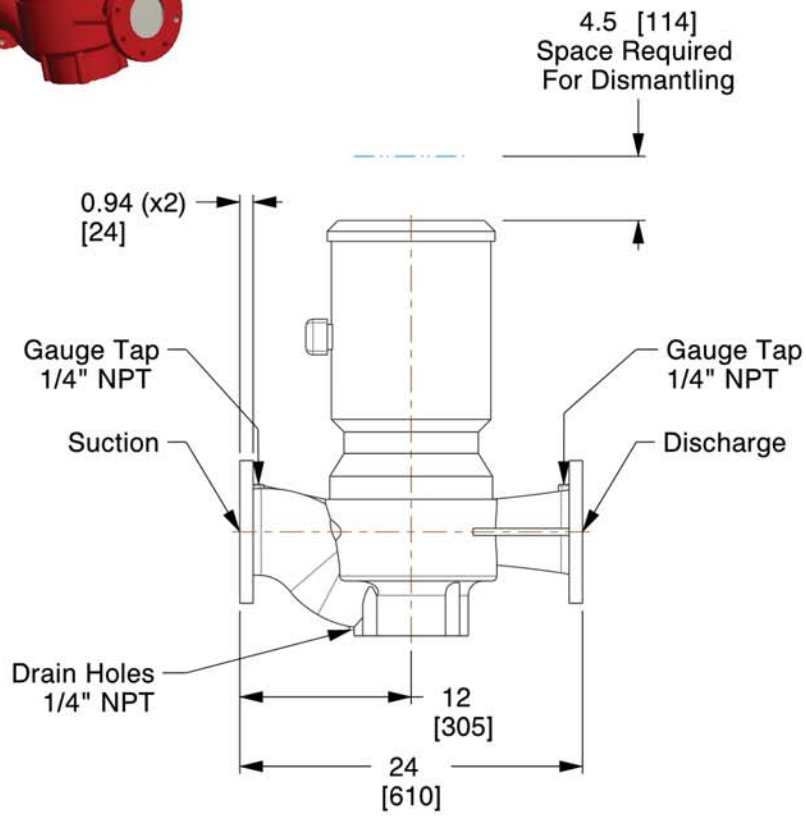
Materials Of Construction

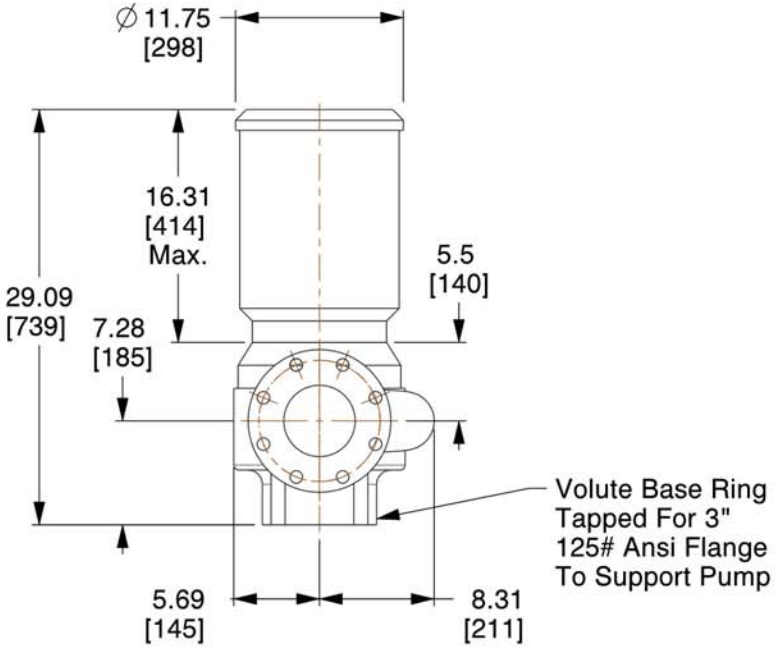
Pump Information\Construction	
Pump Series	e-80
Pump Size	5 x 5 x 7B
Seal Type	Standard Seal
Seal Material	EPR/Carbon/Tungsten Carbide/SS
Material of Construction	Stainless Steel
Impeller Diameter	6 inches
Sleeve Material	Stainless Steel Sleeve

Motor Details	
Motor Power	5
Motor Speed	1800
Frequency	60
Phase	3
Voltage	230/460
Frame	184JM
Enclosure	ODP
Motor Manufacturer	BG Choice
Motor Status	MO
Motor Comments	NEMA Premium w/Shaft Grounding Rings



5" SUCTION & DISCHARGE FLANGE DETAILS ANSI 125#





Bell & Gossett
a xylem brand

8200 N. Austin Ave.
Morton Grove, IL 60053, USA

Dimensions are subject to change

Not to be used for construction unless certified

BG-E80-5x5x7B-SS184JM-1-IN

Series e-80 Close Coupled In-Line Centrifugal Pump

Seal Type:Standard Seal | Motor Frame:184JM | Flange:ANSI 125#

Dimensions : IN (mm)	Scale : N.T.S.	Submittal # : B-139.26B

Standard Materials of Construction

Construction:	Stainless Steel Fitted Pump
1 Shaft:	Carbon Steel
2 Volute:	Cast Iron ASTM A48 Class B
3 Impeller:	ASTM A743 Grade CF8 - 304 Stainless Steel
4 Shaft Sleeve:	Stainless Steel
5 Impeller Key:	#304 Stainless Steel
6 Impeller Washer:	Carbon Steel
7 Impeller Lock Washer:	#304 Stainless Steel
8 Impeller Cap Screw:	#304 Stainless Steel
9 Volute Gasket:	Cellulose Fiber

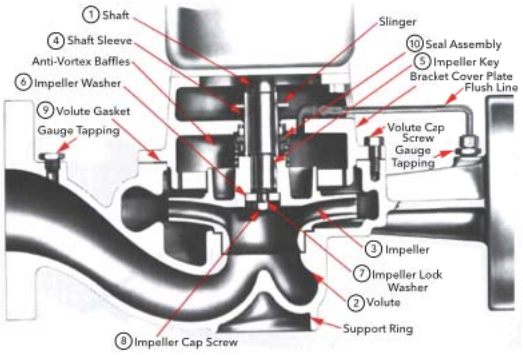
Pump Options *contact your local rep to configure

10 Standard Mechanical Seal Assembly

Bellows	Buna N
Faces	Carbon-Ceramic
Metal Parts	Brass or Stainless Steel
Spring	Stainless Steel

Maximum Working Pressure

Max Working Pressure (standard)	175 psi (12 bar)
Max Working Pressure (optional)	175#, 250#, and 300# working pressure designs.



xylem
Let's Solve Water

Xylem Inc.
8200 N. Austin Avenue, Morton Grove, IL 60053
Phone: (847)966-3700 Fax: (847)965-8379
www.bellgossett.com

Bell & Gossett
a xylem brand

Submittal

Job/Project: Sharonville Convention Center		**Representative:** Blackmore and Glunt, Inc. - Cincinnati	
ESP-Systemwize: WIZE-2B6C87	01/04/2022	**Phone:**	
Location/Tag: For PCWP-4		**Email:**	
Engineer: KLH Engineering		**Submitted By:** Eric Meyer	**Date:** 1/4/2022
Contractor: Driekast Piping		**Approved By:**	**Date:**

Triple Duty Valve

Bell & Gossett Model: 3DS-8S

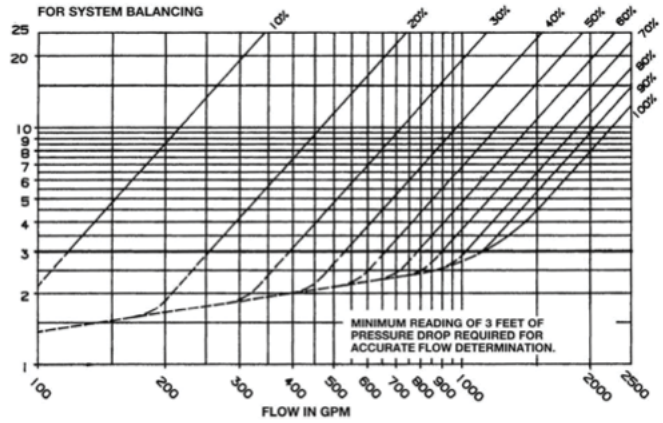
The Triple Duty Valve is a quiet operating heavy-duty valve which performs all of the functions normally required on the discharge side of hydronic system pumps. The valve serves as a nonslam check valve as needed for zoned pumping, parallel and standby pumping, and condenser water applications. The spring loaded disk prevents valve chatter, and assures positive shutoff.. The Triple Duty Valve is also equipped with Model RV-125A readout valves for more accurate system balance. The calibrated nameplate allows the valve to be returned to the original balance position after shutoff.

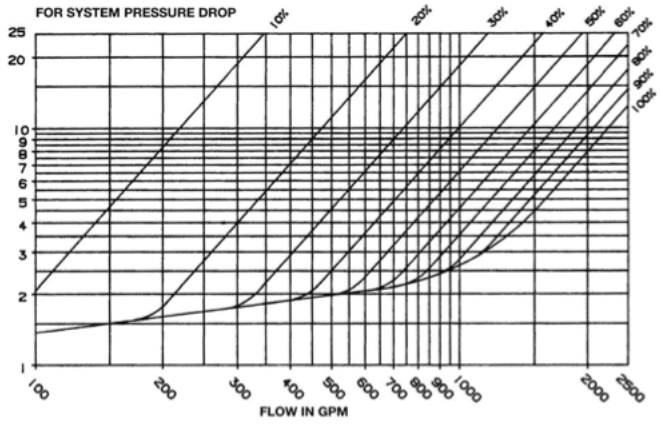
Triple Duty Valve Selection

Model	3DS-8S
Size	8.0 in
Pressure Drop @ Design Flow & Designated Stem Position	0.0'
Stem Position	60%
Connection Type	Flanged
Cv @ Designated Stem Position	700

Performance Characteristics:

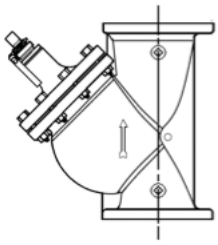
3DS-8S





Materials of construction

Body:	Cast Iron with Bronze seat
Disc	Brass with EPDM Seat Ring
Stem	Stainless Steel
Spring	Stainless Steel
Packing	Teflon-Graphite (asbestos-free)
Gasket	Non-Asbestos
Readout Valve	Brass with EPT insert, check valve & gasket



PROPER INSTALLATION
SHOWING STEM UPRIGHT

Operating Limits

Max Working Pressure (standard)	175 psi
Max Temp (standard)	250°F

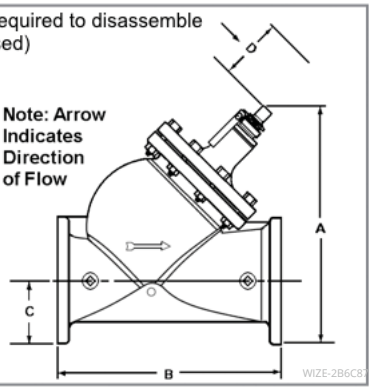
Dimensional Data:

not for construction

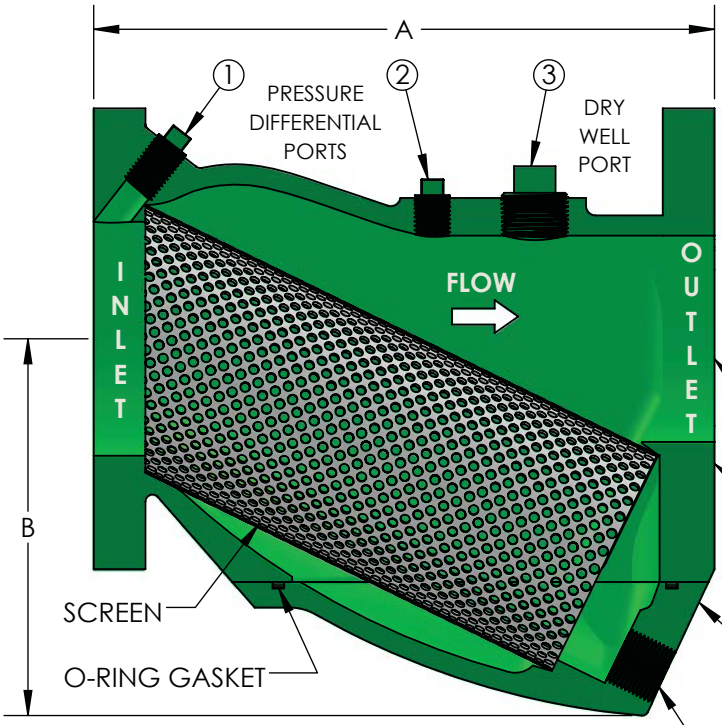
DIMENSIONS IN INCHES (mm)							APPROX. SHPG. WT. LBS. (Kg)
FLANGE SIZE*	A		B	C	D	E	
	OPEN	CLOSED					
8 (203.2)	24-3/4 (629)	23-1/4 (591)	21-1/2 (546)	6-3/4 (172)	20-7/16 (519)	10-3/8 (264)	316 (144)

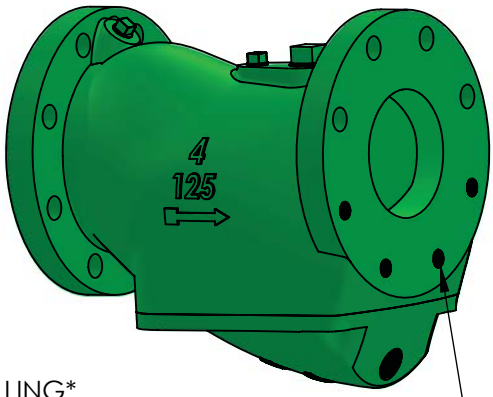
*STANDARD 125 PSIG (862 kPa) ANSI FLANGES.
Dimensions are subject to change. Not to be used for construction purposes unless certified.

Distance required to disassemble (valve closed)



MODEL LPD
LOW PRESSURE DROP
125# FLANGED STRAINER





*TAPPED BOLT HOLES
HALF OF THE BOLT HOLES ON THE OUTLET END ARE TAPPED. SEE TAP SIZE BELOW FOR SIZING.

MATERIALS OF CONSTRUCTION
BODY, FLANGES, COVER PLATE - CAST IRON
SCREEN - 304 STAINLESS STEEL
O-RING GASKET - VITON

OPERATING TEMPERATURE/PRESSURE
WATER, OIL, GAS.....175 PSI @ 150°F
STEAM.....125 PSI @ 350°F

STANDARD SCREENS

SERIVCE	SIZE	PERF
LIQUID	2" - 3"	.045"
	4" - 12"	.125"
STEAM	2" - 6"	.045"
	8" - 12"	.062"

QTY	PART NUMBER	PIPE SIZE		A	B	Cv# (GPM)	SCREEN AREA (in²)	PORT SIZE (NPT)		BLOWOFF SIZE (NPT)	TAP SIZE (UNC)	TAP DEPTH	WEIGHT (LBS)
		INCH	MM					1 & 2	3				
	LPD0200	2"	50	7-7/8"	4-5/8"	120	52.0	1/4"	1/2"	3/4"	5/8"-11	0.5"	20
	LPD0250	2-1/2"	65	10"	5-1/4"	160	84.6	1/4"	1/2"	3/4"	5/8"-11	0.5"	30
	LPD0300	3"	80	10-1/8"	6-1/4"	236	99.0	1/4"	1/2"	1"	5/8"-11	0.875"	50
	LPD0400	4"	100	12-1/8"	7-3/8"	460	147.3	3/8"	1"	1"	5/8"-11	0.875"	75
	LPD0500	5"	125	15-5/8"	8-3/8"	600	226.5	3/8"	1"	1-1/2"	3/4"-10	0.875"	115
	LPD0600	6"	150	18-1/2"	10-5/8"	952	317.6	3/8"	1"	1-1/2"	3/4"-10	0.875"	154
1	LPD0800	8"	200	22-1/2"	13"	1580	515.0	3/8"	1"	1-1/2"	3/4"-10	1"	273
	LPD1000	10"	250	27"	16-5/8"	2424	745.2	3/8"	1"	2"	7/8"-9	1.125"	464
	LPD1200	12"	300	29-7/8"	19-3/4"	3200	1035.1	3/8"	1"	2"	7/8"-9	1.125"	565

#Cv IS THE FLOW RATE IN GALLONS OF 60°F WATER THAT WILL PASS THROUGH THE STRAINER IN 1 MINUTE AT A 1 PSI PRESSURE DROP.

NSF 372 - LEAD FREE
The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight. Material complies with state codes and standards, where applicable, requiring reduced lead content.

CUSTOMER: Driekast Piping

PROJECT: Sharonville Convention Center

ENGINEER: KLH Engineering

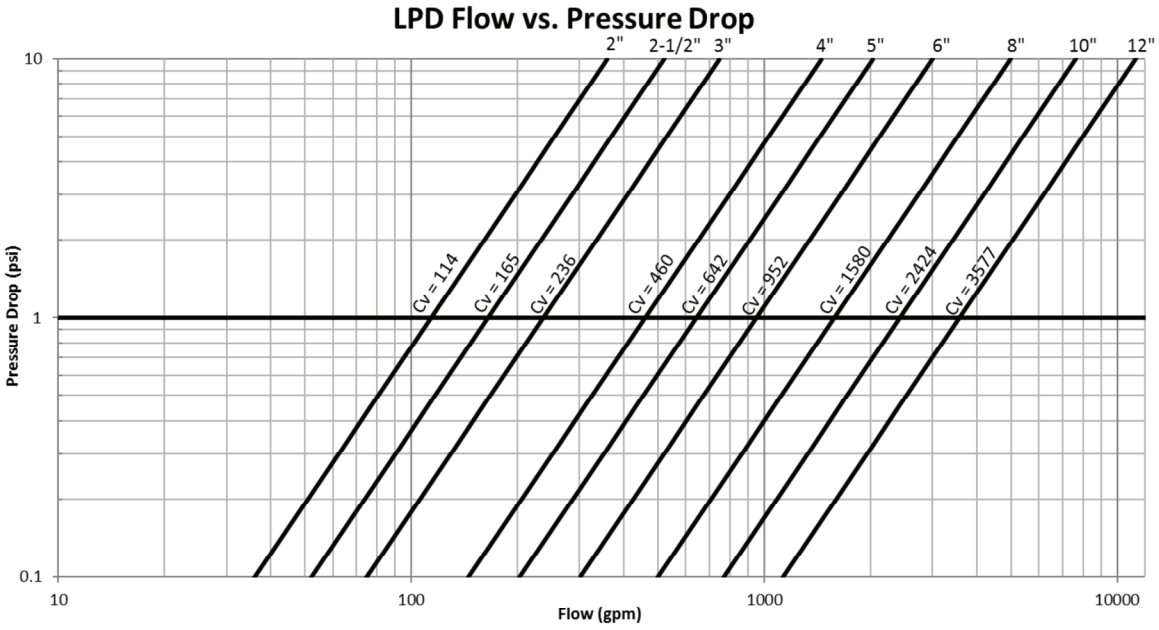
REV.			
	7	2-1/2" BLOWOFF ADJUSTED	4/12/2018
	6	BLOWOFF ADJUSTED	12/6/2016
REV.	5	Cv ADDED, 5" ADDED	DATE 10/12/2016

Metraflex for pipes in motion
2323 W. HUBBARD ST.
CHICAGO, IL 60612
TEL: 312-738-3800
FAX: 312-738-0415
WWW.METRAFLEX.COM

MODEL LPD
LOW PRESSURE DROP 125# FLANGED STRAINER

DRAWN BY: DKISH	DATE: 11/23/2015
APPROVED: JR	DATE: 11/23/2015
SCALE: N/A	DRAWING NUMBER: LPD-7

LPD Y Strainer Pressure Drop



Size	Cv
2	113.8
2.5	165.1
3	236.1
4	460
5	641.9
6	952
8	1579.5
10	2423.5
12	3576.5