



Submittal ID: 89920

## Shop Drawing Submittal

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Send To: **MOODY NOLAN, INC.**  
300 SPRUCE STREET, SUITE 300  
COLUMBUS, OH 43215-

Attention: Bernard Costantino

Project Id: 2018-0217      Project Name: Dayton Charter School-Connor Group

Discipline: HVAC      Spec Description: 232123 HVAC WATER PUMPS

Submittal Description: PRODUCT DATA FOR HVAC WATER PUMPS

Date Recv'd: 4/6/2022      Date Sent: 2022-04-18

Copies Recv'd: 1 E-COPY      Copies Sent: 1 E-COPY

### Action Taken

- Approved
- Approved As Noted
- Revise and Resubmit
- Reviewed
- Returned without review per "Submittals" Specification

### Comments:


Logged In By:: AMS      Marked/Logged Out By: AMS

Checked By: ~~Edwartoski, Dan~~ Ledford, Caleb      Initials: CJL      Date: 04.18.2022

Coordinated By: Jones, Rob      Initials: RRJ      Date: 2022-04-18

Coordinated By: \_\_\_\_\_      Initials: \_\_\_\_\_      Date: \_\_\_\_\_

Signature: Caleb Ledford





## SUBMITTAL DATA

**Project:** The Greater Dayton School  
**Bid Category :** HVAC  
**Project No.:** E1000110  
**TP Tab No.:** 224  
**Construction Manager:** Daimler Group  
**Architect/Engineer:** Moody Nolan  
**Submittal For:** HVC Water Pumps Rev 1  
**Specification #:** 232123  
**Manufacturer:** Various  
**Project Manager:** Josh Bolton 937-768-2289

The attached submittal data has been reviewed by TP Mechanical Contractors for compliance with the Architect/Engineer's specifications and plan schedule for this project.

In order to maintain the project schedule, we request that this submittal be returned to TP Mechanical Contractors **within 7 days**.

**NOTE: Material cannot be released without Architect/Engineer's approval of submittal.**

*(Please place stamp of approval here)*

<u>  X  </u>	PRODUCT DATA
<u>      </u>	DRAWINGS
<u>  4/5/22  </u>	DATE SUBMITTED
<u>      </u>	DATE RESUBMITTED
T. P. MECHANICAL CONTRACTORS	
BY	<u>  Josh Bolton  </u> TJ
<p>This drawing or brochure has been checked to quality or proper components only. Approval of this drawing or brochure shall not relieve the supplier of responsibility for accuracy or dimensions of full compliance with plans and specifications and purchase order.</p>	



**WEBER-HUFF, INC.**

9099 SUTTON PLACE, HAMILTON, OHIO 45011

(513) 874-1911

FAX: (513) 874-3383

[email@weber-huff.com](mailto:email@weber-huff.com)

visit us at our website: [www.weber-huff.com](http://www.weber-huff.com)

## **SUBMITTAL**

**PROJECT: GREATER DAYTON SCHOOL**

**CONTRACTOR: TP MECHANICAL**

**SUBMITTED BY: WEBER-HUFF, INC.**

**ENGINEER: KORDA/NEMETH ENGINEERING**

**MANUFACTURER: GRUNDFOS**

**DATE: April 5, 2022**

## Pump Performance Datasheet

Customer	: Greater Dayton School	Quote Number / ID	: 1275919
Customer ref. / PO	:	Model	: 25709 VL
Tag Number	: HWP-1,2	Stages	: 1
Service	:	Based on curve number	: VL_25709_4P Rev 0.0
Quantity	: 2	Basic model number	: -
		Date last saved	: 01/17/2022 9:25 AM

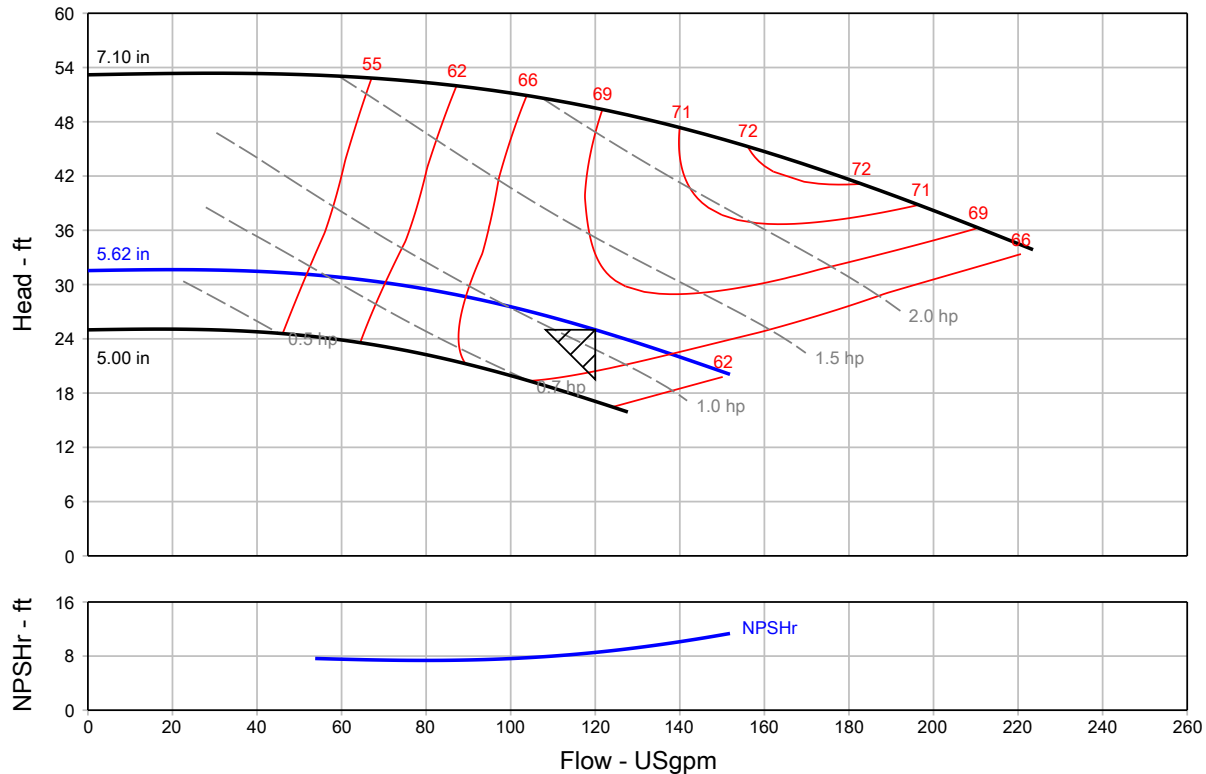
Operating Conditions		Liquid	
Flow, rated	: 120.0 USgpm	Liquid type	: Hot Water
Differential head / pressure, rated (requested)	: 25.00 ft	Additional liquid description	:
Differential head / pressure, rated (actual)	: 25.13 ft	Solids diameter, max	: 0.00 in
Suction pressure, rated / max	: 0.00 / 0.00 psi.g	Solids concentration, by volume	: 0.00 %
NPSH available, rated	: Ample	Temperature, max	: 180.0 deg F
Site Supply Frequency	: 60 Hz	Fluid density, rated / max	: 0.972 / 0.972 SG
		Viscosity, rated	: 0.35 cP
		Vapor pressure, rated	: 7.51 psi.a

Performance		Material	
Speed, rated	: 1760 rpm	Material selected	: Cast iron - 125#
Impeller diameter, rated	: 5.62 in		
Impeller diameter, maximum	: 7.10 in		
Impeller diameter, minimum	: 5.00 in		
Efficiency	: 67.89 %		

Performance (cont.)		Pressure Data	
NPSH required / margin required	: 8.54 / 0.00 ft	Maximum working pressure	: 13.31 psi.g
Ns (imp. eye flow) / Nss (imp. eye flow)	: 1,362 / 3,254 US Units	Maximum allowable working pressure	: 169.0 psi.g
MCSF	: 35.01 USgpm	Maximum allowable suction pressure	: 175.0 psi.g
Head, maximum, rated diameter	: 31.65 ft	Hydrostatic test pressure	: 263.0 psi.g
Head rise to shutoff	: 26.17 %		

Performance (cont.)		Driver & Power Data (@Max density)	
Flow, best eff. point	: 115.4 USgpm	Motor sizing specification	: Max power (non-overloading)
Flow ratio, rated / BEP	: 103.99 %	Margin over specification	: 0.00 %
Diameter ratio (rated / max)	: 79.15 %	Service factor	: 1.00
Head ratio (rated dia / max dia)	: 50.48 %	Power, hydraulic	: 0.74 hp
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00	Rated power (based on duty point)	: 1.08 hp
Selection status	: Acceptable	Max power (non-overloading)	: 1.20 hp
		Nameplate motor rating	: 1.50 hp / 1.12 kW

Energy Indexes	
PEI (CL)	: 0.95
ER (CL)	: 5



## Construction Datasheet

Project name	: Greater Dayton	Tag Number	: HWP-1,2
Consulting engineer	:	Service	:
Customer	: Weber-Huff Inc.	Model	: 25709 VL
Customer ref. / PO	:	Quantity	: 2
Quote Number / ID	: 1275919	Quoted By (Sales Office)	: Weber-Huff Inc.
Date last saved	: 01/17/2022 9:25 AM	Quoted By (Sales Engineer)	: Carol Christy

Construction				Motor Information	
Nozzle	Size (in.)	Nozzle Configuration	Pos'n	Manufacturer	: Baldor
Suction	2.5	125# ANSI	Side	Frame Size	: 145JM
Discharge	2.5	125# ANSI	Side	Power	: 1.50 hp

**PROVIDE 480/3 AS SCHEDULED. - KORDA (CJL)**

Orientation / Configuration	: Vertical	RPM	: 1800 rpm
Rotation	: Clockwise	Enclosure	: ODP
Wear Ring Configuration	: Single - Case	Operating Power Supply	: 230/460/3/60
Discharge Elbow Size	: -	Efficiency	: Premium
Subplate	: -	Service factor	: 1.15
Sump Depth (feet)	: -	Motor Application	: General Purpose
Bearing Frame	: -	Motor Options/Accessories	: -
Bearing Frame Foot	: -	Cord Length (feet)	: -

**BASIS OF DESIGN 2". PROVIDE PIPE TRANSITIONS AS NECESSARY. - KORDA (CJL)**

Materials	
Case	: Cast Iron, ASTM A48 - Class 30
Motor Bracket	: Cast Iron, ASTM-A48, CL 30
Impeller	: Stainless Steel, AISI-304 (H304)
Impeller Cap Screw and Washer	: Stainless Steel, AISI-303
Impeller Key	: Stainless Steel, AISI 316
Case wear ring	: Tin Bronze, ASTM B584-90500 (B18)
Impeller wear ring	: -
Pump Shaft	: Steel, AISI-1040
Sleeve	: Bronze, III932, C89835
Line Shaft	: -
Column	: -
Discharge Pipe	: -
Discharge Elbow	: -
Suction Elbow	: -
Subplate	: -
Hardware	: Steel, Grade 5
O Rings	: Buna N
Pump Coatings	: Standard Manufacturers Paint

Baseplate, Coupling and Guard	
Baseplate	: Not Applicable
Drip Pan	: -
Coupling	: -
Guard	: OSHA Approved

Seal & Packing Construction	
Sealing Method	: Single Seal, Type 21S
Seal Material	: Buna Carbon Ceramic SS-Spring and Hardware
Packing Gland	: -
Lantern Ring	: -
Recirculation Lines	: Copper Tubing with Brass Fittings

Weights (Approx.)	
Pump	: 91.00 lb
Baseplate	: -
Driver	: 44.00 lb
Estimated Shipping gross weight	: 135.0 lb

**Spare seals included**

## General Arrangement

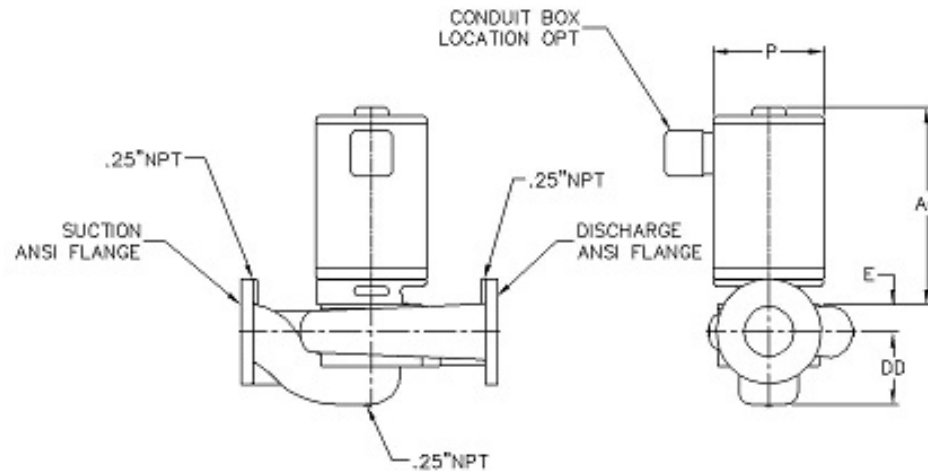
Project name	: Greater Dayton School	Tag Number	: HWP-1,2
Consulting engineer	:	Service	:
Customer	:	Model	: 25709 VL
Customer ref. / PO	:	Quantity of pumps	: 2
Quote Number / ID	:	Quoted By (Sales Office)	: Weber-Huff Inc.
Date last saved	: 1275919	Quoted By (Sales Engineer)	: Carol Christy

: 01/17/2022 9:25 AM

Do not install pump larger than 215JM in vertical piping.

Pressure and drain tap locations are approximate.

Suction and discharge flanges, are cast per 250# ANSI thickness and diameter. All flanges are flat face. Some holes may be threaded because of nut clearances.



**NOT FOR CONSTRUCTION, UNLESS CERTIFIED AND REFERENCED ON ORDER**

Units	Frame	S x D (in.)	AG (Max)	DC	DD	DE	E	P (Max)	X	YY	Weight ea
inches	145JM	2.5 X 2.5	18.00	4.75	5.84	5.50	1.75	8.00	8.50	8.50	135.0
Conditions of Service			Motor Data								
Flow: 120.0 USgpm	Fluid: Hot Water	HP: 1.5	Encl: ODP	Phase: 3	Efficiency: Premium						
TDH: 25.00 ft	Temp.: 180.0 deg F	RPM: 1760 rpm	Hz: 60	Voltage: 230/460	S.F.: 1.15						

**Pump Performance Datasheet**

Customer : Greater Dayton School	Quote Number / ID : 1275919
Customer ref. / PO :	Model : 25957 LCS
Tag Number : HWP-3,4	Stages : 1
Service :	Based on curve number : RC9867-1-SS Rev 0
Quantity : 2	Basic model number : -
	Date last saved : 01/17/2022 9:26 AM

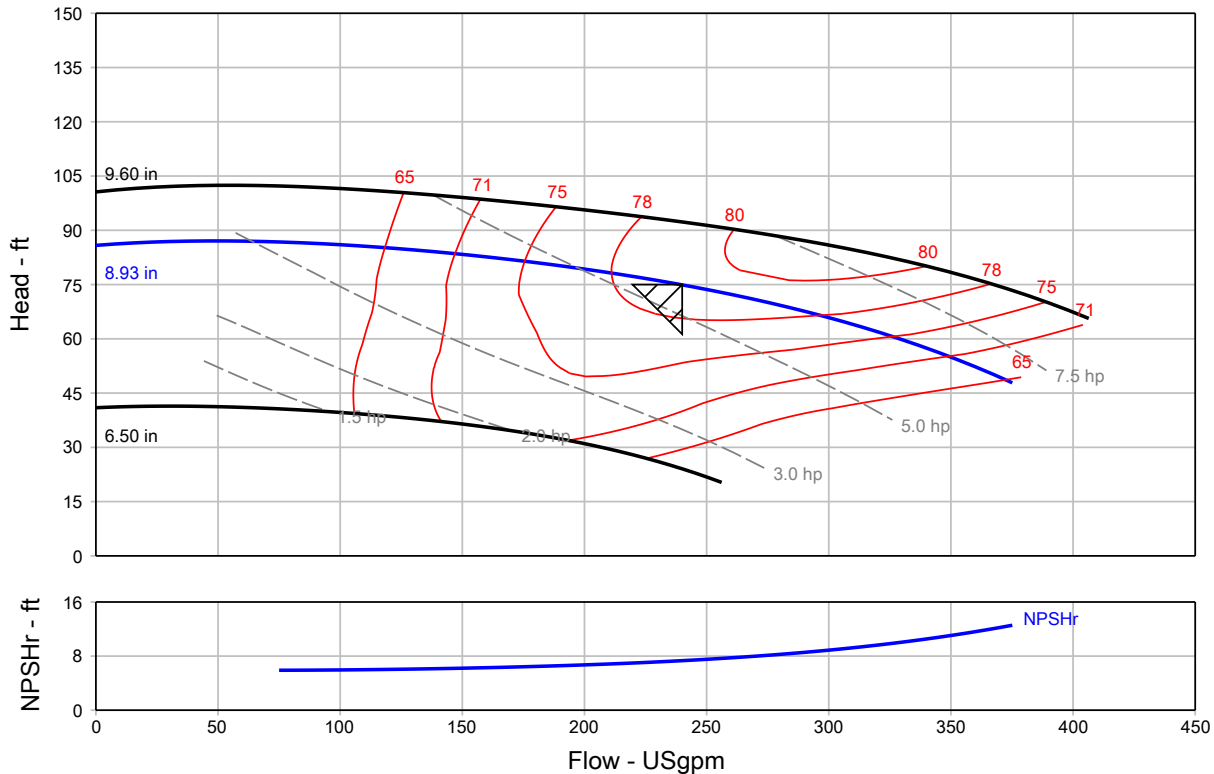
Operating Conditions	Liquid
Flow, rated : 240.0 USgpm	Liquid type : Hot Water
Differential head / pressure, rated (requested) : 75.00 ft	Additional liquid description :
Differential head / pressure, rated (actual) : 74.93 ft	Solids diameter, max : 0.00 in
Suction pressure, rated / max : 0.00 / 0.00 psi.g	Solids concentration, by volume : 0.00 %
NPSH available, rated : Ample	Temperature, max : 180.0 deg F
Site Supply Frequency : 60 Hz	Fluid density, rated / max : 0.972 / 0.972 SG
	Viscosity, rated : 0.35 cP
	Vapor pressure, rated : 7.51 psi.a

Performance	Material
Speed, rated : 1775 rpm	Material selected : Cast iron
Impeller diameter, rated : 8.93 in	
Impeller diameter, maximum : 9.60 in	
Impeller diameter, minimum : 6.50 in	
Efficiency : 79.15 %	

Pressure Data
Maximum working pressure : 36.62 psi.g
Maximum allowable working pressure : 165.0 psi.g
Maximum allowable suction pressure : 175.0 psi.g
Hydrostatic test pressure : 263.0 psi.g

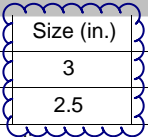
Driver & Power Data (@Max density)
Motor sizing specification : Max power (non-overloading)
Margin over specification : 0.00 %
Service factor : 1.00
Power, hydraulic : 4.41 hp
Rated power (based on duty point) : 5.57 hp
Max power (non-overloading) : 6.86 hp
Nameplate motor rating : 7.50 hp / 5.59 kW

Energy Indexes
PEI (CL) : 0.93
ER (CL) : 7



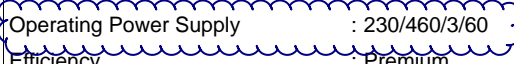
## Construction Datasheet

Project name	: Greater Dayton School	Tag Number	: HWP-3,4
Consulting engineer	:	Service	:
Customer	: Weber-Huff Inc.	Model	: 25957 LCS
Customer ref. / PO	:	Quantity	: 2
Quote Number / ID	:	Quoted By (Sales Office)	: Weber-Huff Inc.
Date last saved	: 1275919	Quoted By (Sales Engineer)	: Carol Christy
		: 01/17/2022 9:26 AM	
Motor Information			
Nozzle	Size (in.)	Nozzle Configuration	Pos'n
Suction	3	125# ANSI	-
Discharge	2.5	125# ANSI	-
Orientation / Configuration	: Horizontal		
Rotation	: Clockwise		
Wear Ring Configuration	: Single - Case		
Discharge Elbow Size	: -		
Subplate	: -		
Sump Depth (feet)	: -		
Bearing Frame	: -		
Bearing Frame Foot	: -		
Bearing Type (Radial/Thrust)	: -		
Bearing Lubrication	: -		
Thrust Bearing	: -		
Intermediate Bearing	: -		
Lower Bearing	: -		
Bearing Housing Accessories	: -		
-	: 14-25957-130368-1742P		
Materials			
Case	: Cast Iron, ASTM A48 - Class 30		
Motor Bracket	: Cast Iron, ASTM-A48, CL 30		
Impeller	: Stainless Steel, AISI-304 (H304)		
Impeller Cap Screw and Washer	: Stainless Steel, AISI-303		
Impeller Key	: Stainless Steel, AISI 316		
Case wear ring	: Tin Bronze, ASTM B584-90500 (B18)		
Impeller wear ring	: -		
Pump Shaft	: Stainless Steel, AISI-303		
Sleeve	: -		
Line Shaft	: -		
Column	: -		
Discharge Pipe	: -		
Discharge Elbow	: -		
Suction Elbow	: -		
Subplate	: -		
Hardware	: Steel, Grade 5		
O Rings	: Buna N		
Pump Coatings	: Standard Manufacturer's Paint		
Spare Seals included Shaft Grounding Rings included			
Baseplate, Coupling and Guard			
Baseplate	: Welded Steel Fabrication		
Drip Pan	: No drip pan		
Coupling	: Rigid, Axial Split Coupling (aluminum) RASC2		
Guard	: OSHA Approved		
Seal & Packing Construction			
Sealing Method	: Single Seal, Type 21		
Seal Material	: Buna Carbon Ceramic SS-Spring and Hardware		
Packing Gland	: -		
Lantern Ring	: -		
Recirculation Lines	: Copper Tubing with Brass Fittings		
Weights (Approx.)			
Pump	: 95.00 lb		
Baseplate	: 60.00 lb		
Driver	: 117.0 lb		
Estimated Shipping gross weight	: 272.0 lb		



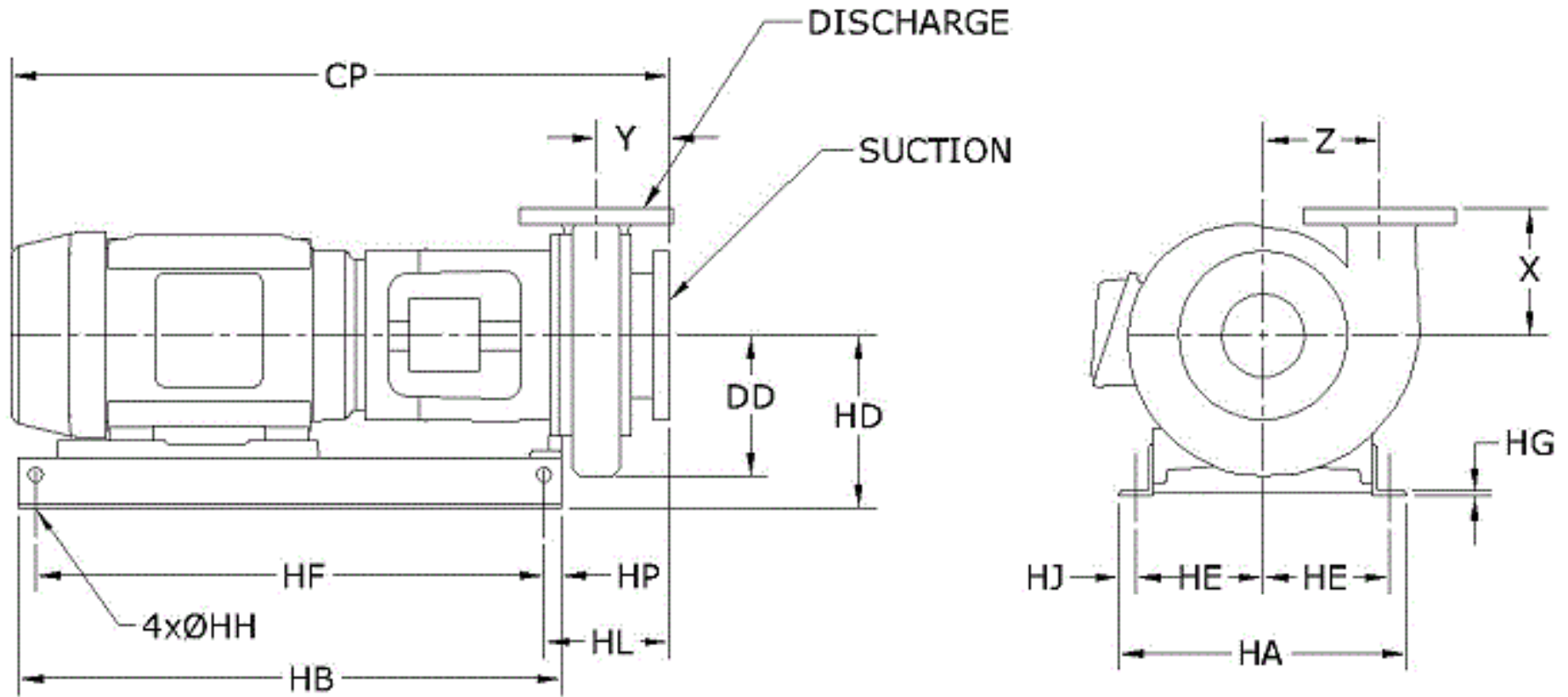
**BASIS OF DESIGN  
2.5" AND 2".  
PROVIDE PIPE  
TRANSITIONS AS  
NECESSARY.  
- KORDA (CJL)**

**PROVIDE 480/3 AS  
SCHEDULED.  
- KORDA (CJL)**



**General Arrangement**

Project name	: Greater Dayton School:	Tag Number	: HWP-3,4
Consulting engineer	:	Service	:
Customer	:	Model	: 25957 LCS
Customer ref. / PO	:	Quantity of pumps	: 2
Quote Number / ID	: 1275919	Quoted By (Sales Office)	: Weber-Huff Inc.
Date last saved	: 01/17/2022 9:26 AM	Quoted By (Sales Engineer)	: Carol Christy



**NOT FOR CONSTRUCTION, UNLESS CERTIFIED AND REFERENCED ON ORDER**

Units	Frame	Suct(in)	Disch(in)	CP	DD	HA	HB	HD	HE	HF	HG	HH	HJ	HL	HP	X	Y	Z	Weight ea
inches	213TC	3	2.5	34.00	6.80	17.00	25.75	10.75	7.00	23.75	0.25	0.63	1.50	7.93	1.00	6.75	4.13	6.00	272.0
<b>Conditions of Service</b>					<b>Motor Data</b>														
Flow: 240.0 USgpm		Fluid: Hot Water			HP: 7.5			Encl: ODP			Phase: 3			Efficiency: Premium					
TDH: 75.00 ft		Temp.: 180.0 deg F			RPM: 1775 rpm			Hz: 60			Voltage: 230/460			S.F.: 1.15					

Project name	: Greater Dayton School	Tag Number	: HWP-3,4
Consulting engineer	:	Service	:
Customer	: Weber-Huff Inc.	Model	: SD4030-125
Customer ref. / PO	:	Quantity	: 2
Quote Number / ID	:	Quoted By (Sales Office)	: Weber-Huff Inc.
Date last saved	: 1275919	Quoted By (Sales Engineer)	: Carol Christy

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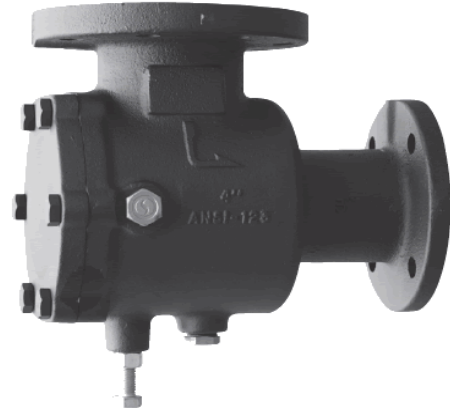
**Grundfos Suction Diffusers**

Nozzle	Size (in.)	Nozzle Configuration	Pos'n
Inlet	4	-	Top
Outlet	3	-	Side

Difuser Body	: Cast Iron, ASTM-A126, CL B
Hardware	: Steel, ASTM A-283C
Internal Magnet	: -
Strainer	: SS 304, ASTM-A240, 3.5MM Holes
Mesh Grid (Startup strainer)	: SS 304, ASTM-A240, (#20 Mesh)
Strainer Cover	: Cast Iron, ASTM-A126, CL B
O Rings	: EPDM
Coating	: Standard Manufacturers Paint
Construction Code/Part Number	: 97523151

**Weights (Approx.)**

Estimated Shipping gross weight : 60.00 lb



**Description**

Grundfos Series SD, Suction diffuser provides and ensures a uniform flow pattern to the suction side of the pump ensuring a stable NPSH. Suction diffuser makes it possible to install the pump in a very narrow spacing as no long bends are necessary.

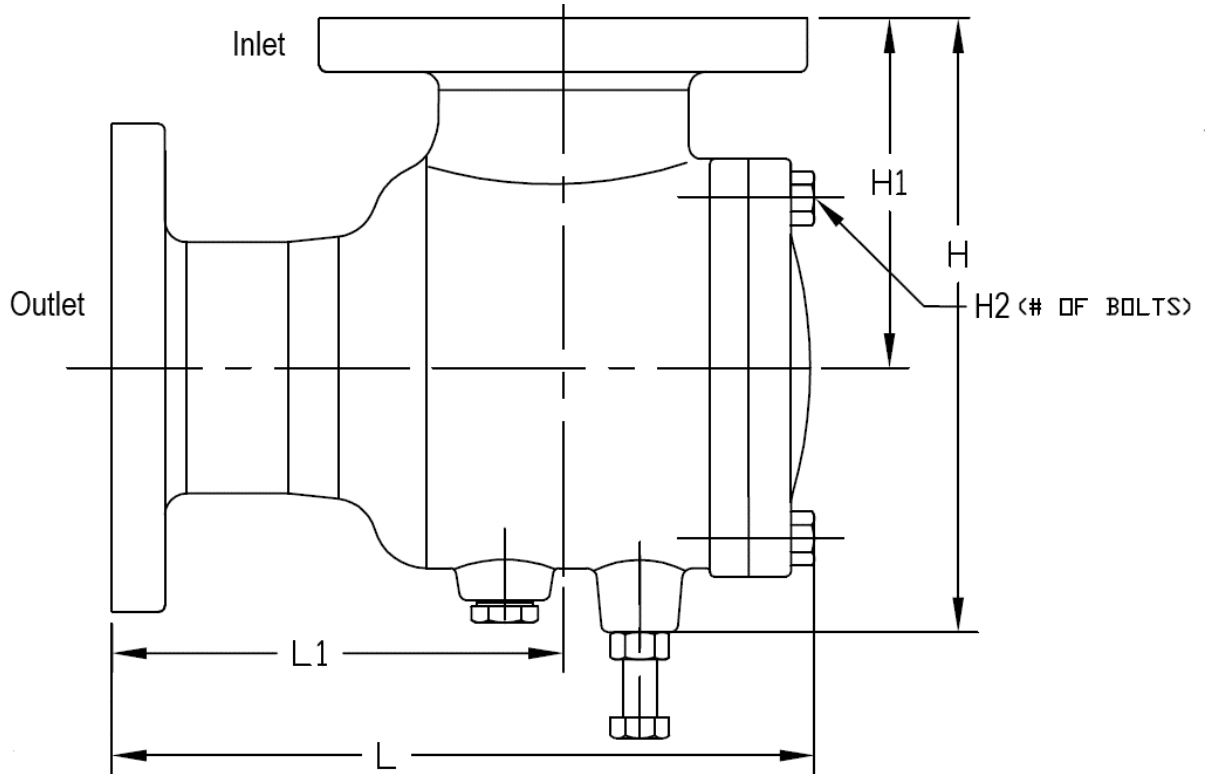
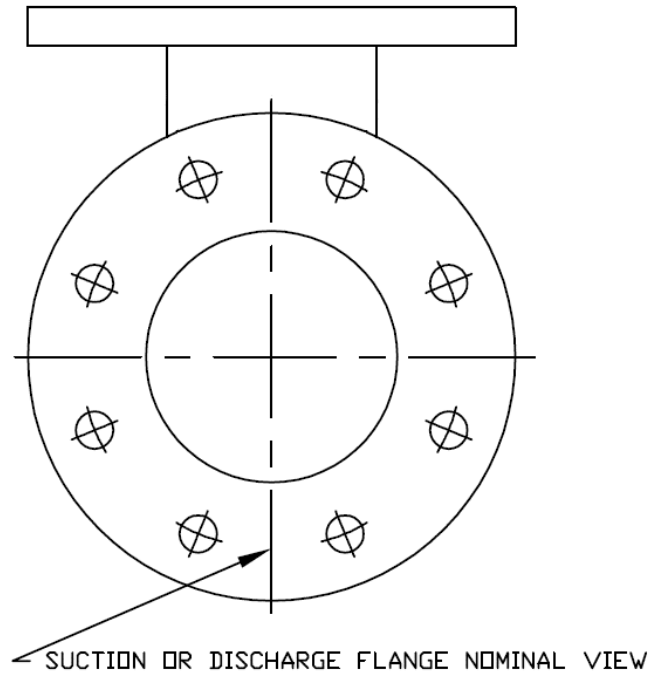
The suction diffuser incorporates a cylindrical strainer preventing impurities from entering the pump. Additional feature includes an adjustable support for mounting.

-

**General Arrangement**

Project name	: Greater Dayton School	Tag Number	: HWP-3,4
Consulting engineer	:	Service	:
Customer	:	Model	: SD4030-125
Customer ref. / PO	:	Quantity of pumps	: 2
Quote Number / ID	:	Quoted By (Sales Office)	: Weber-Huff Inc.
Date last saved	: 1275919	Quoted By (Sales Engineer)	: Carol Christy

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**NOT FOR CONSTRUCTION, UNLESS CERTIFIED AND REFERENCED ON ORDER**

Units	Inlet (in)	Outlet (in)	Strainer Area (sq in)	L (in)	L1 (in)	H1 (in)	H (in)	H2 (qty)	Weight (lbs)
inches	4	3	50	12.90	8.30	6.50	11.40	6.00	60

SUBMITTAL

# GSPA-S SERIES

AIR SEPARATOR WITH STRAINER



Models: GSPA-2S to GSPA-24S

Rev. G1 3/26/2020

Job Name	Greater Dayton School	Submitted By	_____	Date	_____
Location	_____	Approved By	_____	Date	_____
Engineer	Korda/Nemeth Engineering	Order No.	_____	Date	_____
Contractor	TP Mechanical	Notes	_____		
Sales Rep.	Weber-Huff, Inc.		_____		

**Description:**

GSPA-S ASME Vortex type Air Separators with removable strainer eliminate air quickly and efficiently from open and closed loop heating/cooling systems. Water enters and exits through unique "tangential" connections, which promote a low velocity swirling effect in the center of the unit. Natural centrifugal forces allow the heavier air-free water to move toward the outer edges while entrained air is captured within the "eye" of the vortex and released out of the top of the separator. The bubble-free water then exits near the bottom of the unit, protecting systems against the noise, corrosion, and damage commonly caused by entrained air.

**Construction:**

Shell: Carbon Steel  
 Heads: Carbon Steel  
 Exterior: Red Oxide Primer  
 Interior: Unlined

**Design Parameters:**

Maximum Design Pressure: 125 PSIG\*  
 Temperature Range: -20°F to 450°F

\*Higher pressures also available

MODEL NUMBER	PART NUMBER	MAX FLOW (GPM)	TAGGING INFORMATION	QUANTITY
GSPA-2-S	99398045	56		
GSPA-2.5-S	99398046	90		
GSPA-3-S	99398048	190		
GSPA-4-S	99398049	300	AS-1	1
GSPA-5-S	99398050	530		
GSPA-6-S	99398051	850		
GSPA-8-S	99398052	1900		
GSPA-10-S	99398054	3200		
GSPA-12-S	99398056	4800		
GSPA-14-S	99398057	6100		
GSPA-16-S	99398058	8000		
GSPA-18-S	99398061	9700		
GSPA-20-S	99398063	12000		
GSPA-22-S	99398064	15000		
GSPA-24-S	99398065	17000		

**Typical Specification:**

Furnish and install, as shown on plans, a vortex type AIR SEPARATOR WITH STRAINER model GSPA-\_\_\_\_\_-S sized for \_\_\_\_\_GPM, with \_\_\_\_\_" (NPT/Flanged) tangential connections, as manufactured. A blowdown connection shall be provided to facilitate routine cleaning of the unit. The tank must be constructed in accordance with most recent edition of Section VIII Division 1 of the ASME Boiler and Pressure Vessel Code, and shall be constructed and stamped for 125 PSIG working pressure @ -20°F to 450°F. Each air separator shall be model number GSPA-\_\_\_\_\_-S or approved equal.



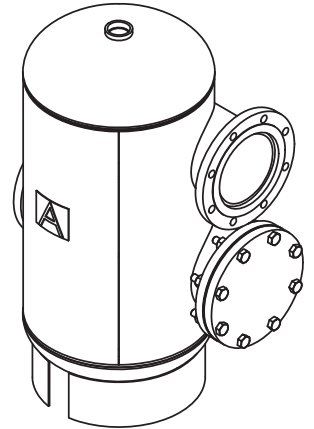
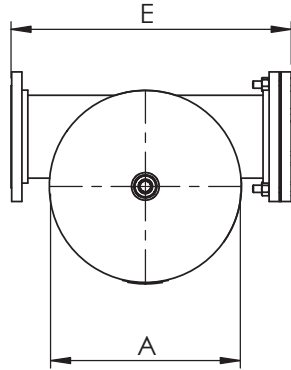
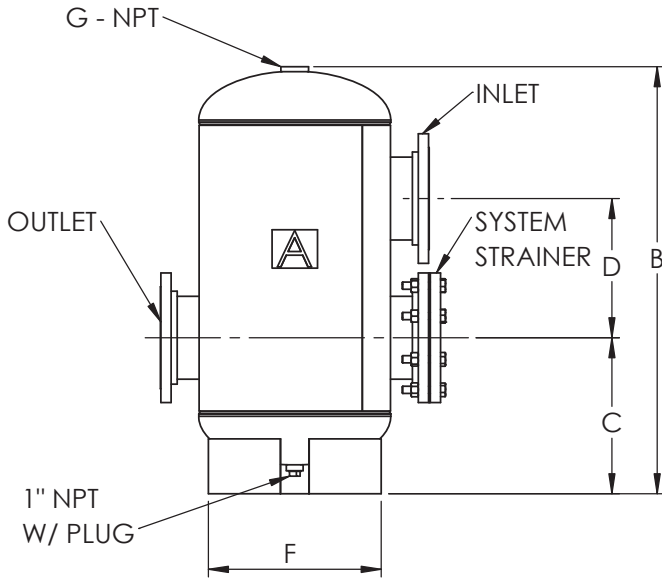
SUBMITTAL

# GSPA-S SERIES

AIR SEPARATOR WITH STRAINER

Models: GSPA-2S to GSPA-24S

Rev. G1 3/26/2020



GSPA-2S thru GSPA-24S

### Dimensions & Weights:

Model Number	Connection Size	Dimensions in Inches							Approx. Shipping Weight (lbs)
		A	B	C	D	E	F	G	
GSPA-2-S	2 NPT	12	22 1/2	9 5/16	8 1/2	16 5/8	9 1/2	1 1/4	34
GSPA-2.5-S	2.5 NPT			9 3/4	8	19 3/4			37
GSPA-3-S	3			12 1/8	10 3/4	21 3/4			45
GSPA-4-S	4	14	32	16 1/4	14 1/2	28	18	2	80
GSPA-5-S	5								21 1/2
GSPA-6-S	6	20	44	24 1/2	31 1/2	46 3/8	30	2	175
GSPA-8-S	8								40
GSPA-10-S	10	30	60 1/2	21 1/2	20	41	24	2	460
GSPA-12-S	12								38
GSPA-14-S	14	36	78	24 1/2	31 1/2	46 3/8	30	2	850
GSPA-16-S	16	48	108	38	40	60	38		1858
GSPA-18-S	18	54	124	41	50	66	44	2	2490
GSPA-20-S	20	60	138	42 1/2	60	72	50		3346
GSPA-22-S	22	66	150	46	66	78	56	2	3879
GSPA-24-S	24					80			4211

### Notes:

- Mounting Clips Available Upon Request



SUBMITTAL

# GNLA-SERIES

HVAC EXPANSION TANKS

Models: GNLA-35 to GNLA-800L

Rev: G1 3/25/2020

Job Name	Greater Dayton School	Submitted By	_____	Date	_____
Location	_____	Approved By	_____	Date	_____
Engineer	Korda/Nemeth Engineering	Order No.	_____	Date	_____
Contractor	TP Mechanical	Notes	_____		
Sales Rep.	Weber-Huff, Inc.		_____		

**Description:**

GNLA tanks are ASME removeable bladder type pre-charged HVAC expansion tanks. They are designed to absorb the expansion forces and control the pressure in heating/cooling systems. The system's expanded water (fully compatible with water/glycol mixtures) is contained in a full acceptance heavy-duty butyl bladder that prevents tank corrosion and waterlogging problems. All GNLA expansion tanks can be installed vertically or horizontally.

**Construction:**

Shell: Carbon Steel  
 Heads: Carbon Steel  
 Exterior: Carbocoat 140 - Harvester Red  
 Interior: Heavy Duty Butyl Bladder

**Design Parameters:**

Maximum Design Pressure: 125 PSIG\*  
 Temperature Range: -20°F to 240°F

\*150, 200 & 250 PSIG available

Model Number	Part Number	Tank Volume (Gallons)	Tagging Information	Quantity
GNLA-35	99397643	10		
GNLA-50	99397644	13		
GNLA-85	99397645	23		
GNLA-130	99397646	35		
GNLA-200	99397647	53		
GNLA-300	99397648	79		
GNLA-400	99397649	106		
GNLA-500	99397650	132		
→ GNLA-600	99397651	158	ET-1	1
GNLA-800L	99397652	211		

**Typical Specification**

Furnish and install, as shown on plans, a \_\_\_\_\_ gallon \_\_\_\_\_" diameter X \_\_\_\_\_" (high) pre-charged steel HVAC expansion tank with heavy-duty butyl bladder. The tank shall have multiple water-side connections to eliminate stagnate water within the tank, a 0.302"-32 charging valve connection (standard tire valve) to facilitate the on-site charging of the tank to meet system requirements, a pressure gauge, and bladder integrity monitor. The tank must be constructed in accordance with the most recent addendum of Section VIII Division 1 of the ASME Boiler and Pressure Vessel Code and rated for 125 psig.

Each tank shall be model number GNLA-\_\_\_\_\_ or approved equal.



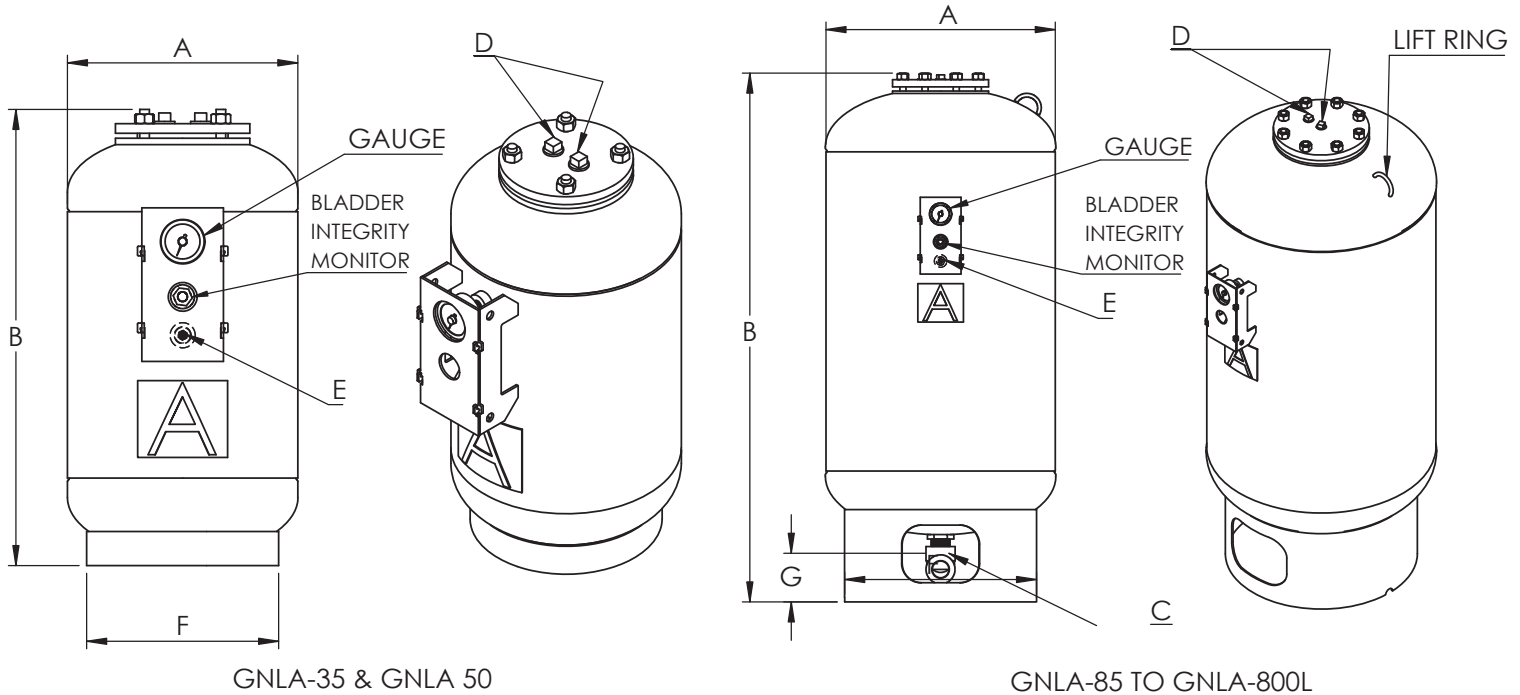
SUBMITTAL

# GNLA-SERIES

HVAC EXPANSION TANKS

Models: GNLA-35 to GNLA-800L

Rev: G1 3/25/2020



GNLA-35 & GNLA 50

GNLA-85 TO GNLA-800L

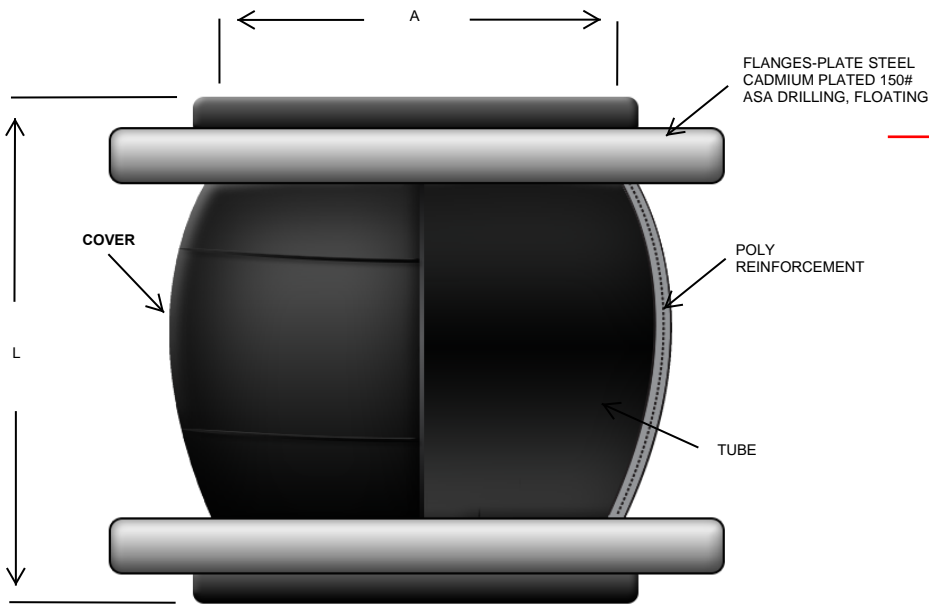
## Dimensions & Weights:

Model Number	Dimensions in Inches						Approx. Shipping Weight (lbs)	
	A	B	System Connection		Charging Valve	F		G
			C	D	E			
GNLA-35	12	23 1/2	-			10	-	40
GNLA-50	14	24				10	-	50
GNLA-85	16	37	1 NPT	3/4 NPT	0.302"-32NC	12	5 1/2	90
GNLA-130	20					16		125
GNLA-200	24	43	1 1/2 NPT	3/4 NPT	0.302"-32NC	20	5 1/4	210
GNLA-300		55						225
GNLA-400	30	49	2 NPT	3/4 NPT	0.302"-32NC	24	5 1/4	300
GNLA-500		57						335
→ GNLA-600		65						360
GNLA-800L	32	76				28		475

## Notes:

- Tanks are factory pre-charged at 40 psig and field adjustable.
- California code-sight glass is available upon request.
- Both top and bottom connections (C & D) access the bladder.
- Mounting clips are available upon request.

### MS1



#### CONTROL RODS Included

PIPE SIZE	PSI
1" - 4"	180
5" - 10"	135
12" - 14"	90
16" - 24"	45

\* USE CONTROL RODS IF PSI IS AT OR EXCEEDS RATINGS IN CHART

DESIGN DATA:
1) MAX NEGATIVE PRESSURE. 26" HG VACUUM
2) TEMPERATURE RANGE: 20° F - 250° F
3) LISTED MOVEMENTS CANNOT OCCUR SIMULTANEOUSLY
4) 3:1 SAFETY FACTOR (BURST TO OPERATING PRESSURE)

Pressure rating is based on 170°F operating temperature

BODY CONSTRUCTION:	MAXIMUM TEMPERATURE
NEOPRENE NYLON	up to 230 DEGREES F
EPDM NYLON	up to 250 DEGREES F
BUTYL NYLON	up to 250 DEGREES F
NITRILE NYLON	up to 230 DEGREES F

\*EPDM acceptable for Lead Free



QTY	MODEL NUMBER	"A" NOMINAL SIZE	"L" FACE TO FACE	WRK. PRESS	LATERAL DEFLECT	AXIAL EXT.	AXIAL COMP.	ANGULAR	APPROX. WEIGHT (LB.)
	MS1-1 1/2	1 1/2"	6"	225	(+/- 1/2")	3/8"	1/2"	27	7
	MS1-2	2"	6"	225	(+/- 1/2")	3/8"	1/2"	20	9
	MS1-2 1/2	2 1/2"	6"	225	(+/- 1/2")	3/8"	1/2"	17	13
	MS1-3	3"	6"	225	(+/- 1/2")	3/8"	1/2"	14	14
	MS1-4	4"	6"	225	(+/- 1/2")	1/2"	3/4"	14	19
	MS1-5	5"	6"	225	(+/- 1/2")	1/2"	3/4"	11	23
	MS1-6	6"	6"	225	(+/- 1/2")	1/2"	3/4"	9	27
	MS1-8	8"	6"	225	(+/- 1/2")	1/2"	3/4"	7	41
	MS1-10	10"	8"	225	(+/- 3/4")	3/4"	1"	7	57
	MS1-12	12"	8"	225	(+/- 3/4")	3/4"	1"	6	83
	MS1-14	14"	8"	150	(+/- 3/4")	3/4"	1"	5	115
	MS1-16	16"	8"	125	(+/- 3/4")	3/4"	1"	4	165
	MS1-18	18"	8"	125	(+/- 3/4")	3/4"	1"	4	168
	MS1-20	20"	8"	125	(+/- 3/4")	3/4"	1"	3	170
	MS1-24	24"	10"	110	(+/- 3/4")	3/4"	1"	3	255

DRAWN BY:

DRAWING NUMBER:

REV:

SIGNATURE:

DATE:

PO NUMBER:

PROJECT:

CUSTOMER:

NOTES: