THIS FORM MUST BE PRINTED TO A STATIC PDF FOR DISTRIBUTION

Yellow highlighted text will not appear in the printed document.

SUBMITTAL REVIEW

CLIENT NAME: Vails Gate Fire Department

PROJECT TITLE: Vails Gate FD - New Firehouse

SUBMITTAL No.: 232123-1.1 **H2M PROJECT No.:** VGFD2001

SUBMITTAL NAME: Hydronic Pumps Phase 2 PD

SUBMITTAL REVIEW

REVIEW IS FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS.
NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS
OF DIMENSIONS OR DETAILS

- [x] NO EXCEPTIONS TAKEN
- [ ] SUBMIT SPECIFIED ITEM
- [ ] MAKE CORRECTIONS NOTED (RESUBMISSION NOT REQUIRED)
- [ ] NO ACTION TAKEN (REVIEW IS THE RESPONSIBILITY OF ANOTHER PARTY)
- [ ] REVISE & RESUBMIT
- [ ] NO ACTION TAKEN (THIS SUBMITTAL IS NOT REQUIRED BY THE CONTRACT)
- [ ] REJECTED - SEE REMARKS
- [ ] RECEIVED FOR RECORD

Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating their work with that of all other trades; and performing the work in a safe and satisfactory manner.

H2M architects + engineers

Date: 07/26/2023 By: MJV

Rev.: 2020-05-20

Comments:

CONTRACTOR'S COMPANY NAME
ADDRESS

SUBMISSION TRANSMITTAL FORM
CLIENT NAME: Vails Gate Fire District
PROJECT TITLE: VGFD2001-New Firehouse

H2M PROJECT NO.: VGFD2001

Product, Item, or System Submitted:	Hydronic Pumps (Phase 2) Product Data		
Submission Date:	7/18/23	Submission Log No.:	232123-1.1
Specification Section:	232123	Paragraph Reference:	1.02.A.1
Contract Drawing Reference(s):			
Manufacturer's Name:	Joseph Lombardo Plumbing & Heating		
Manufacturer's Mailing Address:			
Manufacturer's Contact Information:	*Name*	( ) *Tel. no.*	*Email*
Supplier's Name:			
Supplier's Mailing Address:			
Supplier's Contact Information:	*Name*	( ) *Tel. no.*	*Email*
This item is a substitution for the specified item:		☑ No	☐ Yes

KEY CONSTRUCTION SERVICES, LLC

Project No: VGFD2001

Reviewed for General Acceptance Only. This review does not relieve the Subcontractors or Suppliers of responsibility for making the work conform to the requirements of the contract. The Subcontractor and Suppliers are responsible for all dimensions, correct fabrication and accurate fit with the work of other trades.

SUBJECT TO ARCHITECT AND OR ENGINEER APPROVAL

Signed *Joseph Manfredi*(PM) **Date: 7/18/23**

Contractor's Approval Stamp with Signature & Date

Contractor's Brief Comments or Remarks (attach separate letter as needed):

By making this submission, we represent that we have determined and verified all field measurements and dimensions, field construction criteria, site and building constraints in terms of limitations in moving the item into the enclosed space, materials, catalog and model numbers and similar data and that we have checked and coordinated this submission with other work at or adjacent to the installed location in accordance with the requirements contained in the Contract Documents.

END OF SECTION 013300

Joe Lombardo

Plumbing & Heating of Rockland, Inc.

321 Spook Rock Road
Suffern, NY 10901
Ph. 845-357-6537 Fx 845-357-8529
E: info@josephlombardo.com
Website: www.josephlombardo.com

Rockland Cty. Plumbing #1000 *Rockland Cty. Cooling # 1468*
Westchester Cty. Plumbing #460 *New Jersey State Plumbing #12702*

LETTER OF TRANSMITTAL

DATE:	JOB NO.
7.17-23	
ATTENTION: Joe Manfredi	
RE: Vails Gate Firehouse	

TO: Key Construction
4246 Albany Post Rd. Suite 1
Hyde Park, NY 12538

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via _____ the following items:

☐ Shop Drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

EMAIL	DATE	NO.	DESCRIPTION
1	7.17-23	232123	HYDRONIC PUMPS – PHASE 2 REVISED AND RESUBMITTING

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ No Exceptions Taken ☐ Resubmit _____ copies for review
☐ For your use ☐ Make Corrections Noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Rejected ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 20___ ☐ PRINTS RETURNED AFTER LOAN TO US

COPY TO: Joe Manfredi

SIGNED: Ronald J. Lombardo

Wales Darby
Complete HVAC, Hydronic & Plumbing Systems

Submittal

Date:	6/15/2023	Engineer:	H2M Engineering
Submitted To:	General Plumbing Supply	Job Name:	Vails Gate FD Phase 2
WD Quote #:	80932	Job Address:	872 Blooming Grove Turnpike
WD Job #:	2208239		New Windsor, NY 12553

Tag	Qty	Manufacturer	Model Number	Description
HHWP-1&2	2	Taco	SKV1506	Vertical In-Line Pumps with SelfSensing VFD
	2	Taco	953-3907RP	Pump Stands
HHWP-3&4*	2	Taco	VR15H-F	ECM High Eff. Circs
HHWP-5&6	2	Taco	VR15M-F	ECM High Eff. Circs
	6	Taco	SD020015-5	Suction Diffusers
	6	Taco	MPV015-4	Triple Duty Valves
	12	Keflex	F020SKSSPCF	Flex Connectors
ET	1	Taco	CA140-125	Asme Expansion Tank
AS	1	Taco	4904AD-125	Air&Dirt Separator

*Included in this Submittal (left out previously)

Submitted for (Select one): ___ Approval __X__ Re-Submission _____ Record Purposes

WD Submitted/Reviewed By: Greg Zimmerman

New York
2910 Express Dr S, Islandia, NY 11749
Tel: 631.585.6800
Email: infony@walesdarby.com

Pennsylvania
1650 Market St #3600, Philadelphia, PA 19103
Tel: 267.370.5204
Email: infopa@walesdarby.com

New Jersey
5B Powder Horn Dr, Warren, NJ 07059
Tel: 732.560.1001
Email: infonj@walesdarby.com

KV / SKV Vertical Inline Pumps

Taco KV Series Vertical Inline Pumps meet the latest standards for hydraulic performance and dimensional characteristics. Now available with SelfSensing Series with ProBalance®, ECM motor options and eLink™.

Optimized Efficiency Oe
Featuring **ECM** Technology

SelfSensing Series
WITH ProBalance®

eLink™
Taco Connectivity

Taco Comfort Solutions®
A Taco Family Company

©Taco Catalog #300-1.2B
Supersedes: 01/25/19

Effective Date: 11/14/22
Printed in USA

KV Series Details

Quiet, dependable power. Proven performance. Taco's extensive line of vertical inline pumps are designed for optimum performance and ease of installation. Doing your job once means doing it right...with pumps made by the world leader in hydronic technology for heating and cooling. Each pump we sell is backed by Taco's reputation for quality and dependability, and engineered for years of trouble-free service.

Space Saving Design Taco vertical inline pumps require no isolation pads. Their simplified in-the-line design saves you time and money.

Back Pull-Out Design Should a service call or maintenance ever be required, our pumps pull out from the back. There's no need to disconnect the pump from the piping system to work on it.

Close Coupled Design Each vertical inline pump features Taco's close coupled design for improved alignment and increased seal life. The bottom line? Fewer service calls.

Lower Installed Cost Because of the way we've engineered our pumps, they require less time to install, and require no special tools or hardware.

Replaceable casing wear ring, pump support bracket are all value added options.

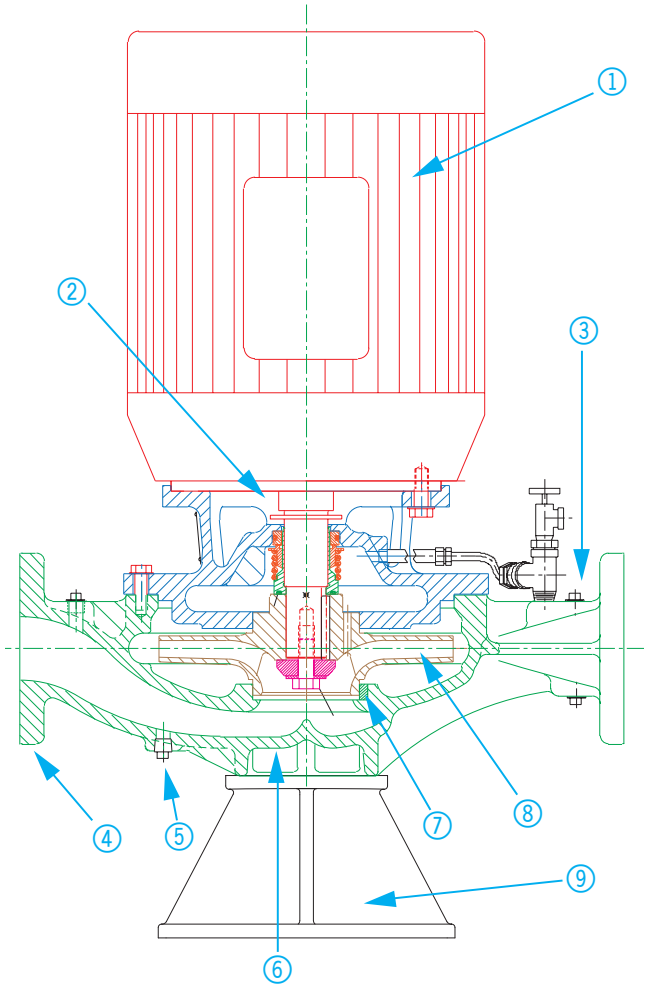
We've got you covered With flows ranging up to 2500 GPM and heads up to 300' TDH, Taco can do the job.

Support Stand These optional support stands, made of rugged ductile iron, can be added to all KV pump models. The already small footprint of KV pumps in tight mechanical rooms is further enhanced with the support stand's easy access bolt holes. Now installation and maintenance is that much easier.

③ Standard NEMA JM Motor.

⑦ Standard seal design allows for flexibility of seal options.

③ Pressure tapping on suction and discharge for easy verificatio of pump performance.



④ 250# flanges available

⑤ Casing drain

⑤ Machined mounting surface with tapped holes

⑥ Low cost replaceable optional wear ring available

⑦ High efficiency impellers standard on all models

⑧ Support Stand

SelfSensing Series WITH ProBalance®

A giant leap forward for variable speed pumping

The Self-Sensing Series with ProBalance®. At the heart is the patent pending SelfSensing ProBalance technology. The VFD's SelfSensing capabilities make fast, accurate do-it-yourself system balancing easy. Reduced balancing contractor costs, no expensive wiring, and no additional sensors required. Apply to ALL your pumping needs: both constant flow chiller/boiler pumps and secondary variable flow pumps!

- Integrated pump and drive
- Pump automatically responds to system demand changes
- No remote sensors
- No complex wiring
- Multiple modes:
  - — Constant flow
  - — Constant pressure
  - — Flow compensation
  - — Duplex pump alternation

Parallel Pumping Configuration

The SelfSensing Modulating Pump Controller (MPC) stages individual pumps in parallel configuration for best overall pumping efficiency. The MPC is capable of operating 2 to 4 pumps in parallel for maximum efficiency. The Sensorless Parallel Pump Controller provides single building automation systems connection in either BACnet MSTP or Modbus RTU and is enclosed in a NEMA 4X certified enclosure.

The ultimate in pump protection and electrical safety.

The SelfSensing Series also features automatic alerts with optional shutdown for no-flow, dry-run, and end-of-curve operation. That means the seal is safe should someone forget to open a valve or to run the pump without water. What's more, the unit is electronically protected for overload and locked rotor conditions per UL 778 and CSA C22.2 No. 108, so the motor is protected — a real crowd pleaser for insurance companies.

Presenting DIY Balancing

Every HVAC pump needs to be balanced by an expert who must account for construction variables and safety factors. Whether constant or variable speed, the balancing process has to be addressed at commissioning and startup. But what if you could zero in on the true system resistance without inducing false head and balance the pump yourself? You can with Taco's SelfSensing ProBalance® technology.

The benefits of Do-It-Yourself balancing:

- You'll have control over your construction schedule and subcontractors
- Reduced installation costs
- You can help a LEED team get a job into their budget

What kind of savings can you expect?

Balancing a constant flow system with Taco drives saves lots of energy and increases pump life dramatically. For example, a pump that would have run at 1750 rpm @ 60hz is balanced with technology to run at 1458 rpm @50hz. Now the pump consumes 57% of the horsepower and runs 291 fewer revolutions per minute. The savings translate to 419,000 cycles per day or 150M fewer cycles very year. As a result, the pump lasts longer, requires less maintenance, and uses less energy.

To illustrate, using best practices and balancing with drives saved a Tennessee hospital $3,000 in yearly electrical costs on 100 hp chiller pumps running at 47 hz instead of 60 hz.

ProBalance® feature not available in Parallel Pumping Configuration.

SKV Series Pump | Submittal Data

Submittal No: 301-S148 | **Model:** SKV1506D | **RPM:** 3500 | **HP:** 3HP | **Effective:** April 24, 2020 | **Supersedes:** January 27, 2020

JOB: VAILS GATE FD PHASE 2

REPRESENTATIVE: WALES DARBY

ENGINEER: H2M ENGINEERING

CONTRACTOR: JOSEPH LOMBARDO PLUMBING & HEATING

PRODUCT DATA

ITEM NO. HHWP-1&2

DOE BASIC MODEL NO. SKV1506D-A-2P-PD

MODEL NO. SKV1506

VOLTAGE 208V

PEI$_{VL}$ 0.41

HI ENERGY RATING 59

IMPELLER DIA. 4.40"

WEIGHT 246

GPM 70

PUMP/MOTOR Complete

HEAD/FT 65'

FREQUENCY

RPM 3500 **HP** 3 **PHASE** 3

NSF 61 CERTIFIED* ☐ YES ☑ NO
*Not configurable as a standard option; please contact your account manager to configure.

SUPPORT STAND OPTION ☐ YES ☑ NO
(Ductile Iron ASTM A536-84 Grade 65-45-12)

OPERATING SPECIFICATIONS

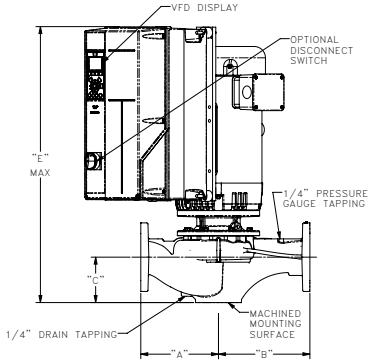
FLANGE	PRESSURE	TEMPERATURE
ANSI Class 125	175 PSIG* (1210 KPA)	250°F (120°C)
ANSI Class 250	300 PSIG** (2070 KPA)	250°F (120°C)

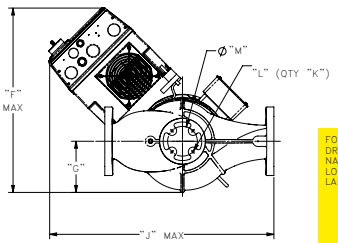
* In accordance with ANSI Standard B16.1 Class 125
** In accordance with ANSI Standard B16.1 Class 250

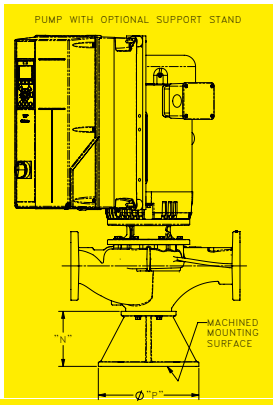
DIMENSIONS

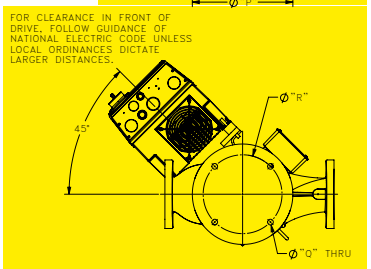
Model No. | 1506D
Flange Size (Suction x Discharge) | 1 ½ x 1 ½ (38 x 38)

HORSEPOWER	3
MOTOR FRAME TEFC	182JM
MOTOR FRAME ODP	145JM
WEIGHT WITHOUT OPTIONAL STAND LBS (KG)	246 (112)
WEIGHT WITH OPTIONAL STAND LBS (KG)	257 (117)
FLANGE SIZE ASA	1.5 (38)
A*	ANSI CLASS 125: 7.5 (191)
	ANSI CLASS 250: 7.75 (197)
B*	ANSI CLASS 125: 7.5 (191)
	ANSI CLASS 250: 7.75 (197)
C	4.68 (119)
E MAX	29.42 (747)
F MAX	19.16 (487)
G	5.00 (127)
J MAX	21.66 (550)
K	2
L	5/16-18
M	1.75 (44)
N	6 (152)
P	7.5 (191)
Q	0.63 (16)
R	6 (152)









*A & B Dimensions apply for all pump sizes.
English dimensions are in inches. Metric dimensions are in millimeters.
Metric data is presented in ( ). Do not use for construction purposes unless certified.

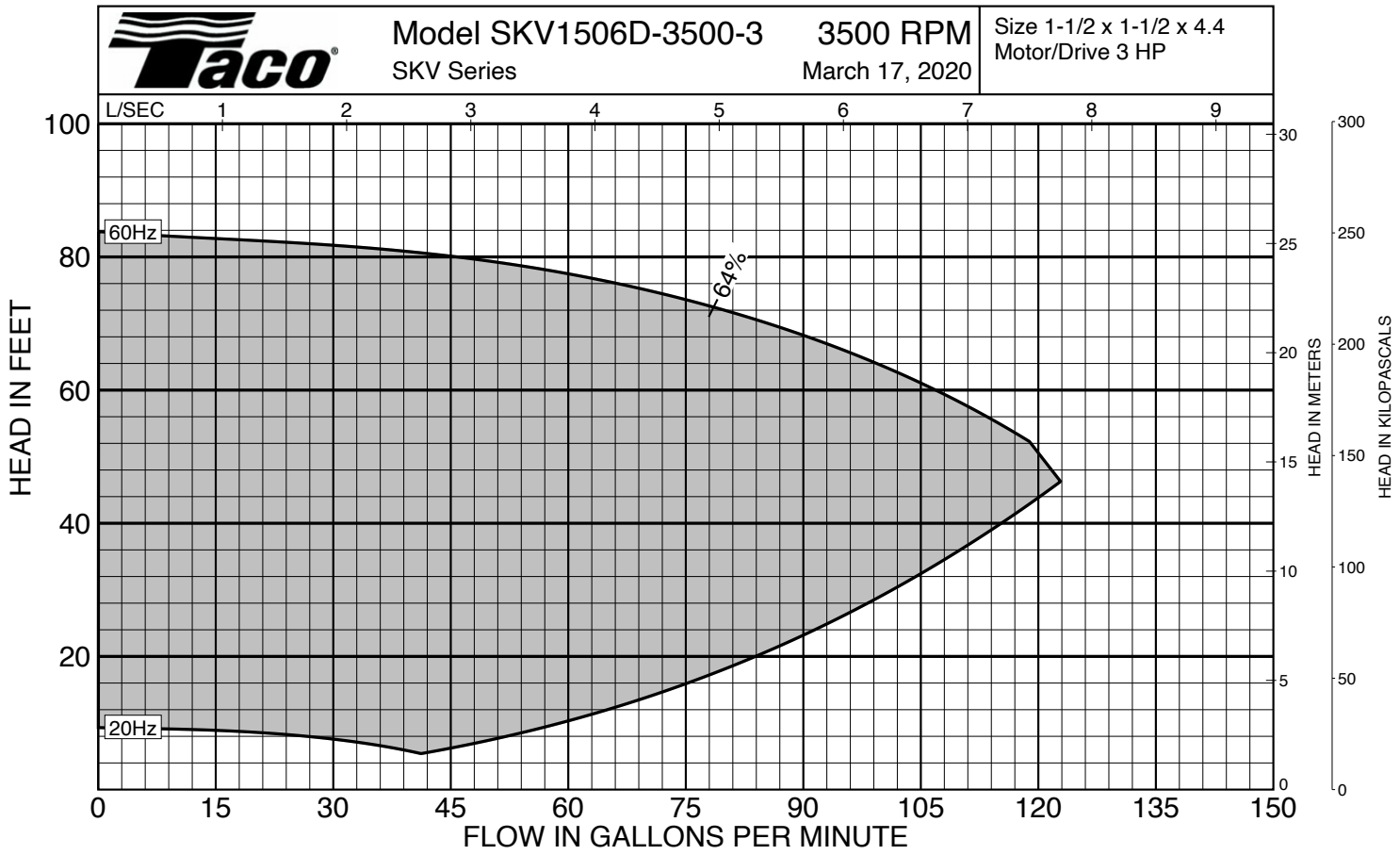
MATERIALS OF CONSTRUCTION			CASING	COVER	IMPELLER	WEAR RING	SHAFT	SHAFT SLEEVE	MECHANICAL SEAL	SEAL FLUSH LINE ASSEMBLY	SUPPORT STAND
STANDARD CONSTRUCTION	BRONZE FITTED	125# FLANGE	Cast Iron ASTM A48/A48M-03 Class 30A	Cast Iron ASTM A48/A48M-03 Class 30A	Bronze ASTM B584 ALLOY C83600 or C84400	N/A	Carbon Steel	Bronze ASTM B584-98A C92200	Ceramic/EPT	Copper & Brass C3600	N/A
		250# FLANGE	Ductile Iron ASTM A536-84 Grade: 65-45-12	Cast Iron ASTM A48/A48M-03 Class 30A	Bronze ASTM B584 ALLOY C83600 or C84400	N/A	Carbon Steel	Bronze ASTM B584-98A C92200	Ceramic/EPT	Copper & Brass C3600	N/A
OPTIONAL		125# OR 250#	N/A	N/A	Stainless Steel ASTM A351/A 351M-08	Bronze ASTM B584-98A C92200	N/A	Stainless Steel TYPE 303 ASTM A276	Tungsten Carbide/EPT or Silicon-Carbide/EPT	N/A	Ductile Iron ASTM A536-84 Grade 65-45-12
STANDARD CONSTRUCTION	NSF 61	125# FLANGE	Cast Iron ASTM A48/A48M-03 Class 30A	Cast Iron ASTM A48/A48M-03 Class 30A	Stainless Steel ASTM A351/A 351M-08	N/A	Carbon Steel	Bronze ASTM B584-98A C92200	Ceramic/EPT	Copper & Brass C3600	N/A
		250# FLANGE	Ductile Iron ASTM A536-84 Grade: 65-45-12	Cast Iron ASTM A48/A48M-03 Class 30A	Stainless Steel ASTM A351/A 351M-08	N/A	Carbon Steel	Bronze ASTM B584-98A C92200	Ceramic/EPT	Copper & Brass C3600	N/A
OPTIONAL		125# OR 250#	N/A	N/A	N/A	Bronze ASTM B584-98A C92200	N/A	N/A	N/A	N/A	Ductile Iron ASTM A536-84 Grade 65-45-12

N/A - Not Available

DRIVE DATA

PROTOCOLS (Standard)	BACnet, Modbus RTU, N2 Metasys, FLN Apogee, FC Protocol
PROTOCOLS (Optional)	☐ LonWorks® ☐ DeviceNet ☐ Profibus
ENCLOSURE	☒ NEMA Type 12 / IP55 ☐ NEMA Type 4X / IP66
I/O (Standard)	6 Digital Inputs / 2 Digital Outputs 1 Analog Current Output / 2 Analog Inputs 2 Pulse Inputs 2 Form C Relays
ADDITIONAL CONTROL OPTIONS	☒ None ☐ General Purpose I/O ☐ Relay Card ☐ 24VDC Supply ☐ Analog I/O
DISCONNECT SWITCH	☐ Mechanical ☒ Fused
EMC/RFI CONTROL	Intergated filter designed to meet EN61800-3
HARMONIC SUPPRESSION	Dual DC-link chokes (Equivalent: 5% AC line reactor) Supporting IEEE 519-1992 requirements
COOLING	Fan-cooled through back channel
AMBIENT TEMPERATURE	-10°C to 45°C up to 1000 meters above sea level -14°F to 113°F up to 3300 feet above sea level

COMMENTS



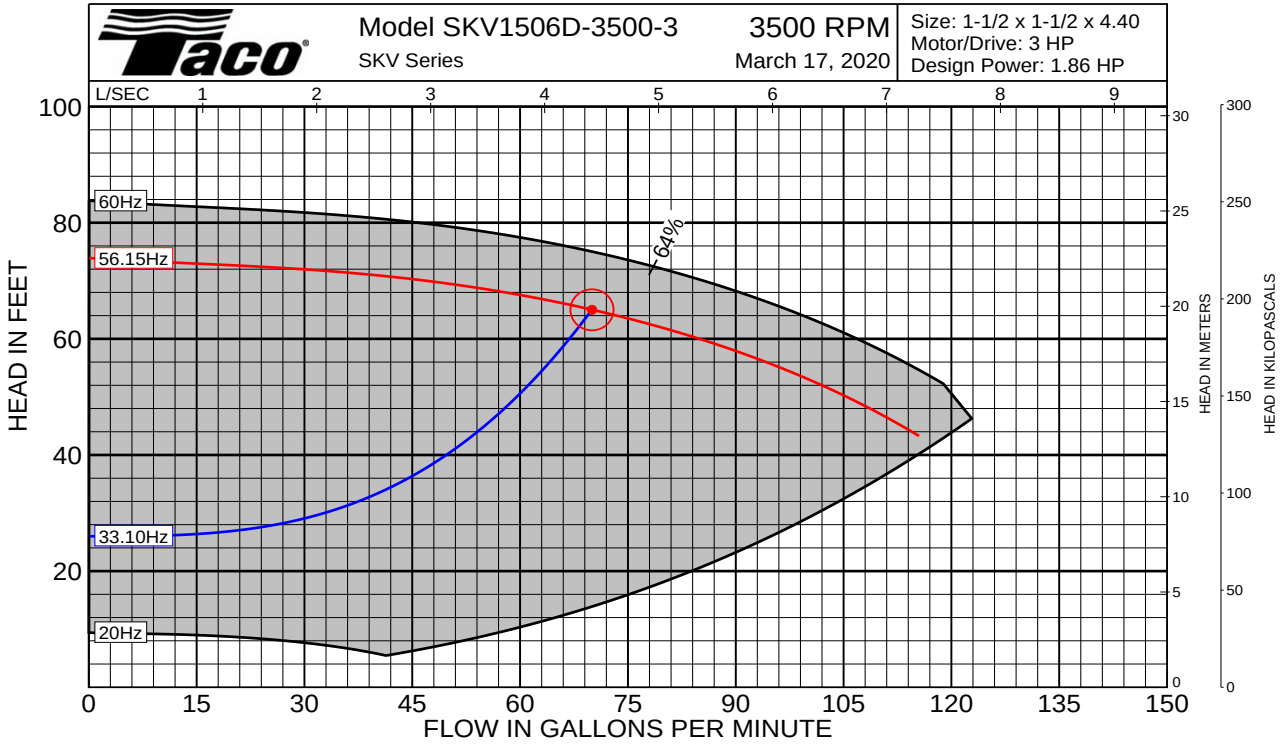
Curves based on Clear Water @ 60F with a Specific Gravity of 1.0

 ©2020 Taco, Inc.

Model: SKV1506D

Tag:
HHWP-1&2

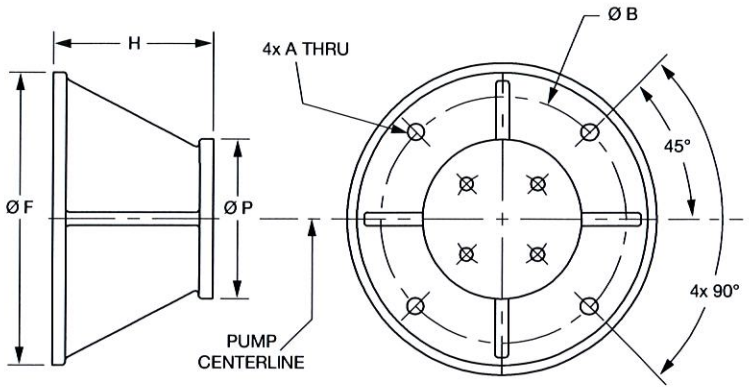
Flow Rate (GPM):	70
Head (FT):	65'
Working Fluid:	Water @ 60 F
Efficiency (%):	62%
Construction:	Iron
Design Hp:	1.86
Nol Hp:	3.00
Motor Hp:	3
Npsh (Ft):	9
RPM:	3500



Design Point: 70.00 gpm @ 65.00 ft
Curves based on Water @ 60F with Specific Gravity of 1.0000.

QTY: 2

KV Vertical Pump Support Stand Dimensions



PUMPS USED ON	A	ØB	ØF	H	ØP	SUPPORT STAND WEIGHT
KV/KS1506	6.00	0.63	7.50	6.00	3.25	10 LBS
KV/KS1507						
KV/KS1509						
KV/KS2007	7.75	0.63	9.38	6	4.88	19 LBS
KV/KS3007						
KV/KS4007						
KV/KS2006						
KV/KS2009						
KV/KS2011						
KV/KS2508						
KV/KS2510	9.25	0.63	11	6	6	26 LBS
KV/KS3006						
KV/KS3009						
KV/KS3011						
KV/KS4075						
KV/KS3013	10.63	0.75	12.63	6.5	7.63	47 LBS
KV/KS4009						
KV/KS4011						
KV/KS4013						
KS/KS5007	11.88	0.75	14.38	6.75	9.38	66 LBS
KV/KS5075						
KV/KS5095						
KV/KS6009						
KV/KS6095						
KV/KS6011						
KV/KS6013						
KS1013	14.5	0.75	16.5	7.2	11.5	100 LBS
KS1016						
KS8016						
KV/KS8011						
KV/KS8013						
KS1217	24.00	1.13	28.00	8.00	24.00	343 LBS
KS1415	24	1.13	28	8	21	311 LBS
KS1213						

VR Series - VR15H | Submittal Data

Submittal No: 301-259 | **Effective:** August 18, 2021 | **Supersedes:** June 29, 2021

JOB: VAILS GATE FD PHASE 2

ENGINEER: H2M ENGINEERING

REPRESENTATIVE: WALES DARBY

CONTRACTOR: JOSEPH LOMBARDO PLUMBING & HEATING

PRODUCT DATA

ITEM NO. HHWP-3&4 **MODEL NO.**

MODE **MODE SETTING**

GPM 28 **HEAD/FT** 40'

NSF 61 & 372 CERTIFIED ☐YES ☑NO **VOLTAGE** 200-240/1

APPLICATIONS

DUCTILE IRON MODEL
Closed loop, pressurized Heating and Chilled Water HVAC Systems

STAINLESS STEEL MODEL
Potable water systems (DHW recirculation, pressure boosting)

STANDARDS, PROTECTION & FLANGE TYPE

Insulation Class H
Enclosure: Class 2, IP44
Integrated Motor Protection (electronically protected)
Continuous Duty
UL778, 1004-1, 508C
CAN/CSA22.2 #108, #100, #107.1
EMC (89/366EEC): EN 61000
LDV (73/23/EC): EN 60335-1, EN 60335-2-51
Machine Safety (98/37/EC): EN ISO 12100
Standard 125# ANSI Flanges
Stainless Steel Version: NSF/ANSI 61 & 372 Commercial Hot

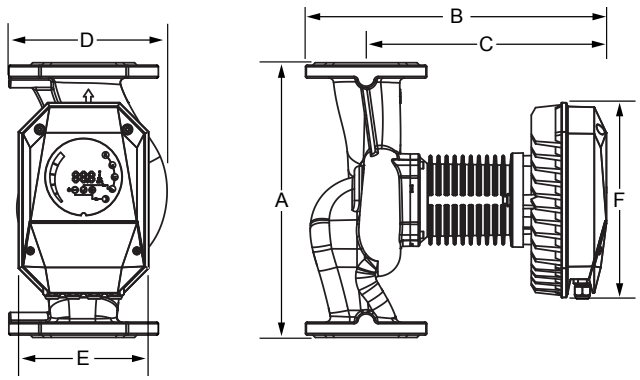
4004896

Stainless Steel Model

DIMENSIONS

FLANGE SIZE	DIMENSIONS						WEIGHT LBS.	
	A	B	C	D	E	F	CI	SS
1-1/2"	9.8 (250)	15.4 (390)	12.1 (307)	7 (179)	5.9 (150)	9.5 (241)	29 (13)	30 (14)

English dimensions are in inches. Metric dimensions are in millimeters. Metric data is presented in ( ).
Do not use for construction purposes unless certified.



SPECIFICATIONS

MAX SHUT-OFF HEAD	52 feet
MAX. FLOW	122 USGPM
MAX. OPERATING PRESSURE	175 PSI (12 bar)
WATER TEMPERATURE RANGE	14 to 230ºF (-10 to 110ºC)
AMBIENT TEMPERATURE RANGE	32 to 104ºF (0 to 40ºC)
AMBIENT HUMIDITY	Less than 95% RH

ELECTRICAL SPECIFICATIONS

VOLTAGE (ALL SINGLE PHASE)	200-240
POWER CONSUMPTION (HP)	0.9 HP
POWER CONSUMPTION (W)	680 W
CURRENT LIMIT	6
24 VOLT SUPPLY OUTLET	Max current up to 100mA, Output Voltage +/- 20% of 24 Volts, Output Ripple under 1 Volt
RELAY OUTLET	230 Vac, 3A, AC1 Potential Free Changeover Contact
NUMBER OF RELAY OUTPUTS	2
ANALOG INPUTS	Max Input Voltage 32Vdc, 2 Inputs, 1 output
ETHERNET	RJ-45 Connector, Http server and FTP Client server

MATERIALS OF CONSTRUCTION

CASING		IMPELLER	SHAFT	BEARINGS
HVAC MODEL	DHW MODEL			
Cast Iron, Cataphoresis Coated	304 Stainless Steel	PES GF-30	ANSI 420	Carbon SleeveType

MINIMUM STATIC INLET PRESSURE

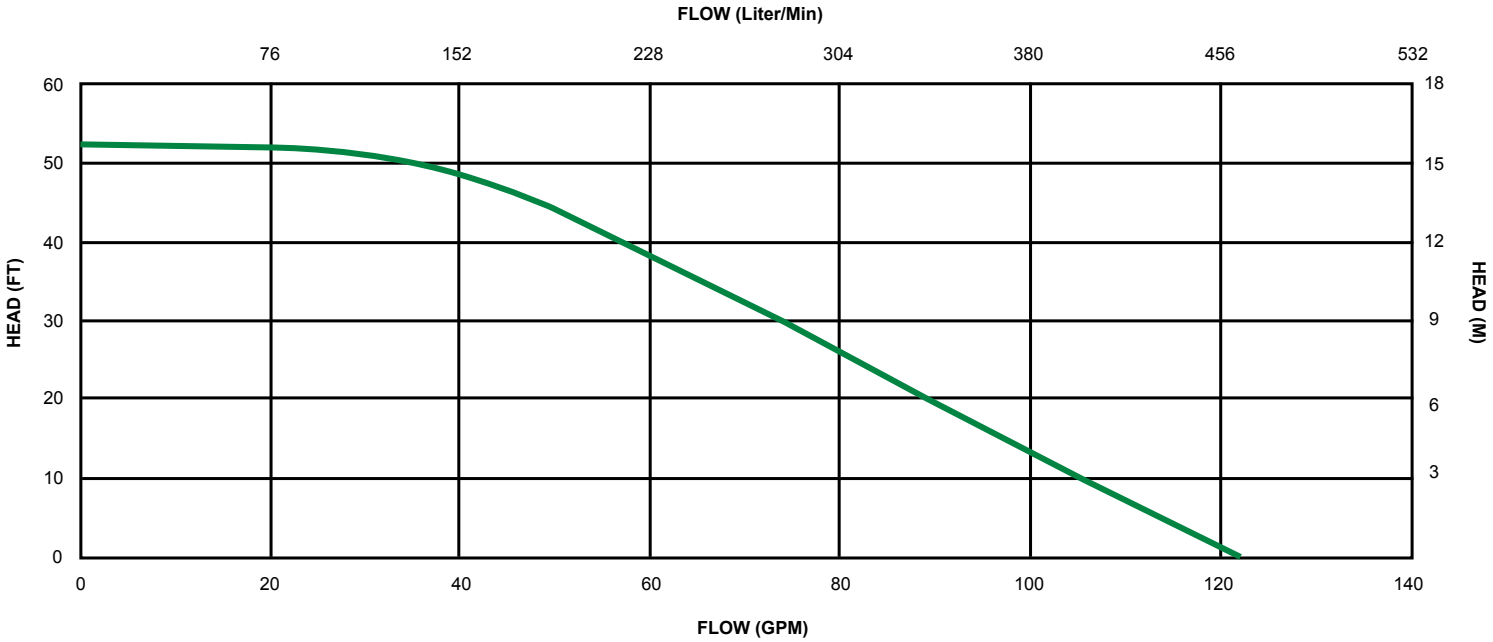
at pump suction port (PSIA / bar) to avoid cavitation at fluid temperatures

FLUID TEMPERATURES	PSIA / bar
112ºF (50ºC)	7.3 / 0.5
176ºF (80ºC)	11.6 / 0.8
230ºF (110ºC)	20.3 / 1.4

OPERATING MODES

- activeADAPT®
- Proportional Pressure
- Constant Pressure
- Constant Speed
- Setback
- BACnet
- ModBus
- 0-10Vdc
- PWM
- Twin Pump Mode

PERFORMANCE CURVE - VR15H



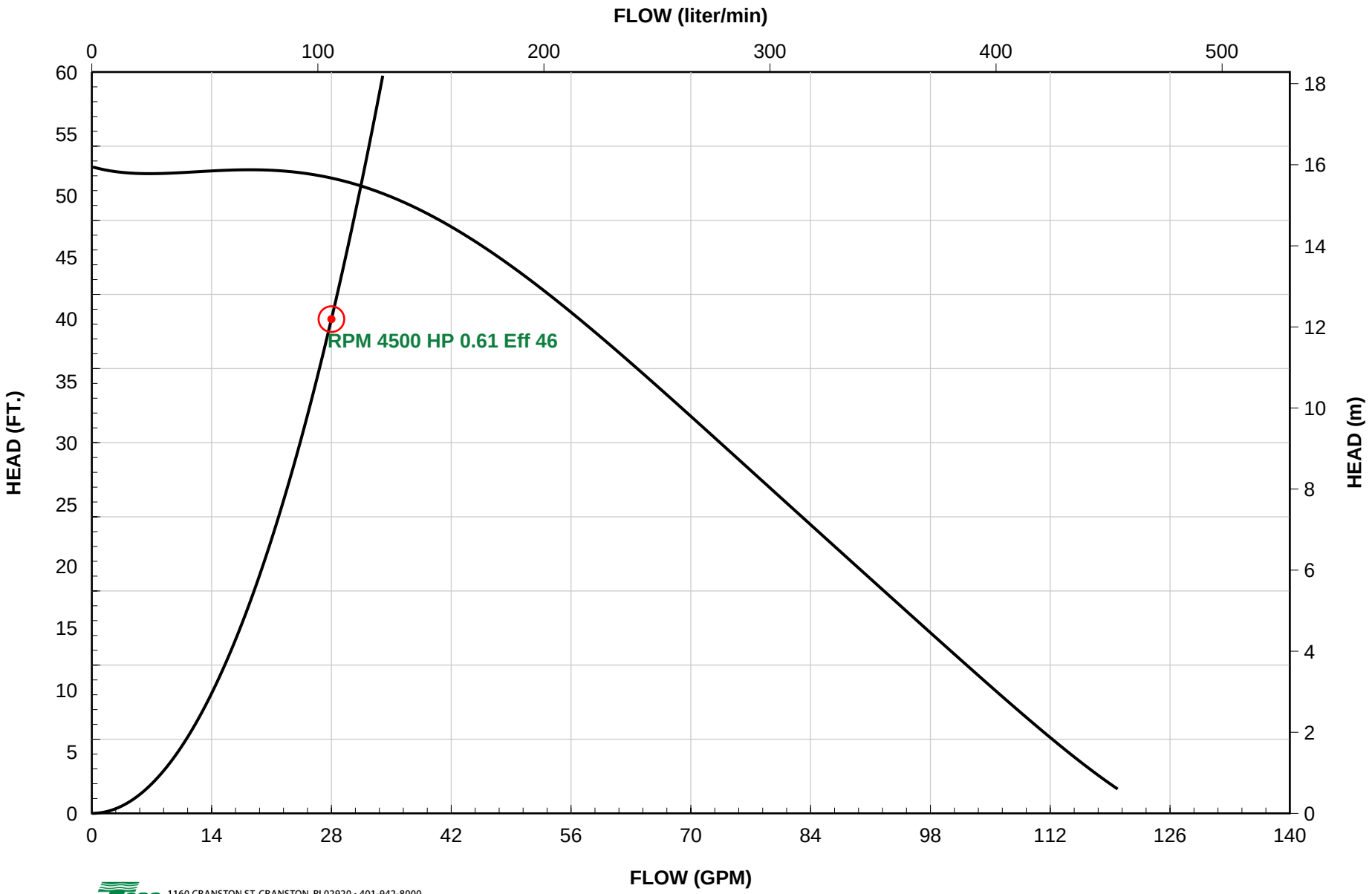
COMMENTS

Taco, Inc., 1160 Cranston Street, Cranston, RI 02920 | Tel: (401) 942-8000 | FAX: (401) 942-2360 | **Taco (Canada), Ltd.,** 8450 Lawson Road, Suite #3, Milton, Ontario L9T 0J8 | Tel: (905) 564-9422 | FAX: (905) 564-9436
Visit our website: www.TacoComfort.com | Printed in USA | ©2021 Taco, Inc.

PERFORMANCE

VR15H CEI: 0.48, ER: 131

00e series
ECM HIGH-EFFICIENCY CIRCULATOR



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VR Series - VR15M | Submittal Data

Submittal No: 301-258 | **Effective:** August 18, 2021 | **Supersedes:** June 29, 2021

JOB: VAILS GATE FD PHASE 2

ENGINEER: H2M ENGINEERING

REPRESENTATIVE: WALES DARBY

CONTRACTOR: JOSEPH LOMBARDO PLUMBING & HEATING

PRODUCT DATA

ITEM NO. HHWP-5&6 **MODEL NO.** VR15M-F

MODE _____ **MODE SETTING** _____

GPM 20 **HEAD/FT** 35'

NSF 61 & 372 CERTIFIED ☐YES ☑NO **VOLTAGE** 20-240/1

APPLICATIONS

DUCTILE IRON MODEL
Closed loop, pressurized Heating and Chilled Water HVAC Systems

STAINLESS STEEL MODEL
Potable water systems (DHW recirculation, pressure boosting)

STANDARDS, PROTECTION & FLANGE TYPE

Insulation Class H
Enclosure: Class 2, IP44
Integrated Motor Protection (electronically protected)
Continuous Duty
UL778, 1004-1, 508C
CAN/CSA22.2 #108, #100, #107.1
EMC (89/366EEC): EN 61000
LDV (73/23/EC): EN 60335-1, EN 60335-2-51
Machine Safety (98/37/EC): EN ISO 12100
Standard 125# ANSI Flanges (by Others)
Stainless Steel Version: NSF/ANSI 61 & 372 Commercial Hot

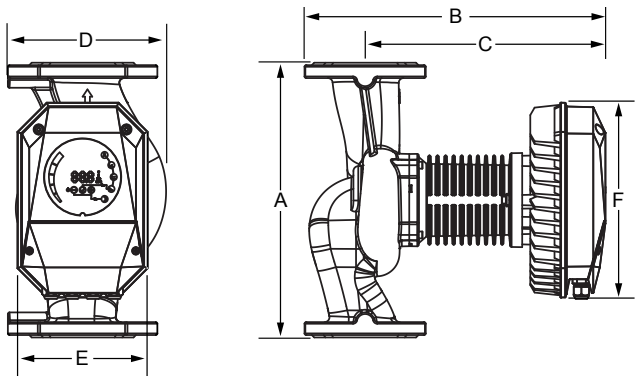
4004896

Stainless Steel Model

DIMENSIONS

FLANGE SIZE	DIMENSIONS						WEIGHT LBS.	
	A	B	C	D	E	F	CI	SS
1-1/2"	9.8 (250)	15 (380)	11.7 (297)	7 (179)	5.9 (150)	9.5 (241)	26 (12)	28 (13)

English dimensions are in inches. Metric dimensions are in millimeters. Metric data is presented in ( ).
Do not use for construction purposes unless certified.



SPECIFICATIONS

MAX SHUT-OFF HEAD	39 feet
MAX. FLOW	108 USGPM
MAX. OPERATING PRESSURE	175 PSI (12 bar)
WATER TEMPERATURE RANGE	14 to 230ºF (-10 to 110ºC)
AMBIENT TEMPERATURE RANGE	32 to 104ºF (0 to 40ºC)
AMBIENT HUMIDITY	Less than 95% RH

ELECTRICAL SPECIFICATIONS

VOLTAGE (ALL SINGLE PHASE)	110-240
POWER CONSUMPTION (HP)	0.6 HP
POWER CONSUMPTION (W)	480 W
CURRENT LIMIT	6
24 VOLT SUPPLY OUTLET	Max current up to 100mA, Output Voltage +/- 20% of 24 Volts, Output Ripple under 1 Volt
RELAY OUTLET	230 Vac, 3A, AC1 Potential Free Changeover Contact
NUMBER OF RELAY OUTPUTS	2
ANALOG INPUTS	Max Input Voltage 32Vdc, 2 Inputs, 1 output
ETHERNET	RJ-45 Connector, Http server and FTP Client server

MATERIALS OF CONSTRUCTION

CASING		IMPELLER	SHAFT	BEARINGS
HVAC MODEL	DHW MODEL			
Cast Iron, Cataphoresis Coated	304 Stainless Steel	PES GF-30	ANSI 420	Carbon SleeveType

MINIMUM STATIC INLET PRESSURE

at pump suction port (PSIA / bar) to avoid cavitation at fluid temperatures

FLUID TEMPERATURES	PSIA / bar
112ºF (50ºC)	7.3 / 0.5
176ºF (80ºC)	11.6 / 0.8
230ºF (110ºC)	20.3 / 1.4

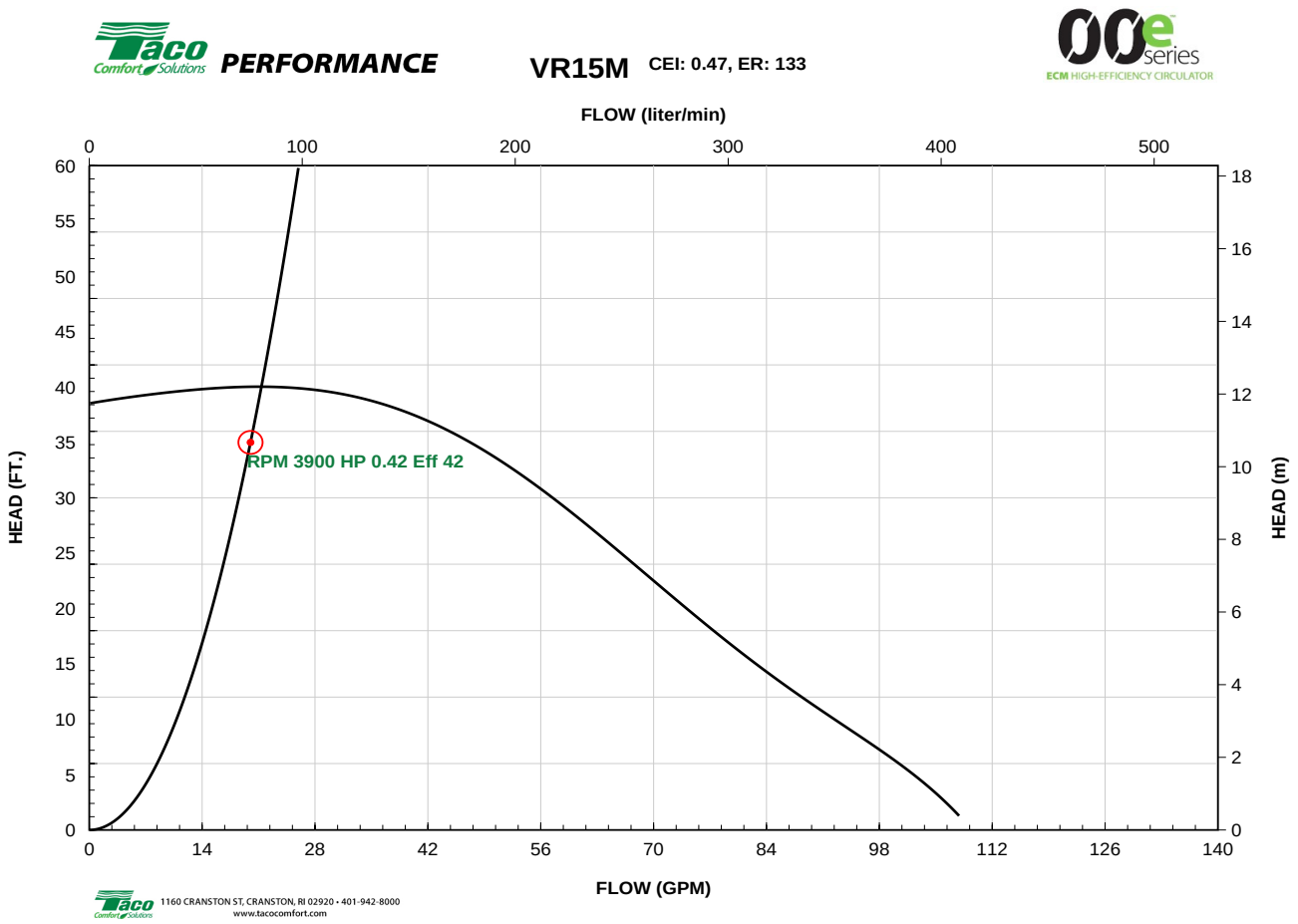
OPERATING MODES

- activeADAPT®
- Proportional Pressure
- Constant Pressure
- Constant Speed
- Setback
- BACnet
- ModBus
- 0-10Vdc
- PWM
- Twin Pump Mode

00e VR Series Model:

Tag:
HHWP-5&6

Flow Rate (GPM):	20
Head (FT):	35'
Working Fluid:	Water @ 60 F
Efficiency (%):	42%
Construction:	Iron
Design Hp:	0.421
Nol Hp:	
Motor Hp:	
Npsh (Ft):	
RPM:	3900
Volt/Ph/Hz:	110-240V/1/60



VR Series - VR15M | Submittal Data

Submittal No: 301-258 | **Effective:** August 18, 2021 | **Supersedes:** June 29, 2021

JOB: VAILS GATE FD PHASE 2

REPRESENTATIVE: WALES DARBY

ENGINEER: H2M ENGINEERING

CONTRACTOR: JOSEPH LOMBARDO PLUMBING & HEATING

PRODUCT DATA

ITEM NO. HHWP-5&6 **MODEL NO.** VR15M-F

MODE _____ **MODE SETTING** _____

GPM 20 **HEAD/FT** 35'

NSF 61 & 372 CERTIFIED ☐YES ☑NO **VOLTAGE** _____

APPLICATIONS

DUCTILE IRON MODEL
Closed loop, pressurized Heating and Chilled Water HVAC Systems

STAINLESS STEEL MODEL
Potable water systems (DHW recirculation, pressure boosting)

STANDARDS, PROTECTION & FLANGE TYPE

Insulation Class H
Enclosure: Class 2, IP44
Integrated Motor Protection (electronically protected)
Continuous Duty
UL778, 1004-1, 508C
CAN/CSA22.2 #108, #100, #107.1
EMC (89/366EEC): EN 61000
LDV (73/23/EC): EN 60335-1, EN 60335-2-51
Machine Safety (98/37/EC): EN ISO 12100
Standard 125# ANSI Flanges
Stainless Steel Version: NSF/ANSI 61 & 372 Commercial Hot

4004896

Stainless Steel Model

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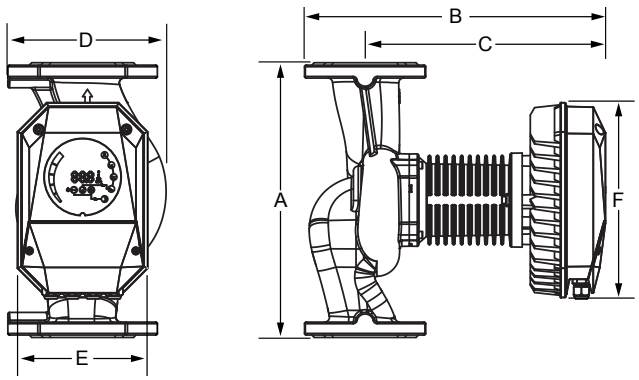

SPECIFICATIONS

MAX SHUT-OFF HEAD	39 feet
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AMBIENT TEMPERATURE RANGE	32 to 104ºF (0 to 40ºC)
AMBIENT HUMIDITY	Less than 95% RH

ELECTRICAL SPECIFICATIONS

VOLTAGE (ALL SINGLE PHASE)	110-240
POWER CONSUMPTION (HP)	0.6 HP
POWER CONSUMPTION (W)	480 W
CURRENT LIMIT	6
24 VOLT SUPPLY OUTLET	Max current up to 100mA, Output Voltage +/- 20% of 24 Volts, Output Ripple under 1 Volt
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NUMBER OF RELAY OUTPUTS	2
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ETHERNET	RJ-45 Connector, Http server and FTP Client server

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CASING		IMPELLER	SHAFT	BEARINGS
HVAC MODEL	DHW MODEL			
Cast Iron, Cataphoresis Coated	304 Stainless Steel	PES GF-30	ANSI 420	Carbon SleeveType

MINIMUM STATIC INLET PRESSURE

at pump suction port (PSIA / bar) to avoid cavitation at fluid temperatures

FLUID TEMPERATURES	PSIA / bar
112ºF (50ºC)	7.3 / 0.5
176ºF (80ºC)	11.6 / 0.8
230ºF (110ºC)	20.3 / 1.4

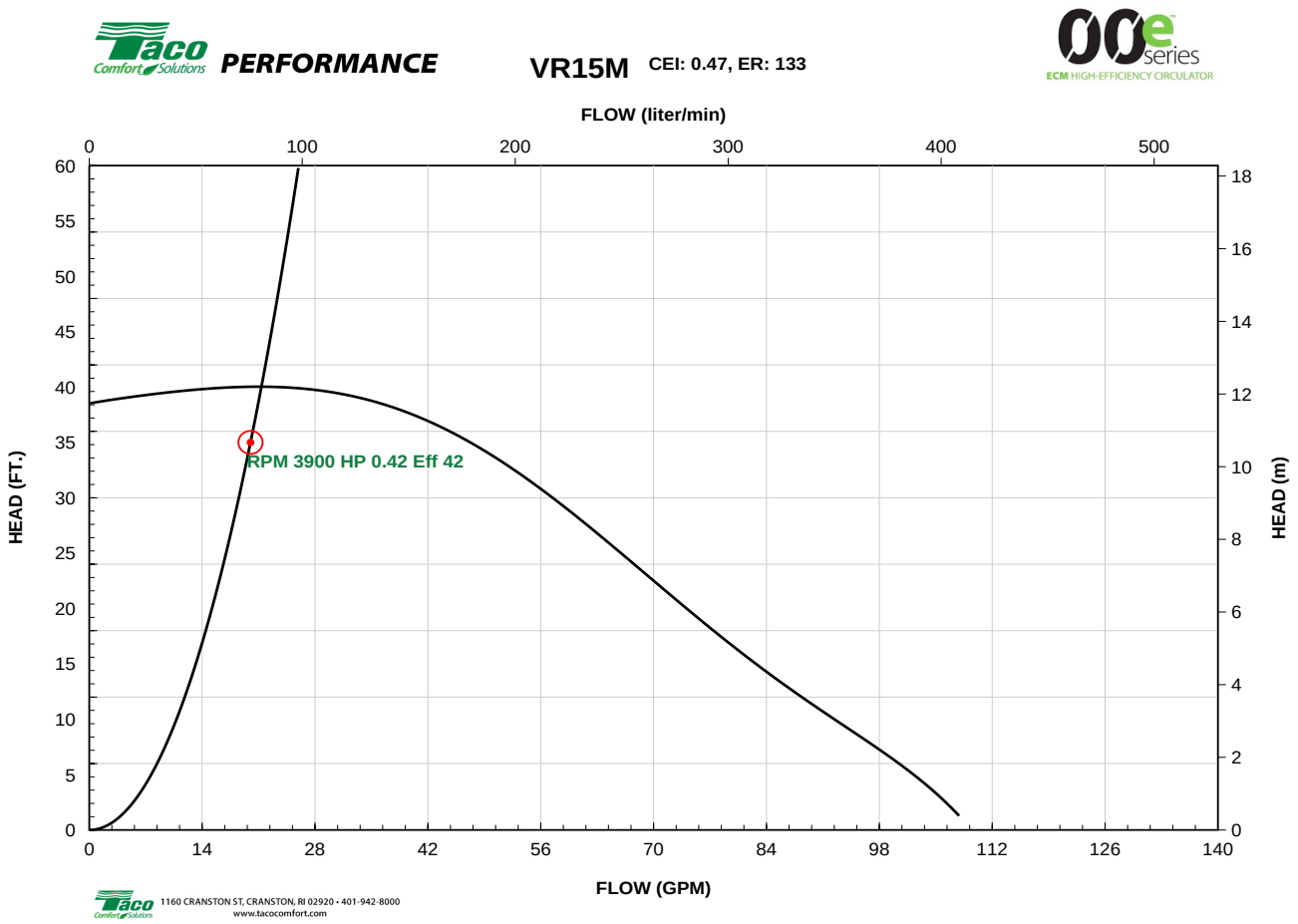
OPERATING MODES

- activeADAPT®
- Proportional Pressure
- Constant Pressure
- Constant Speed
- Setback
- BACnet
- ModBus
- 0-10Vdc
- PWM
- Twin Pump Mode

00e VR Series Model:

Tag:
HHWP-5&6

Flow Rate (GPM):	20
Head (FT):	35'
Working Fluid:	Water @ 60 F
Efficiency (%):	42%
Construction:	Iron
Design Hp:	0.421
Nol Hp:	
Motor Hp:	
Npsh (Ft):	
RPM:	3900
Volt/Ph/Hz:	110-240V/1/60



Submittal Data Information
Suction Diffuser Rear Strainer Pullout (RSP)
"Flanged"

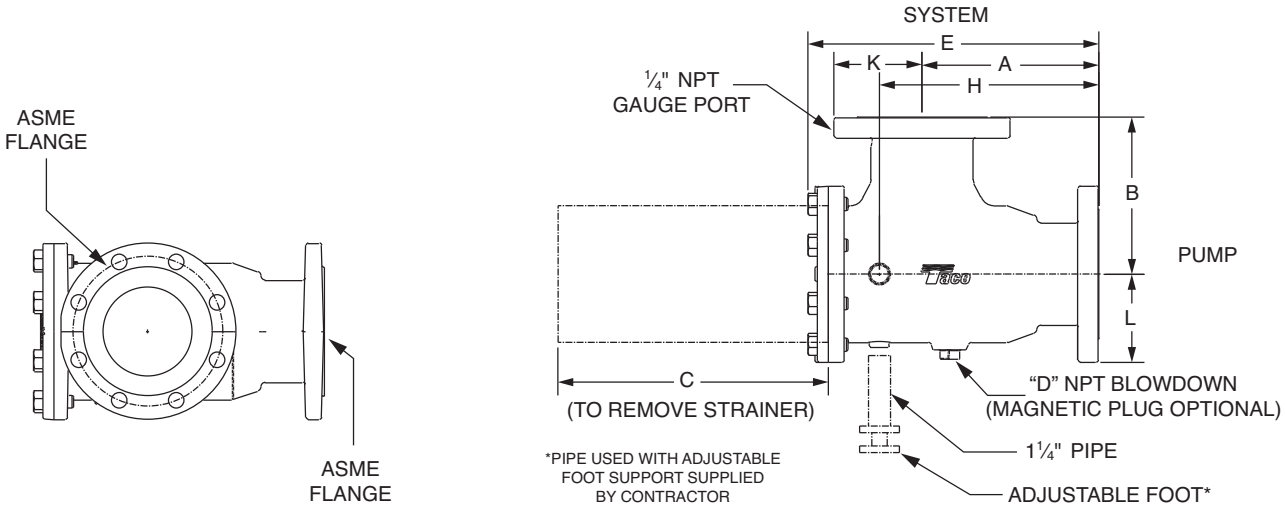
301-239.1

SUPERSEDES: September 17, 2013 EFFECTIVE: July 15, 2017

JOB _____ ENGINEER **H2M ENGINEERING** CONTRACTOR **JOSEPH LOMBARDO PLUMBING & HEATING** REP. **WALES DARBY**

ITEM	QUANTITY	MODEL NO.	SIZE
	6	**SD020015-5**	**2"X1.5"**

DIMENSIONS



Model Number	System	Pump	C_v	Free Area (sq. in.)	A (Class 125)*	A (Class 250)*	B	C	D	E (Class 125)*	E (Class 250)*	H (Class 125)*	H (Class 250)*	K (Class 125)*	K (Class 250)*	L (Class 125)*	L (Class 250)*	WGT. (Class 125)*	WGT. (Class 250)*
SD020015-5	2 Flanged	1½ Flanged	54	21	5.69 (145)	6.06 (154)	5.39 (137)	8.49 (216)	¾	9.25 (235)	9.62 (244)	6.92 (176)	7.29 (185)	3.00 (076)	3.25 (083)	2.50 (064)	3.06 (078)	22 (010)	27 (012)
SD020020-5	2 Flanged	2 Flanged	106	21	5.44 (138)	5.69 (145)	5.39 (137)	8.24 (209)	¾	9.00 (229)	9.25 (235)	6.67 (169)	6.92 (176)	3.00 (076)	3.25 (083)	3.00 (076)	3.25 (083)	24 (011)	28 (013)
SD025020-5	2½ Flanged	2 Flanged												3.50 (089)	3.75 (095)	3.00 (076)	3.25 (083)	27 (012)	35 (016)
SD030020-5	3 Flanged	2 Flanged												3.75 (095)	4.12 (105)	3.00 (076)	3.25 (083)	29 (013)	39 (018)
SD025025-5	2½ Flanged	2½ Flanged	135	24	6.06 (154)	6.56 (167)	6.01 (153)	8.97 (228)	¾	9.83 (250)	10.35 (263)	7.41 (188)	7.91 (201)	3.50 (089)	3.75 (095)	3.50 (089)	3.75 (095)	38 (017)	54 (025)
SD030025-5	3 Flanged	2½ Flanged			6.06 (154)	6.56 (167)	6.01 (153)		1	9.83 (250)		7.41 (188)	7.91 (201)	3.75 (095)	4.12 (105)	3.50 (089)	3.75 (095)	38 (017)	52 (024)
SD040025-5	4 Flanged	2½ Flanged			6.07 (154)	6.07 (154)	8.45 (215)		¾	8.93 (227)		7.59 (193)	7.59 (193)	4.43 (113)	4.93 (125)	3.50 (089)	3.75 (095)	52 (024)	65 (030)
SD030030-5	3 Flanged	3 Flanged	220	35	6.86 (174)	7.62 (194)	6.56 (167)	10.47 (266)	1	11.41 (290)	12.18 (309)	8.32 (211)	9.09 (231)	3.75 (095)	4.12 (105)	3.75 (095)	4.12 (105)	50 (023)	66 (030)
SD040030-5	4 Flanged	3 Flanged												4.50 (114)	5.00 (127)	3.75 (095)	4.12 (105)	55 (025)	72 (033)
SD050030-5	5 Flanged	3 Flanged				6.86 (174)	8.94 (227)					8.51 (216)	8.51 (216)	4.93 (125)	5.43 (138)	3.75 (095)	4.13 (105)	65 (030)	83 (038)
SD040040-5	4 Flanged	4 Flanged	380	64	7.94 (202)	8.93 (227)	8.45 (215)	12.86 (327)	1	13.96 (355)	14.90 (378)	10.29 (261)	11.28 (287)	4.50 (114)	5.00 (127)	4.50 (114)	5.00 (127)	73 (033)	91 (041)
SD050040-5	5 Flanged	4 Flanged												5.00 (127)	5.50 (140)	4.50 (114)	5.00 (127)	75 (034)	97 (044)
SD060040-5	6 Flanged	4 Flanged												5.50 (140)	6.25 (159)	4.50 (114)	5.00 (127)	79 (036)	109 (049)

NOTE: Dimensions are in inches. Metric dimensions are in millimeters and are in parentheses ( ). Weights are in lb (kg).
'C' is the distance required to replace strainer.

* Append **'A'** for Class 250 working pressure flanged units (pump side) – e.g. Model Number SD040030-4A.

FEATURES

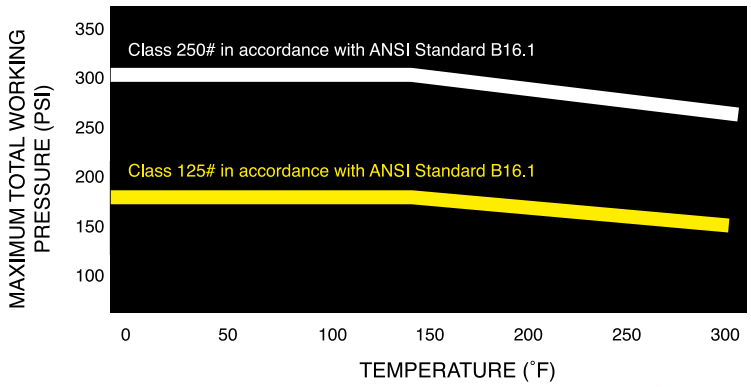
- Integral Cast Straightening Vanes ensure uniform flow to the suction inlet of the pump
- Oversized Body Cylinder ensures minimal pressure drop
- Metering Port allows for the monitoring of system conditions
- Disposable Fine Mesh Start-Up Strainer promotes cleaner, more trouble-free system
- Removable Cover Plate and reusable “O” Ring allows for easy access and maintenance of Permanent Strainer
- Blow Down port allows for routine maintenance and removal of sediment and debris
- Ductile Iron Body on all units
- Optional Magnetic Insert to trap small metallic particles
- Available with Class 125* flanges or Class 250* flanges. Consult pressure/temperature chart below for operating limitations. (Flanged units are raised faced design.)

(All sizes available with optional DIN Flanges. Consult factory for details)

MATERIALS OF CONSTRUCTION

Body	-	Ductile Iron
Cover	-	Ductile Iron
Straightening Vanes	-	Integral Ductile Iron
Permanent Strainer	-	Stainless Steel (304)
Disposable Start Up Strainer	-	Bronze (16 Mesh)
Cover O-Ring	-	EPDM
Grooved Adapter	-	Steel

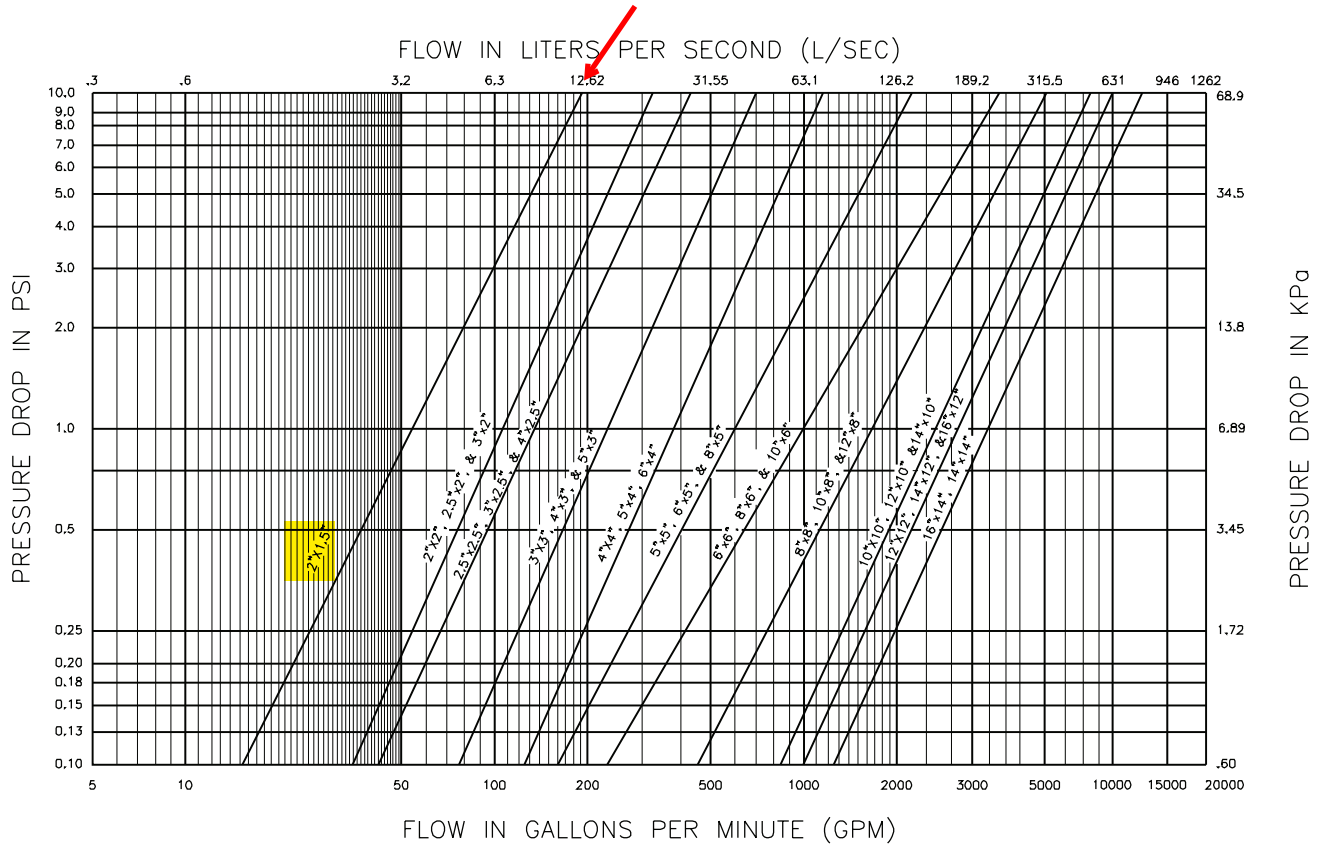
PRESSURE TEMPERATURE RATINGS



OPERATING SPECIFICATIONS

	Standard	Optional
Flange	Class 125*	Class 250*
Pressure	175 PSIG* (1210 KPA)	300 PSIG* (2070 KPA)
Temperature	250˚F (120˚C**)	250˚F (120˚C**)

* Per Pressure Temperature Ratings chart to left.



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Taco (Canada), Ltd., 8450 Lawson Road, Suite #3, Milton, Ontario L9T 0J8 | Tel: (905) 564-9422 | FAX: (905) 564-9436

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Submittal Data Information
Plus Two Multi-Purpose Valve

301-235

Taco Comfort Solutions® A Taco Family Company

SUPERSEDES: December 10, 2015 EFFECTIVE: July 15, 2017

JOB _____ ENGINEER _____ CONTRACTOR _____ REP. _____

ITEM	QUANTITY	MODEL NO.	SIZE
	2	**MPV015-4**	**1.5"**

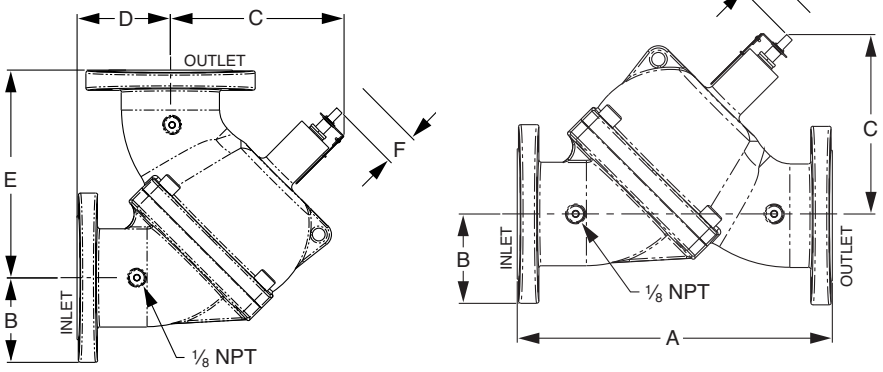
DIMENSIONS

Model Number	Size	Connection	A	B (Class 125*)	B (Class 250*)	C	D	E	F	C_v	Weight (125#)	Weight (250#)
MPV 015-4	1½ (38.1) NPT	Threaded	8.00 (203)	1.44 (037)	1.44 (037)	4.70 (119)	2.39 (061)	5.64 (143)	1.3 (33.0)	69	12 (5.5)	12 (5.5)
MPV 020-4	2 (50.8) NPT	Threaded	8.00 (203)	1.44 (037)	1.44 (037)	4.70 (119)	2.39 (061)	5.64 (143)	1.3 (33.0)	77	12 (5.5)	12 (5.5)
MPV 025-4	2½ (63.5) NPT	Threaded	10.63 (270)	1.93 (049)	1.93 (049)	4.97 (126)	3.50 (089)	7.30 (185)	1.6 (40.6)	122	32 (15)	32 (15)
MPV 030-4*	3 (76.2)	Flanged	11.75 (298)	3.75 (095)	4.13 (105)	6.15 (156)	3.90 (099)	7.85 (199)	1.8 (45.7)	209	38 (17)	46 (21)
MPV 040-4*	4 (101.6)	Flanged	13.75 (349)	4.50 (114)	4.50 (114)	8.51 (216)	4.18 (106)	9.63 (245)	2.1 (53.3)	357	67 (30)	84 (38)
MPV 050-4*	5 (127.0)	Flanged	17.63 (448)	5.00 (127)	5.50 (140)	11.26 (286)	5.25 (133)	12.28 (312)	2.4 (61.0)	459	105 (48)	126 (57)
MPV 060-4*	6 (152.4)	Flanged	20.35 (517)	5.50 (140)	6.25 (159)	11.28 (287)	6.07 (154)	14.23 (361)	2.7 (68.6)	701	134 (61)	176 (80)
MPV 080-4*	8 (203.2)	Flanged	25.88 (657)	6.75 (171)	7.50 (191)	13.58 (345)	6.75 (171)	19.13 (486)	3.9 (99.1)	1200	293 (133)	341 (155)
MPV 100-4*	10 (254.0)	Flanged	30.00 (762)	8.00 (203)	8.75 (222)	15.82 (402)	8.81 (224)	21.20 (538)	4.4 (111.8)	1826	466 (212)	536 (243)
MPV 120-4*	12 (304.8)	Flanged	36.70 (932)	9.50 (241)	10.25 (260)	17.54 (446)	9.98 (253)	26.64 (677)	4.9 (124.5)	2430	724 (329)	811 (368)
MPV 140-4*	14 (355.6)	Flanged	41.56 (1056)	10.50 (267)	11.50 (292)	22.80 (579)	12.09 (307)	29.47 (749)	5.4 (137.2)	3147	1105 (502)	1182 (537)

NOTE: Dimensions are in inches. Metric dimensions are in millimeters and are in parentheses ( ). Weights are in lb (kg).
'F' is the distance required to replace packing under pressure. **'A,C,D,E,F'** applies to Class 250* flanged units also.

* Append 'A' for Class 250* working pressure flanged units (e.g. Model Number MPV 030-4A).

(All sizes available with optional DIN flanges. Consult Factory for details.)

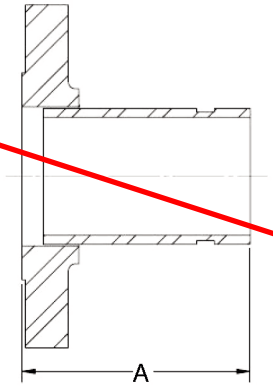


GROOVED ADAPTER

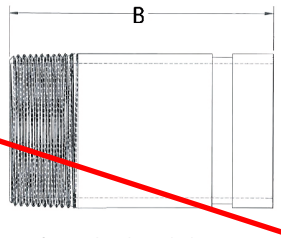
Class 125 Assembly Part No.	Class 250 Assembly Part No	Size	'A'
FTG020-5	FTG020-5A	2"	4"
FTG025-5	FTG025-5A	2-1/2"	
FTG030-F	FTG030-5A	3"	
FTG040-5	FTG040-5A	4"	6"
FTG050-5	FTG050-5A	5"	
FTG060-5	FTG060-5A	6"	
FTG080-5	FTG080-5A	8"	
FTG100-5	FTG100-5A	10"	8"
FTG120-5	FTG120-5A	12"	
FTG140-5	FTG140-5A	14"	

FLANGED - GROOVED

THREADED - GROOVED



Class 125 + 250 Assembly Part No.	Size	'B'
TTG015-5	1-1/2"	4"
TTG020-5	2"	
TTG025-5	2-1/2"	



Note: Adapters required to convert flanged & threaded MPV to grooved.

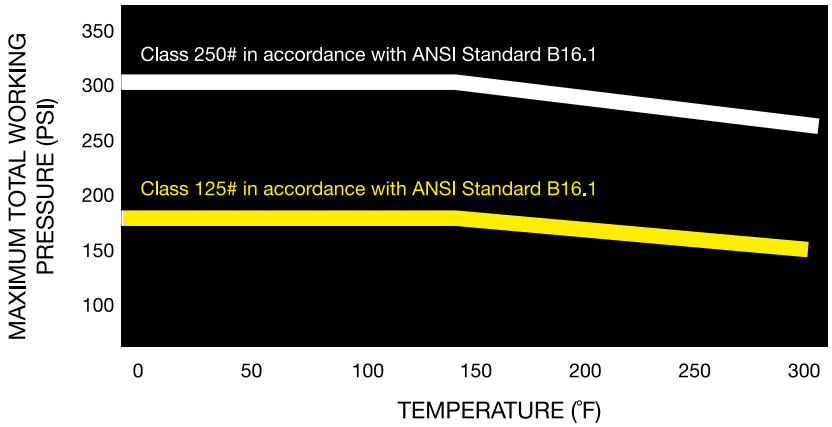
FEATURES

- Horizontal or Vertical Installation
- Field Convertible to a Right Angle Valve
- Stem Seal Packing (replaceable under pressure)
- Memory Indicator, Pointer and Scale
- Shrader Valve Metering Connections
- "O" Ring Sealed Valve Body
- Replaceable "Soft Seal"
- Low Pressure Drop (equal to or better than any comparable valve on the market today
- Five (5) Valves in One:
  - Shut Off Valve
  - Flow Control Valve (globe style)
  - Non Slam Check Valve
  - Flow Metering Valve
  - Straight Pattern Valve Convertible to a Right Angle Pattern Valve
- Available with Class 125* flanges or Class 250* flanges. Consult pressure/temperature chart on page 2 for operating limitations. (Flanged units are raised faced design.)

MATERIALS OF CONSTRUCTION

Body	-	Ductile Iron
Spring	-	Stainless Steel (302)
Gland	-	Bronze
Stem Packing	-	Teflon Impregnated Aramid Fiber (asbestos free)
Stem	-	Bronze/Stainless Steel (416)
Seat	-	EPDM
Seat Disc	-	Stainless Steel (304)
	-	Bronze for MPV140-4 only
Body O-Ring	-	EPDM
Adapter	-	Steel

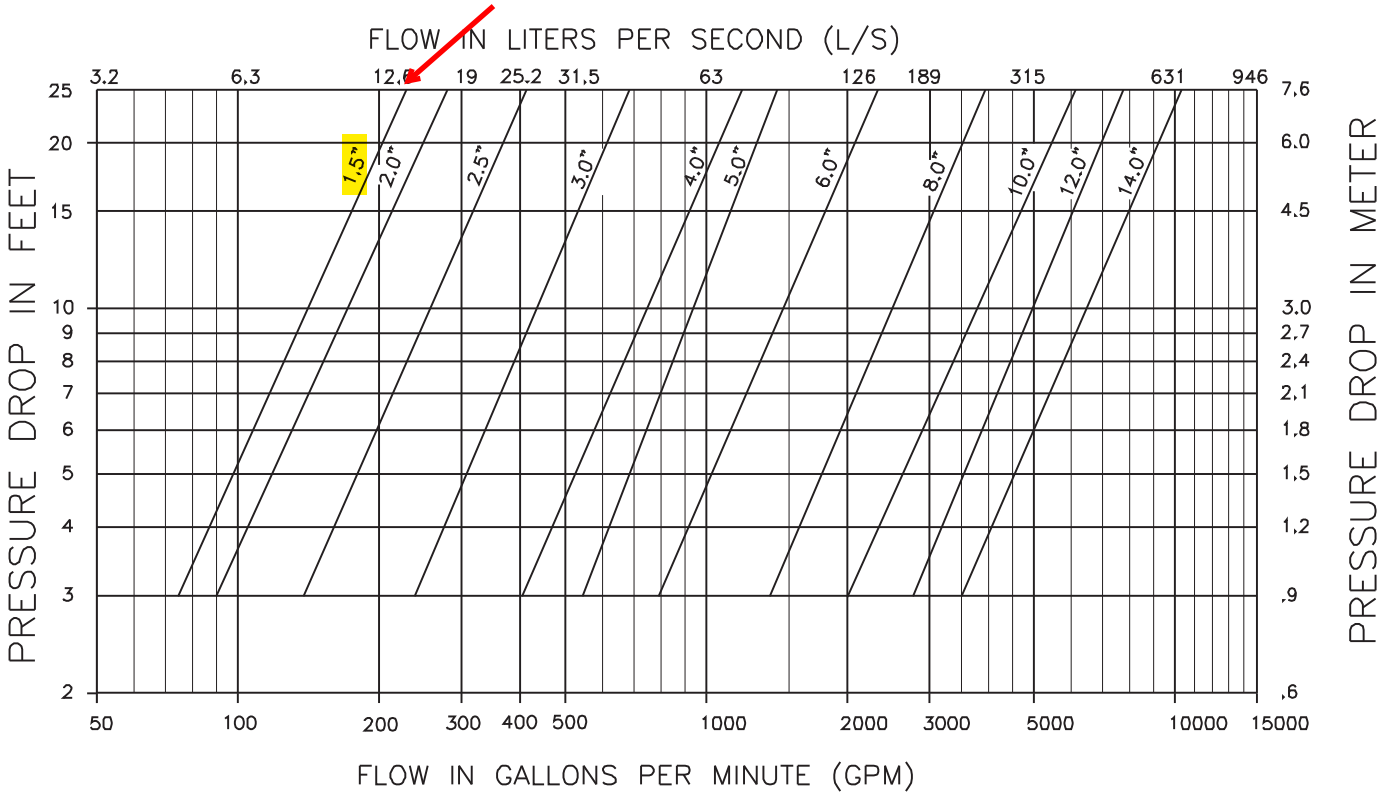
PRESSURE TEMPERATURE RATINGS



OPERATING SPECIFICATIONS

	Standard	Optional
Flange	Class 125*	Class 250*
Pressure	175 PSIG* (1210 KPA)	300 PSIG* (2070 KPA)
Temperature	250˚F (120˚C**)	250˚F (120˚C**)

*Per Pressure Temperature Ratings chart to left.



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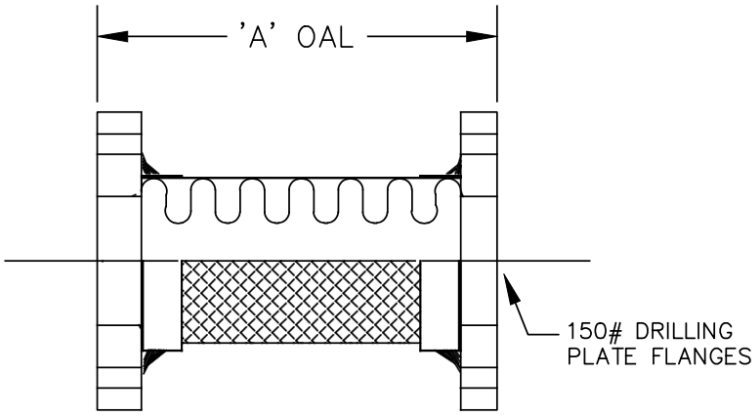
KEFLEX
HVAC Products

SUBMITTAL

Mar 2018

SILVER SERIES -STAINLESS STEEL BRAIDED HOSE ASSEMBLY FLANGE X FLANGE

PROJECT:	VAILS GATE FD PHASE 2
CUSTOMER:	JOSEPH LOMBARDO P&H
ENGINEER:	H2M ENGINEERING
ARCHITECT:	



MAXIMUM LATERAL DEFLECTION = 1/8"

MATERIALS OF CONSTRUCTION	
HOSE:	T-321 SS
BRAID:	T-304 SS
END FITTINGS:	CARBON STEEL

QTY	ID # OR TAG #	HOSE DIAMETER (IN)	KEFLEX PART #	PRESSURE @ 70°F	'A' OAL	3D Model (.stp)
12		2"	F020SKSSPCF	400	9"	3D
		2 1/2"	F024SKSSPC	320	9"	3D
		3"	F030SKSSPC	310	9"	3D
		4"	F040SKSSPC	250	9"	3D
		5"	F050SKSSPC	185	11"	3D
		6"	F060SKSSPC	165	11"	3D
		8"	F080SKSSPC	150	12"	3D
		10"	F100SKSSPC	150	13"	3D
		12"	F120SKSSPC	120	14"	3D

FOR T-304 SS BRAID ABOVE 70°F	
TEMP °F	FACTOR
70	1.00
200	0.91
300	0.85
400	0.78
500	0.77
600	0.76

NOTE: FOR SAFE WORKING PRESSURE MULTIPLY PRESSURE RATING AT 70°F BY THE APPLICABLE CORRECTION FACTOR

IMPORTANT LINKS	
BROCHURE:	PDF
INSTALLATION INSTRUCTIONS:	PDF
WEBSITE:	FLEX-WELD.COM

MADE IN THE USA

1425 LAKE AVE
WOODSTOCK, IL 60098
800-323-6893

401-083

Submittal Data Information
CA Expansion Tanks

SUPERSEDES: July 30, 2014 EFFECTIVE: December 1, 2014

JOB _____ ENGINEER _____ CONTRACTOR _____ REP. _____

ITEM NO.	LOCATION	MODEL NO.	QUANTITY	PRE-CHARGE *	WORKING PRESSURE
ET		**CA140-125**	**1**	**12**	**125**

* Unless otherwise specified, standard pre-charge of 12 psi (83 kPa).

SPECIFICATIONS

- Designed and constructed per ASME Code Section VIII, Div. 1.
- Construction: Carbon Steel with exterior red oxide primer finish
- Standard Design Pressure and Temperature: 125 psi @ 240°F (862 kPa @ 116°C) Max.
- Registered with the National Board of Pressure Vessel Manufacturers
- U-1A Data Report
- Bladder type for permanent separation of air and water.
- Water expands into bladder, air pre-charge on shell side.
- Bladder – Heavy Duty Butyl, removable for inspection.
- **Suitable for Vertical or Horizontal Installation**
- **Optional Design Pressures and Temperatures**

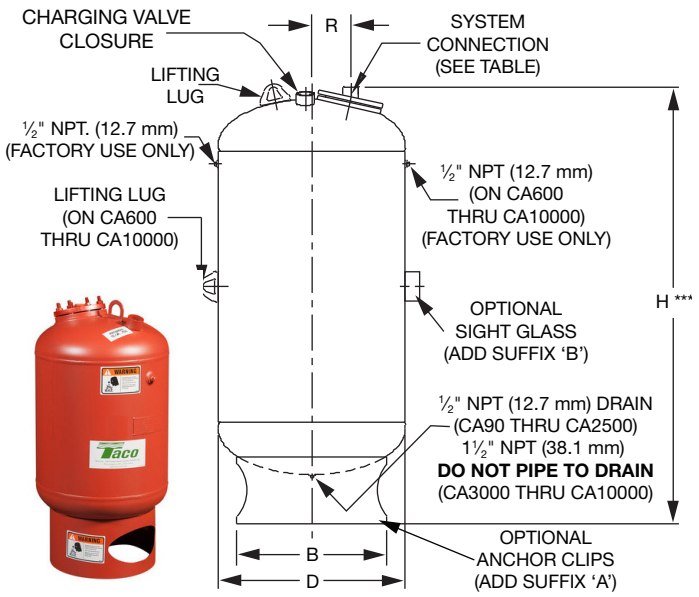
❑ 125 psi @ 280°F (862 kPa @ 138°C)
❑ 150 psi @ 240°F (1034 kPa @ 116°C) ❑ 150 psi @ 280°F (1034 kPa @ 138°C)
❑ 175 psi @ 240°F (1207 kPa @ 116°C) ❑ 175 psi @ 280°F (1207 kPa @ 138°C)
❑ 250 psi @ 240°F (1724 kPa @ 116°C) ❑ 250 psi @ 280°F (1724 kPa @ 138°C)
❑ 300 psi @ 240°F (2069 kPa @ 116°C) ❑ 300 psi @ 280°F (2069 kPa @ 138°C)

- **Optional System Connection Materials, "For Potable Water Use", Non NSF/ANSI 61-G**

❑ [K] 304 Stainless Steel

- **Additional Options**

❑ [A] Anchor Clips
❑ [B] Bulls Eye Sight Glass



MODEL NUMBER	TANK VOLUME		H HEIGHT ***		B DIAMETER		D DIAMETER		R RADIUS		SHIPPING WEIGHT **		SYSTEM CONNECTION SIZE	
	GAL.	liter	INCH	mm	INCH	mm	INCH	mm	INCH	mm	LBS.	kg	Imperial	metric
CA90-125	23	90	29⅛	740	16	406	20	508	4¼	108	120	155	1" NPT	25.4mm
CA140-125	37	140	40⅛	1019	16	406	20	508	4½	114	195	88	1" NPT	25.4mm
CA215-125	57	215	58⅞	1495	16	406	20	508	4½	114	290	132	1" NPT	25.4mm
CA300-125	79	300	57¾	1467	20	508	24	610	5	127	320	145	1½" NPT	38.1mm
CA450-125	119	450	77⅜	1965	20	508	24	610	5	127	400	181	1½" NPT	38.1mm
CA500-125	132	500	85¾	2178	20	508	24	610	5	127	420	191	1½" NPT	38.1mm
CA600-125	158	600	71⅞	1826	24	610	30	762	6¼	159	460	209	1½" NPT	38.1mm
CA700-125	185	700	80⅝	2048	24	610	30	762	6¼	159	525	238	1½" NPT	38.1mm
CA800-125	211	800	89⅞	2283	24	610	30	762	6¼	159	590	268	1½" NPT	38.1mm
CA900-125	238	900	73⅛	1857	30	762	36	914	7 7/16	189	690	313	1½" NPT	38.1mm
CA1000-125	264	1000	79	2007	30	762	36	914	7 7/16	189	790	358	1½" NPT	38.1mm
CA1100-125	291	1100	85¼	2165	30	762	36	914	7 7/16	189	865	392	1½" NPT	38.1mm
CA1200-125	317	1200	91	2311	30	762	36	914	7 7/16	189	940	426	1½" NPT	38.1mm
CA1300-125	344	1300	97	2464	30	762	36	914	7 7/16	189	980	445	1½" NPT	38.1mm
CA1400-125	370	1400	103	2616	30	762	36	914	7 7/16	189	1020	463	1½" NPT	38.1mm
CA1500-125	396	1500	73⅜	1864	40	1016	48	1219	10 15/16	278	1200	544	1½" NPT	38.1mm
CA1600-125	422	1600	76⅝	1946	40	1016	48	1219	10 15/16	278	1380	626	1½" NPT	38.1mm
CA1800-125	475	1800	83½	2121	40	1016	48	1219	10 15/16	278	1515	687	1½" NPT	38.1mm
CA2000-125	528	2000	90⅜	2296	40	1016	48	1219	10 15/16	278	1650	748	1½" NPT	38.1mm
CA2500-125	660	2500	107⅛	2721	40	1016	48	1219	10 15/16	278	1838	834	1½" NPT	38.1mm
CA3000-125	792	3000	94⅛	2391	44	1118	54	1372	11 7/16	291	2025	919	2" NPT	50.8mm
CA4000-125	1056	4000	120¾	3067	44	1118	54	1372	11 7/16	291	2400	1089	2" NPT	50.8mm
CA5000-125	1320	5000	150¼	3816	44	1118	54	1372	11 7/16	291	3100	1406	2" NPT	50.8mm
CA7500-125	1980	7500	128¾	3270	62	1575	72	1829	11½	292	3850	1746	3" NPT	76.2mm
CA10000-125	2640	10000	158¼	4020	62	1575	72	1829	11½	292	4500	2041	3" NPT	76.2mm

** Weight shown is for 125 psi models only. Consult factory for shipping weight of higher design pressure models.
*** Allow 18" minimum clearance above tank for piping system connection.

COMMENTS: _____

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4900 Series Air/Dirt Separators
Submittal Data

Submittal No: 401-138 | **Effective:** May 6, 2022 | **Supersedes:** January 5, 2017

JOB: VAILS GATE FD PHASE 2

REPRESENTATIVE: WALES DARBY

ENGINEER: H2M ENGINEERING

CONTRACTOR: JOSEPH LOMBARDO PLUMBING & HEATING

PRODUCT DATA

ITEM NO. AS

LOCATION

MODEL NO. 4904AD-125

QUANTITY 1

GPM 204

SPECIFICATIONS

- Designed and constructed per ASME Code Section VIII Div. 1
- Registered with the National Board of Pressure Vessel Manufacturers
- Standard Design Pressure and Temperature: 125 psi @ 240°F
- Particle removal down to 5 microns
- Construction: Carbon Steel with exterior red oxide primer finish
- 304 Stainless Steel Coalescence Pall Rings
- Taco 4900 units are designed to be self-supporting in the piping system. Factory review is necessary should any piping loads be present.

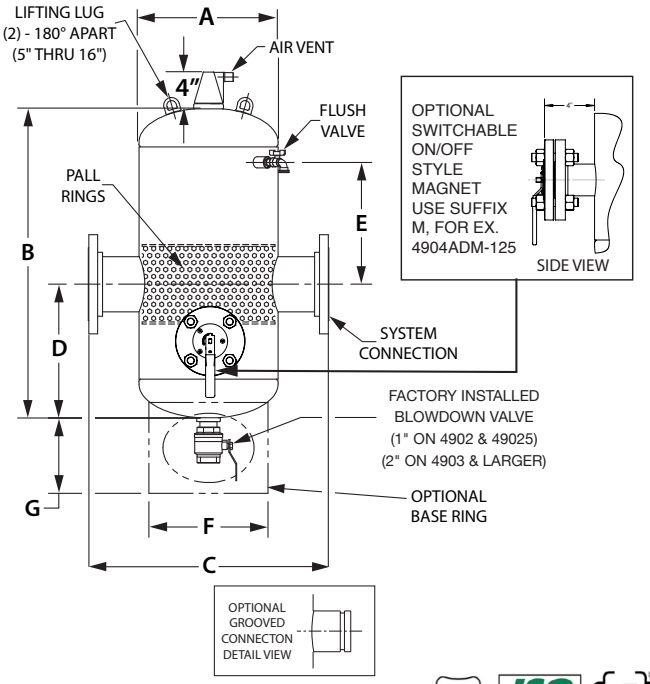
CAUTION: LIFTING LUGS FOR RIGGING AND LIFTING USE ONLY, NOT FOR ANCHORING OR HANGING.

FACTORY INSTALLED

- Air Vent is suitable for water, max. 50% glycol
- Flush Valve

OPTIONS

- Higher Design Pressures and Temperatures
  - 150 psi @ 240°F or higher available
- Optional System Connection Sizes available
- Optional Connection Types
  - 'G' Grooved Pipe Connections up to 16"
- Optional Base Ring
  - Add Suffix 'R' (4905 thru 4916) Exp. 4912AD-125R
    - Not Available (4902 thru 4904)
- High Power Switchable On/Off Style Magnet



SIZES & DIMENSIONS

All dimensions shown are subject to change and should not be used for prepiping. Contact your local Taco representative should certified dimensional drawings be required.

PIPE SIZE	MODEL NUMBER (1)	A DIA. (INCH)	B MAX. (INCH)	C (INCH)	D (INCH)	E (INCH)	F DIA. (INCH)	G (INCH)	GPM @ 4.9ft/sec	APPROX. DRY WGT. (LBS)
2	4902ADT-125	10	16 1/2	12*	7 1/2	3 7/8	–	–	51	30
2	4902AD-125	10	16 1/2	20	7 1/2	3 7/8	–	–	51	45
2 1/2	49025ADT-125	10	16 1/2	12*	7 1/2	3 7/8	–	–	73	40
2 1/2	49025AD-125	10	16 1/2	20	7 1/2	3 7/8	–	–	73	50
3	4903ADT-125	12	25 1/8	14 1/2*	11 1/2	7 1/2	–	–	113	75
3	4903AD-125	12	25 1/8	22	11 1/2	7 1/2	–	–	113	85
4	4904AD-125	12	25 1/8	22	11 1/2	7 1/2	–	–	204	90
5	4905AD-125	14	33 5/8	24	15 3/4	12	13 1/2	12 3/8	306	230
6	4906AD-125	14	33 5/8	24	15 3/4	12	13 1/2	12 3/8	469	245
8	4908AD-125	18	41 1/2	28	18 1/8	16	17 1/2	12 5/8	816	325
10	4910AD-125	24	56 1/4	36	25 3/8	22	20	12 7/8	1291	615
12	4912AD-125	24	63 1/4	36	26 3/8	28	20	12 7/8	1837	695
14	4914AD-125	30	73	42	33	29 1/2	24	13 3/4	2106	1000
16	4916AD-125	30	79 3/4	42	34	35 1/4	24	13 3/4	2790	1055

(1) FOR 150 PSI MODEL NUMBERS, REPLACE -125 WITH -150 *DIMENSIONS FOR "T" OPTION ONLY - T OPTION REFERS TO FNPT CONNECTIONS

COMMENTS