

Pump Data Sheet - Patterson HVAC Pumps

Company: Intermountain Hydror
 Name: Cache County Mountain Crest
 Date: 09/24/2018

Tags: P-5
 1800RPM Premium Efficient Motor 460/3/60
 Pump and Motor Weight: 187lbs

REVIEWED

Reviewed only as to the general conformity with the design concept. The Engineer does not warrant or represent that the information contained on this drawing is either accurate or complete. Sole responsibility for correct design, details, and dimensions shall remain with the contractor submitting the drawing. The review of this shop drawing shall not, in any way, relieve the contractor from complying with all requirements of the contract.

BRENKMAN & COMPANY
 By: stephen.sadler
 Date: 10/31/2018



Pump:

Model: V3D7A-CC Dimensions: Suction: 3 in
 Type: VIL Discharge: 3 in
 Synch Speed: 1800 rpm
 Dia: 4.875 in
 Size: 3x3x7.25
 Impeller: D05-90084

Fluid:

Name: Water
 SG: 1 Vapor Pressure: 0.256 psi a
 Density: 62.4 lb/ft³ Atm Pressure: 14.7 psi a
 Viscosity: 1.1 cP
 Temperature: 60 °F

Search Criteria:

Flow: 96 US gpm Near Miss: ---
 Head: 20 ft Static Head: 0 ft

Pump Limits:

Temperature: --- Sphere Size: ---
 Wkg Pressure: ---

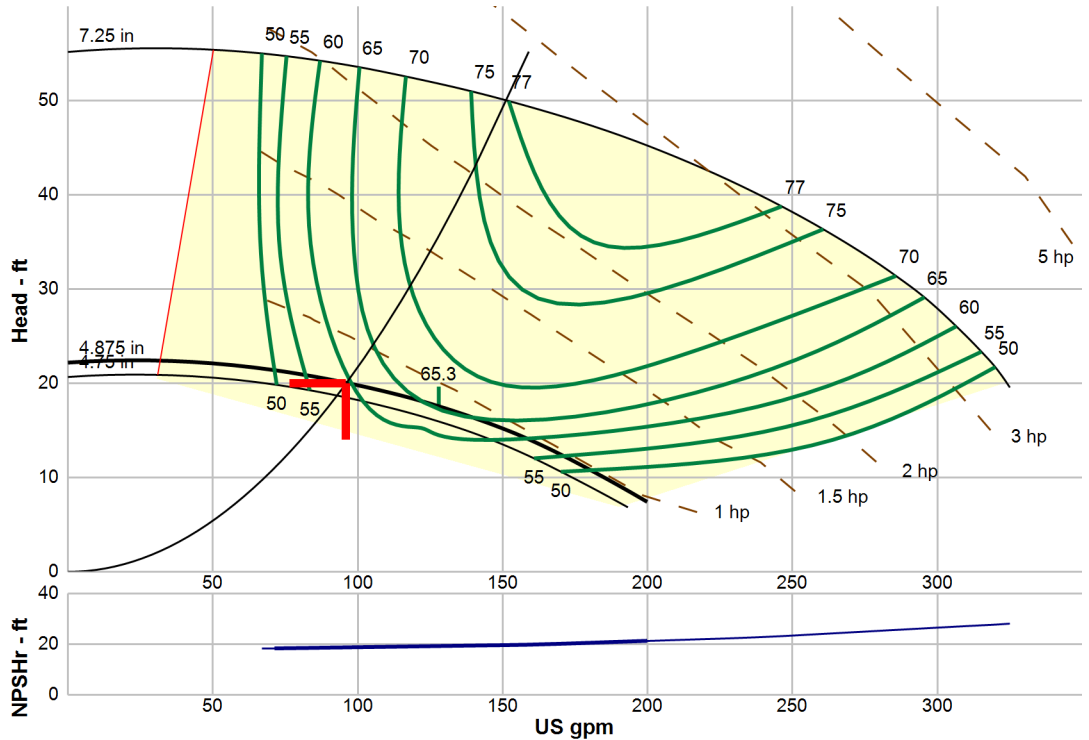
Motor:

Standard: NEMA Size: 1 hp
 Enclosure: ODP Speed: 1800 rpm
 Frame: See Chart
 Sizing Criteria: Max Power on Design Curve

Pump Selection Warnings:

None

--- Duty Point ---	
Flow:	96.1 US gpm
Head:	20 ft
Eff:	59.4%
Power:	0.818 hp
NPSHr:	18.8 ft
Speed:	1760 rpm
--- Design Curve ---	
Shutoff Head:	22.2 ft
Shutoff dP:	9.62 psi
Min Flow:	32 US gpm
BEP:	65.3% @ 128 US gpm
NOL Power:	0.982 hp @ 180 US gpm
--- Max Curve ---	
Max Power:	3.51 hp @ 320 US gpm



Performance Evaluation:

Flow	Speed	Head	Efficiency	Power	NPSHr
US gpm	rpm	ft	%	hp	ft
115	1760	18.6	63.5	0.848	19.1
96	1760	20	59.4	0.818	18.8
76.8	1760	21.1	52.6	0.778	18.5
57.6	1760	21.6	43.6	0.75	18.3
38.4	1760	21.8	34.6	0.722	18.2



Toccoa, Georgia
U.S.A.

VIL VERTICAL INLINE PUMPS OUTLINE DIMENSIONS, TYPE CC, 1800 RPM

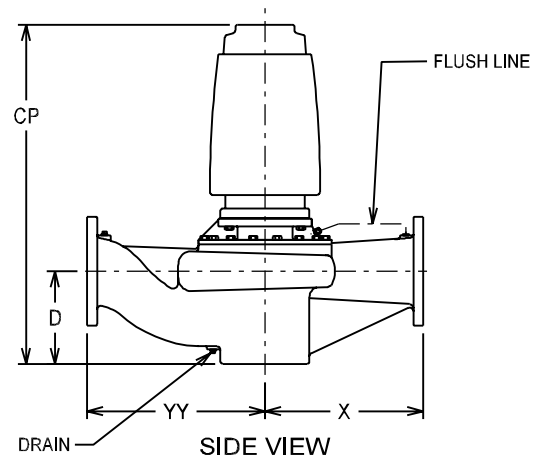
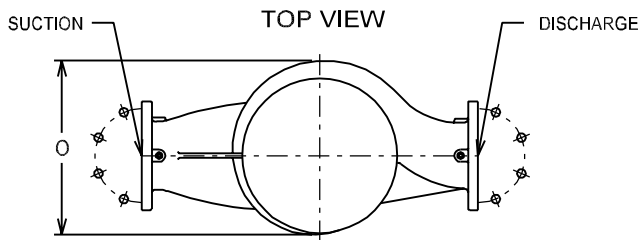
SECTION 3.0

PAGE 5.1

DATE: MAR 1, 2009

NOTE: ALL DATA SUBJECT TO CHANGE. CONTACT FACTORY FOR CERTIFIED DATA.

ALL DIMENSIONS ARE IN INCHES



NOTE: 1/4" NPT SUCTION & DISCHARGE
GAUGE TAP CONNECTIONS

MODEL	DISCHARGE SIZE	SUCTION SIZE	DISCHARGE FLANGE DRILLING		SUCTION FLANGE DRILLING	*** WORKING PRESSURE	MOTOR FRAMES	CP * (MAX.)	D	O	X	YY
			STD	OPT								
V1.5A7A-CC	1.5	1.5	125#	X	125#	175	143-145 JM	20 1/16	4 1/4	10	7 1/2	7 1/2
V2B7A-CC	2	2	125#	X	125#	175	143-145 JM	20 3/4	4 7/8	10 1/2	8	8
V2C7A-CC			125#	X	125#	175	143-145 JM	20 11/16				
V2A9A-CC			125#	250	125#	**	145 JM	20 3/16	4 1/2	12 1/2	9 1/4	9 1/4
			182-184 JM	20 11/16	213 JM	23 9/16						
V3D7A-CC	3	3	125#	X	125#	175	143-145 JM	20 5/8	6 1/8	11	9 1/2	9 1/2
V3C9A-CC			125#	250	125#	**	182-184 JM	23 3/8				
V3A13A-CC			125#	X	125#	175	215 JM	26 1/2	6 1/4	17 1/16	12 3/4	12 3/4
			254-256 JM	32 1/16	284 JM	31 13/16						
			V3B11A-CC	125#	250	125#	**	213-215 JM				
254 JM			32 3/16									
V4D7A-CC	4	4	125#	X	125#	175	145 JM	23 5/8	7 1/8	11 5/8	11	12
V4C9A-CC			125#	250	125#	**	184 JM	23 3/4				
V4B11A-CC			125#	250	125#	**	213-215 JM	28	7 7/16	13 11/16	13	13
			215 JM	27 3/4	254-256 JM	33 3/8						
V4A13A-CC			125#	X	125#	175	254-256 JM	34 3/8	8	17 15/16	15	15
			284-286 JM	34 1/16								

MOTOR FRAME SELECTIONS - 3PH / 60 CYCLE

HORSEPOWER	3600	1800	1200	HORSEPOWER	3600	1800	1200
1/2			143JM	15	215JM	254JM	284JM
3/4			143JM	20	254JM	256JM	286JM
1		143JM	145JM	25	256JM	284JM	324JM
1 1/2	143JM	145JM	182JM	30	284JM	286JM	326JM
2	145JM	145JM	184JM	40	286JM	324JM	364JM
3	145JM	182JM	213JM	50	324JM	326JM	365JM
5	182JM	184JM	215JM	60	326JM	364JM	
7 1/2	184JM	213JM	254JM	75	364JM	365JM	
10	213JM	215JM	256JM				

* DIMENSION MAY VARY SLIGHTLY WITH MOTOR MANUFACTURER

** 175 P.S.I. (125# FLANGE), 250 P.S.I. (OPTIONAL 250# FLANGE)

*** REFER TO WORKING PRESSURE VS. TEMPERATURE CHART FOR TEMPERATURE EFFECTS