

Pump Performance Datasheet

Customer	:		Quote Number / ID	:	1143354
Customer ref. / PO	:		Model	:	2095A-4P-5HP VLSE
Tag Number	:	Hurley Engineering	Stages	:	1
Service	:	HYDRONIC	Based on curve number	:	VLSE_2095A_4P_5HP Rev 0.0
Quantity	:	1	Basic model number	:	-
			Date last saved	:	04/02/2020 2:07 PM

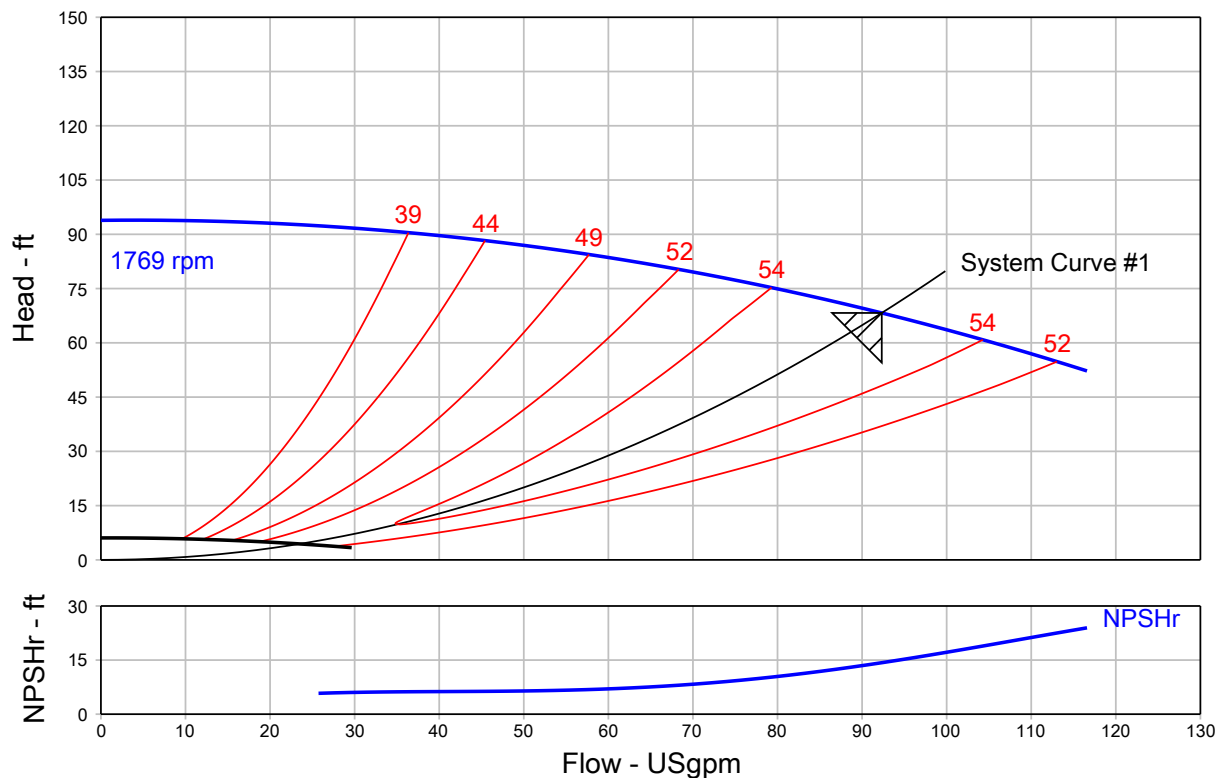
Operating Conditions		Liquid	
Flow, rated	: 92.33 USgpm	Liquid type	: Cold Water
Differential head / pressure, rated (requested)	: 68.26 ft	Additional liquid description	:
Differential head / pressure, rated (actual)	: 68.26 ft	Solids diameter, max	: 0.00 in
Suction pressure, rated / max	: 0.00 / 0.00 psi.g	Solids concentration, by volume	: 0.00 %
NPSH available, rated	: Ample	Temperature, max	: 68.00 deg F
Frequency	: 60 Hz	Fluid density, rated / max	: 1.000 / 1.000 SG

Performance		Material	
Speed, rated	: 1769 rpm	Material selected	: Cast Iron
Speed, maximum	: 1769 rpm		
Speed, minimum	: 450 rpm		

Impeller diameter, rated	: 9.60 in		
Efficiency	: 54.89 %		
NPSH required / margin required	: 14.27 / 0.00 ft		
nq (imp. eye flow) / S (imp. eye flow)	: 14 / 46 Metric units		
MCSF	: 28.47 USgpm		

Head maximum, rated speed	: 93.91 ft		
Head rise to shutoff	: 37.50 %		
Flow, best eff. point	: 92.33 USgpm		
Flow ratio, rated / BEP	: 100.00 %		
Speed ratio (rated / max)	: 100.00 %		
Head ratio (rated speed / max speed)	: 100.00 %		
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00		
Selection status	: Acceptable		

Energy Indexes		Driver & Power Data (@Max density)	
PEI (VL)	: 0.47	Motor sizing specification	: Max power (non-overloading)
ER (VL)	: 53	Margin over specification	: 0.00 %
		Service factor	: 1.00
		Power, hydraulic	: 1.59 hp
		Rated power (based on duty point)	: 2.90 hp
		Max power (non-overloading)	: 3.03 hp
		Nameplate motor rating	: 5.00 hp / 3.73 kW (Fixed)



Grundfos Series VLSE - Split Coupled Vertical In-Line with Integrated VFD

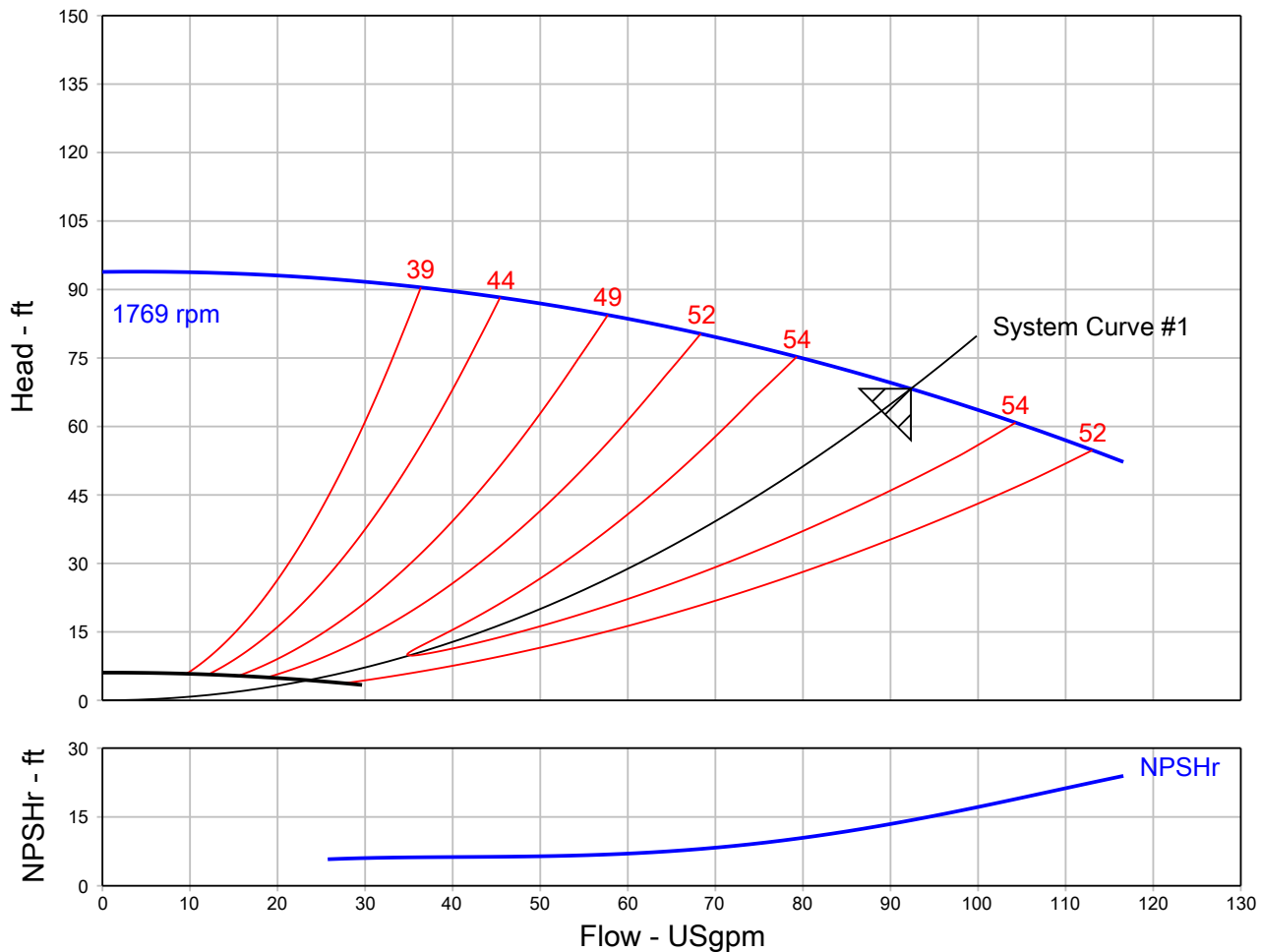
QUOTE NUMBER / ID 1143354	UNIT TAG Hurley Engineering	QUANTITY 1
	SERVICE HYDRONIC	
REPRESENTATIVE	SUBMITTED BY	DATE
ENGINEER	APPROVED BY	DATE
CONTRACTOR	ORDER #	DATE



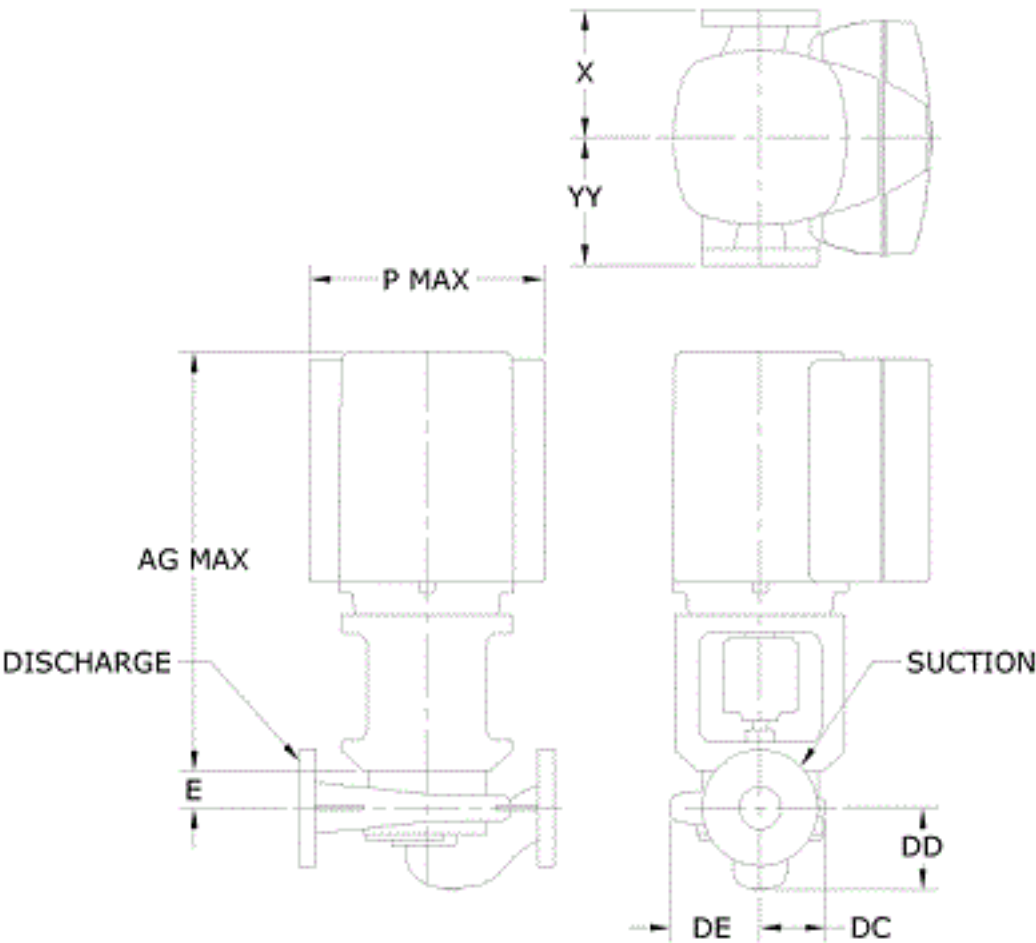
VLSE 2095A-4P-5HP
1800 rpm

Part Number N/A

Conditions of Service		Pump Data		Motor Data	
Flow	92.33 USgpm	Impeller Diameter	9.60 in	Motor HP	5 HP
Head	68.26 ft	Efficiency	54.89 %	BHP	2.9
Liquid	Cold Water	Suction	2 in.	Enclosure	TEFC
Temperature	68.00 deg F	Discharge	2 in.	Voltage	460 V
NPSHr	14.27 ft	PEI (VL)	0.47	Phase	3 Phase
Viscosity	1.00 cP	ER (VL)	53	Cycle	60
Specific Gravity	1.000 SG			Frame Size	182TC



Grundfos Series VLSE - Split Coupled Vertical In-Line with Integrated VFD



NOT FOR CONSTRUCTION, unless certified and referenced on order

Units	Frame	S x D	AG (Max)	DC	DD	DE	E	P (Max)	X	YY
inches	182TC	2 X 2	28.50	6.00	4.88	6.25	1.50	13.30	9.00	9.00

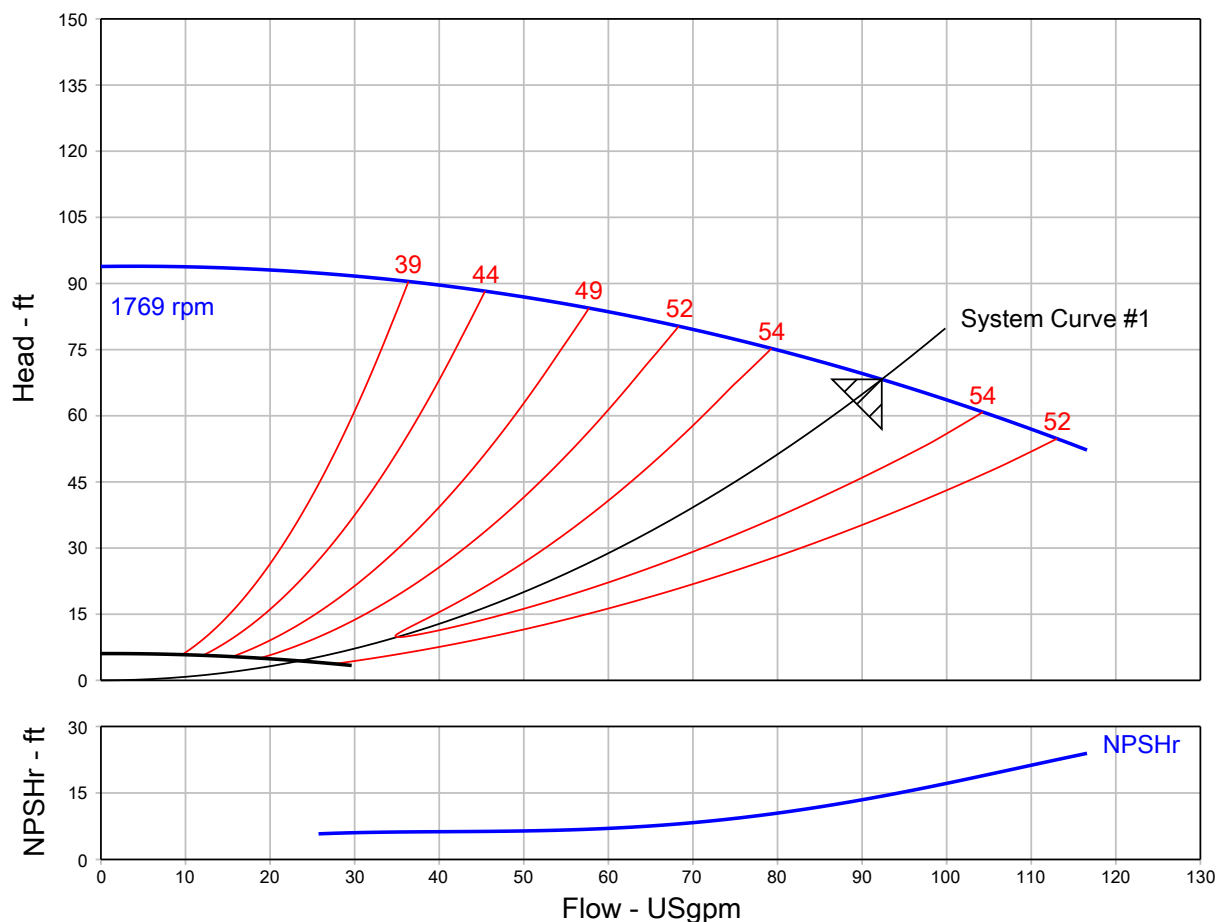
Grundfos Series VLSE - Split Coupled Vertical In-Line with Integrated VFD

QUOTE NUMBER / ID 1143354	UNIT TAG Hurley Engineering	VLSE 2095A-4P-5HP
---------------------------	-----------------------------	-------------------

MATERIALS OF CONSTRUCTION			
PART	MATERIAL	PART	MATERIAL
Rotation Options	Clockwise	Impeller Washer	S.S., AISI-303
Base/Stand Type	No Stand Provided	Impeller Key	S.S., AISI-303
Connections	125# ANSI	Sleeve Material	Bronze, III932, C89835 or No Sleeves
Coupling Options	Rigid Radially Split Coupling	Wear Ring Type	Case Wear Ring
Wear Ring Material	NiAl-Bronze, ASTM-B148, C95500	Pump Coatings	Standard Paint
Seal Type	Type 21	Seal Material	Ceramic/Carbon/Buna
Casing	Cast Iron, ASTM-A48, CL 30	O-Rings	Buna N
Motor Shaft	Steel, AISI 1045 or S.S	Seal Flush Options	External Flush, plastic tubing
Backplate/Seal Plate	Cast Iron, ASTM-A48, CL 30	Gaskets	Vegetable Fiber
Motor Bracket	Cast Iron, ASTM-A48, CL 30	Casing Bolts	Steel, Grade 5
Impeller	Stainless Steel, AISI-304	Impeller Cap Screw	S.S., AISI-303

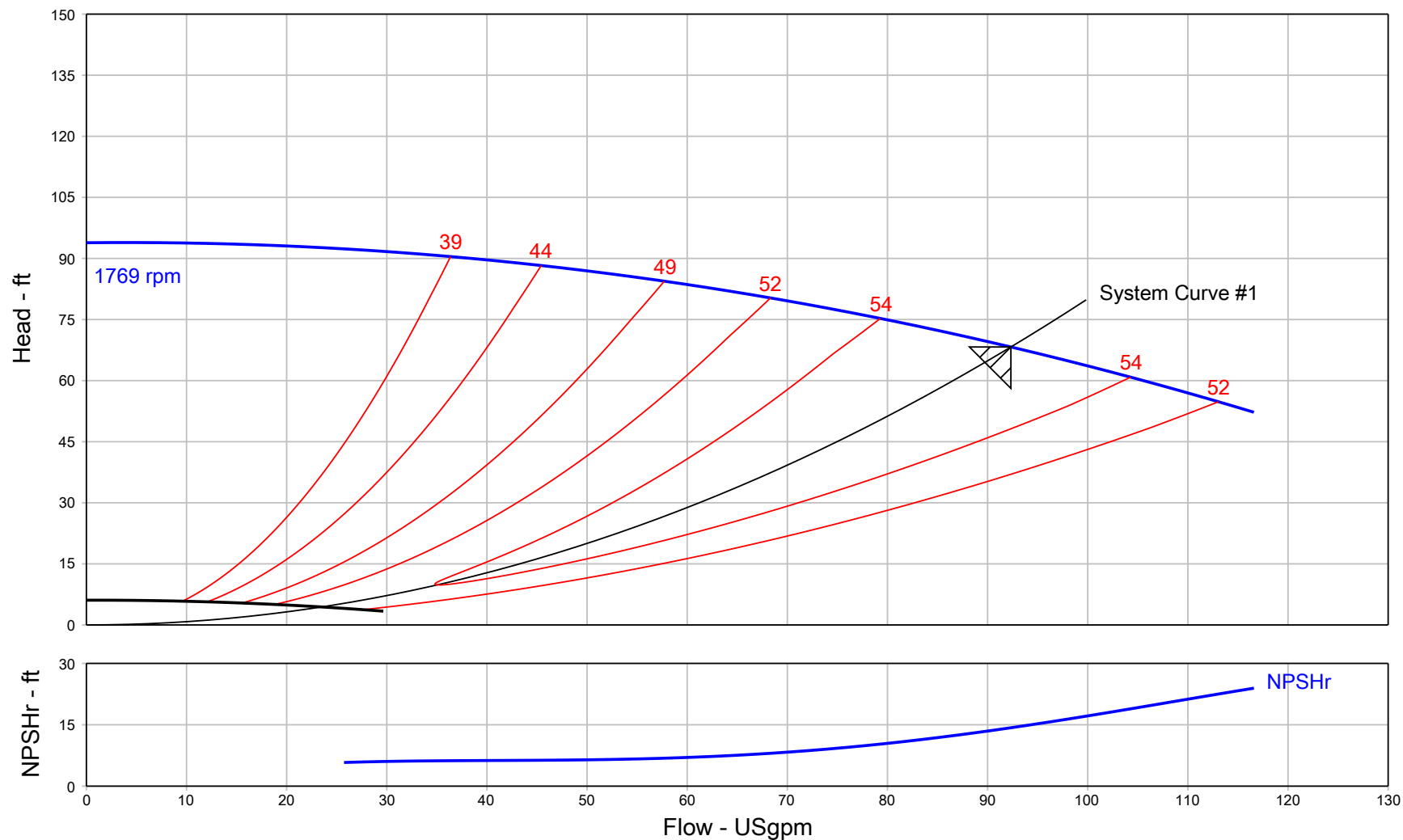
* All materials based on STANDARD configuration

Pump Performance Curve



Customer	:	Model	: 2095A-4P-5HP VLSE
Customer ref. / PO	:	Stages	: 1
Tag Number	: Hurley Engineering	Speed, rated	: 1769 rpm
Service	: HYDRONIC	Based on curve number	: VLSE_2095A_4P_5HP Rev 0.0
Quantity	: 1	Efficiency	: 54.89 %
Quote Number / ID	: 1143354	Rated power (based on duty point)	: 2.90 hp
Date last saved	: 04/02/2020 2:07 PM	NPSH required	: 14.27 ft
Flow, rated	: 92.33 USgpm	Viscosity	: 1.00 cP
Differential head / pressure, rated	: 68.26 ft	Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
Fluid density, rated / max	: 1.000 / 1.000 SG	Impeller diameter, rated	: 9.60 in
		PEI (VL)	: 0.47
		ER (VL)	: 53

Pump Performance Curve

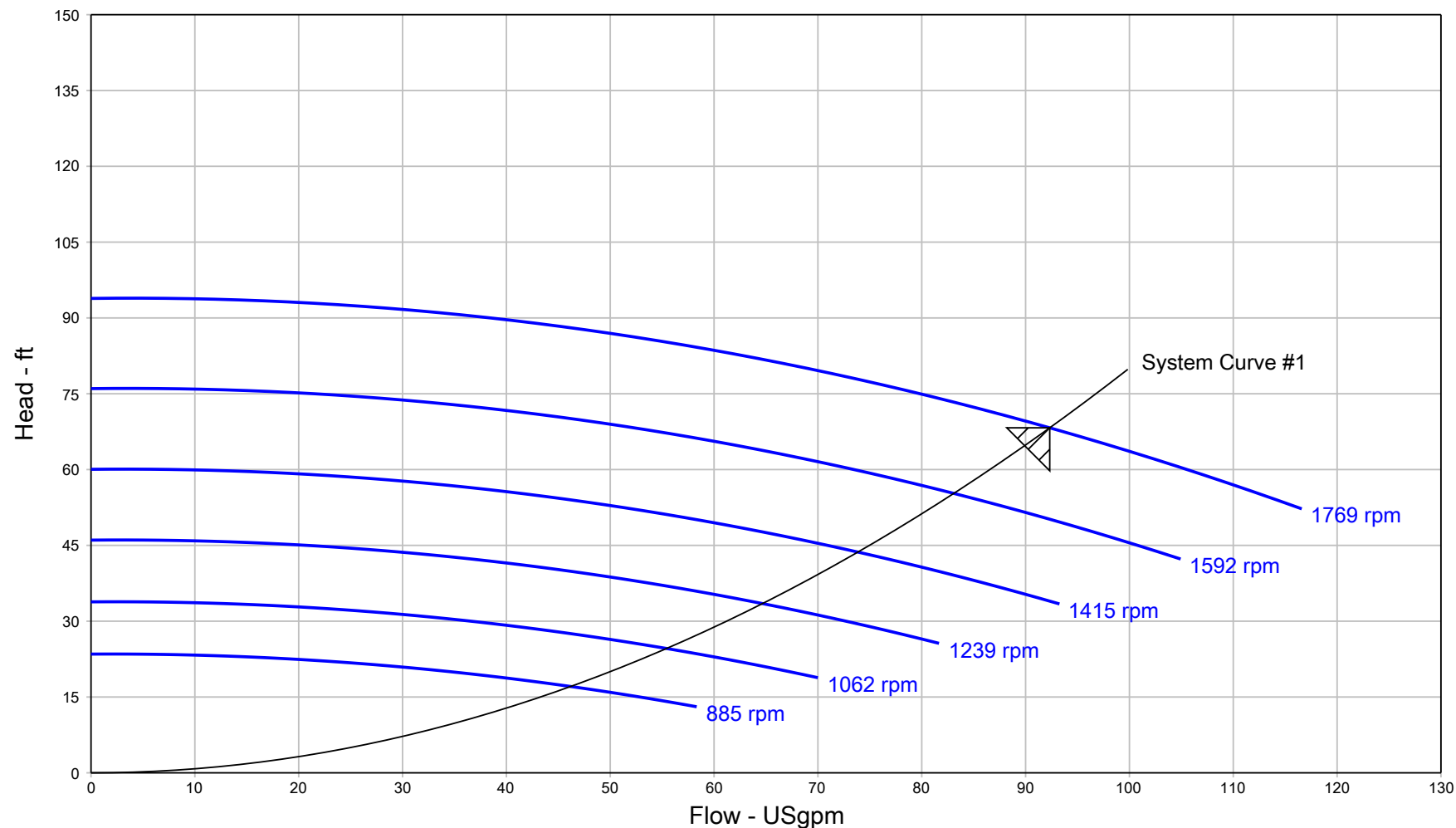


Project name : VLSE project
 Consulting engineer :
 Customer :
 Customer ref. / PO :
 Quote Number / ID : 1143354
 Date last saved : 04/02/2020 2:07 PM
 Based on curve number : VLSE_2095A_4P_5HP Rev 0.0

Tag Number : Hurley Engineering
 Service : HYDRONIC
 Model : 2095A-4P-5HP VLSE
 Quantity : 1
 Quoted By (Sales Office) : HURLEY ENGINEERING COMPANY
 Quoted By (Sales Engineer) : Steven Leingang
 Stages : 1
 Speed, rated : 1769 rpm

Flow, rated : 92.33 USgpm
 Differential head / pressure, rated : 68.26 ft
 Rated power (based on duty point) : 2.90 hp
 Max power (non-overloading) : 3.03 hp
 Efficiency : 54.89 %
 Impeller diameter, rated : 9.60 in
 PEI (VL) : 0.47
 ER (VL) : 53

Multi-Speed Performance Curve



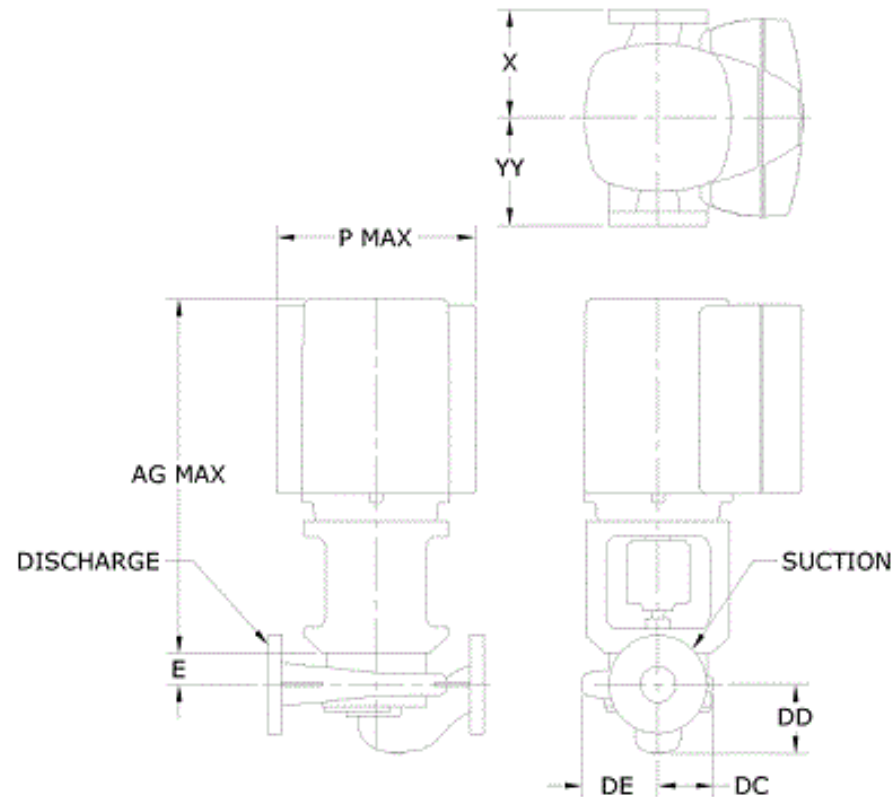
Project name	: VLSE project	Tag Number	: Hurley Engineering	Speed, rated	: 1769 rpm
Consulting engineer	:	Service	: HYDRONIC	Flow, rated	: 92.33 USgpm
Customer	:	Model	: 2095A-4P-5HP VLSE	Differential head / pressure, rated	: 68.26 ft
Customer ref. / PO	:	Quantity	: 1	Fluid density, rated / max	: 1.000 / 1.000 SG
Quote Number / ID	: 1143354	Quoted By (Sales Office)	: HURLEY ENGINEERING COMPANY	Viscosity	: 1.00 cP
Date last saved	: 04/02/2020 2:07 PM	Quoted By (Sales Engineer)	: Steven Leingang	Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
		Stages	: 1	Based on curve number	: VLSE_2095A_4P_5HP
				Rev 0.0	

Construction Datasheet

Project name : VLSE project				Tag Number : Hurley Engineering	
Consulting engineer :				Service : HYDRONIC	
Customer : HURLEY ENGINEERING COMPANY				Model : 2095A-4P-5HP VLSE	
Customer ref. / PO :				Quantity : 1	
Quote Number / ID : 1143354				Quoted By (Sales Office) : HURLEY ENGINEERING COMPANY	
Date last saved : 04/02/2020 2:07 PM				Quoted By (Sales Engineer) : Steven Leingang	
Construction				Motor Information	
Nozzle	Size (in.)	Nozzle Configuration	Pos'n	Manufacturer	: Grundfos MLE
Suction	2	125# ANSI	-	Frame Size	: 182TC
Discharge	2	125# ANSI	-	Power	: 5.00 hp
Orientation / Configuration : Vertical				RPM	: 1800 rpm
Rotation : Clockwise				Enclosure	: TEFC
Wear Ring Configuration : Single - Case				Operating Power Supply	: 460/3/60
Discharge Elbow Size : -				Efficiency	: IE5
Subplate : -				Service factor	: 1.15
Sump Depth (feet) : -				Motor Application	: Intergrated Variable Frequency Drive
Bearing Frame : -				Motor Options/Accessories	: -
Bearing Frame Foot : -				Cord Length (feet)	: -
Bearing Type (Radial/Thrust) : -				Materials	
Bearing Lubrication : Regreasable				Case	: Cast Iron, ASTM A48 - Class 30
Thrust Bearing : -				Motor Bracket	: Cast Iron, ASTM-A48, CL 30
Intermediate Bearing : -				Impeller	: Stainless Steel, AISI-304 (H304)
Lower Bearing : -				Impeller Cap Screw and Washer	: Stainless Steel, AISI-303
Bearing Housing Accessories : -				Impeller Key	: Stainless Steel, AISI 316
PACO Construction code : 28-2095A-130268-25D2MS1				Case wear ring	: Tin Bronze, ASTM B584-90500 (B18)
Baseplate, Coupling and Guard				Impeller wear ring	: -
Baseplate : Not Applicable				Pump Shaft	: Stainless Steel, AISI-303
Drip Pan : -				Sleeve	: -
Coupling : Rigid, Axial Split Coupling (aluminum) RASC1				Line Shaft	: -
Guard : OSHA Approved				Column	: -
Seal & Packing Construction				Discharge Pipe	: -
Sealing Method : Single Seal, Type 21				Discharge Elbow	: -
Seal Material : Buna Carbon Ceramic SS-Spring and Hardware				Suction Elbow	: -
Packing Gland : -				Subplate	: -
Lantern Ring : -				Hardware	: Steel, Grade 5
Recirculation Lines : Nylon Tubing with Brass Fittings				O Rings	: Buna N
Weights (Approx.)				Pump Coatings	: Standard Manufacturers Paint
Pump : 119.0 lb					
Baseplate : -					
Driver : 68.26 lb					
Estimated Shipping gross weight : 187.3 lb					

General Arrangement

Project name	: VLSE project	Tag Number	: Hurley Engineering
Consulting engineer	:	Service	: HYDRONIC
Customer	: HURLEY ENGINEERING COMPANY	Model	: 2095A-4P-5HP VLSE
Customer ref. / PO	:	Quantity of pumps	: 1
Quote Number / ID	: 1143354	Quoted By (Sales Office)	: HURLEY ENGINEERING COMPANY
Date last saved	: 04/02/2020 2:07 PM	Quoted By (Sales Engineer)	: Steven Leingang



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	182TC	2 X 2	28.50	6.00	4.88	6.25	1.50	13.30	9.00	9.00	187.3
Conditions of Service			Motor Data								
Flow: 92.33 USgpm	Fluid: Cold Water	HP: 5	Encl: TEFC	Phase: 3	Efficiency: IE5						
TDH: 68.26 ft	Temp.: 68.00 deg F	RPM: 1800 rpm	Hz: 60	Voltage: 460	S.F.: 1.15						

