

ADDENDUM NO. 3

Addendum Date: June 30, 2026

Bid Date: July 7, 2026

Bid Number: EDA # ED24AUS0G0115

Engineer: Clark Associates
215 North Main Street
Temple, Texas 76501
(254) 899-0899

Project: Copperas Cove EDC 45 Acre Industrial Park

Owner: Copperas Cove Economic Development Corporation
Fred Welch, Executive Director

Item #1: The following suppliers submitted alternate submersible pumps to be approved to bid for the project:

1. **Pump Solutions** – submitted a KSB submersible pump to be approved to bid the subject project. The pump was approved as an alternate pump for the project. HOWEVER, the maximum flow for the new force main should not exceed 881 GPM. This was a mandated design requirement from the City of Copperas Cove and cannot be exceeded. The submitted pump model will have to be adjusted to meet this requirement.
2. **Smith Pump Company** – submitted a Tsurumi submersible pump to be approved to bid the subject project. The pump was approved as an alternate pump for the project. HOWEVER, the maximum flow for the new force main should not exceed 881 GPM. This was a mandated design requirement from the City of Copperas Cove and cannot be exceeded. The submitted pump model will have to be adjusted to meet this requirement.

Item #2: KSB submersible pump submittal is provided.

Item #3: Tsurumi submersible pump submittal is provided.

Item #4: Contractor Questions:

1. Bid items 19, 85 and 113 of the base bid is asking the contractor to furnish New Street Lighting to include poles, 2" PVC electrical conduit, wiring, connection boxes, secondary and service boxes, coordination with Oncor, foundations and all miscellaneous appurtenances. When looking at the overall lighting plan notes on sheet C3.2 it seems that the contractor will be responsible for installing the 2" conduits (material included), the service boxes (as supplied by Oncor) and the precast streetlight foundations (also provide by Oncor). I do not see any notes about the wiring or the poles. Is it correct to assume that the bid item is stated incorrectly and that the items that I list are the only items that the contractor is responsible for? As per the plan notes on Sheet C3.2, the contractor is responsible for installing the 2" conduits (material included), the service boxes (as supplied by Oncor) and the precast streetlight foundations (also provide by Oncor). Will Oncor install the light poles, lights and wiring? Yes, Oncor will furnish and install the light poles, light fixtures, and wiring systems.



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Data sheet

Pump type

KRT F 100-316/454XEG-S

Operating data

Flow	891 US g.p.m.	Fluid	01 Water, clean water
Head	112 ft		
Operating speed	1781 rpm	Density of fluid	62.3 lb/ft³
Shaft power	43.8 hp	Viscosity	1.08E-5 ft²/s
Efficiency	57.7 %	Temperature	68 °F
Required pump NPSH	25.2 ft	Hydraulic acceptance acc.	ISO 9906/ANSI HI 3B - Factory
Head H(Q=0)	151 ft		
Application range	Head	Flow	
	From 151 ft	4.87 US g.p.m.	
	To 102 ft	1110 US g.p.m.	

Design

Make	KSB	Impeller type	Vortex impeller
Design	Submersible pump		Open
Series	KRT F	Impeller size	(279) 11 inch
Frame size	100-316		Max. (310) 12 3/16 inch
Stages	1		Min. (236) 9 5/16 inch
Curve number	K42593/3	Free passage	3 15/16 inch
		Weight	lb
Type of bearings	Antifriction		
Nos. of bearings	1 / 1		
Lubrication	Grease lubrication. lubricated for lifetime		
Suction port	Pressure rating	--	
	Flange size	DN0 ---	
	Flange size	DN1 4"	
	Norm	--	
Discharge port	Pressure rating	CLASS 125	
	Flange size	DN2 4 inch	
	Flange size	DN3 6 inch	
	Norm	ASME/ANSI B16.1	
		Discharge port: discharge elbow (DN3)	

Materials

Pump casing	Grey cast iron EN-GJL-250 (A 48 Class 35B)
Discharge cover	Grey cast iron EN-GJL-250 (A 48 Class 35B)
Impeller	Grey cast iron EN-GJL-250 (A 48 Class 35B)
Shaft	Stainless steel EN-1.4021+QT800 (A 276 Type 420)
Bearing bracket	Grey cast iron EN-GJL-250 (A 48 Class 35B)
Motor casing	Grey cast iron EN-GJL-250 (A 48 Class 35B)
Bolts. nuts	Stainless steel A4 (EN-1.4571) (A 276 Type 316)
Cooling jacket	---
Wear plate	N/A
Shaft protection sleeve	---
O-Rings	
Casing Wear Ring / Impeller Wear Ring	N/A

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Data sheet

Pump type

KRT F 100-316/454XEG-S

Shaft seal

Type of seal	Double mechanical seal
Arrangement:	Tandem
Seal on medium side	with elastomer bellows
Mechanical seal. pump-side	Silicon carbide / Silicon carbide
Mechanical seal. bearing-side	Carbon / Silicon carbide

Monitoring

Thermal winding protection	By temperature sensitive switches
Explosion proof protection	Durch PTC-Thermistoren (Nur EEx)
Motor housing monitoring	By conductive moisture sensor electrode
Mechanical seal leakage detection	---
Bearing temperature monitoring	---

Coating

Preparatory treatment	SSPC near white SP 10
Blasting method	Steel grit blasting
Primer	Zinc phosphate or Zinc dust
Dry film thickness primer	> 1 1/2 mils (35 microns)
Top coat	2-component epoxy resin
Solids content	> 82 %
Dry film thickness top coat	> 6 mils (150 microns)
Color	Ultramarine Blue (RAL 5002 to DIN 6174)

Installation

INSTALLATION

Type of installation : Wet well installation designed for connection to a installed discharge elbow

Discharge elbowsize (DN2/DN3) : /

Flange dimensions to suit : ASME/ANSI B16.1, CLASS 125

Claw : Bolted to the pump

Guide system : Double guide bars

Guide bar diameter : 2" diameter pipes

Installation depth :

Lifting device : stainless steel lifting chain

Length of lifting device :

Lifting loops : Every

Installation : Discharge elbow, 4 inch / 6 inch

Accessories : fasteners, claw, bracket, lifting chain, but without guide bars

Lifting Bail : Included

Materials:

Discharge elbow : Grey cast iron EN-GJL-250 (A 48 Class 35B)

Claw : Grey cast iron EN-GJL-250 (A 48 Class 35B)

Bracket : Stainless steel EN-1.4571 (A 276 Type 316 Ti)

Guide bars : Not part of this specification

Lifting device : Stainless steel EN-1.4404 (A 276 Type 316L)

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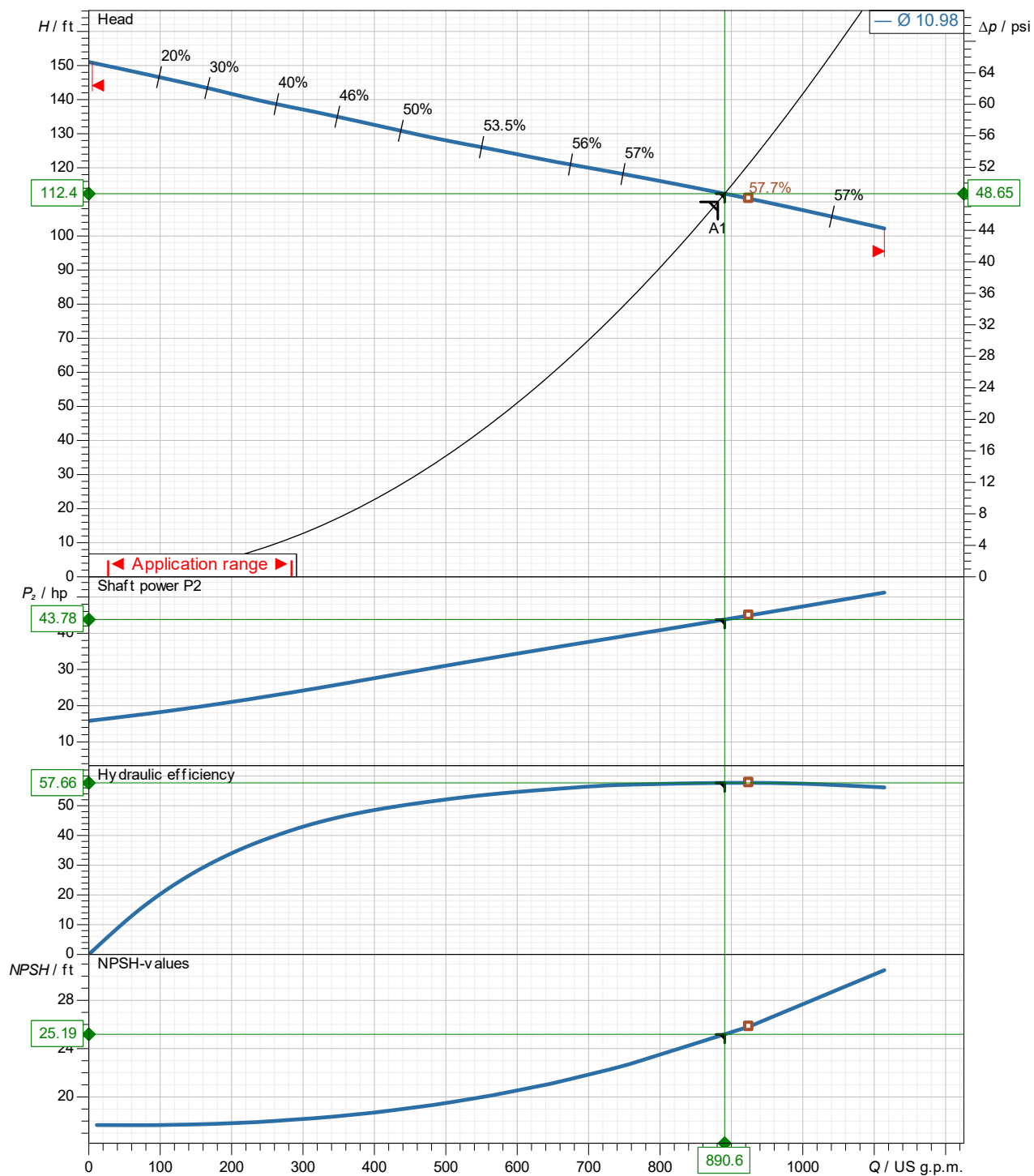
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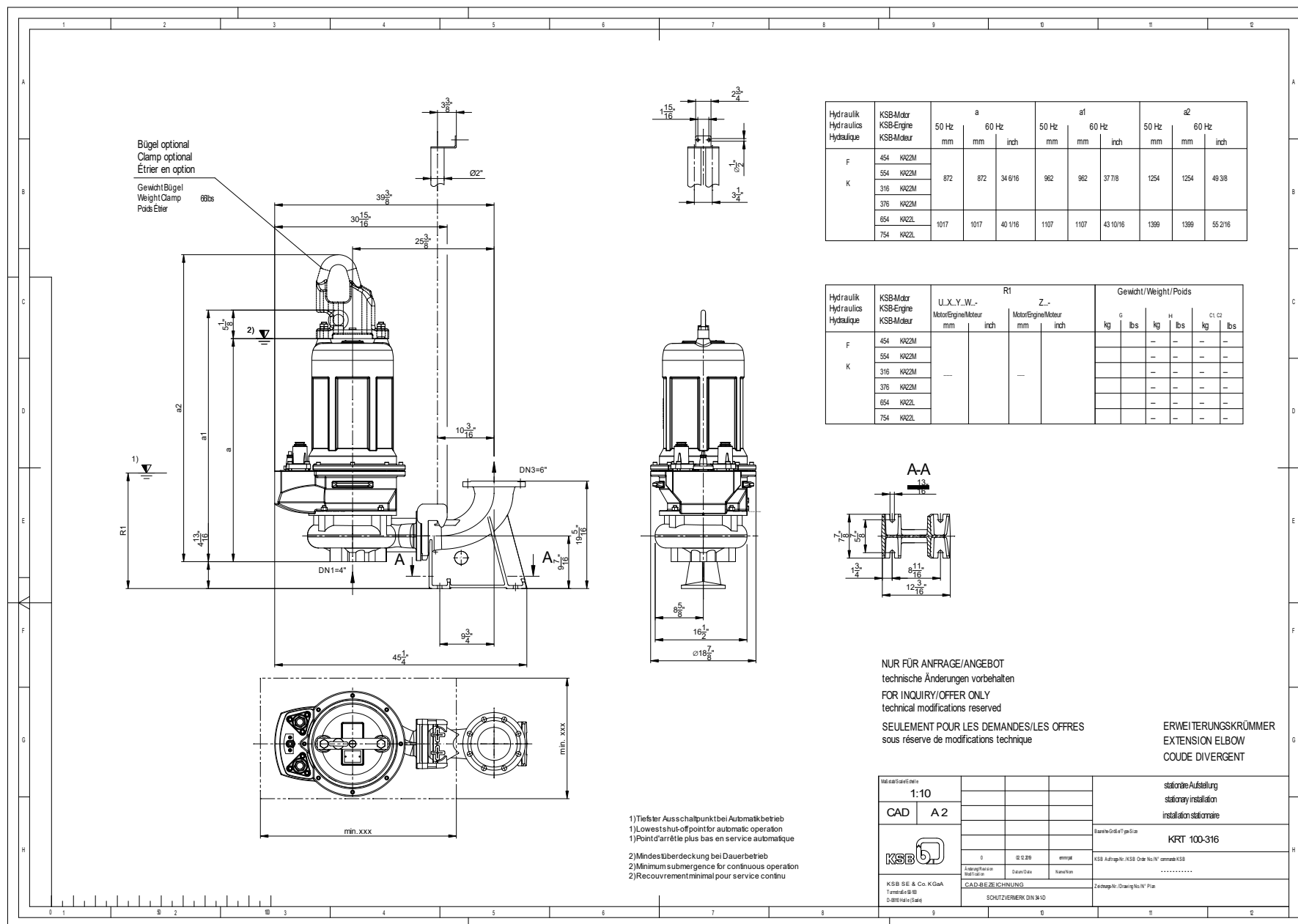
Performance curve

Pump type

KRT F 100-316/454XEG-S



Impeller type	Closed Impeller	Curve number	K42593/3
Density of fluid	62.322 lb/ft ³	Frequency	60 Hz
Impeller size	11 inch	Speed	1781 1/min
Viscosity	1.082E-5 ft ² /s		



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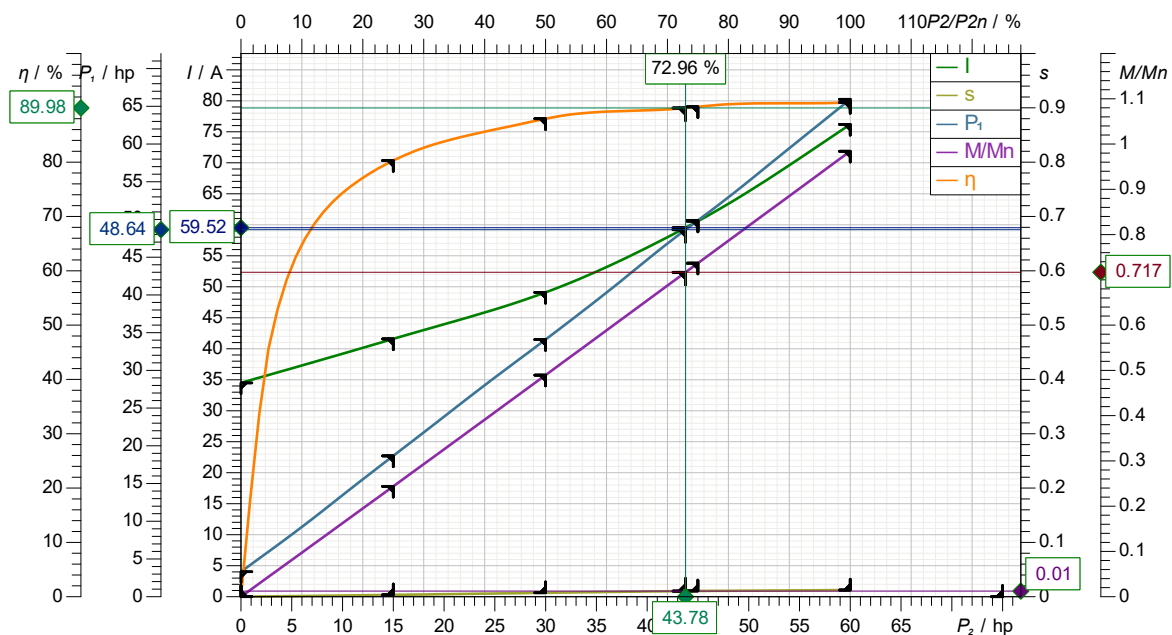
Data sheet: Motor data

Motor type **454XEG**

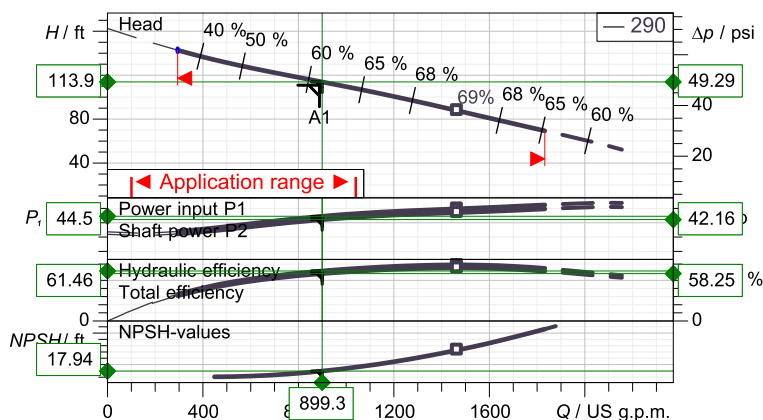
Motor manufacturer	KSB SE & Co. KGaA	Rated voltage	460 V
Design acc. standard	-	Rated frequency	60 Hz
Service factor	1.15	Rated HP (D.O.L) or VFD	60 hp
Degree of protection	IP68	Rated current	76.2 A
Insulation class		Nominal speed	1778 rpm
Starting mode	Direct starting	NEMA code letter	H
No. starts / h	10	Starting to rated current	7
Coolant temperature	< / = 104 °F (40 °C)	Starting current	533.4 A
Motor casing	Grey cast iron EN-GJL-250 (A48 Class 35B)		
Explosion protection	Class I, Div. 1, Groups C&D T3		
Pump type	KRT F 100-316/454XEG-S		

Load	P1 kW	P2 hp	eta %	cos phi	I A
4/4	49.16	60.0	91.0	0.81	76.2
3/4	37.21	45.0	90.2	0.77	60.6
2/4	25.42	30.0	88.0	0.65	49.1
1/4	13.93	15.0	80.3	0.42	41.6

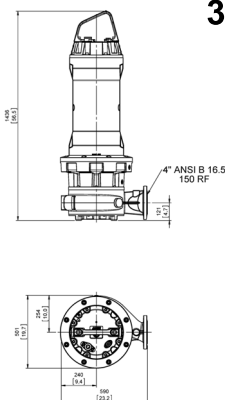
Main cable	2 x AWG 7-4	Diameter	0.72 inch...0.77 inch
Control cable	1 x AWG 15-8	Diameter	0.56 inch...0.60 inch
Cable. outer sheath	Waterproof synthetic rubber compound		
Cable length	65 ft (20 m)		



Technical specification



Characteristic curves according to UNI EN ISO 9906:2012
P2<10kW: paragraph 4.4.2
10kW<P2<100kW: Grade 3B
P2>100kW: Grade 2B
for pumps with standard material combination



3~ 60 Hz

Pump

Series	AVANT MQ
Type	MQB100B 37/4AW 290PD
Version	BB 10 460 D6 FM NN
Variant	A431 GG25 GG25 N 200 VN A270 N N STD 0 40 0
FM mark	Class I Division 1, Groups C, D; T3C Ta(max)= 40°C, IP68

Operating limits (standard pumps)

Max. ambient temperature	104 °F
Max. density treated liquid	68.67 lb/ft ³
pH treated liquid	6 ÷ 14
Max. start per hour (equally distributed)	15
Wet/dry use	WET
Max. acoustic pressure level	70 dB
Operating mode	S1 - Continuous use

Construction materials

Case	Cast iron EN-GJL 250
Shaft	AISI 431
Hydraulic	Cast iron EN-GJL 250
Impeller	Cast iron EN-GJL 250
Painting	Bi-epoxy 200 µm (7,9 thou) sea water resistant
Screws	Stainless steel A2-70
Gaskets	VITON

Motor data

Rated voltage	460 V
Frequency	60 Hz
Motor phases	3~
Number of poles	4
Rated power P2	49.62 hp
Incoming power P1	52.51 hp
Rated current	60.0 A
rpm	1772 rpm
Efficiency	94.5 %
cos φ	0.83
Rated torque	147.1 lbf ft
Start*	Direct starting
Starting current	480.0 A
Starting torque	466.2 lbf ft
Degree of protection	IP 68
Insulation class	H
Motor efficiency class ref	IE3
Motor size	M15N

*use soft start, inverter or star/delta method to start and stop the pump if the power is greater than or equal to 30 kW.

Construction features

Cooling jacket	-
Main cable **	4G16
Cable length	10 m (32,8 ft)
Mechanical seals	2 in sil.carbide (SiC) in oil chamber
Flushing valve - drilling	-
Drilling variant	PD
Weight*	543.3 kg

* cable and fixing system excluded

** Main cable for standard versions, no FM, no special cable

Monitoring features

Monitoring option	BB
- n.3 bimetal thermal protectors (Klixon) in series	
- n.1 double leakage sensor , mechanical seals chamber and stator housing (1 signal)	
- No bearing thermistors	
- No vibration sensor	

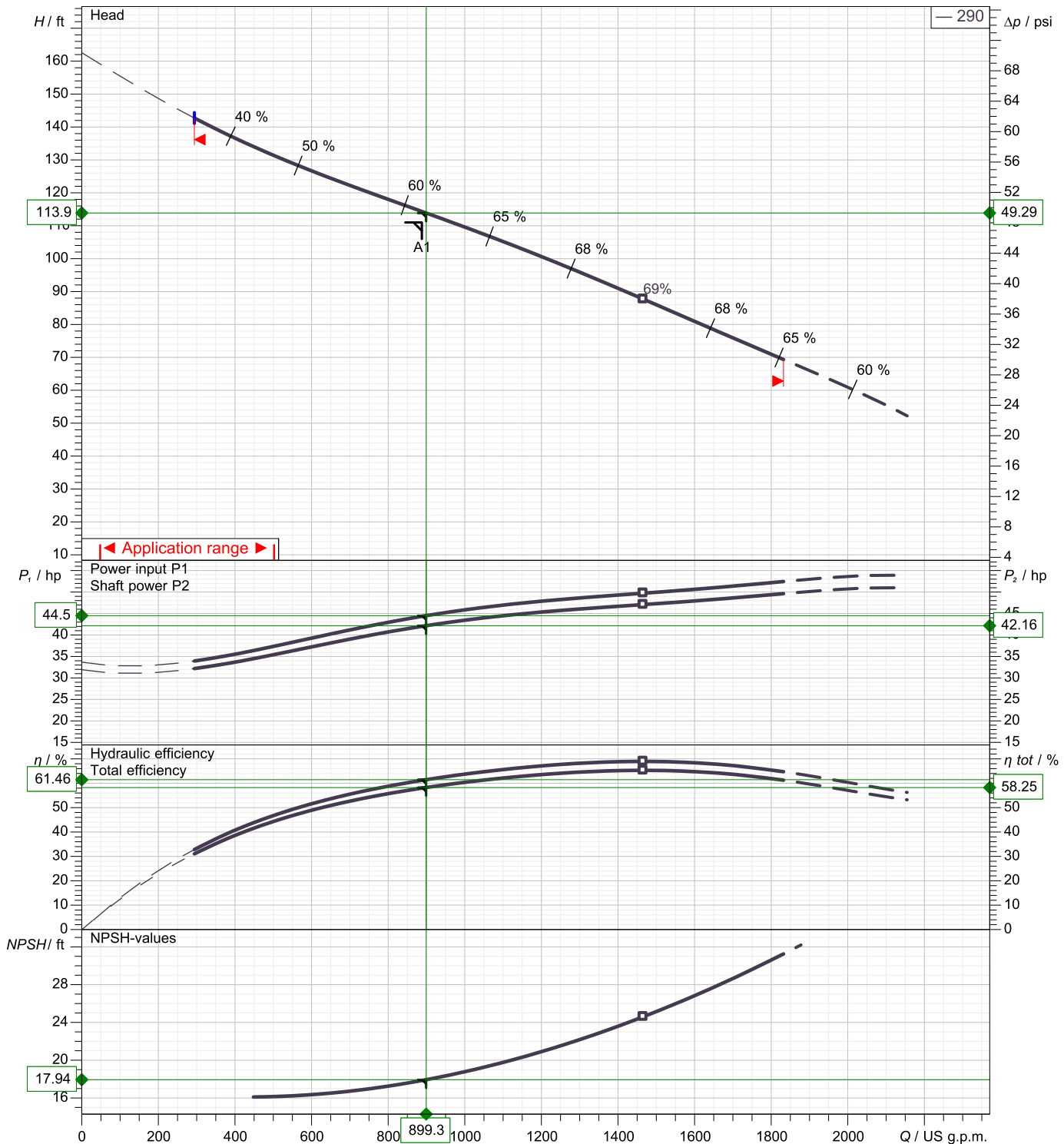
Hydraulic

Free passage	3.15 inch
Impeller type	Open channel impeller
No. of vanes	2
Nominal impeller size	11.4 inch
Max. hydraulic efficiency	69.0 %
Suction	DN 6" UNDRILLED
Discharge	DN 4" ANSI B16.5
Curve tolerance	UNI EN ISO 9906:2012

Pump performance curves

3 ~ 60 Hz

Impeller type Open channel impeller		Nominal impeller size 11.4 inch		Free passage 3.15 inch		Data version 06-11-2018	
Density 62.32 lb/ft³	Viscosity 1.082E-5 ft²/s	No. of vanes 2	Discharge DN 4"		Suction DN 6"		
DUTY POINT							
Flow 899.3 US g.p.m.	Head 113.9 ft	Shaft power P2 42.2 hp	Power input P1 44.5 hp	Hydraulic efficiency 61.5 %	Total efficiency 58.3 %	NPSH 17.9 ft	

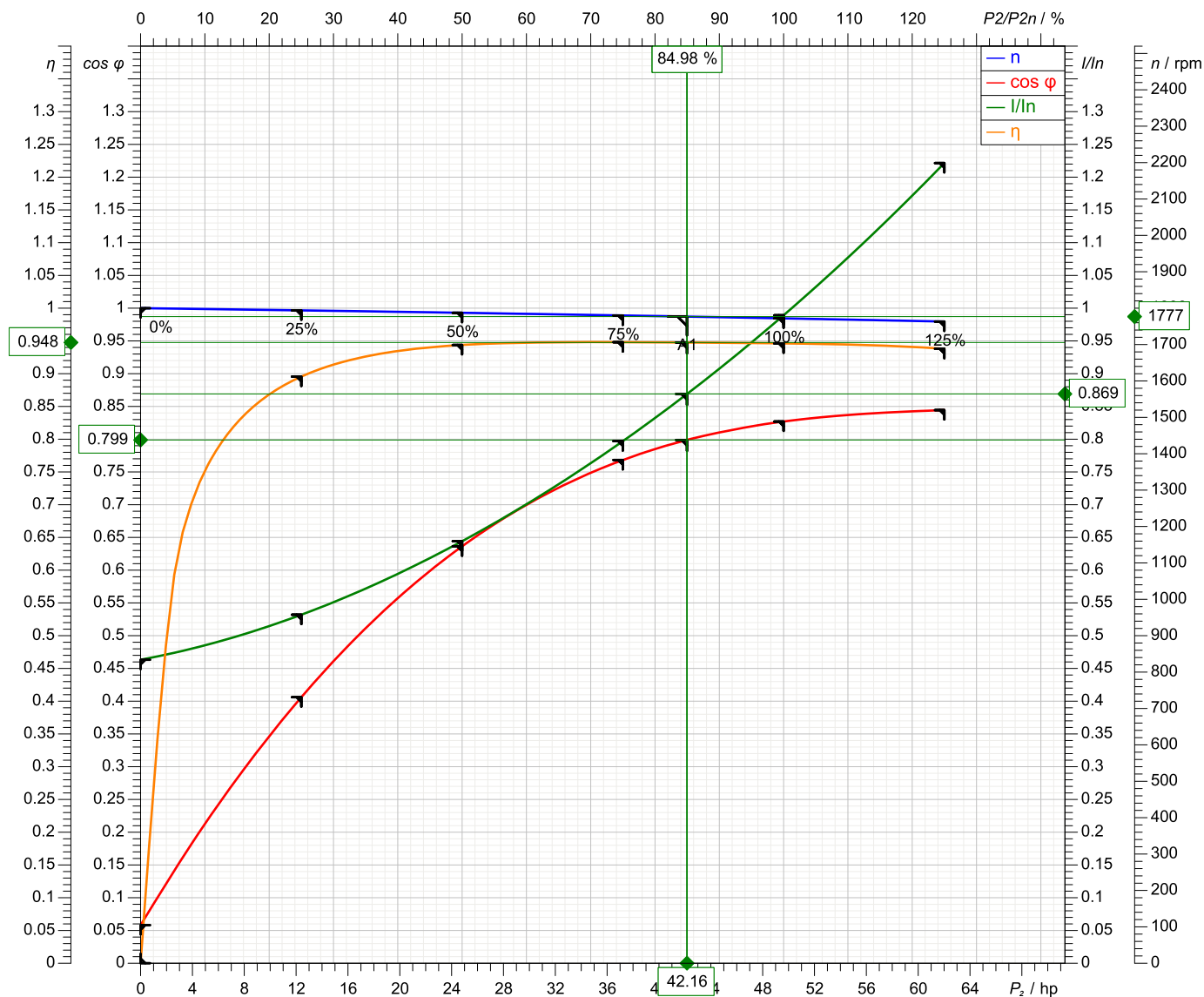


Characteristic curves according to UNI EN ISO 9906:2012 for pumps with standard material combination
P2<10kW: paragraph 4.4.2
10kW<P2<100kW: Grade 3B
P2>100kW: Grade 2B

Motor performance curves

3 ~ 60 Hz

Motor 37/4 AW	Rated power 49.6 hp	Rated voltage 460 V	Motor efficiency 94.5 %
Number of poles 4	Nominal Speed 1772 rpm	Rated current 60.0 A	cos φ 0.83
Starting current 480.0 A	Start Direct starting	Rated torque 147.1 lbf ft	

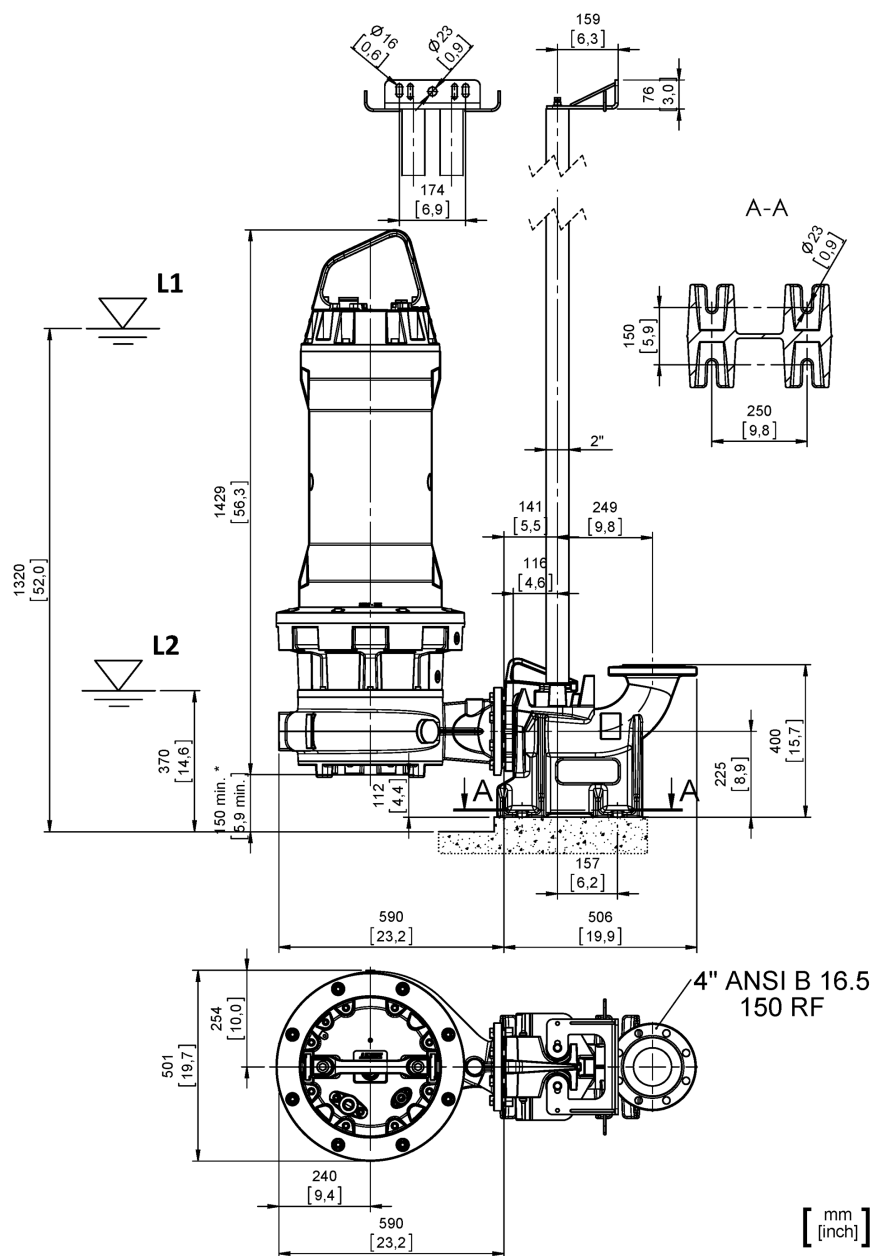


Symbol	No load	25 %	50 %	75 %	100 %	125 %
P ₂ / hp	0	12.4	24.81	37.21	49.62	62.02
P ₁ / hp	1.731	13.85	26.29	39.25	52.44	66.12
n / rpm	1800	1794	1787	1780	1772	1763
cos φ	0.05828	0.4061	0.6364	0.7682	0.8269	0.8444
I / A	27.8	31.92	38.66	47.82	59.35	73.29
s / %	0	0.3391	0.7107	1.117	1.561	2.044
M / lbf ft	0	36.32	72.91	109.8	147.1	184.8
η / %	0	89.55	94.38	94.81	94.62	93.8

Dimensional drawing

3 ~ 60 Hz

Installation type P: bottom coupling device - vertical discharge DN100 - guide pipes 2"		
Wet/dry use WET	Drilling variant PD	Flushing valve - drilling -
Discharge DN 4" ANSI B16.5	Suction DN 6" UNDRILLED	Pressure rating (suction/discharge): -150 lb/sq. in.
Accessory DAC-R 100/100V+KAF 116-2"[AZ] ANSI (P)	Accessory code 9071.100	Accessory variant Inst_Acc_Var
DAC-R 100/100V+KAF 116-2"[XX] AN (P)	9071.154	Spacer for guide tubes in stainless steel
Note: Accessory must be ordered separately		



L1: Minimum operating level for continuous use

L2: Minimum operating level for discontinuous use (excluding -EX/FM models)

* clearance from bottom suggested

The minimum indicated levels do not prevent the formation of vortices and/or cavitation