

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17890
Exam Date: 04/25/2025

1. Current Owner:
BLACK ROCK UTILITIES INC PO BOX 1764 COEUR D ALENE ID 83816-1764
2. Accompanied by: Bradon Agueros – United Crown Pump & Drilling
Phone No: 208-772-7867
Address: 3125 W Hayden Ave, Hayden ID 83835
Relationship to permit Holder: Water System Operator – Utility Manager

3. **SOURCE:**
COEUR D ALENE LAKE

Tributary
SPOKANE RIVER

Method of Determination: Arc Pro GIS and DRG Layer.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-9045	Coeur D Alene Lake	Municipal	License
95-9055	Ground Water	Municipal	License

Comments: Licensed WR 95-9045 uses the same POD(s) and common water system infrastructure as this Permit for municipal use with a diversion rate of 2.5 cfs and annual diversion volume of 1,215.0. This Permit's storage pond and from storage municipal use POU's are overlapped by prior WR 95-9045. This permit seeks to add additional storage capacity but doesn't enlarge the diversion rate nor diversion volume between the two WRs; condition X35 was added to this Permit's conditions of approval describing combined use limits between 95-9045 and 95-17890 to mitigate overlap concerns.

Licensed WR 95-9055 uses a separate GW source(s) than both 95-9045 & 95-17890's surface water source. The Municipal POU is the same for both groundwater system and surface water system, but the two systems do not co-mingle negating concerns for overlap. The ground water system covers "in-dwelling" uses and the surface water system covers external lawn and golf course irrigating. I **don't** recommend inclusion on condition X35 between 95-9055 and 95-17890.

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-9045	Coeur D Alene Lake	Municipal	License

Comments: Licensed Right 95-9045 and this Permit share the same POD(s). I've recommended adding condition F06 to describe the shared PODs between 95-9045 and 95-17890; condition X35 annotated above covers combined use by diversion rate between the two WRs that share common water system infrastructure.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

COEUR D ALENE LAKE L1 (NW¼ NE¼), Sec. 16, Twp 48N, Rge 04W, B.M. KOOTENAI County

Method of Determination: GPS. POD is located at -116°51.7846, 47°30.4458; single intake structure housing two pumps (single POD for licensing purposes).

PLACE OF USE: MUNICIPAL STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
48N	04W	8									X								

PLACE OF USE: MUNICIPAL FROM STORAGE

– POU is linked to a "Large" POU shape in AdHoc and doesn't designate a POU by QQ/Q table legal description breakout.

Method of Determination: beneficial use field examination and Arc Pro GIS mapping software.

3.

☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

☒ Aerial Photo Attached (required for irrigation of 10+ acres).

☒ Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
LAKE PUMP POD*	Hitachi	125	Model No. VTI-KK (8-inch) S/N: G2793005H	Grundfos	Model No. 800S1250-5 (10-inch)
	Hitachi	125	Model No. VTI-KK (8-inch) S/N: G2793005H	Grundfos	Model No. 800S1250-5 (10-inch)

*Note: Pumps operate lead/lag within a single intake structure – single POD on face of License recommended.

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Flowmeter	Flanged Velocity Style	Master Meter	6" MMT	Unknown	6-inch	Unknown

2. Measurements: I utilized a system installed Master Meter flowmeter, 10 x 100 indicator, to record multiple 1-minute cycles that resulted in the largest diversion rate equal to 1,125 gpm or 2.51 cfs considering Department rounding standards.

E. FLOW CALCULATIONS

Measured Method: Flowmeter.

- Permit authorized Diversion to Storage rate of 2.50 cfs.
- Field exam observed largest instantaneous flow rate = 2.51 cfs.
- License recommendation for Diversion to Storage and Maximum Diversion Rate = 2.50 cfs; license is limited by permit authorized rate and the pump system as developed demonstrates sufficient pump capacity to meet the 2.5 cfs as permitted.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A – Municipal beneficial uses do not account for irrigation acreage.
2. Volume Calculations for Other Uses: See attached pond analysis worksheet.
 - Municipal Storage BU volume: review of "as built" pond documents housed in Permit's backfile; 2/11/2020 Lake City Engineering submitted the as-built pond schematics Sheet C-01 – Pond Capacity at maximum operating levels 30.6 af but when filled to "Full" level the pond capacity equals 33.7 af. Based on Permit authorized storage volume equaling 33.1 af the system has capacity to fill to this level considering a 19 ft maximum pond depth considering 2594 ft – 2575 ft pond elevation profile.
 - I developed a department derived pond analysis using the 3.16 ac "Pond Full" surface area, maximum depth of 19 ft with 10.66 average pond depth (varying slopes around pond circumference) and the pond capacity equates to 33.7 af which is the same as the as-built technical specs sheet C-01. I was unable to get an evaporation rate as high as the 7.5 af established at time of filing and the largest rate I'm able to recommend for evaporation is 4.5 af based on Coeur D Alene regional evaporative data retrieved from ET-IDWR's website [ET-IDWR -- Evapotranspiration and Net Irrigation Requirements for Idaho](#) on 2/10/2026. I checked evaporative rates for a) Open water – shallow systems, b) Open water – deep systems, and c) Open water – small stock ponds; the small stock ponds option provided the largest evaporative rate loss, and I used this in my pond analysis computation with evaporation loss rate = 4.5 af annually.
 - Based on my pond analysis calculations I'm able to recommend the **38.2 af** for the Municipal Storage beneficial use.
 - Municipal from Storage volume: the permit authorized up to 33.1 af annually for municipal use from the storage pond annually, which is not considered a multiple fill volume as the permit doesn't authorize multiple fills. I requested annual volume reports for the Right Holder's Lake water municipal irrigation system use; during the exam Braden with United Crown provided volume reporting records demonstrated that each year from 2021 to 2024 the "Lake Irrigation System" diverted 658 af (Yr 2021), 515 af (Yr 2022), and 563 af (Yr 2023).
 - This Permit authorized 33.1 af for Municipal from Storage uses and the annual volume reports demonstrate adequate diversion to fill the storage pond 1 time and deplete it 1 time throughout the year. Much of the Right Holder's Lake irrigation system which incorporates this municipal use is direct flow or distribution to multiple storage ponds covered by prior WR 95-9045.
 - I'm authorized to recommend **33.1 af** for licensing purposes and condition X35 remains on the license to describe combined use between 95-9045 and 95-17890; the combined use limits mitigate overlap enlargement.
 - Maximum Diversion Volume: I've reduced the maximum diversion rate from the 40.6 af permit approved to **38.2 af** at time of licensing. The reduction is specific to evaporative loss rates evaluated after the field exam. I've concluded that the pond analysis worksheet developed at time of application inflated the evaporation loss rate to ensure adequate volume was requested at time of filing.

G. NARRATIVE/REMARKS/COMMENTS

I conducted my initial beneficial use field exam on 4/25/2026 with the Right Holder's representative, Braden Agueros – Utility Manager with United Crown Pump and Drilling, which showed a Coeur D Alene Lake diverting system being used for municipal water use(s). At this time one of the two diverting pumps was inoperable and in the process of being replaced along with pump station SCADA management software program installation. I captured initial information related to the storage pond and pump station components but deferred gaining flow measurements until the diverting system was fully operational.

I performed a 2nd site visit on 7/31 with Mr. Agueros to evaluate the diverting works from the Lake. During the Permit's development period, which closed on 12/30/2024, two 100 hp submersible pumps were system installed; once repairs were complete, I identified that 1 of 2 pumps was replaced on 5/5/2025 (ref invoice attached) with a 125 hp Grundfos pump, and on 6/8/2025 the 2nd pump was replaced with a 125 hp Grundfos pump. Mr. Agueros asserts that each 125 hp pump has been limited by Hz setting to mirror the original 100 hp pump(s) performance capacity.

The POD currently consists of a single large intake containment which houses two each 125 hp submersible pumps coupled with same hp pump motors. Pumping is accomplished in a lead/lag system, but Mr. Agueros asserts that if both were pumped simultaneously the max capacity for each pump would be reduced (competing pump push in single conveyance pipe) to not exceed the authorized 2.5 cfs diversion rate. Based on this information and observed diverting rates during the exam I recommend maintaining the single POD for licensing purposes.

From the lake front POD site, a 6-inch water main conveyance pipeline routes along a roadway to a halfway point pump station which houses a vaulted section of water main with system installed Master Meter flanged velocity style flowmeter. I used the system installed meter to evaluate flow measurements with the largest 1-minute period equating to 1,125 gpm or 2.51 cfs. I'm authorized to recommend **2.5 cfs** for licensing purposes which was the Permit authorized maximum diversion rate. The maximum diversion rate is the same as the Diversion to Storage beneficial use rate recommended for licensing.

This permit was proposed in order to impound lake water which normally would be stored in several other ponds incorporated in the municipal provider's golf course and service area irrigation system while historic pond(s) impermeable liners are being replaced. The Permit doesn't authorize multiple fills rather seeks to impound sufficient water to replace other ponds during this maintenance period. During the exam Mr. Agueros provided a detailed tour of the facilities involved in POD pump station, mid-point pump station, and impoundment pond and co-located pump station; I took photographs throughout the process and annotated field map sketches of the approximate pathway of main service pipeline to add to my beneficial use report.

The Municipal Storage POU consists of an engineering planned and constructed pond with impermeable liner to prevent seepage loss. The as-built technical specification sheets were reviewed (available in WR backfile) and I identified the storage pond was constructed to a pond full surface area of 3.16 cfs and I've calculated a 19 ft maximum depth. The pond's capacity equals 33.7 af and annual evaporation loss rates are determined to be 4.5 af with annual pond volume = **38.2 af** which is recommended for licensing. Pumping at 2.5 cfs if the water system diverted 24 hrs. per day the storage pond would be filled in less than 8 days' time each spring. This volume is slightly less than the 40.6 af that was permit approved and the reduction is specific to evaporation loss rates being higher at time of exam based on pond analysis worksheet results derived in 2019. It's unclear whether climate changes have resulted in this change in evaporation loss rates, or if staff at that time used different weather station data but the result is negligible considering the lower municipal from storage volume authorized by permit and subsequent license recommendation.

Three transfer pumps use dry wells with intake pipes from the pond to convey water to their respective Municipal from Storage uses throughout the season of use primarily for golf course and residential irrigation uses covered under the municipal provider's service area. The system pumping components are newly installed and use a sophisticated SCADA water management program. The permit restricts annual volume from storage use to 33.1 af; during the field exam Mr. Agueros provided Lake irrigation system main flow meter volumetric data reporting for several years within the Permit's development period that demonstrate the total diverting system achieves larger annual volumes than 33.1 af but within the 1,215 af authorized by prior Right 95-9045. Based on these records I've recommended **33.1 af** for Municipal from Storage

2. Recommended Amendments

_____ Change P.D. as reflected above _____ Add P.D. as reflected above X None

_____ Change P.U. as reflected above _____ Add P.U. as reflected above X None

I. AUTHENTICATION

Luke Bates – Sr Water Resource Agent

Field Examiner's Name



Date

2/16/2026

Reviewer

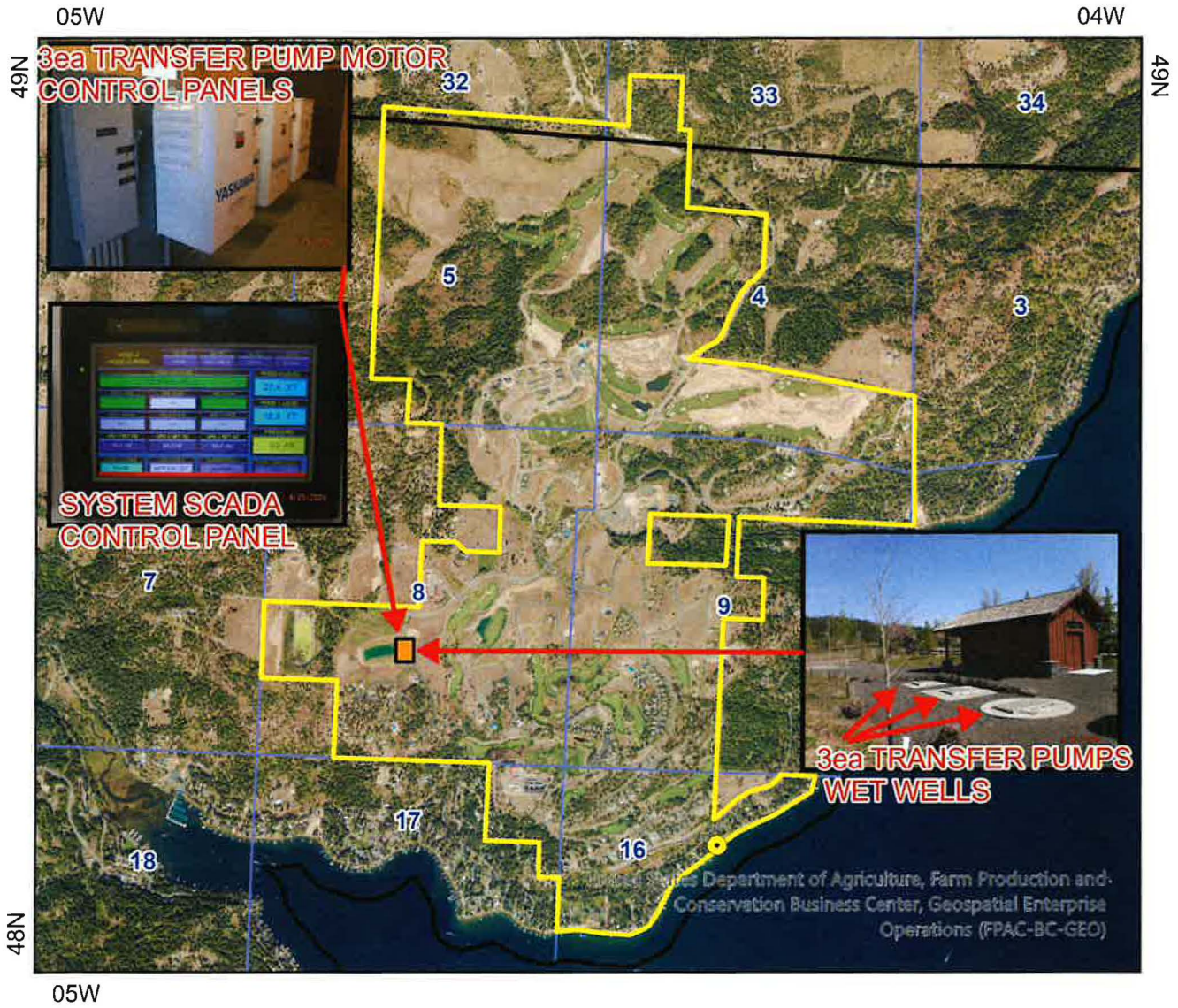


Date

8/7/2026

Attachment to Field Exam

This map depicts the MUNICIPAL FROM STORAGE system diagram. Pump station with 3ea from storage transfer pumps operated using SCADA system.



-  Point of Diversion
  Townships
 Place Of Use Boundary
  Sections



A horizontal number line representing distance in miles. The line starts at 0 and has tick marks at 0.45, 0.9, 1.35, and 1.8. The segments between these marks are shaded: the segment from 0 to 0.45 is black, from 0.45 to 0.9 is white, from 0.9 to 1.35 is black, and from 1.35 to 1.8 is white. The word "Miles" is written at the right end of the line.

IDAHO DEPARTMENT OF
WATER RESOURCES



PUMP & DRILLING

3125 W. Hayden Ave. Hayden, ID 83835
Phone (208) 772-7867 Fax (208) 772-7229
Unitedcrown.com

INVOICE

Invoice Number: 108438

Date 6/27/2025

Terms: Due on Receipt

Service Location

Address: Lake Pump

City:

Job/Well #

Purchase Order

Black Rock Utilities

PO Box 1764

Coeur d' Alene, ID 83816

(208) 699-7867 Cell Rich Agueros

Page 1 of 2

5/2/25: Prepped site for installation of new electrical and replacement of both lake pumps.

5/5/25: Replaced lake pump #1, swapped out electrical panel, started wiring up the new panel.

5/6/25: Finished wiring up new panel. Finished plumbing on pump #1 and ran pump #1.

5/7/25: Replaced pump #2. Fired up pump #2 and with both pumps running total flow roughly 1100-1200GPM. Attempted to wire up transformer for 120-240v devices that use panel power, but encountered a problem. New transformer is on order. It will be replaced and circuits online once new device is in hand.

Note: Job came in under estimate of \$200,717.00. Fencing & concrete that were in the estimate were left out and to be completed at a later date. Also, figured out how to do job without crane service. Transformer was supplied to another electrician to get wired up (Black Rock Golf uses the panel for 120-240v devices).

Quantity	Item
1.00	Misc Parts & Material
280.00	00/2 WG Flat Jacket Wire
1.00	Welding Supplies
1.00	Yaskawa General
1.00	ACM 15KVA Transformer
1.00	Electrical Permit Commercial
★ 2.00	Hitachi 125 hp motor 460v 3 ph 8" mtr
1.00	Confined Space Safety and Monitoring Equipment
12.00	Custom Pipe 6" NPT Coupling Carbon Steel
★ 2.00	Grundfos 800GPM 125HP 10" Pump End
8.00	Admin Time
8.00	Diver Time
2.00	Diver Set Up Charge

Thank you for the opportunity to work for you.

Project Manager

This invoice due and payable upon receipt. Invoices not paid within 10 days will accrue interest at a rate of 1.5% per month.



PUMP & DRILLING
3125 W. Hayden Ave. Hayden, ID 83835
Phone (208) 772-7867 Fax (208) 772-7229
Unitedcrown.com

INVOICE

Invoice Number: 108560

Date 6/27/2025

Terms: Due on Receipt

Black Rock Utilities

PO Box 1764
Coeur d' Alene, ID 83816

(208) 699-7867 Cell Rich Agueros

Service Location

Address: Lake Pump

City:

Job/Well #

Purchase Order

Page 1 of 2

5/22/25: Site visit to understand why lower flow on lake pump system. Found lake pump #2 pulling 125/160 amps & not moving any water through the meter. Combined GPM of both pumps was 1100-1200GPM after installation. But, system is only producing 600GPM now. Checked rotation & valving. Further testing is needed.

5/27/25: Contracted with diver to inspect the lake pump intake structure. Structure looks ok.

6/5/25: Removed old check valve & installed new one in vault on pump #2. Looked over other parts of the system, could find nothing causing low amps & no flow. Pump will need to be pulled to determine if it is faulty.

6/6/25: Further inspection of the lake pump intake structure. Again, no visible issues.

6/8/25 (Sunday): Pulled pump #2 and found that several couplings on the piping (existing) of the pump system had failed and piping pulled apart. New pump & motor that had been installed May 7 were not the issue.

6/9/25: Shop work prepping for re-install of pump #2.

★ 6/10/25: Installed pump #2. Both pumps are back online working. System is again moving 1100-1200GPM.

Quantity	Item
1.00	Misc Parts & Material
100.00	6" Galvanized pipe
120.00	2/0 Flat Jacket Cable
8.00	Pipe wrap 10 mil 2" black tape - 100'
3.00	Elec- #2/0 Butt Connection
4.00	Elec- #4 butt connection
12.00	Custom Pipe 6" NPT Coupling Carbon Steel
6.00	6" Cut Charge
5.00	6" Pipe thread charge
1.00	Confined Space Safety and Monitoring Equipment
2.00	Elec- 3/16X4FT HEAT SHRINKABLE TUBING
1.00	6" Flomatic wafer check VFD

Thank you for the opportunity to work for you.

Project Manager

This invoice due and payable upon receipt. Invoices not paid within 10 days will accrue interest at a rate of 1.5% per month.

- Data From Email Correspondence Dated 7/29/2025
Sent By Braden Agueros - United Crown (Water System Operator)

LAKE IRRIGATION SYSTEM
2 x 100HP SUBMERSIBLES - PUMP #2

LAKE IRRIGATION SYSTEM
MAIN FLOW METER

Reading Date	Number of Days	ETHM Reading	ETHM Hours	Average Hours Per Day	Average Cycles Per Day	Reading Date	Number of Days	Flow Meter	Gallons Pumped	Average Gallons Per Day
1/4/2021	#REF!	40,494.62	#REF!	#REF!	8,384	* 1/4/2021	#REF!	259,878,000	#REF!	#REF!
2/2/2021	29	40,494.62	0.00	0.00	8,384	2/2/2021	29	259,878,000	0	0.00
3/1/2021	27	40,494.62	0.00	0.00	8,384	3/1/2021	27	259,878,000	0	0.00
4/5/2021	35	40,494.62	0.00	0.00	8,384	4/5/2021	35	259,878,000	0	0.00
5/3/2021	28	40,684.10	189.48	6.77	8,398	5/3/2021	28	272,347,000	12,469,000	445,321.43
6/1/2021	29	41,146.53	462.43	15.95	8,452	6/1/2021	29	304,387,000	32,040,000	1,104,827.59
7/1/2021	30	41,795.09	648.56	21.62	8,479	7/1/2021	30	348,325,000	43,938,000	1,464,600.00
8/2/2021	32	42,559.14	764.05	23.88	8,482	8/2/2021	32	399,871,000	51,546,000	1,610,812.50
9/1/2021	30	43,125.73	566.59	18.89	8,486	9/1/2021	30	436,102,000	36,231,000	1,207,700.00
10/1/2021	30	43,507.39	381.66	12.72	8,513	10/1/2021	30	462,028,000	25,926,000	864,200.00
11/1/2021	31	43,664.57	157.18	5.07	8,527	11/1/2021	31	472,740,000	10,712,000	345,548.39
12/1/2021	30	43,683.22	18.65	0.62	8,530	12/1/2021	30	474,030,000	1,290,000	43,000.00
1/3/2022	33	43,690.89	7.67	0.23	8,531	* 1/3/2022	33	474,332,000	302,000	9,151.52
2/1/2022	29	43,690.91	0.02	0.00	8,532	2/1/2022	29	474,333,000	1,000	34.48
3/2/2022	29	43,690.91	0.00	0.00	8,532	3/2/2022	29	474,333,000	0	0.00
4/2/2022	31	43,690.91	0.00	0.00	8,532	4/2/2022	31	474,333,000	0	0.00
5/2/2022	30	43,751.50	60.59	2.02	8,738	5/2/2022	30	478,311,000	3,978,000	132,600.00
6/1/2022	30	43,780.34	28.84	0.96	8,740	6/1/2022	30	487,329,000	9,018,000	300,600.00
7/1/2022	30	43,851.66	71.32	2.38	8,741	7/1/2022	30	506,753,000	19,424,000	647,466.67
8/2/2022	32	44,500.02	648.36	20.26	8,764	8/2/2022	32	551,450,000	44,697,000	1,396,781
9/1/2022	30	45,221.28	721.26	24.04	8,764	9/1/2022	30	600,867,000	49,417,000	1,647,233
10/4/2022	33	45,677.89	456.61	13.84	8,800	10/4/2022	33	632,027,000	31,160,000	944,242
11/1/2022	28	45,822.96	145.07	5.18	8,830	11/1/2022	28	641,895,000	9,868,000	352,429
12/1/2022	30	45,824.46	1.50	0.05	8,853	12/1/2022	30	641,962,000	67,000	2,233
1/4/2023	34	45,825.55	1.09	0.03	8,875	* 1/4/2023	34	641,996,000	34,000	1,000
2/2/2023	29	45,825.55	0.00	0.00	8,875	2/2/2023	29	641,996,000	0	0
3/1/2023	27	45,825.55	0.00	0.00	8,875	3/1/2023	27	641,996,000	0	0
4/3/2023	33	45,825.55	0.00	0.00	8,875	4/3/2023	33	641,996,000	0	0
5/1/2023	28	45,850.08	24.53	0.88	8,881	5/1/2023	28	643,633,000	1,637,000	58,464
6/5/2023	35	46,194.11	344.03	9.83	8,977	6/5/2023	35	668,374,000	24,741,000	706,886
7/5/2023	30	46,775.15	581.04	19.37	8,996	7/5/2023	30	707,502,000	39,128,000	1,304,267
8/2/2023	28	47,451.03	675.88	24.14	8,996	8/2/2023	28	753,576,000	46,074,000	1,645,500
9/1/2023	30	48,071.15	620.12	20.67	9,008	9/1/2023	30	796,654,000	43,078,000	1,435,933
10/2/2023	31	48,385.08	313.93	10.13	9,051	10/2/2023	31	818,704,000	22,050,000	711,290
11/1/2023	30	48,481.78	96.70	3.22	9,070	11/1/2023	30	825,403,000	6,699,000	223,300
12/1/2023	30	48,481.78	0.00	0.00	9,070	12/1/2023	30	825,403,000	0	0
1/2/2024	32	48,481.78	0.00	0.00	9,070	* 1/2/2024	32	825,403,000	0	0
2/1/2024	30	48,481.78	0.00	0.00	9,070	2/1/2024	30	825,403,000	0	0
3/1/2024	29	48,481.78	0.00	0.00	9,070	3/1/2024	29	825,403,000	0	0
3/29/2024	28	48,481.78	0.00	0.00	9,070	3/29/2024	28	825,403,000	0	0
5/1/2024	33	48,524.62	42.84	1.30	9,079	5/1/2024	33	828,386,000	2,983,000	90,394
6/1/2024	31	48,767.26	242.64	7.83	9,152	6/1/2024	31	845,206,000	16,820,000	542,581
7/2/2024	31	49,271.51	504.25	16.27	9,237	7/2/2024	31	879,286,000	34,080,000	1,099,355
8/2/2024	31	50,017.00	745.49	24.05	9,237	8/2/2024	31	930,367,000	51,081,000	1,647,774
9/4/2024	33	50,658.47	641.47	19.44	9,250	9/4/2024	33	980,174,000	49,807,000	1,509,303
10/7/2024	33	51,189.45	530.98	16.09	9,308	10/7/2024	33	17,244,000	-962,930,000	-29,179,697
11/1/2024	25	51,238.37	48.92	1.96	9,319	11/1/2024	25	30,739,000	13,495,000	539,800
12/2/2024	31	51,238.37	0.00	0.00	9,319	12/2/2024	31	30,739,000	0	0
1/2/2025	31	51,238.37	0.00	0.00	9,319	1/2/2025	31	31,339,000	600,000	19,355
2/3/2025	32	51,238.37	0.00	0.00	9,319	2/3/2025	32	31,339,000	0	0
3/4/2025	29	51,238.37	0.00	0.00	9,319	3/4/2025	29	31,339,000	0	0
4/1/2025	28	51,238.37	0.00	0.00	9,319	4/1/2025	28	31,423,000	84,000	3,000
5/6/2025	35	51,238.37	0.00	0.00	9,319	5/6/2025	35	41,311,000	9,888,000	282,514
6/3/2025	28	251.00	-50,987.37	-1,820.98	35	6/3/2025	28	69,556,000	28,245,000	1,008,750
7/2/2025	29	772.00	521.00	17.97	62	7/2/2025	29	116,426,000	46,870,000	1,616,207

6/3/25: New equipment installed therefore the readings are off.

9/2024: Lake pump replaced

12/2/24: Removed lake pump #2 for in-house changes.

1/2/25: Power shut down by KEC. When turned back on pond #4 called for water to recover.

6/1/2022: Surge protector is bad. 7/1/2022 - Repaired

Main Flow meter Volumetric Reporting (gallons)

$$\begin{aligned} \square 2\phi 21 & - 474,332,000 - 259,878,000 = 214,454,000 \text{ GAL} = 658.0 \text{ af} \\ \square 2\phi 22 & - 641,996,000 - 474,332,000 = 167,664,000 \text{ GAL} = 515 \text{ af} \\ \square 2\phi 23 & - 825,403,000 - 641,996,000 = 183,407,000 \text{ GAL} = 563 \text{ af} \end{aligned}$$

(GAL/325,850 gal = acre-feet) at 999,999,999

meter reset

BOOSTER PUMPS - POTABLE
4 x 10HP QUADRAPLEX - PUMP #4

LAKE IRRIGATION SYSTEM
2 x 100HP SUBMERSIBLES - PUMP #1

Reading Date	Number of Days	ETHM Reading	ETHM Hours	Average Hours Per Day	Average Cycles Per Day	Reading Date	Number of Days	ETHM Reading	ETHM Hours	Average Hours Per Day	Average Cycles Per Day
1/4/2021	#REF!	3,590.89	#REF!	#REF!	65,249	#REF!	1/4/2021	#REF!	39,860.21	#REF!	#REF!
2/2/2021	29	3,631.51	40.62	1.40	66,129	30	2/2/2021	29	39,860.21	0.00	0.00
3/1/2021	27	3,682.35	50.84	1.88	67,380	46	3/1/2021	27	39,860.21	0.00	0.00
4/5/2021	35	3,738.97	56.62	1.62	68,671	37	4/5/2021	35	39,860.21	0.00	0.00
5/3/2021	28	3,814.36	75.39	2.69	69,506	30	5/3/2021	28	40,050.45	190.24	6.79
6/1/2021	29	3,928.16	113.80	3.92	70,594	38	6/1/2021	29	40,529.63	479.18	16.52
7/1/2021	30	4,107.76	179.60	5.99	71,568	32	7/1/2021	30	41,179.70	650.07	21.67
8/2/2021	32	4,317.30	209.54	6.55	72,613	33	8/2/2021	32	41,943.73	764.03	23.88
9/1/2021	30	4,497.90	180.60	6.02	73,663	35	9/1/2021	30	42,445.17	501.44	16.71
10/1/2021	30	4,629.39	131.49	4.38	74,637	32	10/1/2021	30	42,826.28	381.11	12.70
11/1/2021	31	4,723.14	93.75	3.02	76,020	45	11/1/2021	31	42,983.27	156.99	5.06
12/1/2021	30	4,796.35	73.21	2.44	77,945	64	12/1/2021	30	43,001.89	18.62	0.62
1/3/2022	33	4,879.92	83.57	2.53	79,488	47	1/3/2022	33	43,005.40	3.51	0.11
2/1/2022	29	4,950.35	70.43	2.43	80,909	49	2/1/2022	29	43,005.43	0.03	0.00
3/2/2022	29	5,015.03	64.68	2.23	82,199	44	3/2/2022	29	43,005.43	0.00	0.00
4/2/2022	31	5,063.45	48.42	1.56	83,360	37	4/2/2022	31	43,005.43	0.00	0.00
5/2/2022	30	5,146.78	83.33	2.78	84,283	31	5/2/2022	30	43,065.93	60.50	2.02
6/1/2022	30	5,251.05	104.27	3.48	85,193	30	6/1/2022	30	43,286.32	220.39	7.35
7/1/2022	30	5,353.86	102.81	3.43	86,316	37	7/1/2022	30	43,737.67	451.35	15.05
8/2/2022	32	5,536.17	182.31	5.70	87,257	29	8/2/2022	32	44,403.77	666.10	20.82
9/1/2022	30	5,685.07	148.90	4.96	88,119	29	9/1/2022	30	45,125.03	721.26	24.04
10/4/2022	33	5,822.80	137.73	4.17	89,209	33	10/4/2022	33	45,581.07	456.04	13.82
11/1/2022	28	5,886.32	63.52	2.27	90,201	35	11/1/2022	28	45,725.67	144.60	5.16
12/1/2022	30	5,960.89	74.57	2.49	91,789	53	12/1/2022	30	45,726.58	0.91	0.03
1/4/2023	34	6,088.91	128.02	3.77	93,443	49	1/4/2023	34	45,727.13	0.55	0.02
2/2/2023	29	6,161.92	73.01	2.52	94,954	52	2/2/2023	29	45,727.13	0.00	0.00
3/1/2023	27	6,210.14	48.22	1.79	96,064	41	3/1/2023	27	45,727.13	0.00	0.00
4/3/2023	33	6,251.21	41.07	1.24	97,180	34	4/3/2023	33	45,727.13	0.00	0.00
5/1/2023	28	6,312.04	60.83	2.17	98,253	38	5/1/2023	28	45,751.33	24.20	0.86
6/5/2023	35	6,435.65	123.61	3.53	99,709	42	6/5/2023	35	46,128.79	377.46	10.78
7/5/2023	30	6,602.07	166.42	5.55	100,400	23	7/5/2023	30	46,692.12	563.33	18.78
8/2/2023	28	6,775.84	173.77	6.21	101,270	31	8/2/2023	28	47,368.01	675.89	24.14
9/1/2023	30	6,927.68	151.84	5.06	102,367	37	9/1/2023	30	47,987.96	619.95	20.66
10/2/2023	31	7,033.40	105.72	3.41	103,626	41	10/2/2023	31	48,301.79	313.83	10.12
11/1/2023	30	7,080.82	47.42	1.58	104,867	41	11/1/2023	30	48,397.59	95.80	3.19
12/1/2023	30	7,113.62	32.80	1.09	105,764	30	12/1/2023	30	48,397.59	0.00	0.00
1/2/2024	32	7,139.14	25.52	0.80	106,533	24	1/2/2024	32	48,397.59	0.00	0.00
2/1/2024	30	7,194.89	55.75	1.86	107,817	43	2/1/2024	30	48,397.59	0.00	0.00
3/1/2024	29	7,221.39	26.50	0.91	108,463	22	3/1/2024	29	48,397.59	0.00	0.00
3/29/2024	28	7,240.01	18.62	0.66	108,788	12	3/29/2024	28	48,397.59	0.00	0.00
5/1/2024	33	7,278.07	38.06	1.15	109,330	16	5/1/2024	33	48,440.29	42.70	1.29
6/1/2024	31	7,355.63	77.56	2.50	110,201	28	6/1/2024	31	48,680.38	240.09	7.74
7/2/2024	31	7,485.62	129.99	4.19	111,263	34	7/2/2024	31	49,182.91	502.53	16.21
8/2/2024	31	7,659.99	174.37	5.62	112,146	28	8/2/2024	31	49,928.40	745.49	24.05
9/4/2024	33	7,799.19	139.20	4.22	113,283	34	9/4/2024	33	50,716.61	788.21	23.89
10/7/2024	33	7,938.73	139.54	4.23	114,391	34	10/7/2024	33	51,246.67	530.06	16.06
11/1/2024	25	7,964.18	25.45	1.02	114,923	21	11/1/2024	25	51,552.71	306.04	12.24
12/2/2024	31	7,994.64	30.46	0.98	115,647	23	12/2/2024	31	51,552.71	0.00	0.00
1/2/2025	31	8,029.25	34.61	1.12	116,305	21	1/2/2025	31	51,570.27	17.56	0.57
2/3/2025	32	8,057.32	28.07	0.88	117,013	22	2/3/2025	32	51,570.27	0.00	0.00
3/4/2025	29	8,095.88	38.56	1.33	118,042	35	3/4/2025	29	51,570.27	0.00	0.00
4/1/2025	28	25.00	-8,070.88	-288.25	1,382	4,166	4/1/2025	28	51,572.60	2.33	0.08
5/6/2025	35	116.00	91.00	2.60	5,247	110	5/6/2025	35	51,827.01	254.41	7.27
6/3/2025	28	155.00	39.00	1.39	6,589	48	6/3/2025	28	546.00	-51,281.01	-1,831.46
7/2/2025	29	155.00	0.00	0.00	6,589	0	7/2/2025	29	1,229.00	683.00	23.55

4/1/2025: New booster pumps installed

6/3/25 New equipment installed therefore the readings are off

Total Storage Calculations

FILE NUMBER	95-17890
REVIEWER	LUKE BATES
DATE	2/9/2026

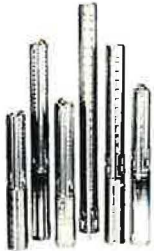
This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	3.16	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	10.659	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	33.68244	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.
Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	0	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	4.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	38.2	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

Submittal Data

PROJECT: _____	UNIT TAG: _____	QUANTITY: _____
REPRESENTATIVE: _____	TYPE OF SERVICE: _____	DATE: _____
ENGINEER: _____	SUBMITTED BY: _____	DATE: _____
CONTRACTOR: _____	APPROVED BY: _____	DATE: _____
	ORDER NO.: _____	DATE: _____



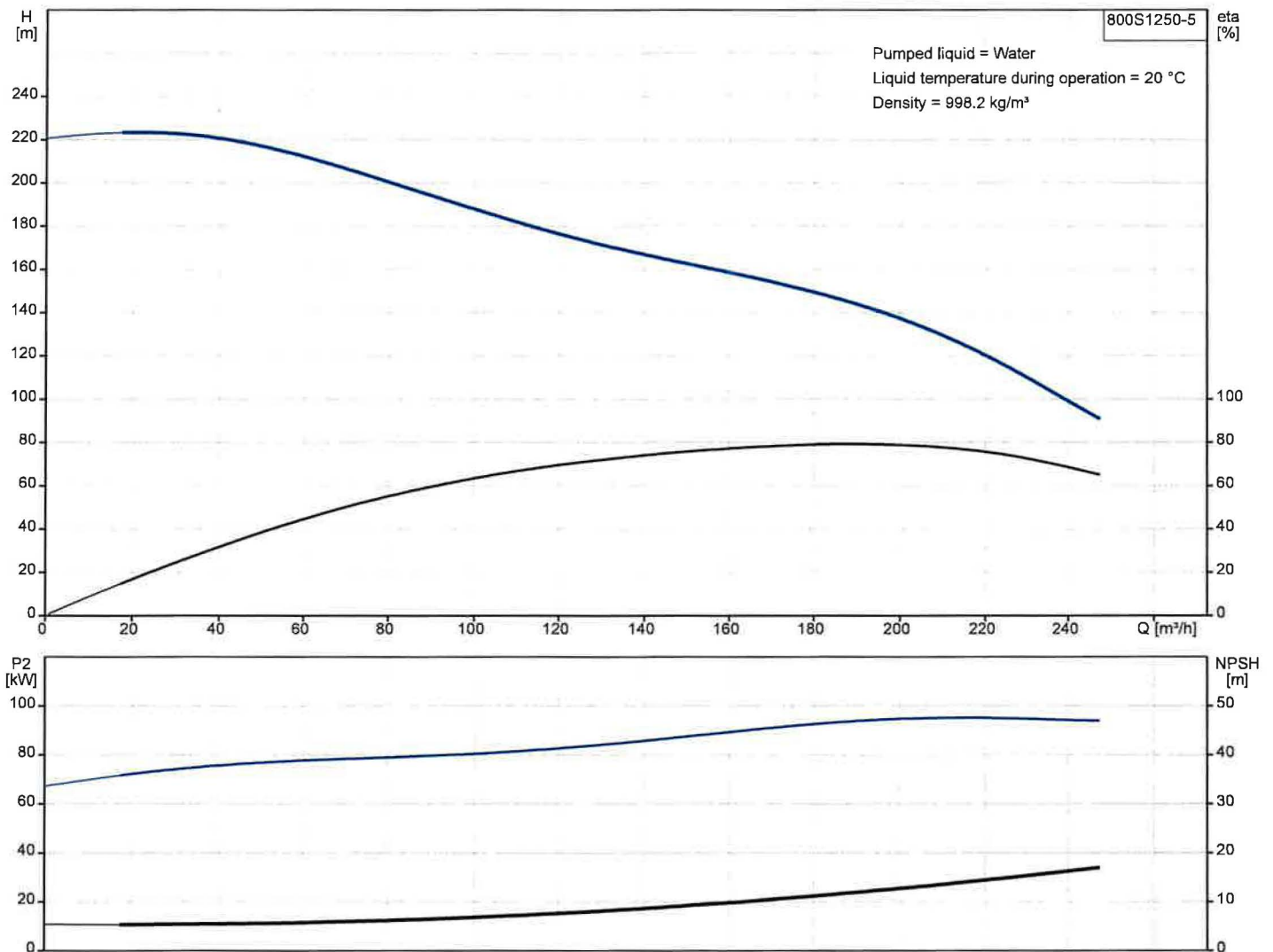
800S1250-5

HP

Submersible pumps in stainless steel. EN 1.4301 (AISI 304). EN 1.4401 (AISI 316). EN 1.4539 (AISI 904L). Typical application: Ground water, Irrigation, Mining, Fountain, Off-shore etc.

Note! Product picture may differ from actual product

Conditions of Service		Pump Data		Motor Data	
Liquid:	Water	Liquid temperature range:	-15 .. 60 °C	Mains frequency:	60 Hz
Temperature:	20 °C	Product number:	On request		
Specific Gravity:	1.000				



Qty. Description

1 800S1250-5

HP



Note! Product picture may differ from actual product

Product No.: On request

Pump without motor

Multi-stage submersible pump for raw water supply, groundwater lowering and pressure boosting. The pump is suitable for pumping clean, thin, non-aggressive liquids without solid particles or fibres.

Liquid:

Pumped liquid: Water

Liquid temperature range: -15 .. 60 °C

Selected liquid temperature: 20 °C

Density: 998.2 kg/m³

Technical:

Pump speed on which pump data are based: 3450 rpm

Rated flow: 192 m³/h

Rated head: 142 m

Approvals: CULDWUS, CCSAUS

Approvals for drinking water: PROP65

Curve tolerance: ISO9906:2012 3B

Return valve: YES

Materials:

Pump: Stainless steel

EN 1.4301

AISI 304

Impeller:

Stainless steel

EN 1.4301

AISI 304

Installation:

Maximum operating pressure: 60 bar

Maximum outlet pressure: 16.2 bar

Type of connection: NPT(F)

Size of connection: 6 inch

Motor diameter: 8 inch

Minimum borehole diameter: 225 mm

Electrical data:

Motor flange design: Grundfos

Power (P2) required by pump: 92 kW

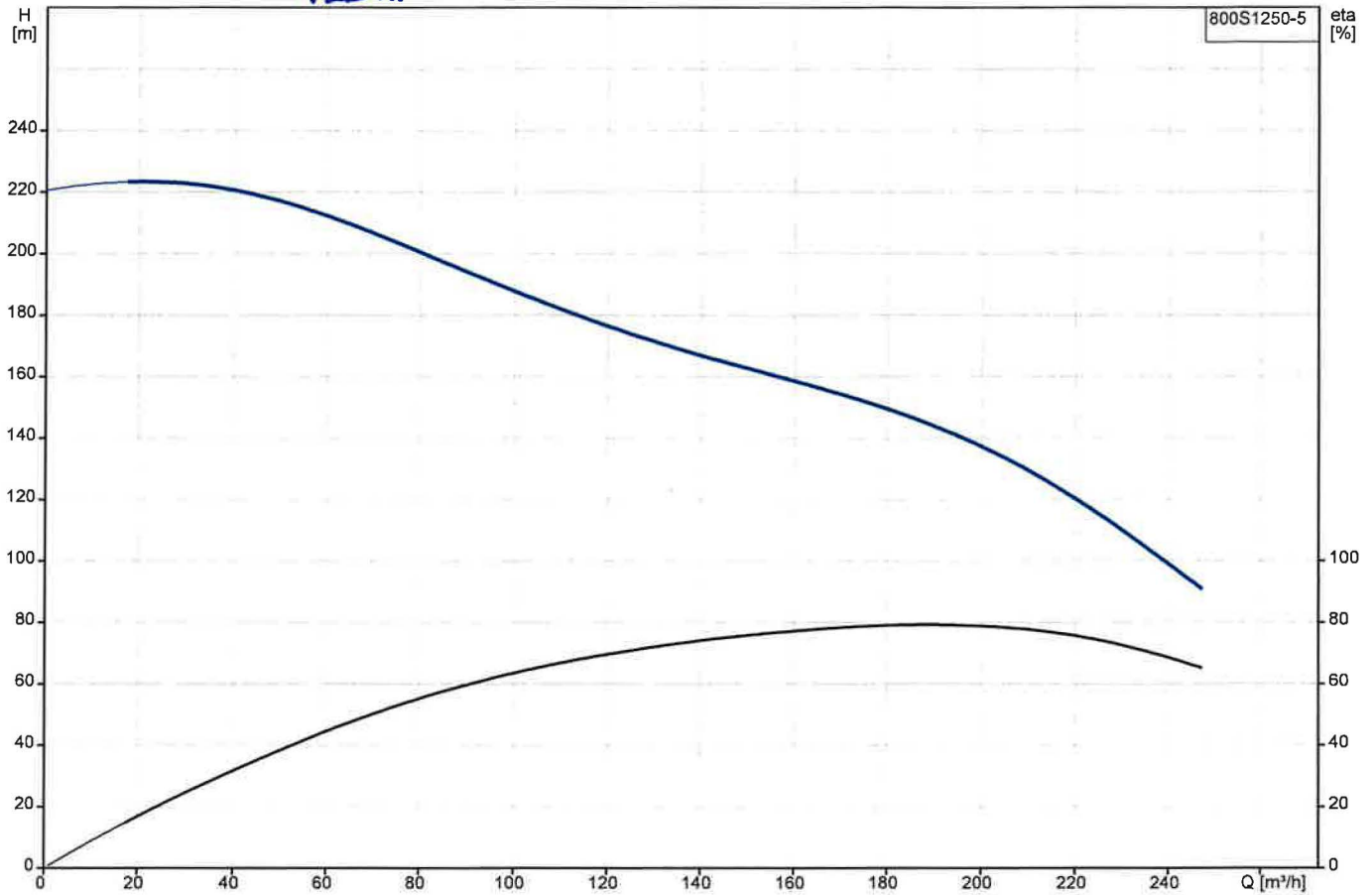
Others:

Minimum efficiency index, MEI ≥: --

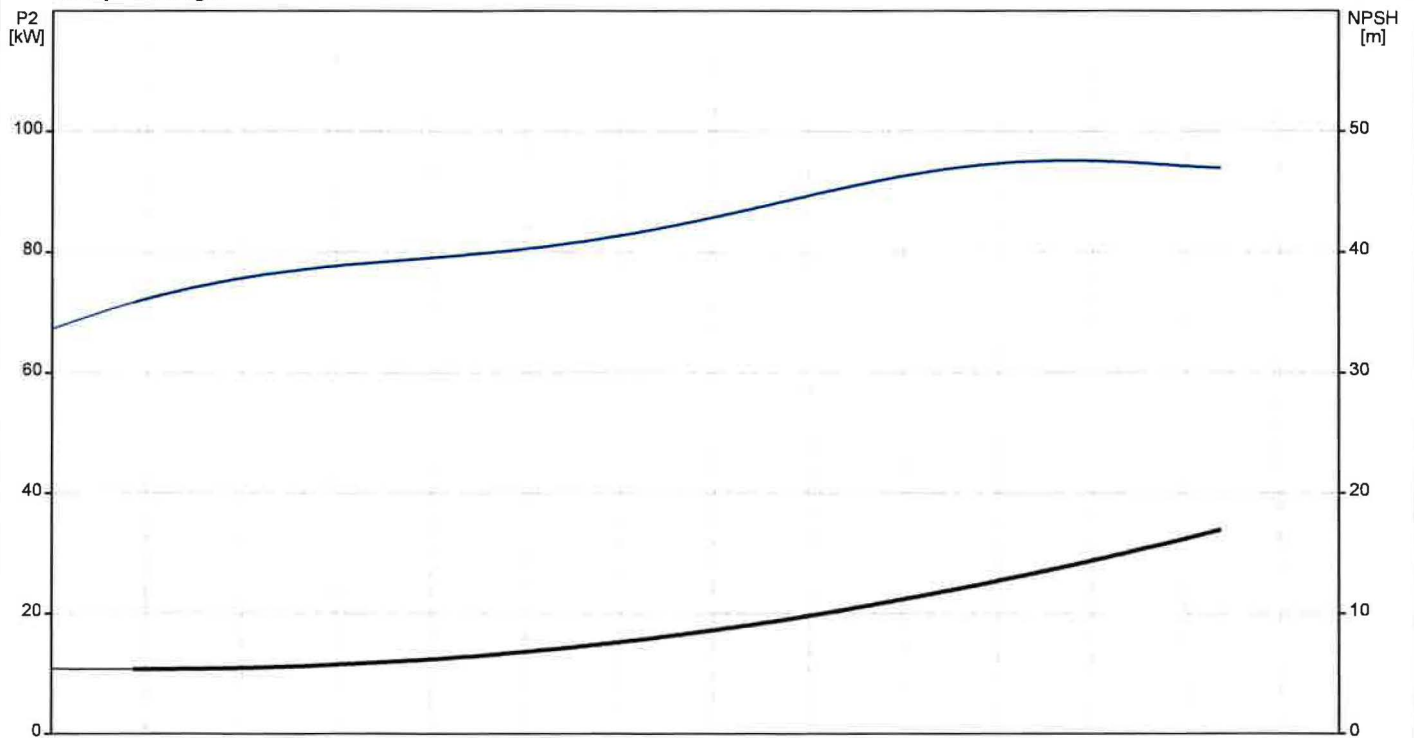
Net weight: 61 kg

On request 800S1250-5 60 Hz

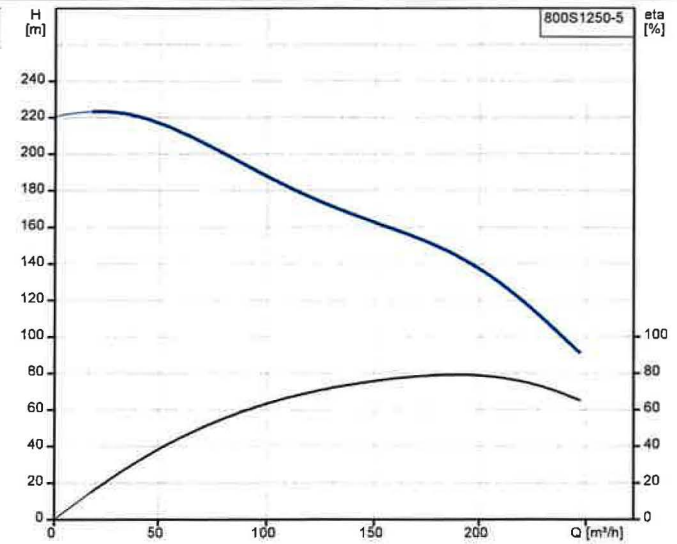
125 HP



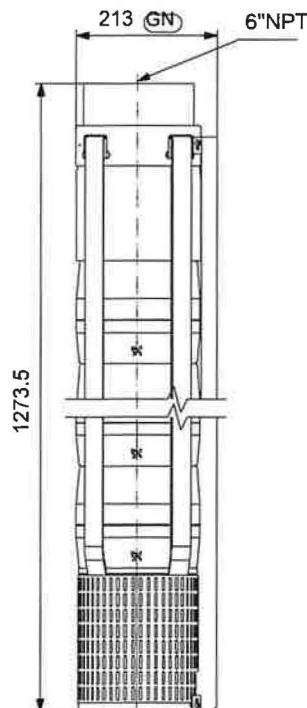
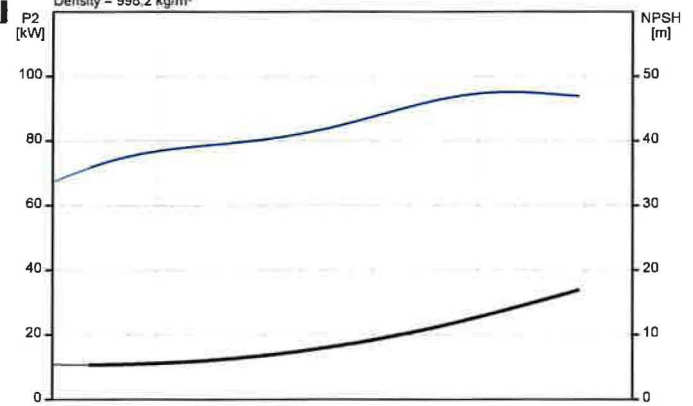
Pumped liquid = Water
 Liquid temperature during operation = 20 °C
 Density = 998.2 kg/m³



Description	Value
General information:	
Product name:	800S1250-5 ^{HP}
Product No:	On request
EAN number:	On request
Technical:	
Pump speed on which pump data are based:	3450 rpm
Rated flow:	192 m³/h
Rated head:	142 m
Stages:	5
Number of reduced-diameter impellers:	NONE
Approvals:	CULDWUS,CCSAUS
Approvals for drinking water:	PROP65
Curve tolerance:	ISO9906:2012 3B
Model:	B
Return valve:	YES
Materials:	
Pump:	Stainless steel EN 1.4301 AISI 304
Impeller:	Stainless steel EN 1.4301 AISI 304
Installation:	
Maximum operating pressure:	60 bar
Maximum outlet pressure:	16.2 bar
Type of connection:	NPT(F)
Size of connection:	6 inch
Motor diameter:	8 inch
Minimum borehole diameter:	225 mm
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-15 .. 60 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor flange design:	Grundfos
Power (P2) required by pump:	92 kW
Others:	
Minimum efficiency index, MEI ≥:	—
Net weight:	61 kg
Gross weight:	88.4 kg
Shipping volume:	0.23 m³

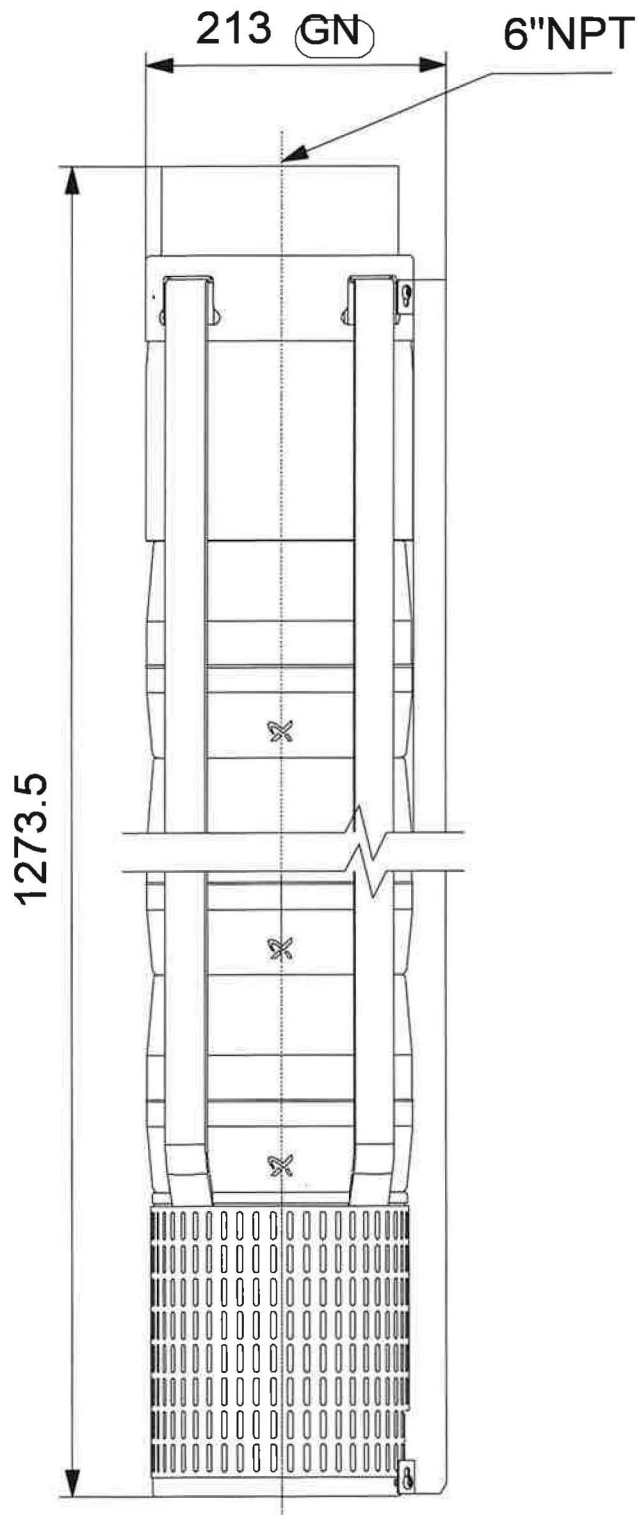


Pumped liquid = Water
Liquid temperature during operation = 20 °C
Density = 998.2 kg/m³



On request 800S1250-5 60 Hz

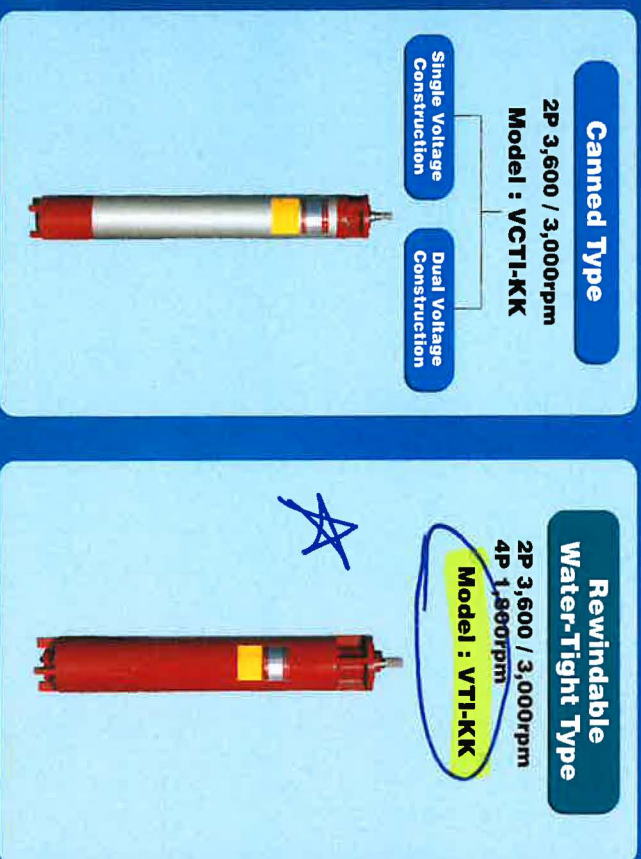
HP



70 years of submersible motor experience

Classification of Submersible Motors

For Municipal Water Service, Industrial Irrigation and Building Water Supply



Type	HP(kW)	3	7.5	10	15	20	25	30	40	50	60	70	100	125	150	175	200	250	300
		(5.2)	(11)	(15)	(22)	(30)	(37)	(45)	(55)	(63)	(75)	(80)	(110)	(132)	(150)	(175)	(200)	(250)	(300)
Canned Type	6	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
	6 x 6	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Rewindable Type	8 and Larger	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H	2 P&H
	4 P&H	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz

* Cerebral available to appropriate sales channel

Hitachi's General Features

High Quality Thrust Bearings

The thrust bearing is of the Kingsbury type lubricated by the internal fluid. During operation a wedge of water is drawn between the stainless steel pivot shoes and carbon disc to carry the thrust load generated by the pump. The bearing construction is achieved long motor life because of our quality construction based on our experience and a field results.

Sand Resistant Slinger and Lip Seals

A stainless steel slinger and slinger guide are also closely fit to help prevent sand entry. Double rubber seals are installed to prevent well water and contaminants from entering the motor.

Rotor Core with Baked Epoxy Coating

A baked epoxy coating prevents rusting of the rotor core. All external and internal cast iron parts are coated with epoxy resin then baked for resistance to water and rust.

Highly Reliable Carbon Bearing

Two water lubricated carbon bearings are used as guide bearings. These have extremely large surface area and result in extra alignment support - less whipping and acts as a steady bushing.

Balancing

The rotor balance rings allow for excellent dynamic balance for the rotating element of the motor.

Water-Filled Design

The motor lubrication is provided by the internal cooling water consisting of a water, antifreeze, and antirust mixture good to - 22 F (-30 C). This mixture is installed at the factory. Water plugs are located near the top of the motor and are used by the installer to check the water level or to top off if needed before installation.

Complete Corrosion and Water-Tight Protection

All main motor components are made of stainless steel. Including the can housing (water tight type motors have baked epoxy coated carbon steel housings), shaft and bolts. All other motor parts are coated with the baked epoxy coating.

Japan Made

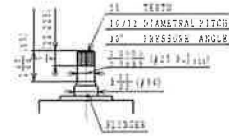
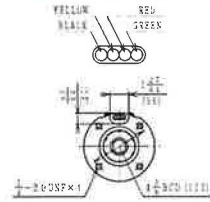
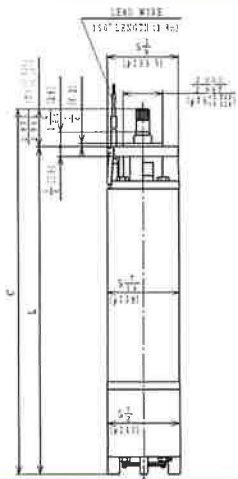
All Hitachi submersible motors are manufactured and tested under the most stringent quality control procedures in Japan, providing long service life and trouble-free operation.



DIMENSIONAL DATA

6" VCTI-KK/ VCTI-KQ 2 Pole

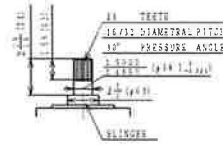
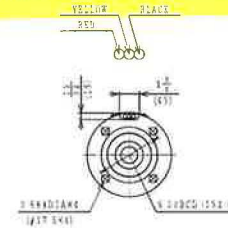
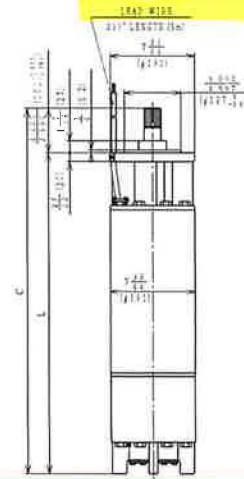
CANNED TYPE



Output		Phase	C		L	
HP	KW		inch	mm	inch	mm
5	3.7	1	29.84	758	26.97	685
7.5	5.5		32.79	833	29.92	760
10	7.5		32.79	833	29.92	760
15	11	3	36.33	923	33.46	850
5	3.7		25.82	656	22.95	583
7.5	5.5		27.67	703	24.80	630
10	7.5		29.84	758	26.97	685
15	11		32.79	833	29.92	760
20	15		34.37	873	31.50	800
25	18.5		39.09	993	36.22	920
30	22		41.06	1043	38.19	970
40	30		44.60	1133	41.73	1060
50	37		44.60	1133	41.73	1060
60	45		44.60	1133	41.73	1060

8" (8" Flange) VTI-KK 2 Pole

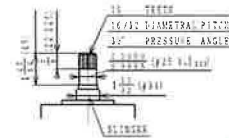
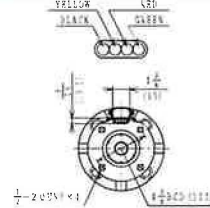
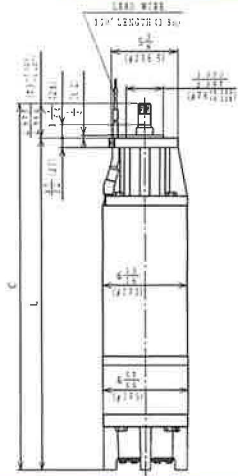
WATER TIGHT TYPE



Output		Phase	C		L	
HP	KW		inch	mm	inch	mm
40	30	3	48.07	1221	44.09	1120
50	37		50.44	1281	46.44	1180
60	45		53.19	1351	49.19	1250
75	55		57.13	1451	53.15	1350
100	75		62.24	1581	58.27	1480
125	90		70.12	1781	66.14	1680
150	110		74.06	1881	70.08	1780

8" (6" Flange) VCTI-KK 2 Pole

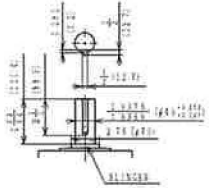
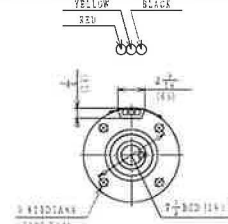
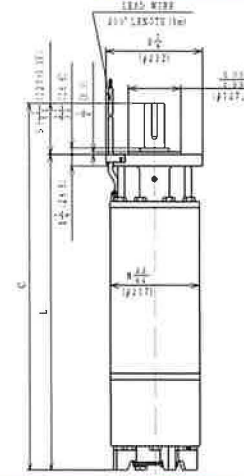
CANNED TYPE



Output		Phase	C		L	
HP	KW		inch	mm	inch	mm
40	30	3	42.52	1080	39.65	1007
50	37		44.48	1130	41.61	1057
60	45		44.48	1130	41.61	1057

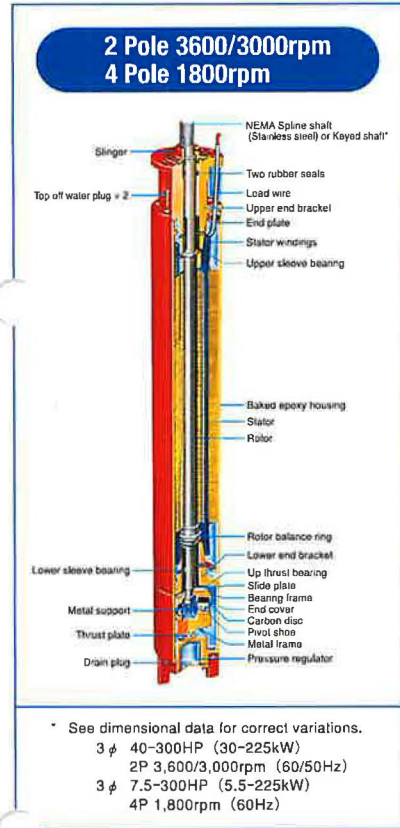
10" (10" -B Flange) VTI-KK 2 Pole

WATER TIGHT TYPE

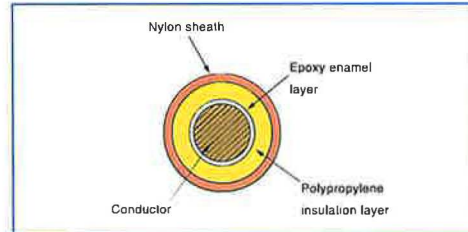


Output		Phase	C		L	
HP	KW		inch	mm	inch	mm
125	132	3	68.78	1747	63.78	1620
200	150		74.70	1897	69.68	1770
250	185		84.55	2147	79.53	2020

WATER TIGHT TYPE FOR DEEP WELL PUMPS



Description of Water Tight Insulated Wire



The reliability of submersible motors depends upon their insulation characteristics. Hitachi has carried out continuous research and development of submersible motors for many years, drawing upon its total corporate technology. These efforts have resulted in new patented water tight insulated magnet wire having excellent insulation characteristics. This patented technology is being applied to all Hitachi water tight submersible motors. For the insulation material, specially developed denatured polypropylene is applied over a special enamel layer. An external nylon sheath is applied over this polypropylene layer for extra mechanical protection. These three insulation barriers are applied to copper conductors for complete insulation from the cooling fluid. This guarantees that Hitachi submersible motors will have an extremely long service life.

STANDARD SPECIFICATIONS

Cable Connection		Direct to Stator	
Cable Length		200 Inches (5m)	
Shaft	2 Pole	Splined 40-150HP (30-110kW) Keyed 175-300HP (132-225kW)	
	4 Pole	Splined 7.5-30HP (5.5-22kW) Keyed 40-300HP (30-225kW)	
Flange		NEMA Standard (See dimensions P9-P14)	
Speed	60Hz	2 Pole 3600 rpm	4 Pole 1800 rpm
	50Hz	2 Pole 3000 rpm	

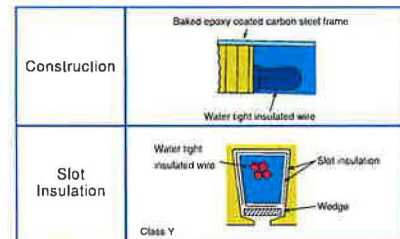
Water Environment

Flow Rate	0.5 l/sec. (0.15 m/sec.)
pH Level	6.5-8
Maximum Temperature	77°F (25°C)

Service Factor

Motor	Service Factor	1.15	1.0
40HP-300HP 2 Pole	460V/60Hz	380, 400, 415V/50Hz	—
7.5HP-300HP 4 Pole	460V/60Hz	—	—

INSULATION



Size and Weight 2 Pole 3600 rpm 60Hz, 3000 rpm 50Hz, and 4 Pole 1800 rpm 60Hz.



2 Pole

Motor Size	Output		D Inch (mm)	L		*Net Weight	
	HP	kW		Inch	mm	lbs.	kg
8"	40	30	7.52 (191)	44.09	1120	320	145
	50	37		46.44	1180	353	160
	60	45		49.19	1250	408	185
	75	55		53.15	1350	463	210
	100	75		58.27	1480	518	235
	125	90		66.14	1680	595	270
10"	150	110	8.54 (217)	70.08	1780	661	300
	175	132		63.78	1620	739	335
	200	150		69.88	1770	816	370
12"	250	185	10.55 (268)	79.53	2020	948	430
	300	225		78.75	2000	1455	660

*Gross Weight : See page 14.

4 Pole

Motor Size	Output		D Inch (mm)	L		*Net Weight	
	HP	kW		Inch	mm	lbs.	kg
8"	7.5	5.5	7.52 (191)	37.40	950	288	135
	10	7.5		37.40	950	288	135
	15	11		41.34	1050	320	145
	20	15		41.34	1050	320	145
	25	18.5		44.09	1120	342	155
	30	22		44.09	1120	342	155
10"	40	30	8.54 (217)	49.21	1250	507	230
	50	37		49.21	1250	507	230
	60	45		59.84	1520	639	290
	75	55		59.84	1520	639	290
	100	75		69.68	1770	794	360
	125	90		69.68	1770	794	360
12"	150	110	10.55 (268)	58.30	1490	959	435
	175	132		61.02	1550	1069	485
	200	150		68.11	1730	1235	560
14"	250	185	12.60 (320)	68.31	1735	1698	770
	300	225		76.18	1935	1940	880

*Gross Weight : See page 14.

Cable Size and Type

2 Pole 200 inches (5m) Lead Wire Standard Length (Round 1 Stranded Conductor)

Motor Size	Output		460V, 415V, 400V, 380V			
	HP	kW	Lead Wire Size		Cable Dia	
			AWG	mm ²	Inch	mm
8"	40-75	30-55	#8	8	0.362	9.2
	100-125	75-90	#6	14	0.433	11.0
	150	110	#4	22	0.531	13.5
10"	175-250	132-185	#2	30	0.591	15.0
12"	300	225	#2/0	60	0.768	19.5

4 Pole 200 inches (5m) Lead Wire Standard Length (Round 1 Stranded Conductor)

Motor Size	Output		460V			
	HP	kW	Lead Wire Size		Cable Dia	
			AWG	mm ²	inch	mm
8"	7.5-30	5.5-22	#8	8	0.362	9.2
	40-50	30-37	#8	8	0.362	9.2
	60-75	45-55	#6	14	0.433	11.0
10"	100-125	75-90	#2	30	0.591	15.0
12"	150-200	110-150	#2	30	0.591	15.0
14"	250-300	185-225	#2/0	60	0.768	19.5

TYPE OF LEAD WIRE - 600V CLASS

Ethylene-propylene rubber insulated chloroprene cable cable.



BENEFICIAL USE FIELD EXAM DATE 4/25/2025 & FOLLOW-UP SITE VISIT 7/31/2025

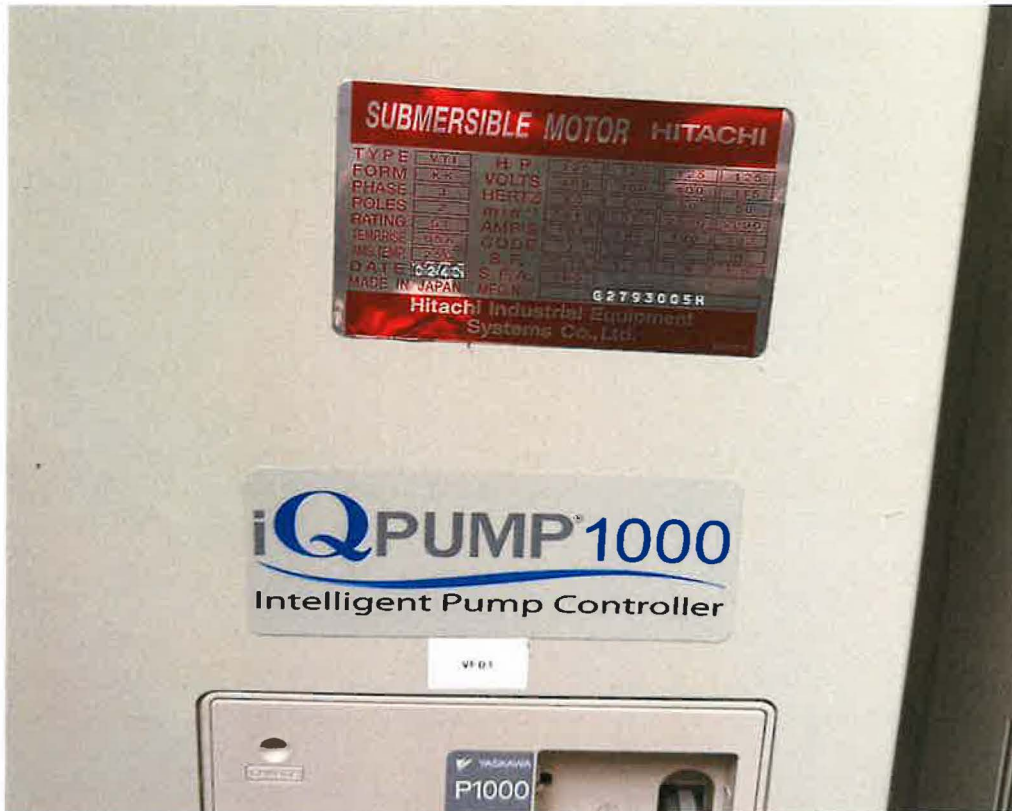


POD- LAKESIDE PUMP STATION HOUSES 2EA DIVERTING PUMP SYSTEM CONTROLS

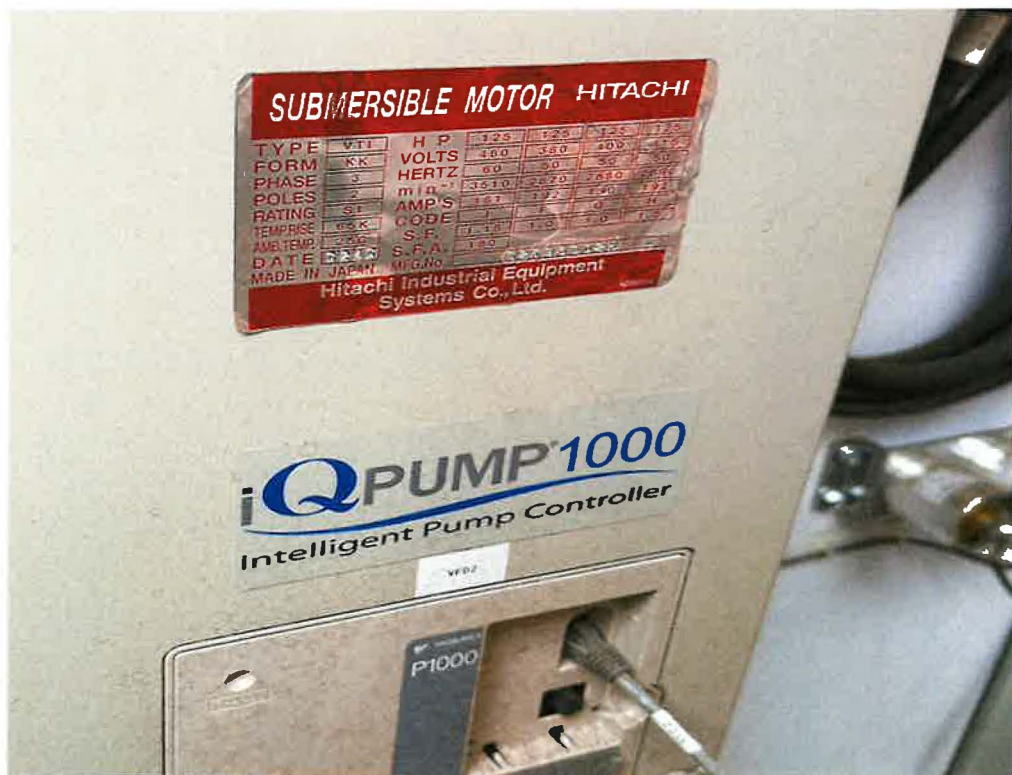


POD – VAULTED ACCESS TO MAIN PIPELINE WHICH HOUSES 2EA 4" PVC PIPELINES,
ONE PER PUMP – ACCESS TO REPLACE/WORK ON PUMPS





POD – Pump 1: Hitachi VFD pump motor control panel S/N G2793005H



POD – Pump 2: Hitachi VFD pump motor control panel S/N G2793002H

DIVERTING WORKS – 2EA 125 HP 10-INCH GRUNDFOS 8" SUBMERSIBLE PUMPS
(Reference Attached United Crown Pump & Drilling invoice)

2 PUMPS PAIRED WITH 2EA 125 HP 8-INCH HITACHI 3 PHASE MOTOR. (Reference
attached United Crown Pump & Drilling invoice)



DIVERTING PUMP(S) SYSTEM CONTROL PANEL



POD – TWO 125 HP VFD DIVERTING PUMPS IN OPERATION DURING SITE VISIT ON 7/31/2025; EACH MOTOR IS SET AT 60.0 Hz



WATER CONVEYANCE SYSTEM – MIDWAY TO STORAGE RESERVOIR, BOOSTER PUMP STATION AND METER READER POST



(TAP HERE METER READER CO-LOCATED WITH BOOSTER STATION IN GRASSED DRAIN FIELD)



MID WAY PUMP STATION (VAULTED) HOUSES FLOW METER FOR VOLUMETRIC AND INSTANTANEOUS FLOW MEASUREMENTS



WATER CONVEYANCE SYSTEM – MAIN PIPELINE WITH BYPASS VALVE(S) AND FLOW METER



MASTER METER FLANGED VELOCITY STYLE FLOW METER INSTALLED ON MAIN DISTRIBUTION PIPELINE BEFORE PUMPING ROUTES TO DIFFERENT STORAGE PONDS FOR DISTRIBUTION.



FLOWMETER INSTALLED ON MAIN 12-INCH DISTRIBUTION LINE PRIOR TO BYPASS LINES, WHICH REDUCE TO 6-INCH (VALVING ON TOP OF IMAGE)



POU – 3.02 ACRE MUNICIPAL STORAGE POND



STORAGE RESERVOIR (POND) IS LINED TO MITIGATE SEEPAGE LOSS OF IMPOUNDED LAKE WATER



MUNICIPAL STORAGE DISTRIBUTION STATION – WET WELLS INCLUDED IN FORE FRONT OF IMAGE (DISTRIBUTION PUMPS No. 1, No. 2, & No.3)



DISTRIBUTION PUMP RELAY CONTROL PANELS



MUNICIPAL FROM STORAGE SCADA SYSTEM MANAGEMENT PANEL



NOTE: POND 4 LEVEL IS CORRELATES WITH THE MUNICIPAL STORAGE POND.
THE POND 1 LEVEL READING CORRESPONDS TO PRIOR RIGHT 95-9045 STORAGE
POND LOCATED EAST OF POND 4.