



Change Order

PROJECT: WTP Generator 3 Emergency Repl **DATE OF ISSUANCE:** November 13, 2024
OWNER: Village of Wellington **CHANGE ORDER NO:** 002
CONTRACTOR: Wharton-Smith, Inc. **OWNER'S PROJECT NO:** CUT22004
 PO230881
ENGINEER: N/A **NOTICE TO PROCEED:** September 25, 2023

You are directed to make the following changes in the Contract Documents.

Description: Construct two corrosion control racks and associated facilities as shown in the drawings Lime Softening Elimination Corrosion Investigation, Sheets G-1, Ex-1 to Ex-3, I-1, I-2, I-3 and responses to RFI questions dated 9/3/2024 by Kimley-Horn and Associates.

1. Increase the contract value by \$136,252.74 as outlined in Wharton's Smith's proposal dated October 28, 2024.

Attachments:

1. OCOR 04 M1 Scrubber Electrical Service Repair Proposal by Wharton-Smith.

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIME
Original Contract Price <u>\$2,940,600.00</u>	Original Contract Time <u>691</u> days to Substantial <u>August 16, 2025</u> cal days/date
Net Change from Previous Change Orders <u>\$71,173.54</u>	Net Change from Previous Change Orders <u>0</u> cal days
Contract Price prior to this Change Order <u>\$3,011,773.54</u>	Contract Time Prior to this Change Order <u>0</u> days to Substantial <u>August 16, 2025</u> cal days/date
Net increase of this Change Order <u>\$136,252.74</u>	Net increase of this Change Order <u>0</u> cal days
Contract Price with all approved Change Orders <u>\$3,148,026.28</u>	Contract Time with all approved Change Orders <u>0</u> days to Substantial <u>August 16, 2025</u> cal days/date

APPROVED:

APPROVED:

APPROVED:

by _____
 Assistant Village Manager

by _____
 Utility Director

by _____
 Contractor



October 28, 2024

Anjuli Panse, PE
Village of Wellington
1100 Wellington Trace
Wellington, FL 33414

Re: OCOR 05 – Corrosion Inhibitor Racks
Village of Wellington WTP Generator 3 Installation

Dear Ms. Panse:

We have developed Proposal Summary No. 05 for the Corrosion Inhibitor Racks project as shown in the Drawings and Specifications provided by Kimley Horn and Associates, dated October 2024. Included in the proposal is the cost of furnishing all necessary materials, labor, equipment, tools, supervision, and subcontractor costs required for the specified scope of work.

Attached to this letter you will find our detailed Proposal Summary for the amount of **\$136,252.74** with all associated back-up documentation.

Clarifications to this proposal are as follows:

- A change order will be provided by the Village under this project for the additional scope provided in the OCOR.
- Additional insurance and bond is included within this proposal to accommodate for the increase in total contract price.
- WSI reserves the right to request additional time as needed for the additional scope of work in this proposal due to any delays out of WSI's control.
- Disinfection and bacteriological testing of the corrosion racks and associated piping is not included within this proposal.

Please do not hesitate to call if you should have any questions or wish to discuss this matter further.

Sincerely,
Wharton-Smith, Inc.

Savanna Bogue
Senior Project Engineer
CC: File 22-050/C-05D1./CCOR 05



CHANGE ORDER COST PROPOSAL NO. 05

The Village of Wellington

PROPOSAL SUMMARY

10/28/2024

#	DESCRIPTION	NOTES
1	Proposal includes costs for materials, labor, equipment, and subcontract costs to construct the Corrosion Inhibitor Racks	
2	Project per the project Drawings dated October 2024 and Q&As received October 11, 2024.	
3		
4		
5		
6		
7		
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9		
10	The duration for the additional work outlined in this proposal is 0 calendar days.	
11	The Contract Time Extension due to this Change Order is 0 calendar days.	
12	MATERIALS	TOTAL
13	From Page 2	\$ 44,703.95
14	Tax 7.00%	\$ - \$ 44,703.95
15	Markup 9.0%	\$ 4,023.36 \$ 48,727.31
16		\$ 48,727.31
17		
18	LABOR	HRS
19	From Page 3	629.6
20	Markup 9.0%	\$ 2,942.28 \$ 35,634.28
21		\$ 35,634.28
22		
23	TOOLS & EQUIPMENT	TOTAL
24	From Page 4	\$ 5,073.28
25	Tax 7.00%	\$ 355.13 \$ 5,428.41
26	Markup 9.0%	\$ 488.56 \$ 5,916.97
27		\$ 5,916.97
28		
29	SUBCONTRACTS	TOTAL
30	From Page 5	\$ 40,280.00
31		\$ -
32		
33		
34	Subtotal	\$ 40,280.00
35	Markup 9.0%	\$ 3,625.20 \$ 43,905.20
36		\$ 43,905.20
37		
38	OTHER	QTY
39	Extended Overhead	Days * Cost Per Day
40	Additional Insurance	0.51% M + L + T&E + S
41	Additional Bond	0.90% M + L + T&E + S
42	Subtotal	\$ 1,898.15
43	Markup 9.0%	\$ 1,898.15 \$ 170.83
44		\$ 2,068.98
45		
46	FINAL QUOTE TOTAL	TOTAL
47		\$ 136,252.74
48		
49		\$ 136,252.74

CHANGE ORDER COST PROPOSAL NO. 05

Revision 00



**The Village of Wellington
MATERIAL ESTIMATE**

#	MATERIALS	INV	QTY	UNIT	UNIT RATE	TOTAL	NOTES
1	Pumps		2	EA	\$ 2,757.35	\$ 5,514.70	Ryan Herco
2	PVC Pipe/Fittings/Misc. Materials		1	LS	\$ 37,189.25	\$ 37,189.25	Ryan Herco
3	Concrete Materials		1	LS	\$ 2,000.00	\$ 2,000.00	ALLOWANCE
4						\$ -	
5						\$ -	
6						\$ -	
7						\$ -	
8						\$ -	
9						\$ -	
10						\$ -	
11						\$ -	
12						\$ -	
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31						\$ -	
32						\$ -	
33						\$ -	
34						\$ -	
35						\$ -	
36						\$ -	
37						\$ -	
38	MATERIAL SUBTOTAL					TOTAL	
39						\$ 44,703.95	
40					\$ 44,703.95		



CHANGE ORDER COST PROPOSAL NO. 05
The Village of Wellington
EQUIPMENT ESTIMATE

#	TOOLS	DESCRIPTION	REF		RATE	TOTAL	
1	Small Tools	4% Labor Cost	\$ 32,692		4%	\$ 1,307.68	
2	Consumables	\$1.00 / Labor Hr	629.6		\$ 1.00	\$ 629.60	
3						\$ -	
4						\$ 1,937.28	
5							
#	EQUIPMENT	DESCRIPTION	QTY	UNIT	RATE	TOTAL	
7				Day		\$ -	
8				Day		\$ -	
9				Day		\$ -	
10				Day		\$ -	
11				Day		\$ -	
12						\$ -	
13							
#	RENTALS	DESCRIPTION	QTY	UNIT	RATE	TOTAL	
14	Mini Excavator		1.00	Week	\$ 1,300.00	\$ 1,300.00	
15	Forklift/Telehandler		1.00	Week	\$ 1,500.00	\$ 1,500.00	
16				Week		\$ -	
17				Week		\$ -	
18						\$ -	
19						\$ -	
20						\$ -	
21						\$ -	
22						\$ -	
23						\$ -	
24						\$ 2,800.00	
25							
#	FUEL	DESCRIPTION		Rate	REF	TOTAL	
27	Equipment Fuel	12% Fueled Equipment Cost		12%	\$ 2,800.00	\$ 336.00	
28						\$ 336.00	
29							
30							
#	EQUIPMENT SUBTOTAL					TOTAL	
32						\$ 5,073.28	
33							
34					\$	5,073.28	



CHANGE ORDER COST PROPOSAL NO. 05
The Village of Wellington
SUBCONTRACT ESTIMATE

Revision 00

#	SUBCONTRACTOR	SCOPE	INV	TOTAL	NOTES
1	CC Controls	I&C Hardware and Software		\$ 30,780.00	Tax Added to Proposal
2	Loveland	Electrical work		\$ 8,000.00	ALLOWANCE
3	Rangeline	Tapping Services		\$ 1,500.00	ALLOWANCE
4					
5					
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36					
37					
38	SUBCONTRACT SUBTOTAL			TOTAL	
39				\$ 40,280.00	
40			\$	40,280.00	



QUOTATION

Billing Inquiries: (305) 599-0022

Sell To:

Wharton Smith, Inc.
750 Monroe Road

Sanford, FL 32771

Ship To:

Wharton Smith, Inc.
3547 S W Corporate Parkway

Palm City, FL 34990

Page: 1 of 4
Quote Number: 7286835
Quote Date: 10/18/2024
Entered By: Aaron Figa
Description: AF1 / LIME CORROSION RACKS /
Account Number: 074260
Contact Name:
Contact Phone: (772) 283-2944

Unless otherwise noted, prices are valid for 7 days. Ship dates subject to inventory availability at the time purchase order is received. All products are non-cancelable/non-returnable unless otherwise agreed upon in writing. All returns are subject to restocking charges, and will require an authorization prior to being sent back in original and unused packaging. Additional surcharge(s) may apply and will be applied at the time of shipment. Please note that due to factors with the potential to create cost changes, prices are subject to change without notice. Items will be invoiced at the prices in effect at the time of shipment.
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Note: The following does not include Shipping & Handling, Tax, or other applicable charges.

Product #	Description/Notes	Uom	Qty	Price	Total
/CA602840937	EX-2/NANO 14"X2" TAPPING SADDLE W/SST STR AND EPOXY COATED DI BODY P/N:CDSL-1570	EA	1	350.6305	350.63
3905H020	PVC HIGH-QUALITY PIPE N80 2"	EA	60	2.8733	172.40
3836G020	PVC MALE ADPT N80 2" SXMT SLOANE	EA	1	9.2469	9.25
3806G020	PVC 90 EL N80 2" S SLOANE	EA	4	3.3618	13.45
3817G020	PVC 45 EL N80 2" S SLOANE	EA	1	7.9391	7.94
3900.040P	PVC PIPE N40 4" PLAIN END	EA	40	2.1063	84.25
3406.040	PVC 90 EL N40 4" S	EA	1	9.6565	9.66
3401.040	PVC TEE N40 4" S	EA	2	14.3377	28.68
3437.417	PVC N40 RDC BUSH 4" X 1" SPGX	EA	3	7.1067	21.32
/CA602840938	EX-2/BLEND 18"X2" TAPPING SADDLE W/SST STR AND EPOXY COATED DI BODY P/N:CDSL-1570	EA	1	390.6265	390.63
3900.030P	PVC PIPE N40 3" PLAIN END	EA	120	1.5548	186.59
3417.030	@ PVC 45 EL N40 3" S	EA	4	7.0192	28.08
3406.030	PVC 90 EL N40 3" S	EA	1	5.4005	5.40
3817G020	PVC 45 EL N80 2" S SLOANE	EA	2	7.9391	15.88
51602.405	EX-2/PUMP 1/2" 1000# 3PC THRD BALL VLV 316	EA	4	31.9275	127.71
3845S247	PVC N80 BUSH 2" X 1/2" SS RFC REDUCER BUSHING SPIGOT X FPT	EA	2	10.8075	21.62
3905H020	PVC HIGH-QUALITY PIPE N80 2"	EA	40	2.8733	114.93
5109H020	PVC/EPDM TU B CK VLV 2" SXT	EA	2	170.9582	341.92
50601H020	PVC/EPDM TBH TU B VLV 2"SXT TBH SERIES HAYWARD	EA	4	114.6106	458.44
5336.160	PRM PRESS GAUGE 0-160 PSI 2.5" STAINLESS/BRONZE/BRASS, 2-1/2"D STYLE A, BOTTOM CONNECTION	EA	4	44.4780	177.91
53369.993	SS ADJ SNUBBER 1/2"NPT	EA	4	214.4730	857.89
3806G020	PVC 90 EL N80 2" S SLOANE	EA	8	3.3618	26.89
3801G020	PVC TEE N80 2" S SLOANE	EA	2	11.9782	23.96
3857S520	PVC EPDM UNION N80 2" S SPEARS SPEARS 2000-SERIES	EA	4	15.3205	61.28
31601013.00005	1/2" 150# 316SS THD TEE	EA	2	6.2445	12.49
31601063.00005	1/2" 150# 316SS THD 90	EA	2	4.8165	9.63
31640603.00077	1/2" X CLOSE NIPPLE S40/40S 316	EA	10	2.9704	29.70



QUOTATION

Billing Inquiries: (305) 599-0022

Sell To:

Wharton Smith, Inc.
750 Monroe Road

Sanford, FL 32771

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Wharton Smith, Inc.
3547 S W Corporate Parkway

Palm City, FL 34990

Page: 2 of 4
Quote Number: 7286835
Quote Date: 10/18/2024
Entered By: Aaron Figa
Description: AF1 / LIME CORROSION RACKS /
Account Number: 074260
Contact Name:
Contact Phone: (772) 283-2944

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3855G020	PVC VAN STONE FLG N80 2" S	EA	2	8.6008	17.20
3855G025	PVC VAN STONE FLG N80 2.5"S	EA	2	13.2834	26.57
3837G292	PVC BUSH N80 2.5X2" SPGXS SLOANE	EA	2	8.3291	16.66
5828.238	EX-3/RACK ACR RTMTR 10 GPM 1" 100MM SC 75202106C-02 W/ PVC END FITTINGS 1" MPT X 1" MPT	EA	12	144.2284	1,730.74
3806G010	PVC 90 EL N80 1" S SLOANE	EA	64	1.9422	124.30
50601H010	PVC/EPDM TBH TU B VLV 1"SXT	EA	44	52.3736	2,304.44
5109H010	PVC/EPDM TU B CK VLV 1" SXT	EA	4	80.9340	323.74
3820S010	PVC CROSS N80 1" S SPEARS	EA	4	16.1902	64.76
3905H010	PVC HIGH-QUALITY PIPE N80 1"	FT	80	1.3098	104.78
3801G010	PVC TEE N80 1" S SLOANE	EA	52	3.4853	181.24
3838G130	PVC BUSH N80 1X1/2" SPGXT SLOANE	EA	32	1.5782	50.50
3838.128	PVC BUSH N80 1" X 1/4" SPG X T	EA	4	8.0905	32.36
3806G005	PVC 90 EL N80 1/2" S SLOANE	EA	24	.9399	22.56
5309.002	PVC LABCOCK VLV 1/4" MT X MT MALE THREAD X MALE THREAD	EA	4	20.1146	80.46
3806G020	PVC 90 EL N80 2" S SLOANE	EA	1	3.3618	3.36
3801G020	PVC TEE N80 2" S SLOANE	EA	4	11.9782	47.91
3837G249	PVC BUSH N80 2X1" SPGXS SLOANE	EA	4	4.7944	19.18
3850G007	PVC PLUG N80 3/4" T SLOANE	EA	16	1.6679	26.69
1436.010	PVC INS MALE ADPT 1"	EA	32	5.0550	161.76
1985F010	RIGID STRUT CLAMP 1" 316SS	EA	32	7.9395	254.06
FSL.363511	1-5/8 STRUT 316SS 12GA SLOTTED	FT	20	85.2642	1,705.28
1987F313	POST BASE SGL CH 4-HOLE SQR 316S	EA	8	201.3819	1,611.06
1510.016	PVC SHEET 1/2" X 4 X 8 WHT ** TYPE 1 - WHITE PVC **	EA	2	671.8080	1,343.62
0512.090	HERCO BRAID TUBING 5/8"ID FD GRD STANDARD-DUTY K3156-10 X 100,	EA	200	1.4350	287.00
0955.008	HOSE CLAMP 0.812"OD MAX 316SS	EA	96	4.1755	400.85
5464.710	PVC/PTFE/EPDM BK PRESS VLV 1" 10-15PSI	EA	4	696.7152	2,786.86
ASC.185322	8210G089 V 120/60 SS 2-WAY N/C 1" NPT *1" SOLENOID	EA	1	1,212.0920	4,848.37 1,212.09
ASC.168662	8210G129 120/60,110/50 SS 2-WAY N/C 2"NPT SOL VLV *2" SOLENOID	EA	3	2,839.0810	5,678.16 8,517.24
845.174999	1/2 COPPER PIPE TYPE L	EA	10	5.1794	51.79
/84602842779	COPPER PIPE TYPE-M 1/2" 10' LTH	EA	10	4.7257	47.26

QUOTATION



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Palm City, FL 34990

Page: 3 of 4
Quote Number: 7286835
Quote Date: 10/18/2024
Entered By: Aaron Figa
Description: AF1 / LIME CORROSION RACKS /

Account Number: 074260
Contact Name:
Contact Phone: (772) 283-2944

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Product #	Description/Notes	Uom	Qty	Price	Total
5924.980	SIGNET 2581 FLOWTRAMAG MTR 1"	EA	4	1,200.0400	4,800.16
5908.511	SIGNET 9950 MLT-CH CTRL AC/DC 9950 BASE UNIT, PANEL-MOUNT, SIX-CHANNEL MULTI-PARAMETER INPUTS, TWO 4-20 MA OUTPUTS	EA	2	1,688.7200	3,377.44
5907.772	XTNL 4-RELAY MOD 3-8059-4	EA	2	497.8000	995.60
5908.481	SIGNET 9900 HINGED ENCL 6"X6"X4"	EA	2	228.0000	456.00
3677.530	CPVC LOW VOC CEMENT QT GRY 724 FOR CAUSTICS	EA	4	46.6900	186.76
3485.030	PVC/CPVC PRIMER QT CLR P70 P-70 CLEAR, QUARTS PC32	EA	6	38.0732	228.44
790.195307	**POOL PUMP BY HAYWARD** HORZ CENT PUMP 1PH 2HP TEFC 230V A-SERIES LIFESTAR AQUATIC PUMP	EA	2	2,757.3480	5,514.70
<p>*CONTRACTOR TO CONFIRM QTY'S PRIOR TO ORDERING, RHFS NOT RESPONSIBLE FOR QTY'S LISTED</p> <p>F.O.B.: SHIPPING POINT FREIGHT PAID BY CUSTOMER ESTIMATED LEAD TIME:TBD</p> <p>THANK YOU FOR THE OPPORTUNITY TO QUOTE ON YOUR REQUIREMENT.</p> <p>PRICE BASED UPON FULL QTY</p> <p>STANDARD LEAD TIME QUOTED ITEM MAY BE ABLE TO BE EXPEDITED.</p> <p>TO IMPROVE QUALITY & ACCURACY REFERENCE THIS QUOTE NUMBER WHEN ORDERING.</p> <p>THANK YOU.</p>					

QUOTATION



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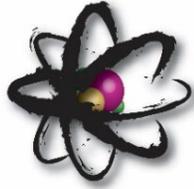
Palm City, FL 34990

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Product #	Description/Notes	Uom	Qty	Price	Total
	---- Package Subtotal:			43,501.15	
				-10,526.53	
				9,729.33	
				42,703.95	

Subtotal: 43,501.15



C. C. CONTROL CORP.

5760 CORPORATE WAY, SUITE 100
WEST PALM BEACH, FLORIDA 33407

PHONE: 561 293-3975

FAX: 561 293-3976

CUSTOMER: WHARTON-SMITH

ATTN: ADAM BLYTHE
ablythe@whartonsmith.com

PROJECT: LIME SOFTENING ELIMINATION CORROSION INVESTIGATION
VILLAGE OF WELLINGTON

DATE: 10/22/2024

VALID FROM: 10/22/2024

VALID TO: 12/21/2024

DESCRIPTION

QTY AMOUNT

C. C. CONTROL CORP. PROPOSES TO FURNISH THE FOLLOWING COMPLETE WITH EXCEPTIONS AS LISTED:

EXCEPTIONS:

- A) QUOTE DOES NOT INCLUDE ANY DEMOLITION OR INSTALLATION.
- B) QUOTE DOES NOT INCLUDE ANY CONDUITS OR CONDUIT SEAL-OFF'S.
- C) QUOTE DOES NOT INCLUDE ANY WIRE/CABLE, EXCEPT AS NOTED BELOW.
- D) QUOTE DOES NOT INCLUDE ANY FIELD TERMINATIONS.
- E) QUOTE DOES NOT INCLUDE ANY PANEL MOUNTING HARDWARE
- F) QUOTE DOES NOT INCLUDE ANY DISCONNECTS OR PULL BOXES.
- G) QUOTE DOES NOT INCLUDE ANY VALVES, SOLENOIDS, LIMIT SWITCH.
- H) QUOTE DOES NOT INCLUDE ANY CORROSION TEST RACK EQUIPMENT

ITEM NO.1

BASELINE TEST RACK CONTROL PANEL

SCHAEFER'S SPN4SS-423012 NEMA 4X SINGLE DOOR WALL MOUNT ENCLOSURE	1
A) SIZE: 42"H X 30"W X 12"D	
B) 3-POINT PADLOCKING HANDLE	
D) DRIPSHIELD KIT	
C) PRINT POCKET	
J) SUBPANEL: SPP-4230 CARBON STEEL SUBPANEL	1
D) FINISH: WHITE	
HOFFMAN AHCI10E INDUSTRIAL CORROSION INHIBITOR	1
SQD HDL36020 POWERPACT H-FRAME CIRCUIT BEAKER 600V, 20A, 3P, 14KA	1
SQD 9421LH43 CIRCUIT BREAKER ROTATORY HANDLE, 3 IN, BLACK, NEMA 3R/4/12	1
SQD 9080LBA361104 POWER DISTRIBUTION BLOCK 90A, 14 - 2 AWG	1
SQD SDSA3650 SURGEOLOGIC SURGE PROTECTIVE DEVICE, 4X ENCLOSURE, SCCR 200KA	1
SQD 9070T250D1 INDUSTRIAL CONTROL TRANSFORMER, 240/480 - 120V, 250VA	1
BUSSMANN CHCC3DU CLASS CC FUSE BLOCK, 600V, 30A, 3P	1

BUSSMANN FNQ-R-1-1/2 600V 1 1/2A TIME-DELAY FUSE, REJECTION TYPE	2
BUSSMANN FNQ-R-3 600V 3A TIME-DELAY FUSE, REJECTION TYPE	1
SQD 8536SAO2V02S NON-REVERSING STARTER, 2HP@480V, SOLID STATE OVERLOAD	1
SQD B1.45 CLASS 20 THERMAL UNIT, FLA 0.91 TO 1.03	3
SQD 9999SX8 EXTERNAL ISOLATED AUXILIARY CONTACT, 1NO/1NC, 6A@120VAC	2
SQD 9999SO4 ISOLATED (1)NO/(1)NC OVERLOAD ALARM CONTACT	1
SQD 9066RA1 EXTERNAL OVERLOAD RESET KIT	1
SQD M9F42102 MINITURE CIRCUIT BREAKER 2A 14KA	1
FINDER 60.13.8.120.0050 60 SERIES RELAYS, 3PDT, 10A, 120VAC, LED	3
FINDER 90.27 DIN RAIL 11-PINS RELAY SOCKET, SCREW TERMINAL	3
SQD 950JCK13V20 PLUG IN ON-DELAY TIMER 120V 0.6-60 SECONDS	1
SQD 8501NR51 8 PINS TUBULAR TMER SOCKET	1
GRASSLIN FWZ72B-120 FWZ SERIES AC HOUR METER, 2.2" DIA, 120VAC	1
SQD 9001 SKT38LGG31 LED PILOT LIGHT, PUSH-TO-TEST, GREEN, 120V	2
SQD 9001 SKT38LRR31 LED PILOT LIGHT, PUSH-TO-TEST, RED, 120V	1
SQD 9001 SKT38LYA31 LED PILOT LIGHT, PUSH-TO-TEST, AMBER, 120V	2
SQD 9001SKR1U PUSH BUTTON OPERATOR 30MM	3
SQD 9001KA1 30MM CONTACT BLOCK, SCREW CLAMP, 1NO/1NC	3
PHOENIX CONTACT 3044102 UT4 TERMINAL BLOCK 32A@1000v, 26-10 AWG, GRAY	12
PHOENIX CONTACT 3047028 D-UT 2,5/10 END COVER, GRAY	1
PHOENIX CONTACT 1201442 E/UK END STOP	2
PHOENIX CONTACT 3032224 FBS 50-6 PLUG-IN BRIDGE	1
PANDUIT UGB2/0-414-6 GROUND BAR, 6-PORTS, 14-4 AWG, TIN-PLATED COPPER	1
WIRE, TERMINALS, DUCT & NAMEPLATES	LOT
U.L. 508A LABEL	LOT

ITEM NO.2

NF & CI TEST RACKS CONTROL PANEL

SCHAEFER'S SPN4SS-483612 NEMA 4X SINGLE DOOR WALL MOUNT ENCLOSURE	1
A) SIZE: 48"H X 36"W X 12"D	
B) 3-POINT PADLOCKING HANDLE	
D) DRIPSHIELD KIT	
C) PRINT POCKET	
J) SUBPANEL: SPP-4836 CARBON STEEL SUBPANEL	1
D) FINISH: WHITE	
HOFFMAN AHCI10E INDUSTRIAL CORROSION INHIBITOR	1
SQD HDL36020 POWERPACT H-FRAME CIRCUIT BEAKER 600V, 20A, 3P, 14KA	1
SQD 9421LH43 CIRCUIT BREAKER ROTATORY HANDLE, 3 IN, BLACK, NEMA 3R/4/12	1
SQD 9080LBA361104 POWER DISTRIBUTION BLOCK 90A, 14 - 2 AWG	1
SQD SDSA3650 SURGELOGIC SURGE PROTECTIVE DEVICE, 4X ENCLOSURE, SCCR 200KA	1
SQD 9070T500D1 INDUSTRIAL CONTROL TRANSFORMER, 240/480 - 120V, 500VA	1
BUSSMANN CHCC3DU CLASS CC FUSE BLOCK, 600V, 30A, 3P	1
BUSSMANN FNQ-R-3 600V 3A TIME-DELAY FUSE, REJECTION TYPE	2
BUSSMANN FNQ-R-5 600V 5A TIME-DELAY FUSE, REJECTION TYPE	1
SQD 8536SAO2V02S NON-REVERSING STARTER, 2HP@480V, SOLID STATE OVERLOAD	1
SQD B1.45 CLASS 20 THERMAL UNIT, FLA 0.91 TO 1.03	3
SQD 9999SX8 EXTERNAL ISOLATED AUXILIARY CONTACT, 1NO/1NC, 6A@120VAC	2
SQD 9999SO4 ISOLATED (1)NO/(1)NC OVERLOAD ALARM CONTACT	1
SQD 9066RA1 EXTERNAL OVERLOAD RESET KIT	1
SQD M9F42102 MINITURE CIRCUIT BREAKER 2A 14KA	3
FINDER 60.13.8.120.0050 60 SERIES RELAYS, 3PDT, 10A, 120VAC, LED	5
FINDER 90.27 DIN RAIL 11-PINS RELAY SOCKET, SCREW TERMINAL	5
SQD 950JCK13V20 PLUG IN ON-DELAY TIMER 120V 0.6-60 SECONDS	1
SQD 8501NR51 8 PINS TUBULAR TMER SOCKET	1
GRASSLIN FWZ72B-120 FWZ SERIES AC HOUR METER, 2.2" DIA, 120VAC	2

SQD 9001 SKT38LGG31 LED PILOT LIGHT, PUSH-TO-TEST, GREEN, 120V	3
SQD 9001 SKT38LRR31 LED PILOT LIGHT, PUSH-TO-TEST, RED, 120V	1
SQD 9001 SKT38LYA31 LED PILOT LIGHT, PUSH-TO-TEST, AMBER, 120V	2
SQD 9001SKR1U PUSH BUTTON OPERATOR 30MM	7
SQD 9001KA1 30MM CONTACT BLOCK, SCREW CLAMP, 1NO/1NC	7
PHOENIX CONTACT 3044102 UT4 TERMINAL BLOCK 32A@1000v, 26-10 AWG, GRAY	20
PHOENIX CONTACT 3047028 D-UT 2,5/10 END COVER, GRAY	2
PHOENIX CONTACT 1201442 E/UK END STOP	4
PHOENIX CONTACT 3032224 FBS 50-6 PLUG-IN BRIDGE	1
PANDUIT UGB2/0-414-6 GROUND BAR, 6-PORTS, 14-4 AWG, TIN-PLATED COPPER	1
WIRE, TERMINALS, DUCT & NAMEPLATES	LOT
U.L. 508A LABEL	LOT

ITEM NO.3

SAMPLE PUMP DISCHARGE PRESSURE GAUGE (2 REQ'D)

ASHCROFT 35-1009-SW-04L-XLLSG-120# 3.5" S.S. PRESSURE GAUGE	1
A) RANGE: 0 TO 120 PSI	
B) 316L STAINLESS STEEL BOURDON TUBE CONNECTION	
C) PROCESS CONN: 1/2 NPT MALE, LOWER	
D) PLUS PERFORMANCE	
E) SAFETY GLASS	
GD) TAG: PI-xxxx, PI-xxxx	
ASHCROFT 04-1112SD-50 PRESSURE SNUBBRER	INCL
A) PROCESS CONN: 1/2" NPT MALE	
B) INSTRUMENT CONN: 1/2" NPT FEMALE	
C) HOUSING MAT: 303 STAINLESS STEEL	
D) POROSITY: STEEL	
JAMESBURY 1/2-33-3600TL 1/2" 316 S.S. BALL VALVE	4
1/2" 316L STAINLESS STEEL TEE	2
1/2" x 2" 316 STAINLESS STEEL NIPPLE	8
1/2" x 4" 316 STAINLESS STEEL NIPPLE	2

ITEM NO.4

PROJECT SERVICES

ENGINEERING	LOT
SUBMITTALS	LOT
TESTING	LOT
START-UP	LOT
TRAINING	LOT
O & M MANUALS	LOT
WARRANTY, 1-YEAR	LOT

SUMMARY

ITEMS NO.1 THRU NO.4	SELL \$28,500.00
----------------------	----------------------------

TOTAL: \$28,500.00 PLUS TAX

SUBMITTAL: 2-4 WEEKS (AFTER RECEIPT OF PURCHASE ORDER)

DELIVERY: 8-10 WEEKS (AFTER APPROVED SHOP DRAWINGS)

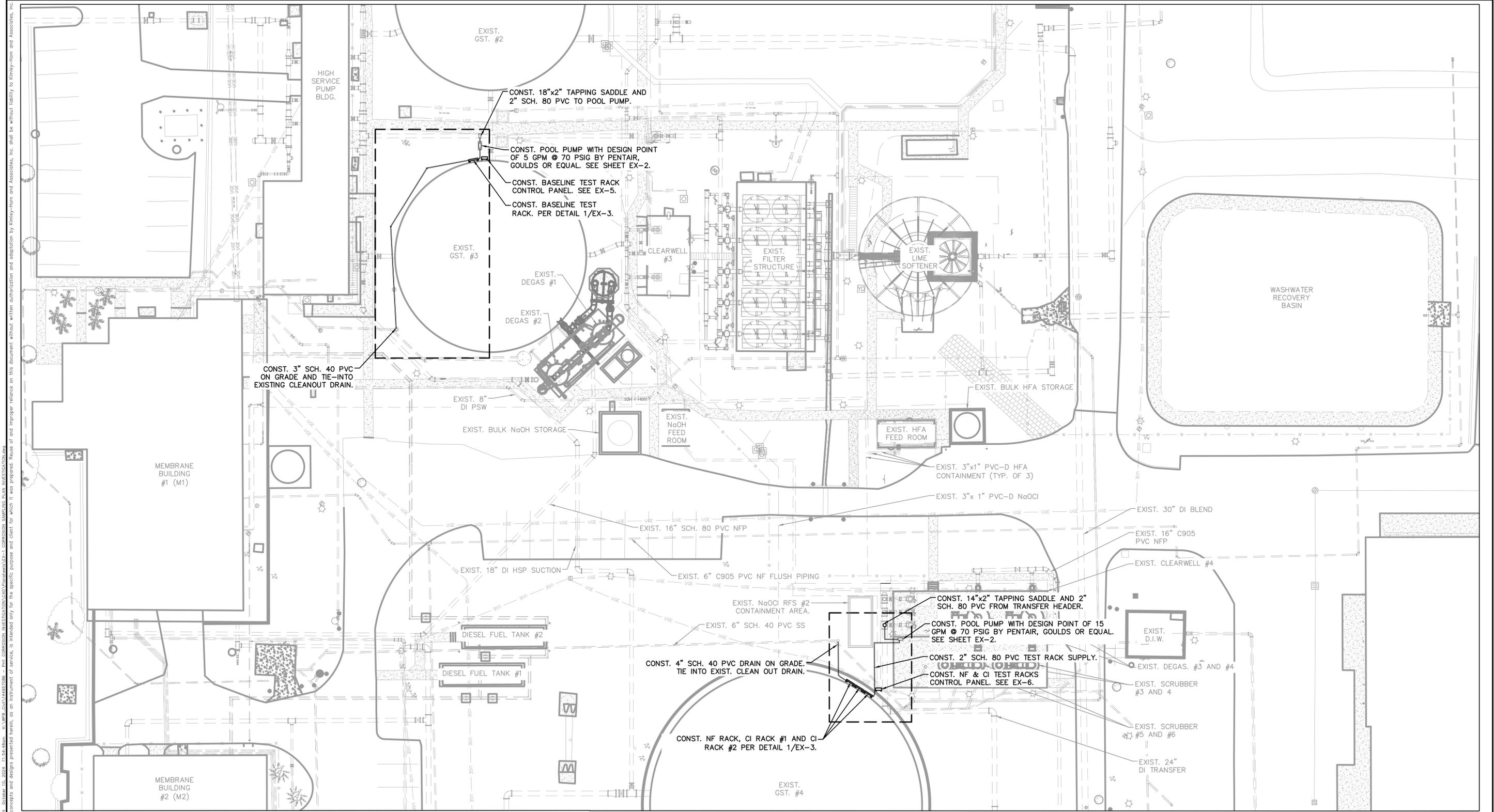
FOB: JOB SITE

TERMS: NET 30 DAYS (SUBJECT TO CREDIT APPROVAL)

WARRANTY: ALL WARRANTIES SHALL EXPIRE ONE (1) YEAR FROM DATE OF START-UP FROM SELLER TO BUYER UNLESS SPECIALLY INDICATED OTHERWISE AND WILL BE NULL AND VOID UNLESS MATERIALS ARE STORED UNDER PROPER CONDITIONS DETERMINED BY C.C. CONTROL CORP.

JUAN REYES

jreyes@cccontrolcorp.com



GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
2. ALL PIPING AND FITTINGS SHALL BE SCH. 80 PVC. U.O.N.

1 EXISTING SITE CIVIL AND YARD PIPING PLAN
 Scale: 1" = 20' - 0"



No.	REVISIONS	DATE	BY

Kimley»Horn

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 1920 WEKIVA WAY SUITE 200, WEST PALM BEACH, FL 33411
 PHONE: 561-845-0665 FAX: 561-863-8175
 WWW.KIMLEY-HORN.COM REGISTRY NO. 696

KHA PROJECT	144957086
DATE	OCT 2024
SCALE	AS SHOWN
DESIGNED BY	NPOB
DRAWN BY	DC
CHECKED BY	---

**LIME SOFTENING ELIMINATION
 CORROSION INVESTIGATION**

PREPARED FOR
VILLAGE OF WELLINGTON

PALM BEACH COUNTY FLORIDA

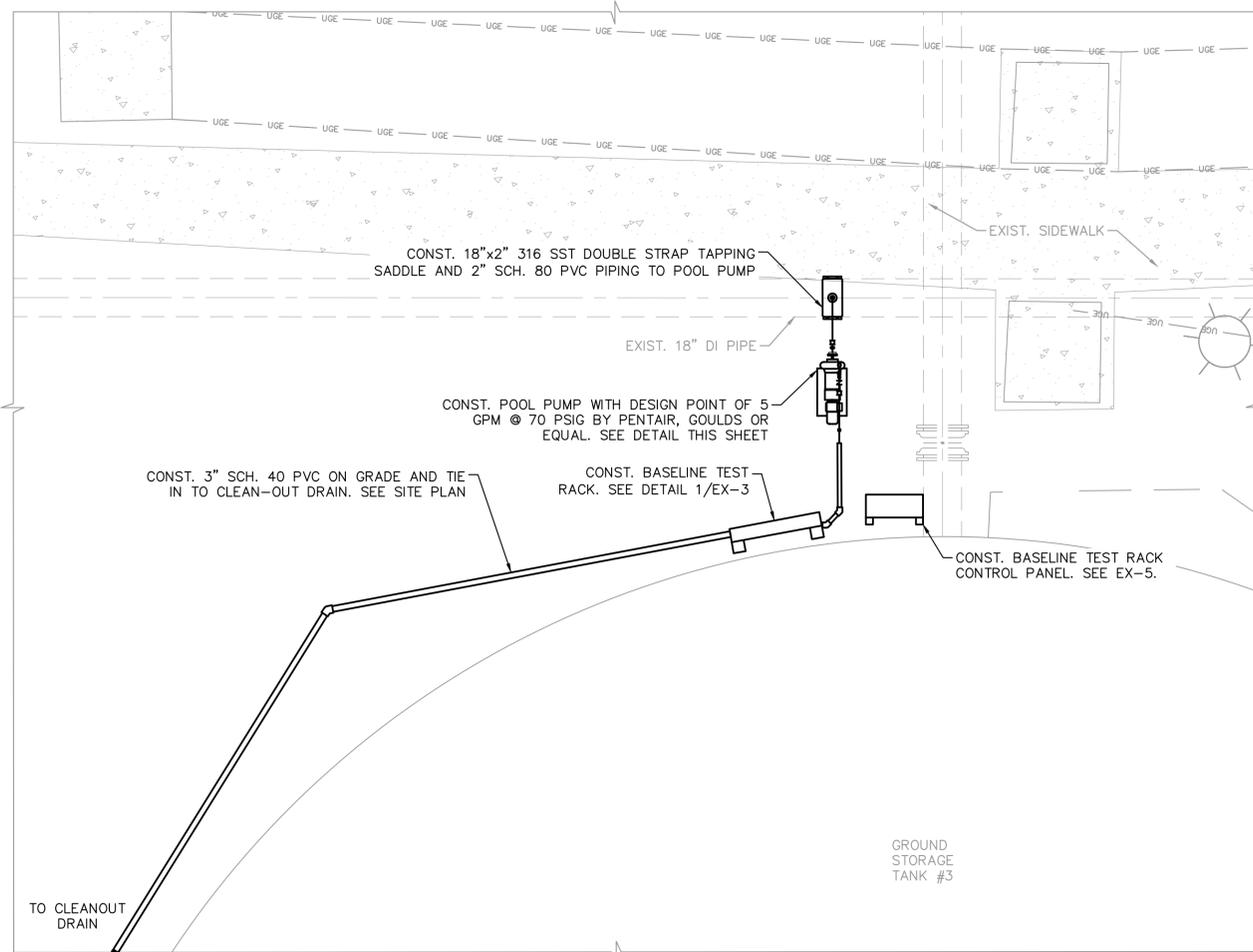
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SITE PLAN

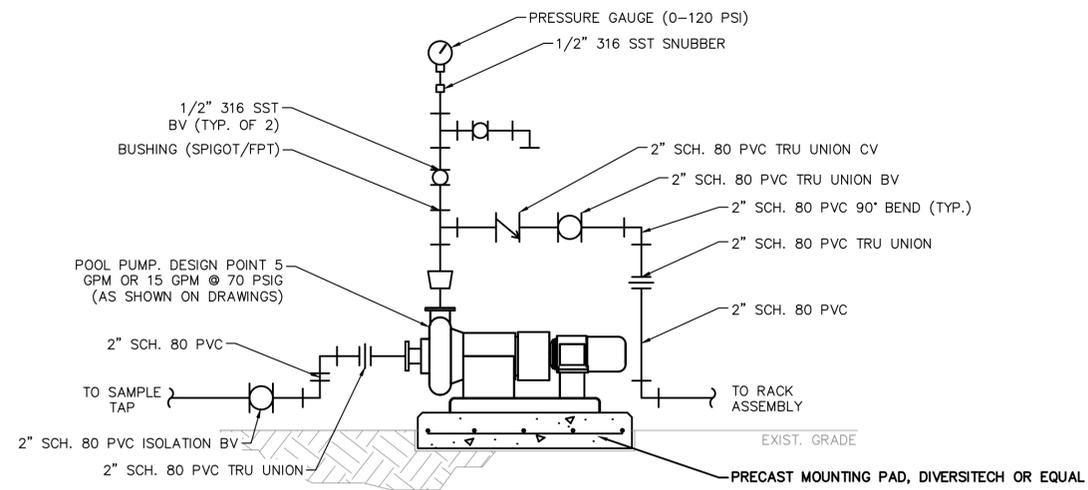
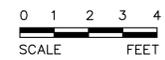
SHEET NUMBER
EX-1

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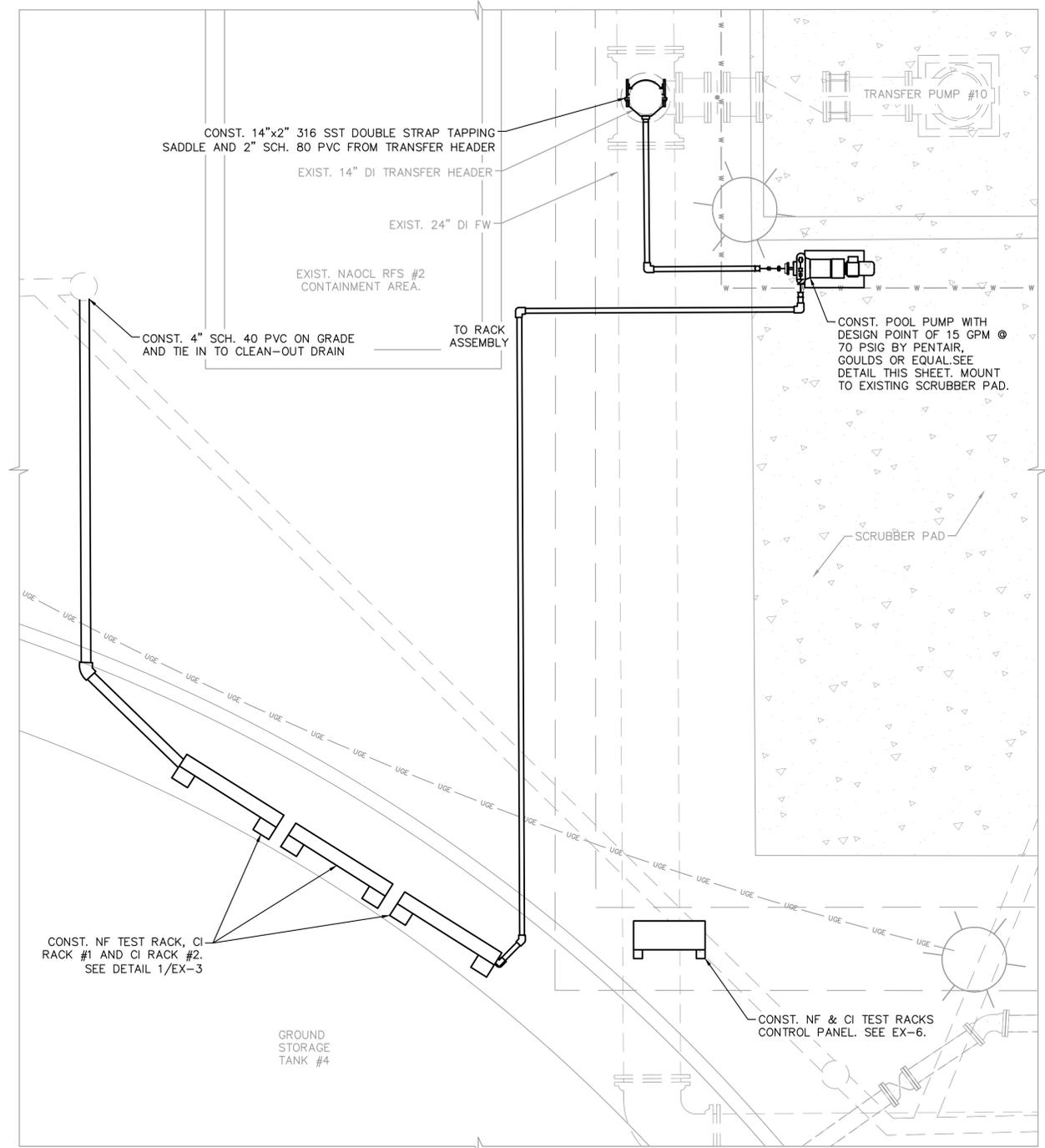
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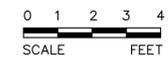
1
Ex-1 **BLENDED FW SAMPLE POINT**
Scale: 1/4" = 1'-0"



2
Ex-2 **SAMPLE PUMP DETAIL**
Scale: N.T.S.



3
Ex-1 **NANOFILTRATION FW SAMPLE POINT**
Scale: 3/8" = 1'-0"



GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
2. ALL PIPING AND FITTINGS SHALL BE SCH. 80 PVC. U.O.N.
3. CONTRACTOR NOT PERMITTED TO MOUNT RACK TO TANK. ALL RACKS SHALL BE FREE STANDING.
4. RACK SUPPLY PIPING SHALL BE INSULATED.

No.	REVISIONS	DATE	BY

Kimley»Horn

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KHA PROJECT	144957086
DATE	OCT 2024
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DRAWN BY	DC
CHECKED BY	----

**LIME SOFTENING ELIMINATION
CORROSION INVESTIGATION**

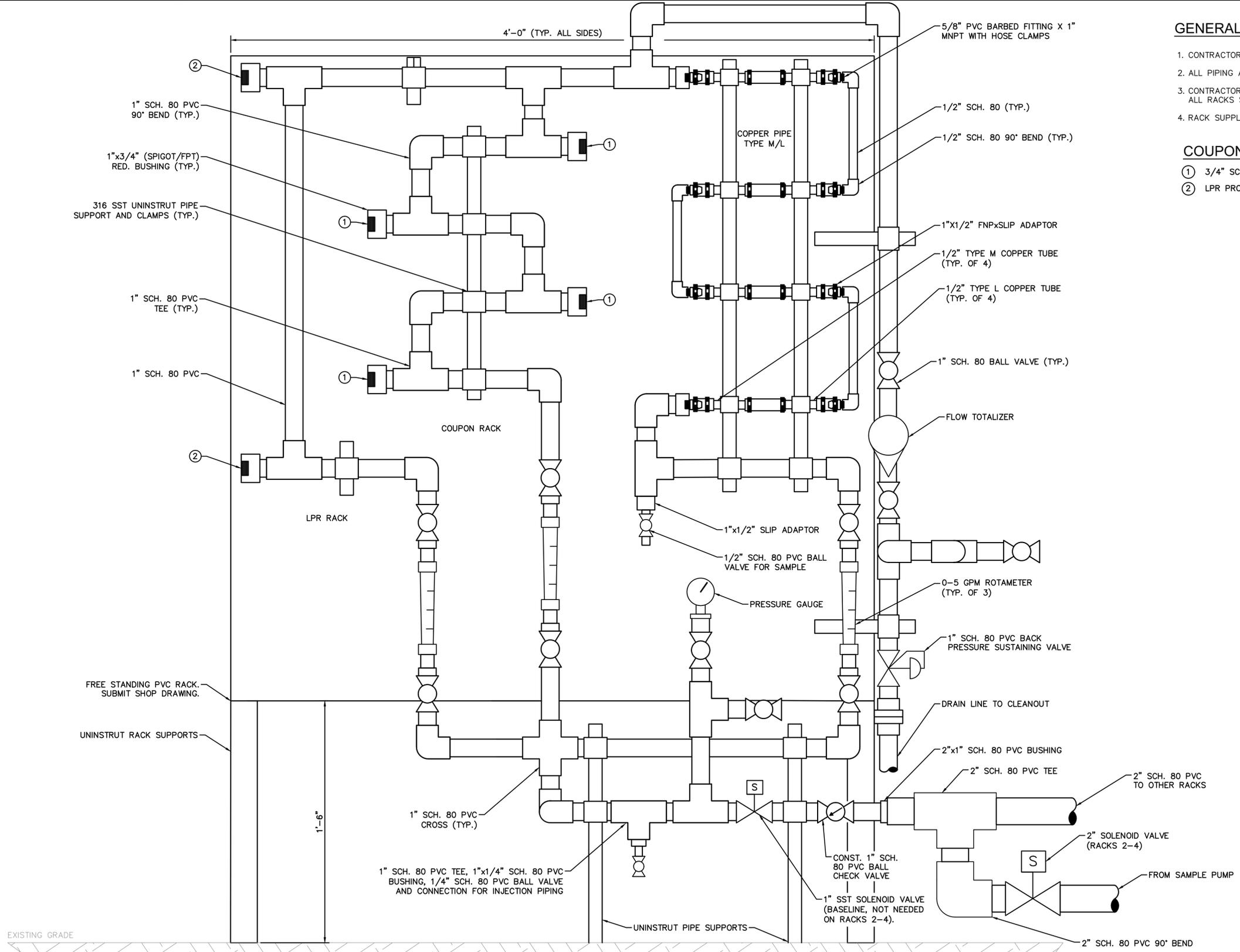
PREPARED FOR
VILLAGE OF WELLINGTON

PALM BEACH COUNTY FLORIDA

**CORROSION TEST RACK PIPING
PLAN AND DETAILS**

SHEET NUMBER
EX-2

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GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
2. ALL PIPING AND FITTINGS SHALL BE SCH. 80 PVC. U.O.N.
3. CONTRACTOR NOT PERMITTED TO MOUNT RACK TO TANK, ALL RACKS SHALL BE FREE STANDING.
4. RACK SUPPLY PIPING SHALL BE INSULATED.

COUPON/LPR RACK SCHEDULE

- ① 3/4" SCH. 80 PVC MPT PLUG
- ② LPR PROBE

1 TYPICAL RACK DETAIL
 Scale: 3" = 1'

No.	REVISIONS	DATE	BY

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KHA PROJECT 144957086
DATE SEP 2024
SCALE AS SHOWN
DESIGNED BY NPOB
DRAWN BY DC
CHECKED BY ----

**LIME SOFTENING ELIMINATION
 CORROSION INVESTIGATION**

PREPARED FOR
VILLAGE OF WELLINGTON

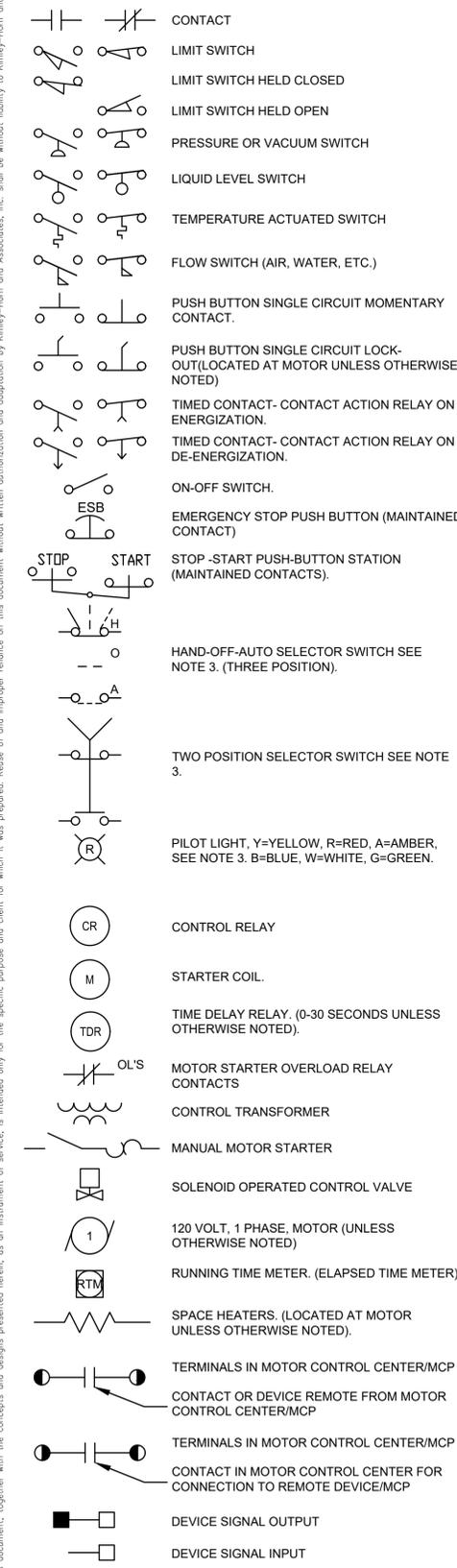
PALM BEACH COUNTY FLORIDA

**TYP. CORROSION TEST RACK
 DETAIL**

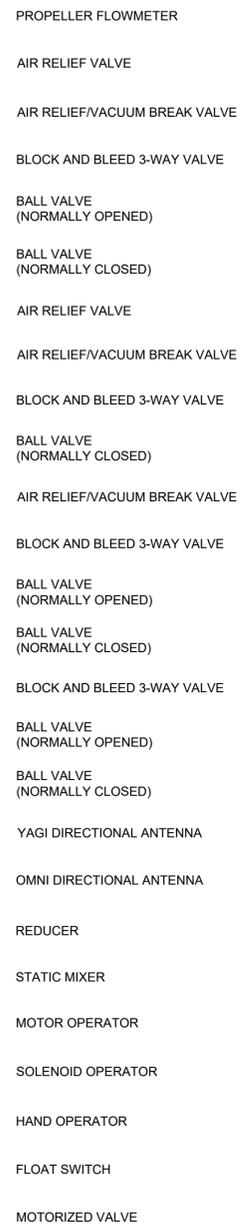
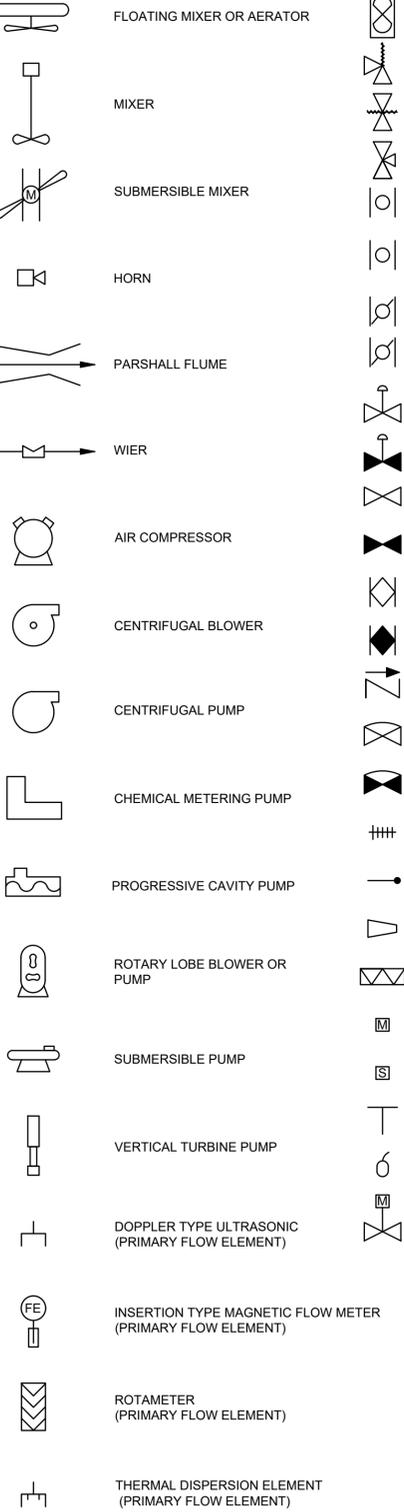
SHEET NUMBER
EX-3

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ELECTRICAL SYMBOLS



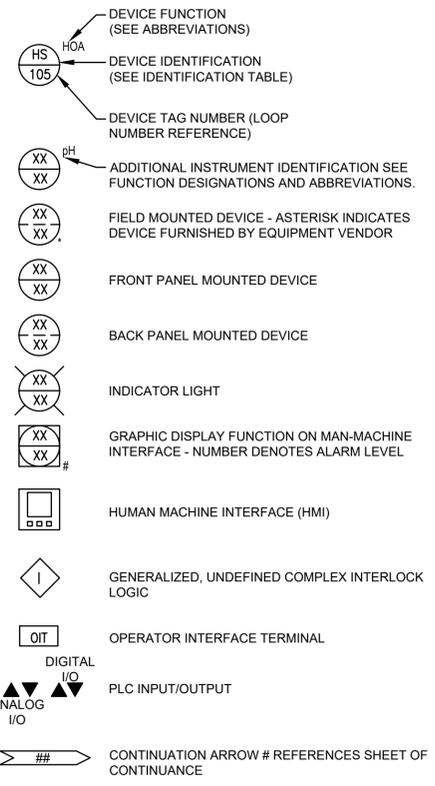
INSTRUMENT SYMBOLS



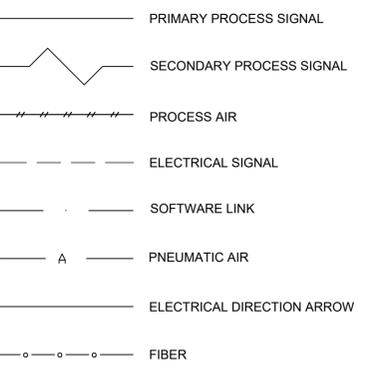
ELECTRICAL ABBREVIATIONS

AI	ANALOG INPUT
AO	ANALOG OUTPUT
CLL	CHLORINE LIQUID
CLS	CHLORINE SOLUTION
CV	CONTROL VALVE
D	DECANT WATER
DCS	DISTRIBUTED CONTROL SYSTEM
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
DS	DIGESTED SLUDGE
ES	EMERGENCY STOP
ETM	ELAPSED TIME METER
EX	EXISTING
FC	FAIL CLOSED
FE	FINAL EFFLUENT
FeCL3	FERRIC CHLORIDE
F/S	FAST/SLOW
GEN	GENERATOR
GR	GRIT
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HS	HYDRAULIC SUPPLY
HMI	HUMAN MACHINE INTERFACE
I/O	INPUT/OUTPUT
IAS	INSTRUMENT AIR SUPPLY
L/R	LOCAL/REMOTE
LAN	LOCAL AREA NETWORK
LCP	LOCAL CONTROL PANEL
LOR	LOCAL-OFF-REMOTE
M/A	MANUAL/AUTO
MCC	MOTOR CONTROL CENTER
ML	MIXED LIQUOR
MLR	MIXED LIQUOR RECYCLE
MMI	MAN MACHINE INTERFACE
MH	MANHOLE
NaOCI	SODIUM HYPOCHLORITE
NaOH	SODIUM HYDROXIDE
NS	NITROGEN SUPPLY
NaHSO3	SODIUM BISULFITE
NG	NATURAL GAS
NTU	TURBIDITY
OF	OVER FLOW
OIT	OPERATOR INTERFACE TERMINAL
OL	OVERLOAD
OR	VERRIDE
OR	VERTORQUE
O/O	ON/OFF(MAINTAINED)
PCP	PROCESS CONTROL PANEL
PE	PRIMARY EFFLUENT
PFS	PRIMARY FINE SCREENINGS
PI	PROCESS INFLUENT
PLC	PROGRAMMABLE LOGIC CONTROLLER
POT	SPEED POTENTIOMETER
PS	PRIMARY SLUDGE
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RF	RADIO FREQUENCY
RIO	REMOTE INPUT/OUTPUT
RS	RAW SEWAGE
RST	RESET
RVSS	REDUCED VOLTAGE SOFT STARTER
SBR	SEQUENCING BATCH REACTOR
SD	SANITARY DRAIN
SE	SECONDARY EFFLUENT
SLC	SINGLE LOOP CONTROLLER
SP	SET POINT
SPD	SPEED
SPC	SET POINT CONTROL
S/S	START/STOP (MOMENTARY)
STR	START
SW	SEAL WATER
TPS	THICKENED PRIMARY SLUDGE
TWAS	THICKENED WASTE ACTIVATED SLUDGE
UW	UTILITY PROCESS WATER
VFD	VARIABLE FREQUENCY DRIVE
WAS	WASTE ACTIVATED SLUDGE
1/2/B	PUMP1/PUMP2/BOTH

INSTRUMENT SYMBOLS



INSTRUMENT LINES



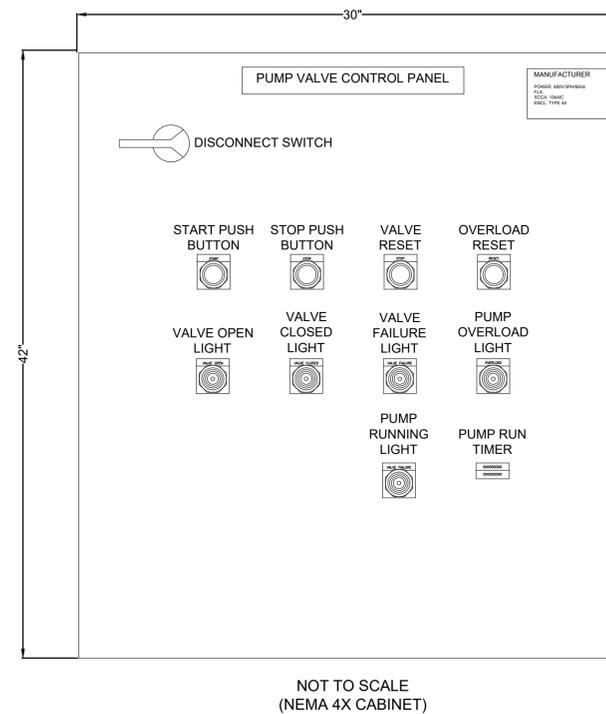
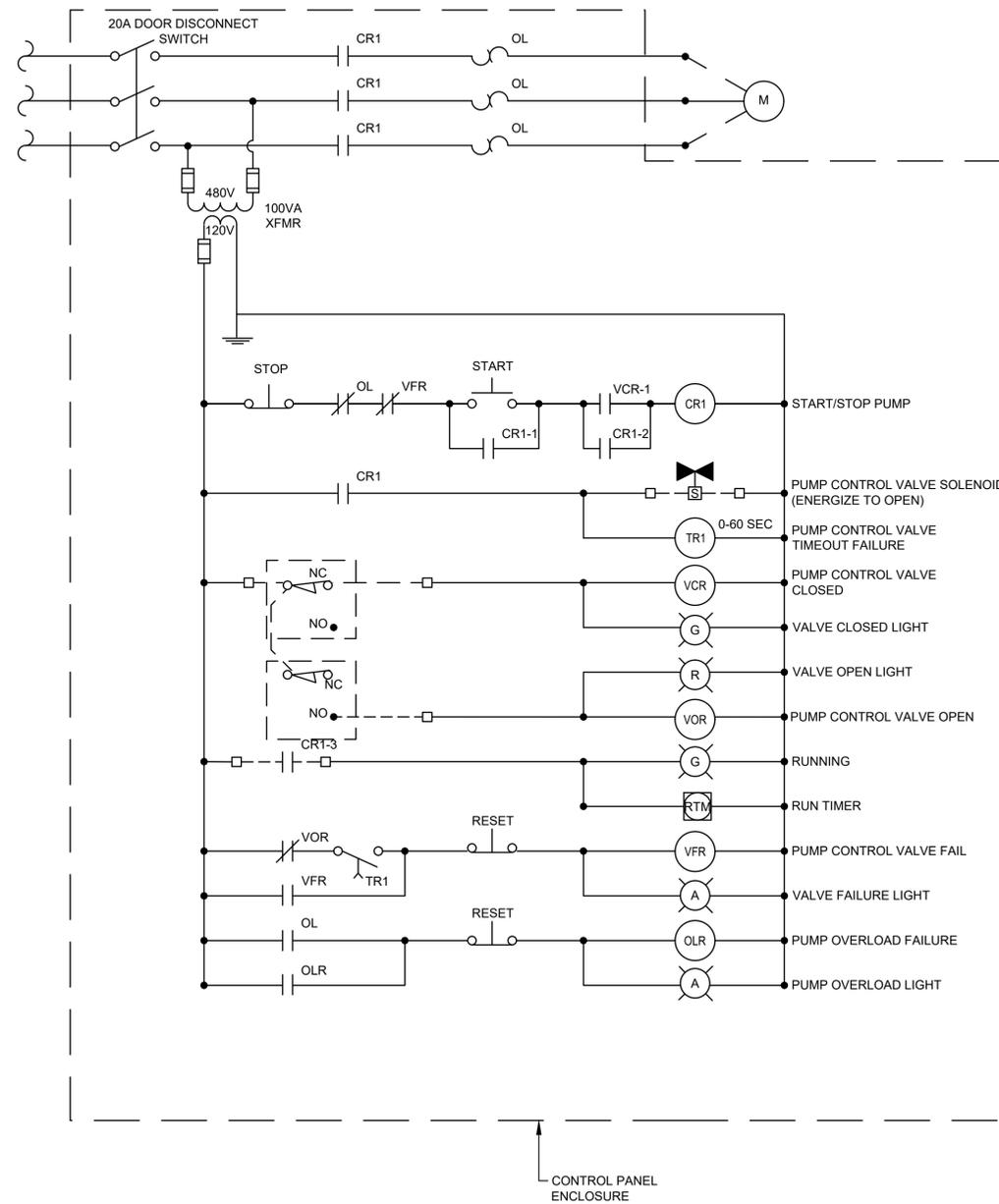
GENERAL ELECTRICAL REQUIREMENTS

- THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED N.E.C.A. STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AS REQUIRED BY THE CODE(S).
- VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
- ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND REVIEWED BY THE ENGINEER BEFORE ORDERING.
- PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE.
- LEAVE THE SITE CLEAN. REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
- CIRCUIT CONDUCTORS #2 AWG OR SMALLER TO BE COPPER TYPE "XHHW" FOR BELOW GRADE INSTALLATION OR COPPER TYPE THHN/THWN FOR ABOVE GRADE INSTALLATIONS. #1 AWG OR LARGER SHALL BE COPPER TYPE "XHHW-2" STRANDED COPPER. MINIMUM CONDUCTOR SIZE TO BE #12 AWG WITH #12 GND.
- UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 1", UNLESS OTHERWISE SHOWN ON THE PLANS. CONDUITS AS SHOWN ARE FOR INFORMATION ONLY. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- OUTDOOR CONDUITS EXPOSED TO BE GALVANIZED RIGID STEEL, MINIMUM SIZE 3/4", UNLESS OTHERWISE NOTED ON THE PLANS. GRS CONDUIT SHALL EXTEND BELOW GRADE TO THE FIRST ELBOW. ALL GRS CONDUIT EXPOSED TO EARTH SHALL BE HALF LAPPED WRAPPED IN SCOTCHRAIP 50 10 MIL TAPE OR EQUAL. EXTEND WRAP TO A HEIGHT OF 12" ABOVE GRADE. INDOOR CONDUITS SHALL BE IMC OR EMT UNLESS OTHERWISE SHOWN ON PLAN.
- ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED AND RATED FOR HEAVY DUTY SERVICE.
- ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRING, BOXES, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
- IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK, SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED, AND WILL BE SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND O & M MANUALS.

FIRST LETTER	SUCCEEDING LETTER(S)	MODIFIER
A	ANALYSIS	ALARM
B	BURNER, COMBUSTION	
C	CONDUCTIVITY	CONTROL CLOSED
D	DENSITY	DIFFERENTIAL
E	VOLTAGE	PRIMARY ELEMENT
F	FLOW RATE	FAILURE FAST
G	GAUGE	GLASS, VIEWING DEVICE
H	HAND (MANUAL)	HIGH
I	CURRENT (ELECTRICAL)	INDICATE
J	POWER	
K	TIME, RATE OF CHANGE	
L	LEVEL	LIGHT LOW
M	MOTION	MIDDLE
N	INTRUSION	NORMAL
O	TORQUE	OPEN
P	PRESSURE, VACUUM	
Q	QUANTITY	INTEGRATE, TOTALIZE
R	RADIATION	RECORD OR PRINT
S	SPEED, FREQUENCY	SWITCH SLOW
T	TEMPERATURE	TRANSMIT
U	MULTIVARIABLE	MULTIFUNCTION MULTIFUNCTION
V	VIBRATION	VALVE, LOUVER
W	WEIGHT, FORCE	WELL
X	UNCLASSIFIED	UNCLASSIFIED UNCLASSIFIED
Y	EVENT, STATE, PRESENCE	RELAY, COMPUTE, CONVERT
Z	POSITION	DRIVER, ACTUATOR

		KHA PROJECT 144957086 DATE OCT 2024 SCALE AS SHOWN DESIGNED BY YH DRAWN BY YH CHECKED BY EG	LIME SOFTENING ELIMINATION CORROSION INVESTIGATION PREPARED FOR VILLAGE OF WELLINGTON PALM BEACH COUNTY FLORIDA	NF & CI TEST RACKS CONTROL PANEL ELECTRICAL DIAGRAM	SHEET NUMBER EX-4
1920 WEKIVA WAY SUITE 200, WEST PALM BEACH, FL 33411 PHONE: 561-845-0665 FAX: 561-863-8175 WWW.KIMLEY-HORN.COM REGISTRY NO. 696					
No. REVISIONS DATE BY					

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Kimley»Horn

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KHA PROJECT
144957086
 DATE
OCT 2024
 SCALE AS SHOWN
 DESIGNED BY YH
 DRAWN BY YH
 CHECKED BY EG

**LIME SOFTENING ELIMINATION
CORROSION INVESTIGATION**

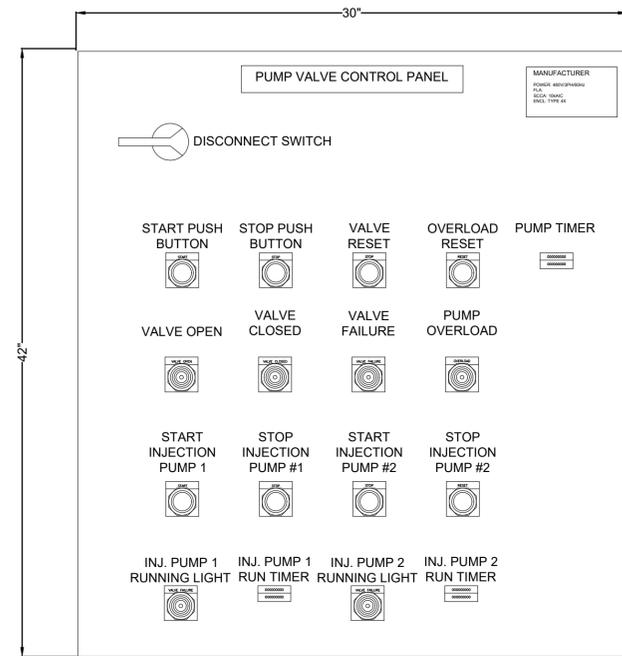
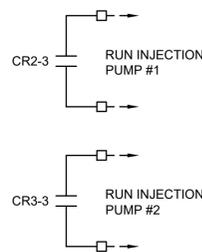
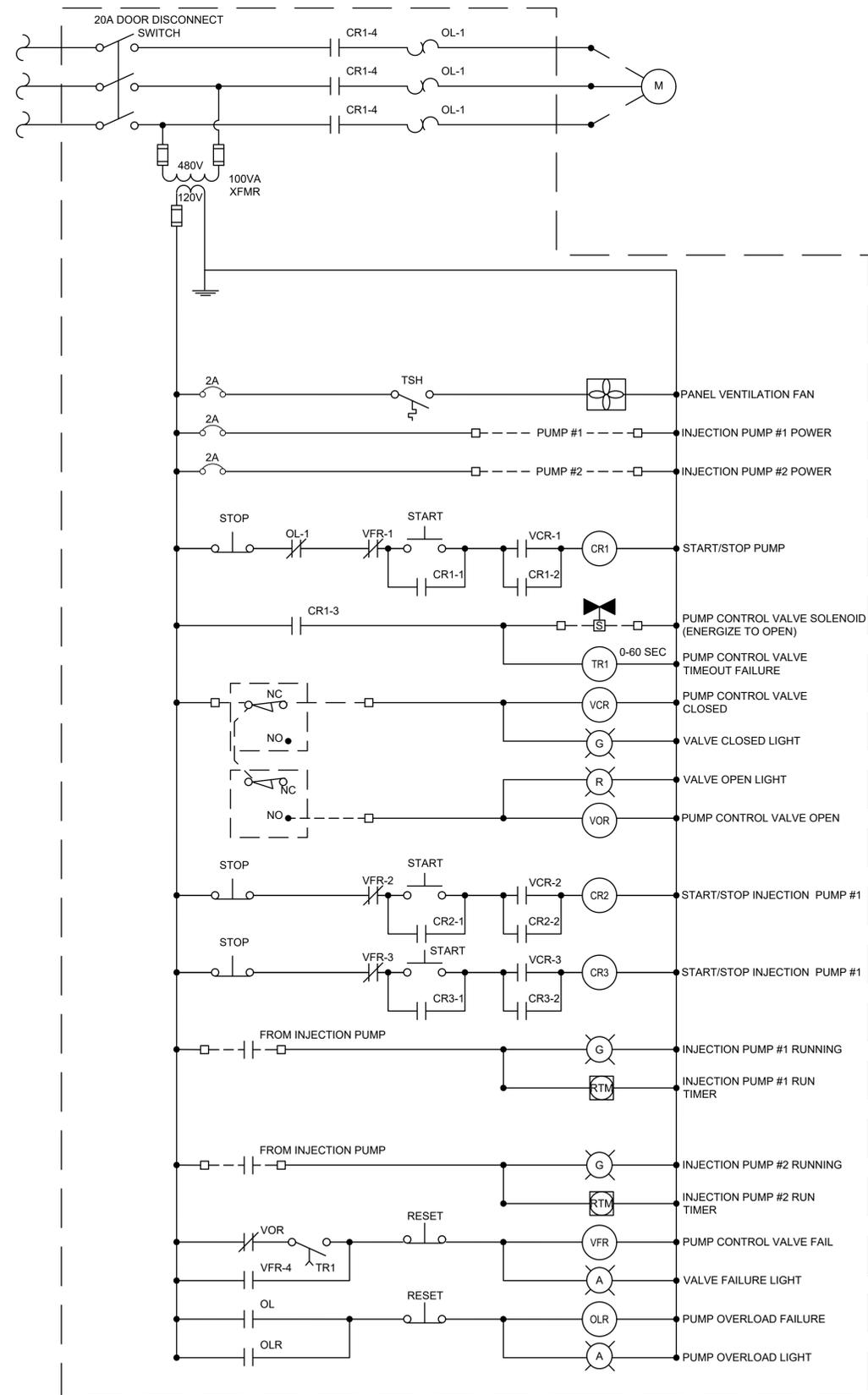
PREPARED FOR
VILLAGE OF WELLINGTON

PALM BEACH COUNTY
FLORIDA

**BASELINE TEST RACK CONTROL
PANEL ELECTRICAL DIAGRAM**

SHEET NUMBER
EX-5

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NOT TO SCALE
(NEMA 4X CABINET)

CONTROL PANEL ENCLOSURE

No.	REVISIONS	DATE	BY

Kimley»Horn
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 PHONE: 561-845-0665 FAX: 561-863-8175
 WWW.KIMLEY-HORN.COM REGISTRY NO. 696

KHA PROJECT 144957086
DATE OCT 2024
SCALE AS SHOWN
DESIGNED BY YH
DRAWN BY YH
CHECKED BY EG

**LIME SOFTENING ELIMINATION
CORROSION INVESTIGATION**
 PREPARED FOR
VILLAGE OF WELLINGTON
 PALM BEACH COUNTY FLORIDA

**NF & CI TEST RACKS CONTROL
PANEL ELECTRICAL DIAGRAM**

SHEET NUMBER
EX-6

VOW WTP – Preliminary Corrosion Testing

9/3/2024

Questions:

1. **(Sheets EX-1, EX-2): Is the intent to construct the 18x2 tapping saddle and line in the vertical to come out of the ground and on-grade?**

Correct.

2. **(Sheets EX-1, EX-2): Please provide Model numbers for proposed 5 GPM and 15 GPM pool pumps from Pentair, Goulds, or equal.**

Pumps shall be Grundfos CM 1-4 A-S-G-E-AQQE E-A-A-N and CM 3-5 A-S-G-E-AQQE E-A-A-N or approved equal. See cut sheets included in this response.

3. **(Sheet EX-1, EX-2, EX-3): General Note 2 states all piping and fittings to be Sch 80 PVC unless otherwise noted. Please confirm that the intent is for Schedule 40 PVC to be used for the drain lines only and that all piping from taps to pumps, supply piping, and rack piping is to be Schedule 80.**

Confirmed.

4. **(Sheet EX-1, EX-2): Please provide details on the Existing Scrubber Pad.**

- a. **Is the pad large enough for the 15 GPM pool pump?**

Correct. 15 gpm pump proposed is ~20"x10" in footprint, whereas existing scrubber pad is much larger. Coordinate piping around existing Chlorine RFS #2 as needed.

- b. **Please provide mounting/connection details.**

Pumps proposed are equipped with baseplate with four holes for bolting to pad. Mount pumps to scrubber pad and precast mounting pad using 316 SST tapcons.

5. **(Sheet EX-2): Please provide details on the pump mounting pads to be furnished by Contractor.**

- a. **What are the dimensions and thickness of the pump mounting pads?**

Mounting pad shall be 24"x36"x3" approx. – Use diversitech L2436-3 or equal.

- b. **Please provide mounting/connection details.**

Pumps are equipped with built-in steel base plate with four (4) mounting holes. Pumps to be mounted to pads using built in base plate and 316 SST tapcons. See attached datasheet.

6. **(Sheet EX-2, EX-3): General Note 4 states "Rack supply piping shall be lagged with insulation." We are not familiar with the term "lagged" with insulation. Please define and provide specification criteria.**

Provide UV resistant/Light blocking insulation for above grade supply piping.

7. **(Sheet EX-2, EX-3): Is the intent to install all the pipe on grade? The pump and rack details show the pipe slightly above existing grade, but no dimension given.**

This is not a permanent installation. Piping shall be installed on grade. Install wood blocking into ground and attach piping to wood to keep piping off grade for weed wacker.

- a. **If on grade, why use Schedule 40 at all since it could be more easily damaged by mowers, landscapers, etc.?**

Not a permanent installation. Proceed with piping schedules as noted in plans. Install piping above grass line so that area can be mowed.

- b. **If slightly above existing grade, what clearance? Please also provide details and spacing for pipe supports?**

A few inches off the normal grass level for area to be mowed. This is not a permanent installation.

8. **(Sheet EX-3): Detail 1 indicates unistrut-supported, free-standing PVC racks in the grass. These need to be Engineered, particularly as we enter hurricane season.**

- a. **Do they need wind load calcs?**

No, this is not a permanent installation. If a storm comes, the rack can be disassembled.

- b. **How do the racks attach to the ground?**

It can be a free-standing rack or a rack with footers. Contractor shall pick something that is cost-effective as this is not a permanent installation.

- c. **Is the structural design of the racks intended to be a delegated design item (if so, perhaps a structural design allowance can be included in the GMP)?**

This is not a permanent installation. No structural calcs or anything of the sort to be provided. If a storm comes, the Village will disassemble the racks.

- d. **Please provides further design information:**

- i. **Do the racks need concrete slabs/footers? If not, should the unistrut rack support posts be set in concrete?**

See prior response.

- ii. **What size and material for the unistrut rack supports and unistrut pipe supports?**

See prior responses. No preference, so long as it will be self-supported and rigid.

- iii. **What is the material for the 4'-0" x 4'-0" backer board on the racks? PVC? Plywood? What thickness?**

Board shall be ½" PVC starboard.

- iv. **What is the connection between the backer board and unistrut rack supports? Please provide details and specify hardware?**

See prior responses.

9. **(Sheet EX-3): Please provide material specs (preferably with approved vendors/model numbers) on the following:**

- a. **LPR Probes:** KHA/Village will provide

- b. **Pressure Gauges:** As manufactured by Ashcroft or approved equal.

- c. **SST Solenoid Valves:** 120V solenoid valves as manufactured by asco, hayward or approved equal

d. Rotameters: As manufactured by Blue-White, king or approved equal.

e. Flow Totalizer: Mechanical totalizer flowmeters as manufactured by dwyer, RPM filtration, or approved equal. Verify minimum flow requirements with application.

f. PVC Back Pressure Sustaining Valves: As manufactured by Hayward or approved equal

g. PVC: Type I, grade 1, ASTM D1784, NSF rated. Meet requirements of ASTM D1785.

Qty.	Description
------	-------------

1 CM 1-4 A-S-G-E-AQQE E-A-A-N



Note! Product picture may differ from actual product

Product No.: [97568241](#)

Compact, reliable, horizontal, multistage, end-suction centrifugal pump with axial suction port and radial discharge port. Pump materials in contact with the liquid are in high-grade stainless steel. The mechanical shaft seal is a special designed, unbalanced O-ring seal. Pipework connection is via internal NPT pipe threads.

The pump is fitted with a 3-phase, foot-mounted, fan-cooled asynchronous motor.

Further product details

Pump and motor are integrated in a compact and user-friendly design. The pump is fitted to a low base plate, making it ideal for installation in systems where compactness is important.

The state-of-the-art design and materials of the shaft seal ensure high wear resistance, improved sticking and dry-running capabilities and long operating life.

Servicing the pump requires no special service tools. Service parts are in stock for quick delivery and are available as kits, single parts or bulk. Service videos are available on www.youtube.com.

Pump

A combination of a stop ring and a Nord-lock® washer secures a tight and reliable fixation of the impeller spacing pipes to the splined pump shaft. It is possible to remove and fit the hydraulic parts from the pump side. The inlet and outlet port are integrated in the pump sleeve. The inlet part, chambers and discharge part are hold together by four staybolts and a retaining flange.

The pump is fitted with an unbalanced O-ring seal with a rigid torque-transmission system. It has a fixed seal driver ensuring a reliable rotation of all parts. The dynamic secondary seal is an O-ring.

Seal faces:

- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)

This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



The pump shaft is connected to the motor shaft through a left thread and tight fit. The shaft cannot be dismantled.

Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to EN 50347. Electrical tolerances comply with EN 60034.

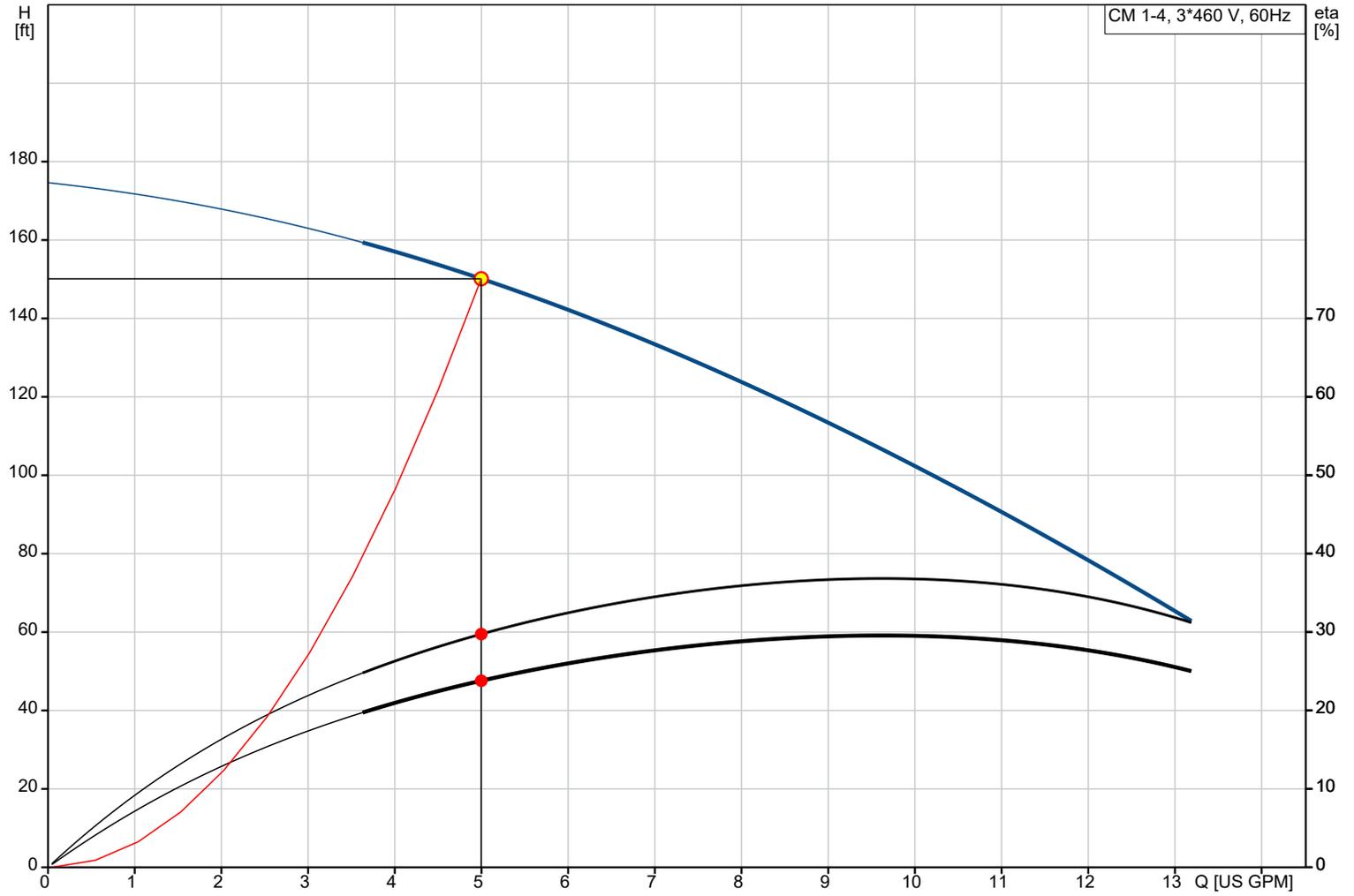
The motor efficiency is classified as premium efficiency in accordance with EISA2007.

An installation indicator is fitted to the motor fan cover. Based on the motor cooling air, it indicates the direction of rotation of the motor. The motor is fitted with a directional sticker.



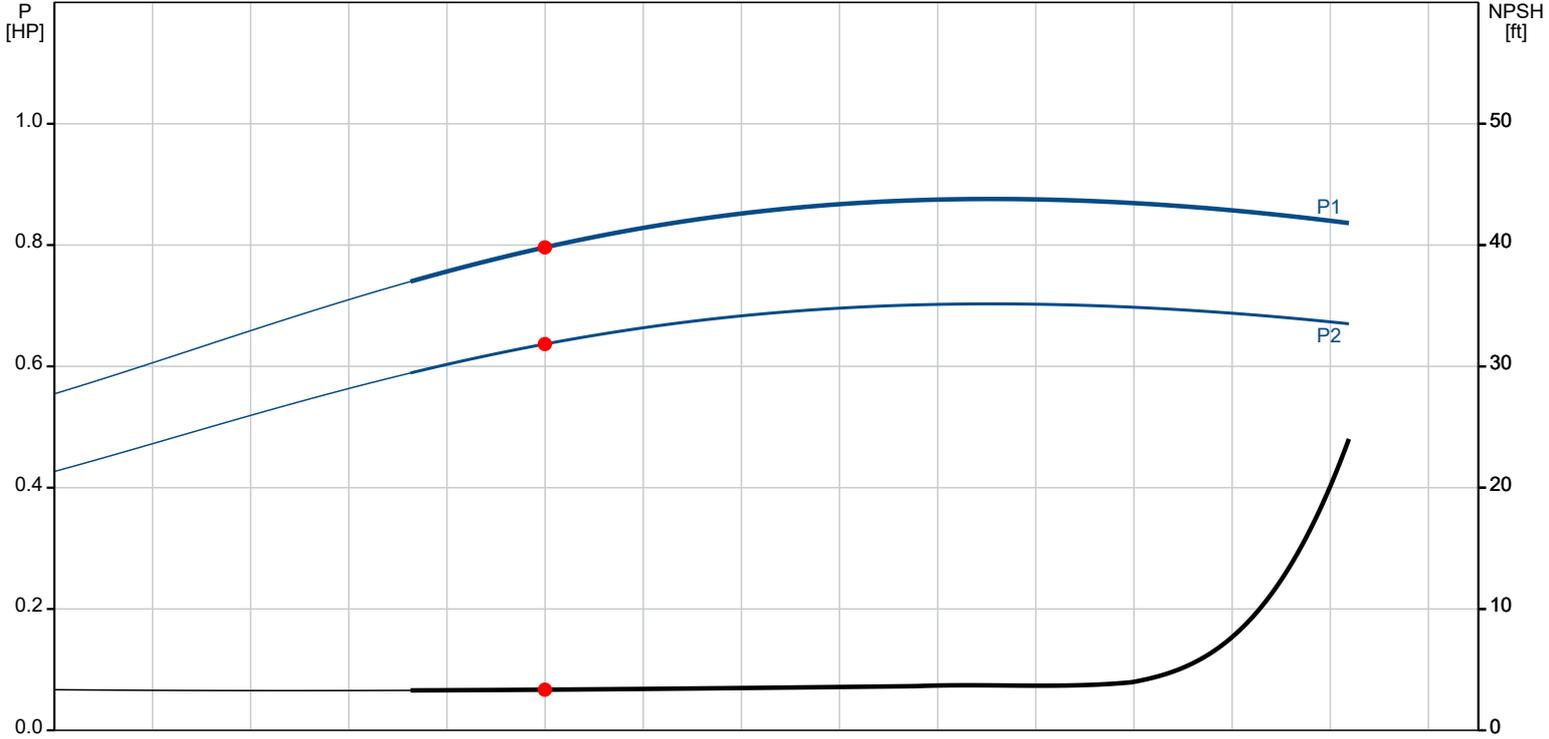
Qty.	Description
1	<p>Technical data</p> <p>Controls: Frequency converter: None</p> <p>Liquid: Pumped liquid: Water Liquid temperature range: -4 .. 248 °F Selected liquid temperature: 68 °F Density: 62.29 lb/ft³</p> <p>Technical: Pump speed on which pump data are based: 3480 rpm Actual calculated flow: 5 US GPM Rated flow: 8.98 US GPM Resulting head of the pump: 150.1 ft Rated head: 118.7 ft Code for shaft seal: AQQE Approvals: CE,CULUS,EAC,CURUS,UKCA Approvals for drinking water: WRAS,ACS,NSF61,UBA Curve tolerance: ISO9906:2012 3B</p> <p>Materials: Pump housing: Stainless steel EN 1.4401 AISI 316 Impeller: Stainless steel EN 1.4401 AISI 316</p> <p>Installation: Range of ambient temperature: -4 .. 131 °F Maximum operating pressure: 232.06 psi Max pressure at stated temp: 232 psi / 194 °F 145 psi / 250 °F Type of connection: NPT(F) Size of inlet connection: 1 inch Size of outlet connection: 1 inch Outlet position: 12</p> <p>Electrical data: Motor standard: NEMA Frame size: 71BA IE efficiency class: IE3 / NEMA Premium Rated power - P2: 0.992 HP Mains frequency: 60 Hz Suitable for 50/60 Hz: N Rated voltage: 3 x 220-230YY/440-480Y V Service factor: 1.00 Rated current: 3,4-3,6/1,7-1,8 A Rated speed: 3220-3370 rpm Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Built-in motor protection: NONE Cable included (Yes/No): N</p> <p>Others: Terminal box position: 12 Minimum efficiency index, MEI ≥: 0.68 Net weight: 28.1 lb Gross weight: 33.6 lb Country of origin: US Custom tariff no.: 8413.70.2040</p>

97568241 CM 1-4 A-S-G-E-AQQE E-A-A-N 60 Hz



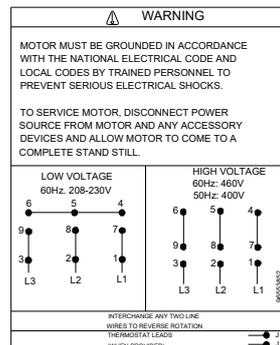
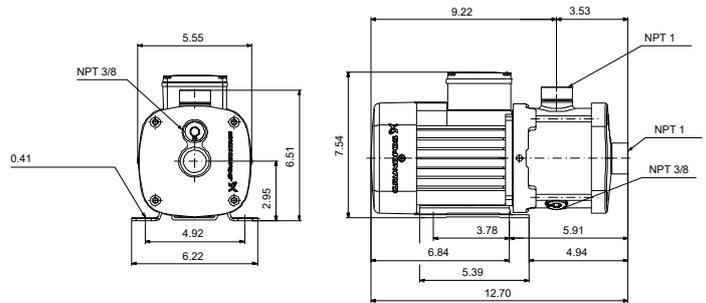
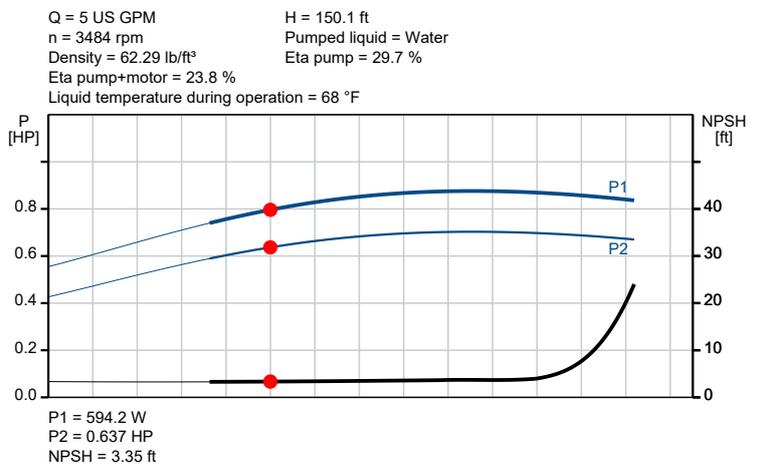
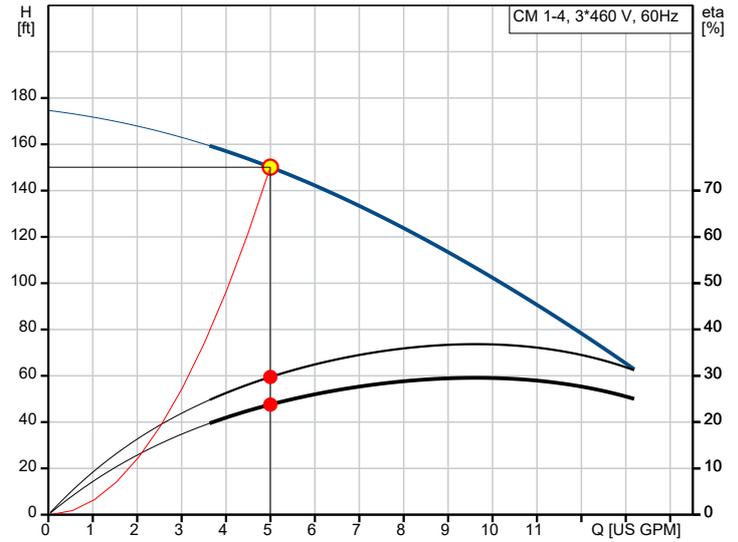
Q = 5 US GPM
n = 3484 rpm
Liquid temperature during operation = 68 °F
Eta pump = 29.7 %

H = 150.1 ft
Pumped liquid = Water
Density = 62.29 lb/ft³
Eta pump+motor = 23.8 %



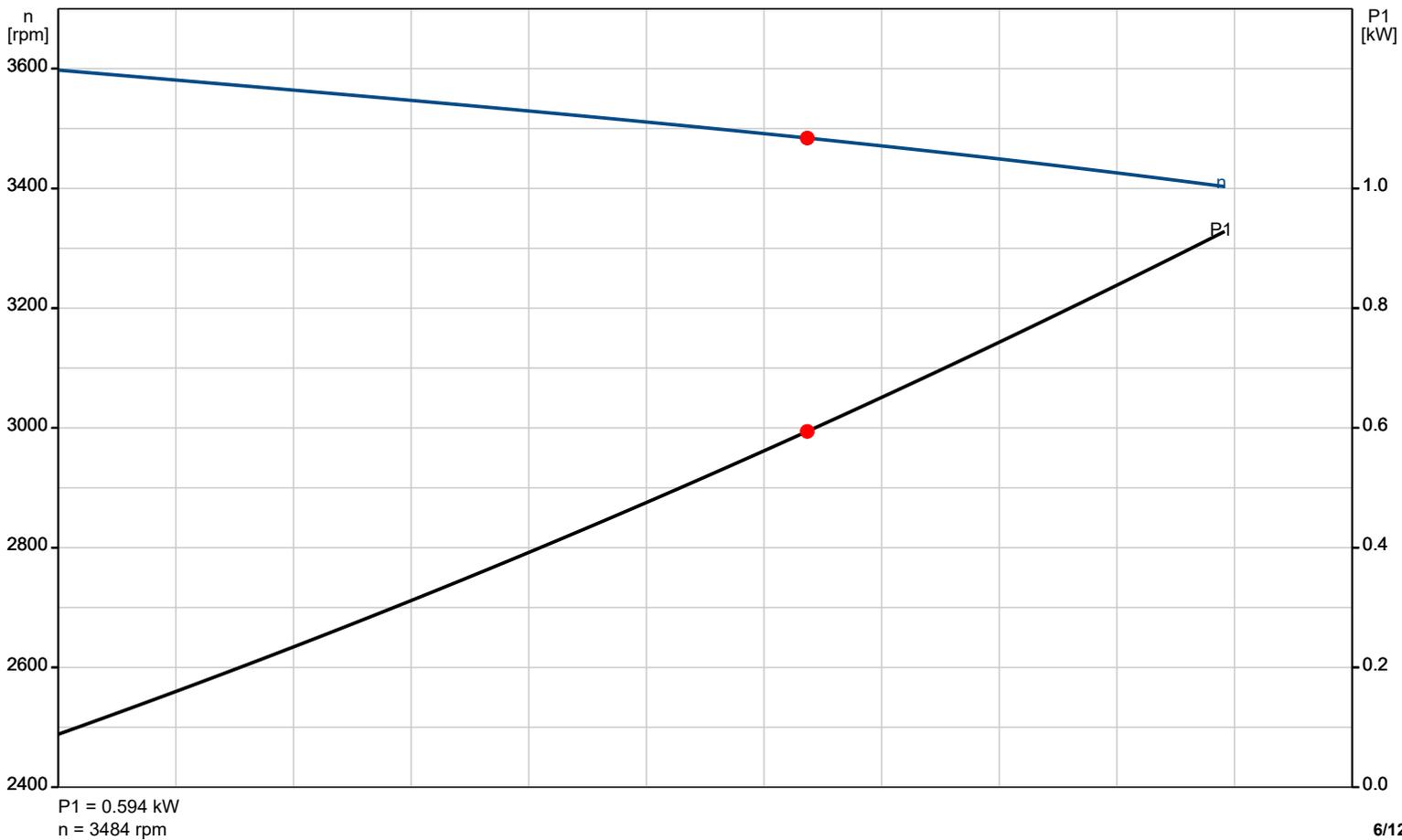
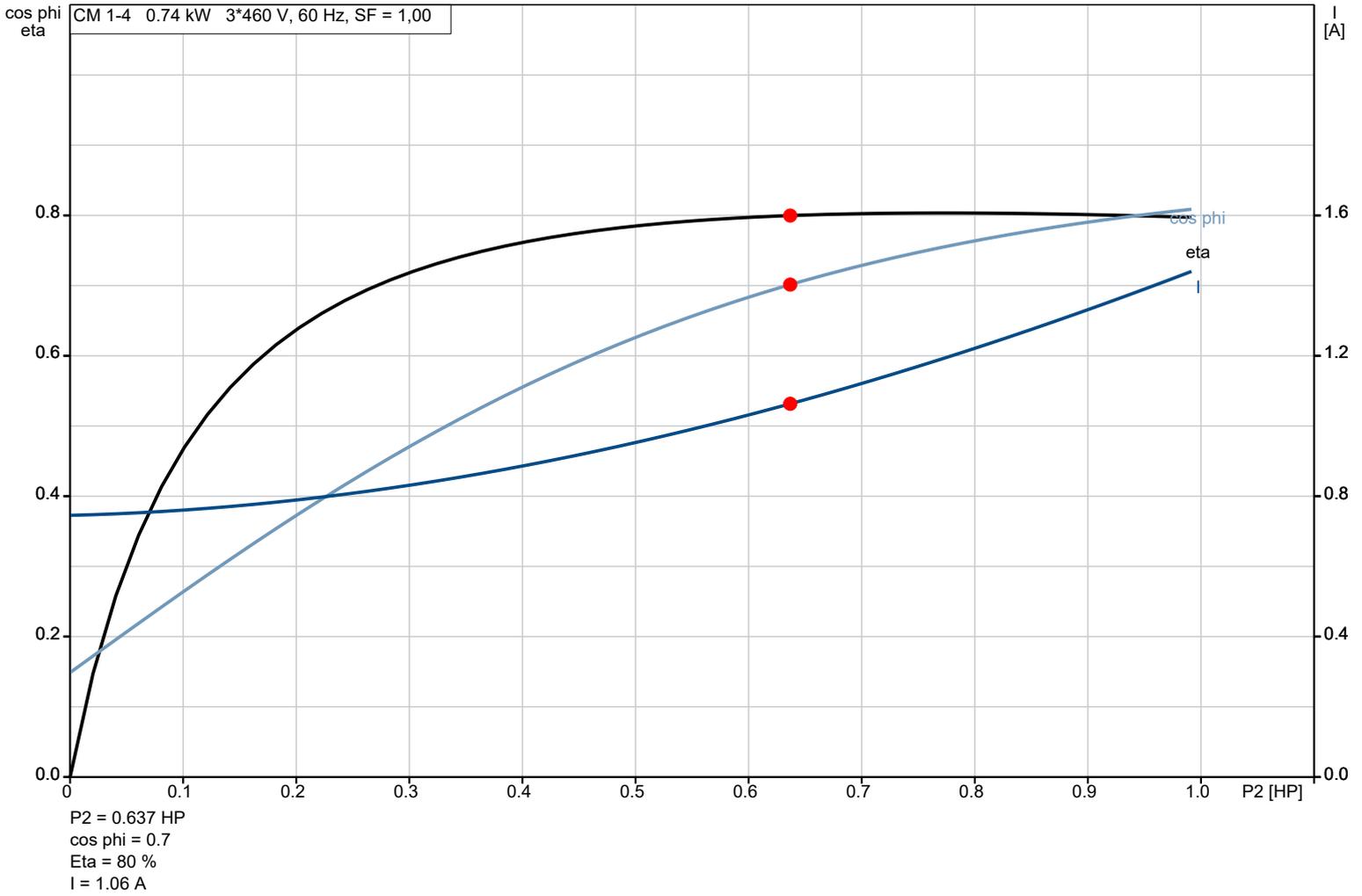
P1 = 594.2 W
P2 = 0.637 HP
NPSH = 3.35 ft

Description	Value
General information:	
Product name:	CM 1-4 A-S-G-E-AQQE E-A-A-N
Product No:	97568241
EAN number:	5700318668026
Technical:	
Pump speed on which pump data are based:	3480 rpm
Actual calculated flow:	5 US GPM
Rated flow:	8.98 US GPM
Resulting head of the pump:	150.1 ft
Rated head:	118.7 ft
Impellers:	4
Code for shaft seal:	AQQE
Approvals:	CE,CULUS,EAC,CURUS,UKCA
Approvals for drinking water:	WRAS,ACS,NSF61,UBA
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
Pump housing:	Stainless steel
Pump housing:	EN 1.4401
Pump housing:	AISI 316
Impeller:	Stainless steel
Impeller:	EN 1.4401
Impeller:	AISI 316
Material code:	G
Code for rubber:	E
Installation:	
Range of ambient temperature:	-4 .. 131 °F
Maximum operating pressure:	232.06 psi
Max pressure at stated temp:	232 psi / 194 °F
Max pressure at stated temp:	145 psi / 250 °F
Type of connection:	NPT(F)
Size of inlet connection:	1 inch
Size of outlet connection:	1 inch
Outlet position:	12
Connect code:	S
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-4 .. 248 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft ³
Electrical data:	
Motor standard:	NEMA
Frame size:	71BA
IE efficiency class:	IE3 / NEMA Premium
Rated power - P2:	0.992 HP
Mains frequency:	60 Hz
Suitable for 50/60 Hz:	N
Rated voltage:	3 x 220-230YY/440-480Y V
Service factor:	1.00
Rated current:	3,4-3,6/1,7-1,8 A
Rated speed:	3220-3370 rpm
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	NONE
Cable included (Yes/No):	N
Controls:	
Frequency converter:	None
Others:	
Terminal box position:	12
Minimum efficiency index, MEI ≥:	0.68
Net weight:	28.1 lb
Gross weight:	33.6 lb

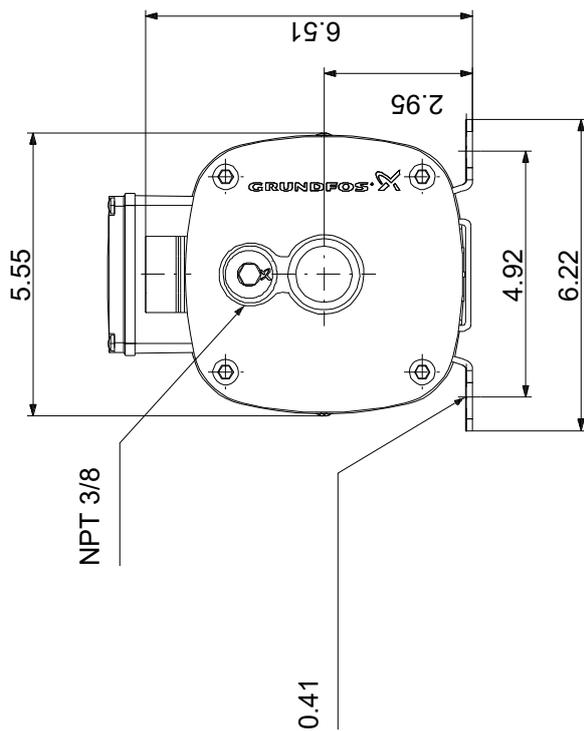
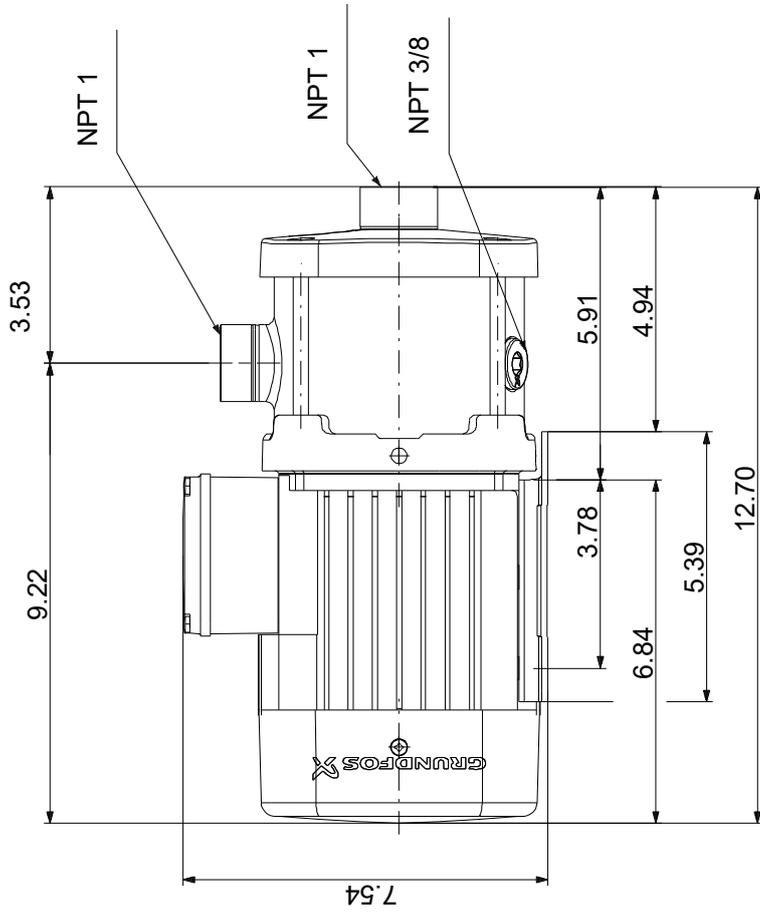


Description	Value
Country of origin:	US
Custom tariff no.:	8413.70.2040

97568241 CM 1-4 A-S-G-E-AQQE E-A-A-N 60 Hz



97568241 CM 1-4 A-S-G-E-AQQE E-A-A-N 60 Hz



97568241 CM 1-4 A-S-G-E-AQQE E-A-A-N 60 Hz

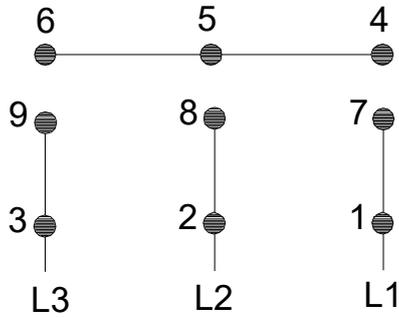


WARNING

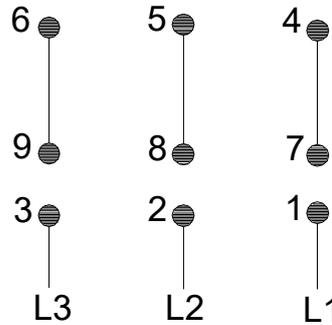
MOTOR MUST BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES BY TRAINED PERSONNEL TO PREVENT SERIOUS ELECTRICAL SHOCKS.

TO SERVICE MOTOR, DISCONNECT POWER SOURCE FROM MOTOR AND ANY ACCESSORY DEVICES AND ALLOW MOTOR TO COME TO A COMPLETE STAND STILL.

LOW VOLTAGE 60Hz. 208-230V



HIGH VOLTAGE 60Hz: 460V 50Hz: 400V



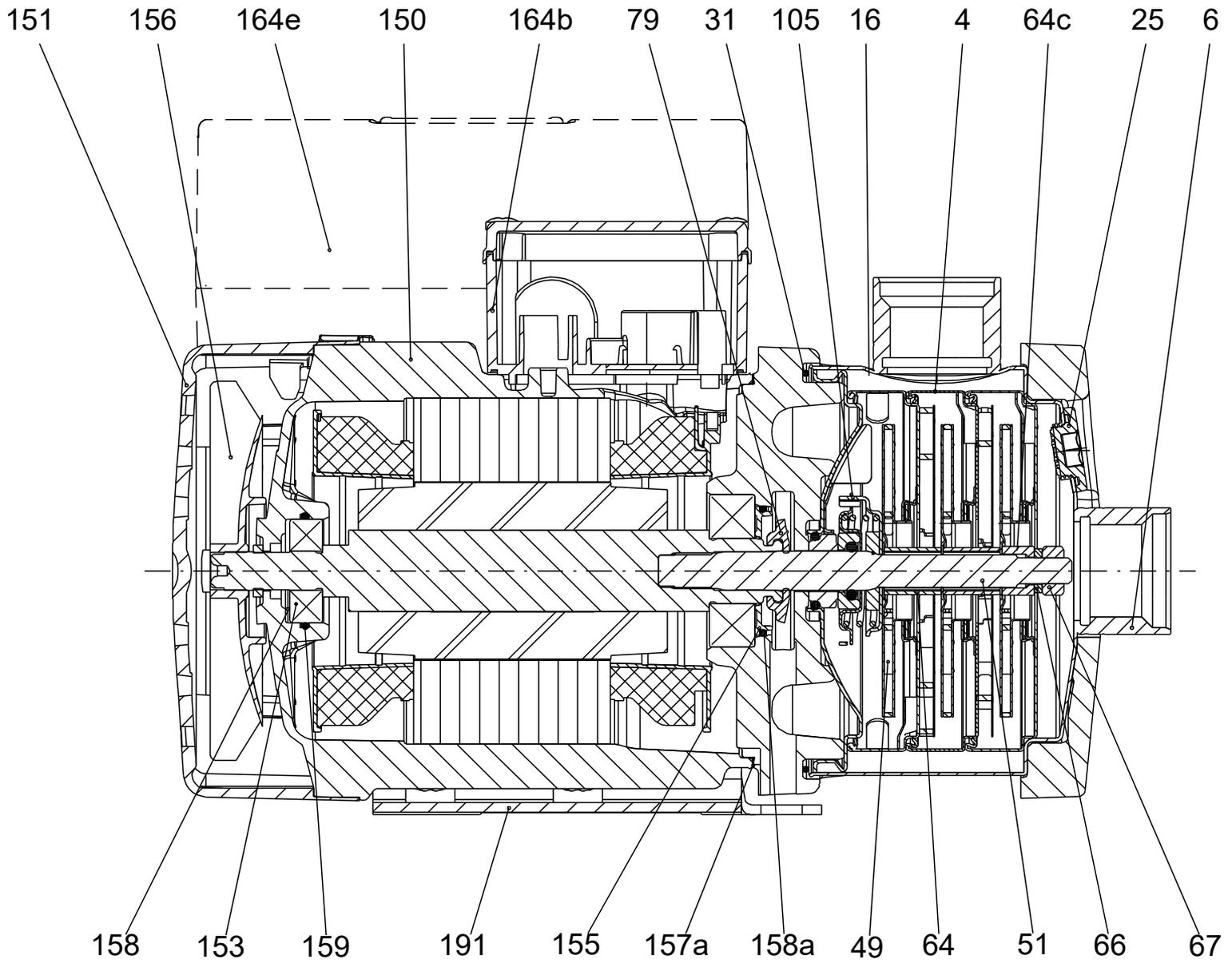
96553852

INTERCHANGE ANY TWO LINE WIRES TO REVERSE ROTATION

THERMOSTAT LEADS
(WHEN PROVIDED)



Sectional drawing



165x100

Spare parts CM 1-4, Product No. 97568241
Produced After 0907 (production year and week number)

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
-	Kit, fan cover, black			96279720	1	pcs
151b	Label				1	pcs
151a	Label				1	pcs
151	Fan cover				1	pcs
152	Pan head thread forming screw				2	pcs
-	Kit, fan cover, black/red			92780557	1	pcs
151b	Label				1	pcs
151a	Label				1	pcs
151	Fan cover				1	pcs
152	Pan head thread forming screw				2	pcs
-	Kit, Impeller and spacing pipe			92685307	1	pcs
49	Impeller cpl.				4	pcs
64a	Spacing pipe				3	pcs
-	Kit, Motor bearing			96932399	1	pcs
151a	Installation indicator				1	pcs
153	Ball bearing				1	pcs
154	Ball bearing				1	pcs
155	Bearing cover				1	pcs
155	Bearing cover				1	pcs
157a	Gasket				1	pcs
157a	Gasket				1	pcs
157a	Gasket				1	pcs
158a	O-ring				1	pcs
158	Waved washer				1	pcs
159a	Seal ring				1	pcs
159	O-ring				1	pcs
-	Kit, Neck ring			96932397	1	pcs
45	Neck ring				14	pcs
65	Neck ring retainer				14	pcs
-	Kit, Plug			96932395	1	pcs
-	Drain plug cpl.				2	pcs
11	O-ring				1	pcs
25	Plug				1	pcs
11	O-ring				2	pcs
-	Kit, Seals			96932440	1	pcs
31	O-ring				1	pcs
31	O-ring				1	pcs
64c	Clamp				1	pcs
66	Wedge lock washer				1	pcs
67	Lock nut				1	pcs
102	O-ring				1	pcs
102	O-ring				1	pcs
103	Seal ring, stationary				1	pcs
104	Seal ring, rotating				1	pcs
107	O-ring				1	pcs
107	O-ring				1	pcs
108	Compression spring				1	pcs
111a	Stop ring				1	pcs
111	Retainer				1	pcs
112	Driver for shaft seal				1	pcs
-	4 Bulk, Chamber cpl. (5 PC)			97690021	2	pcs
45	Bulk, Neck ring (24 PC)			96536194	1	pcs
65	Bulk, Neck ring retainer (8 PC)			99490745	1	pcs
65	Bulk, Neck ring retainer (24 PC)			99490747	1	pcs
+ 4	Bulk, Chamber cpl. (10 PC)			96547663	2	pcs
+ 4	Chamber cpl.			98371223	2	pcs
- 5a	Bulk, Chamber cpl. (10 PC)			98371222	1	pcs
65	Retainer for seal ring			99812852	1	pcs
+ 5a	Chamber cpl.			96588149	1	pcs
6a	Flange			98428397	1	pcs
16	Collar sleeve cpl.			98470957	1	pcs

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
26	Bulk, Hex socket head cap screw (4 PC)			99546332	4	pcs
31	Bulk, O-ring (10 PC)			98345019	1	pcs
+ 32	Cover			98821903	1	pcs
45	Bulk, Neck ring (24 PC)			96536194	1	pcs
65	Retainer for seal ring			99812852	1	pcs
65	Bulk, Neck ring retainer (8 PC)			99490745	1	pcs
65	Bulk, Neck ring retainer (24 PC)			99490747	1	pcs
66	Bulk, Wedge lock washer (10 PC)			96536157	1	pcs
67	Bulk, Lock nut (10 PC)			98277008	1	pcs
102	Bulk, O-ring (10 PC)			98277010	1	pcs
103	Bulk, Seal ring, stationary (10 PC)			99140489	1	pcs
104	Bulk, Seal ring, rotating (10 PC)			98277444	1	pcs
107	Bulk, O-ring (10 PC)			98275967	1	pcs
151a	Bulk, Installation indicator (10 PC)			97768602	1	pcs
152	Bulk, Cross recess countersunk screw (4 PC)			99332927	4	pcs
156	Fan			92715443	1	pcs
191	Base plate			97823648	1	pcs

Qty.	Description
------	-------------

1 **CM 3-5 A-S-G-E-AQQE E-A-A-N**

Product No.: [99155390](#)

Compact, reliable, horizontal, multistage, end-suction centrifugal pump with axial suction port and radial discharge port. Pump materials in contact with the liquid are in high-grade stainless steel. The mechanical shaft seal is a special designed, unbalanced O-ring seal. Pipework connection is via internal NPT pipe threads.

The pump is fitted with a 3-phase, foot-mounted, fan-cooled asynchronous motor.

Further product details

Pump and motor are integrated in a compact and user-friendly design. The pump is fitted to a low base plate, making it ideal for installation in systems where compactness is important.

The state-of-the-art design and materials of the shaft seal ensure high wear resistance, improved sticking and dry-running capabilities and long operating life.

Servicing the pump requires no special service tools. Service parts are in stock for quick delivery and are available as kits, single parts or bulk. Service videos are available on www.youtube.com.

Pump

A combination of a stop ring and a Nord-lock® washer secures a tight and reliable fixation of the impeller spacing pipes to the splined pump shaft. It is possible to remove and fit the hydraulic parts from the pump side. The inlet and outlet port are integrated in the pump sleeve. The inlet part, chambers and discharge part are hold together by four staybolts and a retaining flange.

The pump is fitted with an unbalanced O-ring seal with a rigid torque-transmission system. It has a fixed seal driver ensuring a reliable rotation of all parts. The dynamic secondary seal is an O-ring.

Seal faces:

- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)

This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



The pump shaft is connected to the motor shaft through a left thread and tight fit. The shaft cannot be dismantled.

Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to EN 50347. Electrical tolerances comply with EN 60034.

The motor efficiency is classified as premium efficiency in accordance with EISA2007.

An installation indicator is fitted to the motor fan cover. Based on the motor cooling air, it indicates the direction of rotation of the motor. The motor is fitted with a directional sticker.



Technical data

Controls:

Frequency converter: None

Liquid:

Pumped liquid: Water

Liquid temperature range: -4 .. 248 °F

Selected liquid temperature: 68 °F

Density: 62.29 lb/ft³

Qty. | Description

1 Technical:
 Pump speed on which pump data are based: 3480 rpm
 Rated flow: 16.4 US GPM
 Rated head: 162.8 ft
 Code for shaft seal: AQQE
 Approvals: CE,EAC,CURUS,UKCA
 Approvals for drinking water: WRAS,ACS,NSF61,UBA
 Curve tolerance: ISO9906:2012 3B

Materials:
 Pump housing: Stainless steel
 EN 1.4401
 AISI 316
 Impeller: Stainless steel
 EN 1.4401
 AISI 316

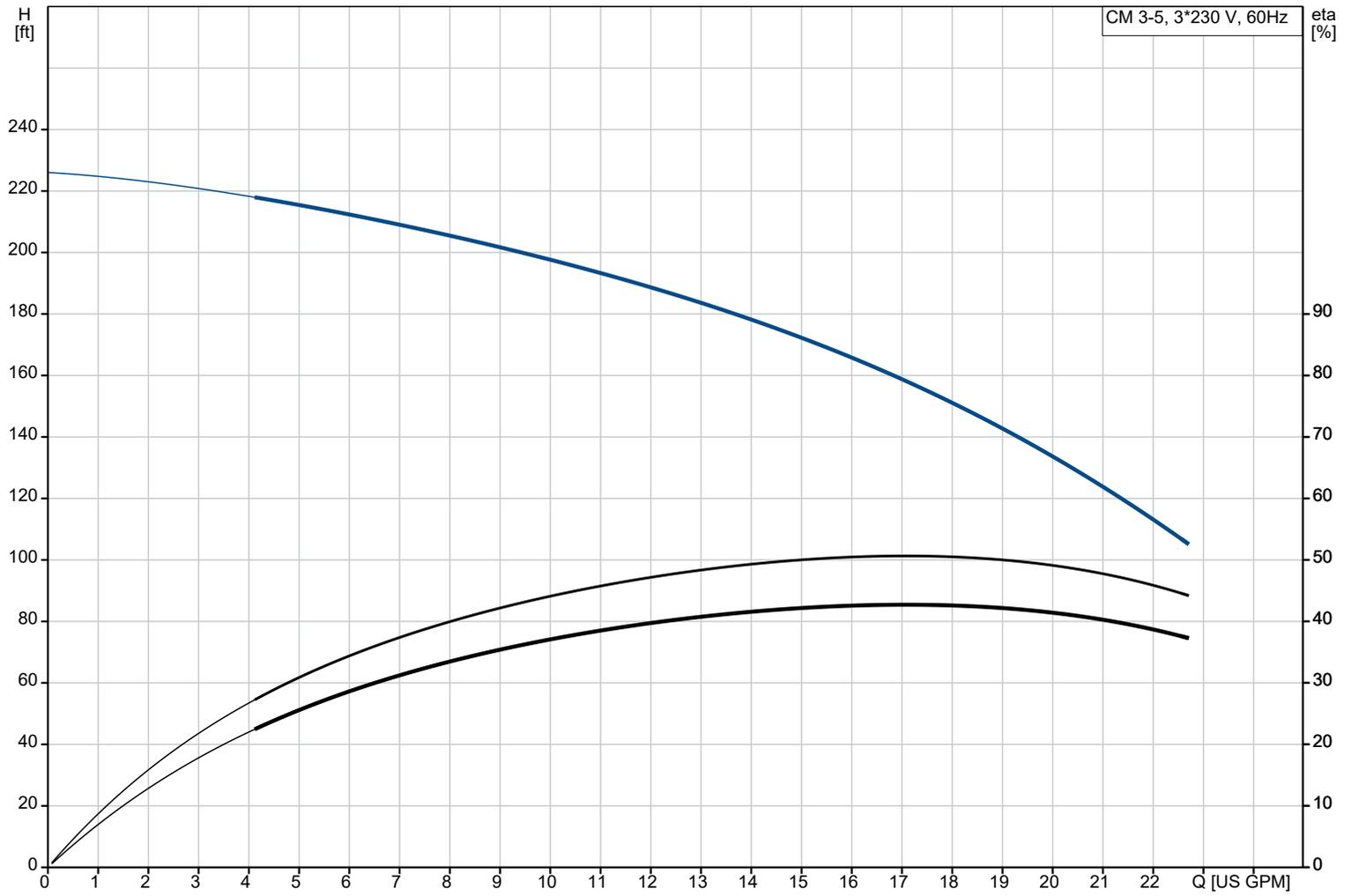
Installation:
 Range of ambient temperature: -4 .. 131 °F
 Maximum operating pressure: 232.06 psi
 Max pressure at stated temp: 232 psi / 194 °F
 145 psi / 250 °F

Type of connection: NPT(F)
 Size of inlet connection: 1 inch
 Size of outlet connection: 1 inch

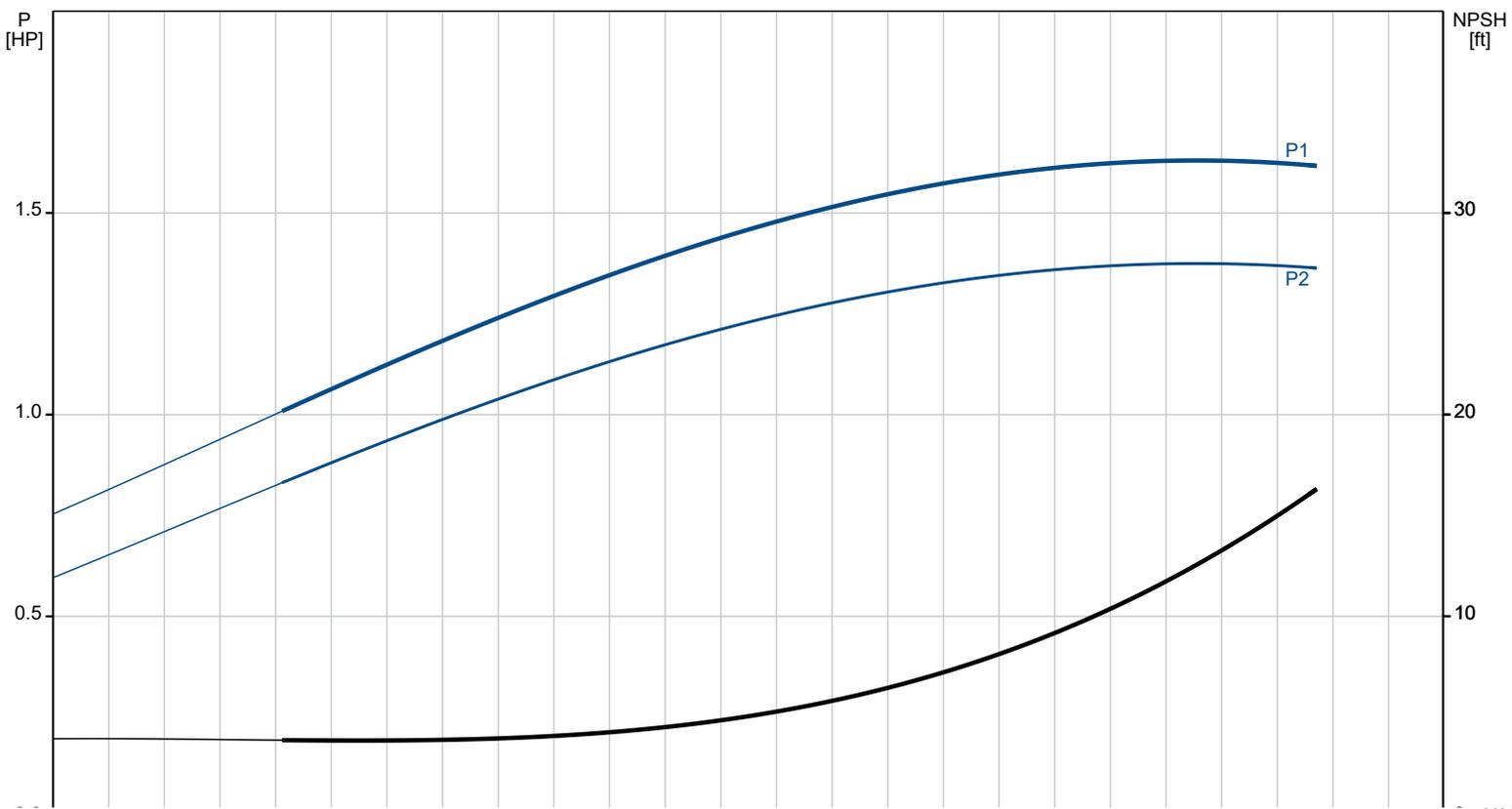
Electrical data:
 Motor standard: NEMA
 Frame size: 80CB
 IE efficiency class: IE3 / NEMA Premium
 Rated power - P2: 1.48 HP
 Mains frequency: 60 Hz
 Suitable for 50/60 Hz: N
 Rated voltage: 3 x 208-230YY/440-480Y V
 Service factor: 1.00
 Rated current: 5,2-5,1/2,55-2,65 A
 Rated speed: 3430-3470 rpm
 Enclosure class (IEC 34-5): IP55
 Insulation class (IEC 85): F
 Built-in motor protection: NONE
 Cable included (Yes/No): N

Others:
 Terminal box position: 12
 Minimum efficiency index, MEI ≥: 0.7
 Net weight: 36.6 lb
 Gross weight: 42.1 lb
 Country of origin: US
 Custom tariff no.: 8413.70.2040

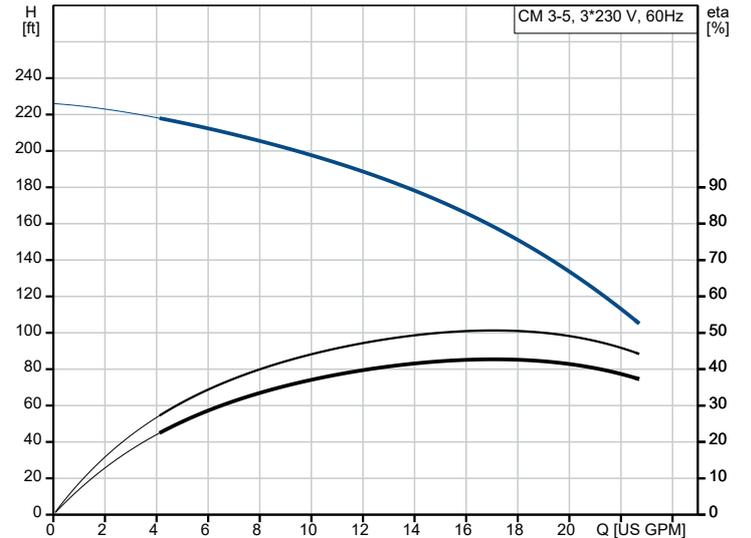
99155390 CM 3-5 A-S-G-E-AQQE E-A-A-N 60 Hz



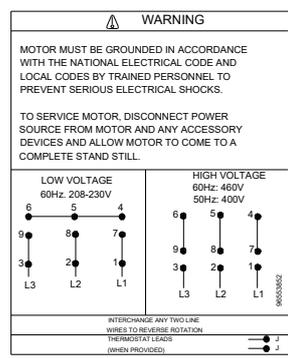
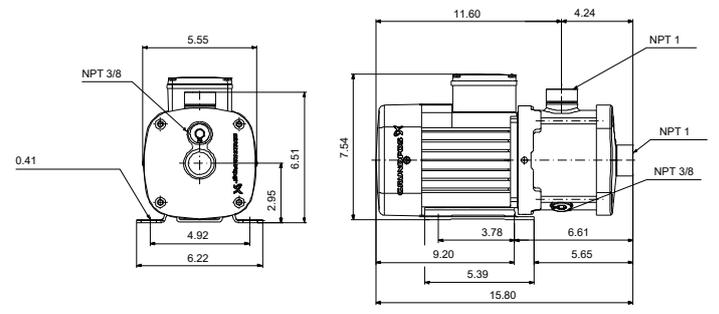
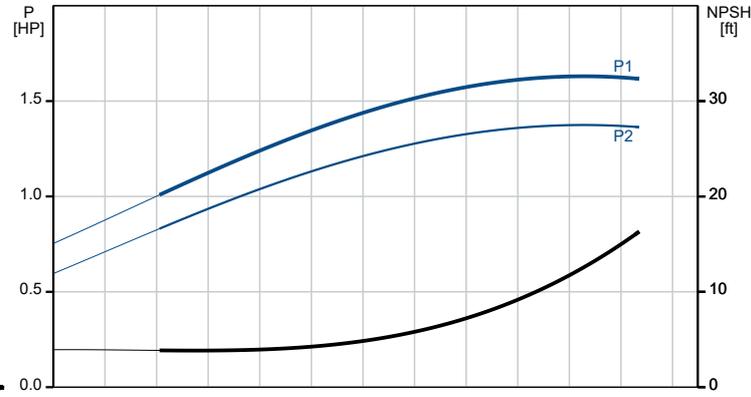
Pumped liquid = Water
Liquid temperature during operation = 68 °F
Density = 62.29 lb/ft³



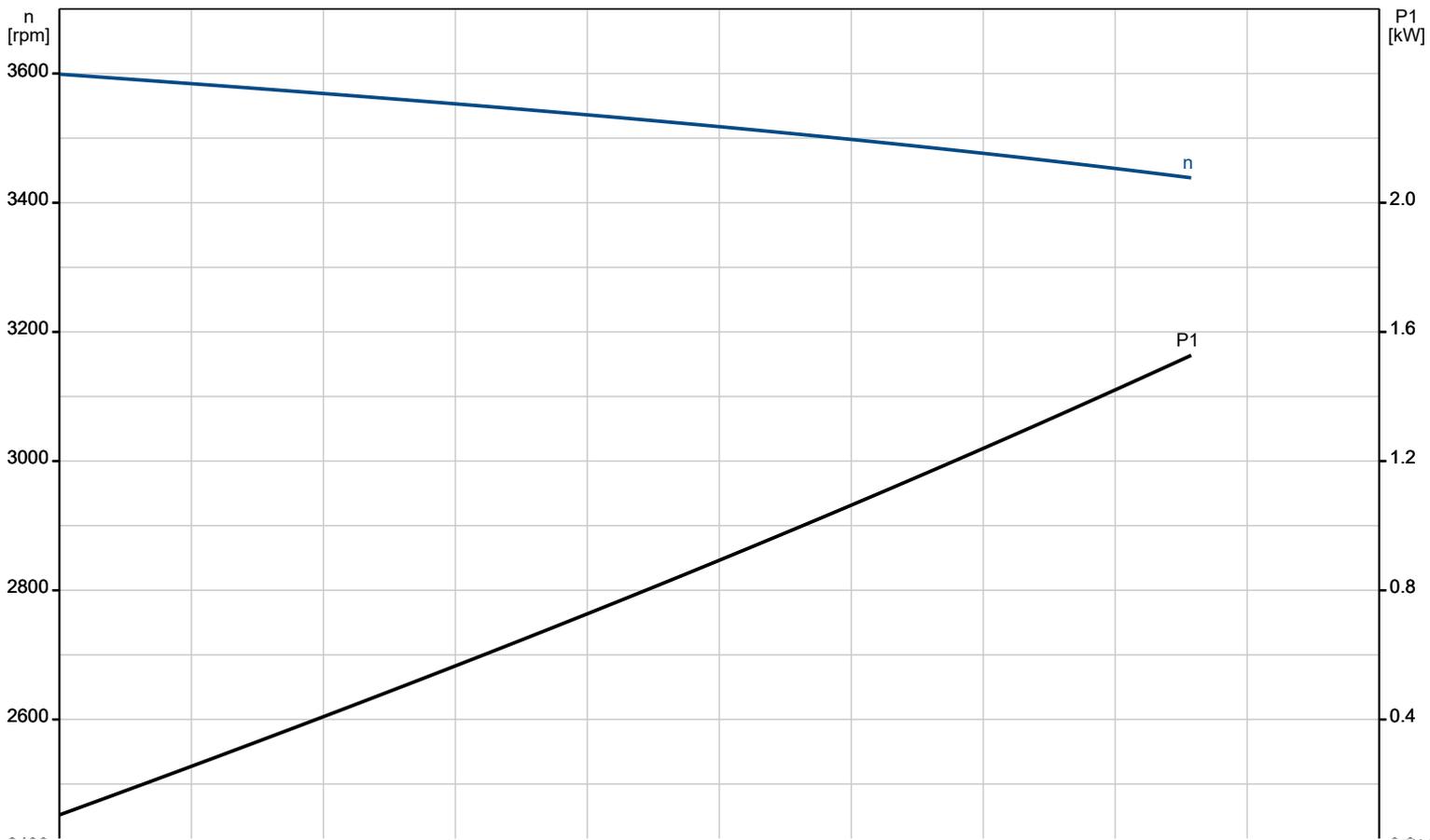
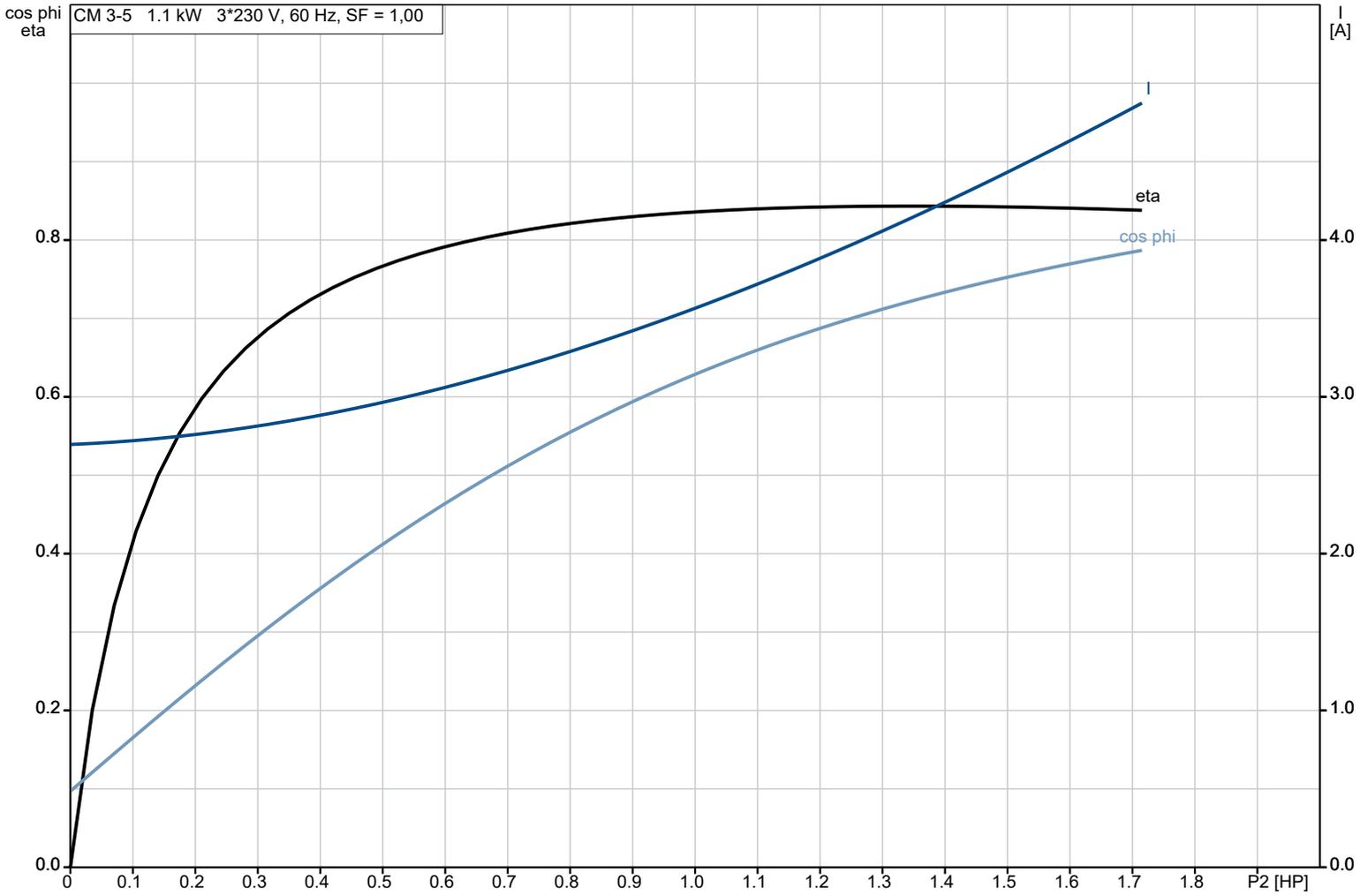
Description	Value
General information:	
Product name:	CM 3-5 A-S-G-E-AQQE E-A-A-N
Product No:	99155390
EAN number:	5712607775124
Technical:	
Pump speed on which pump data are based:	3480 rpm
Rated flow:	16.4 US GPM
Rated head:	162.8 ft
Impellers:	5
Code for shaft seal:	AQQE
Approvals:	CE,EAC,CURUS,UKCA
Approvals for drinking water:	WRAS,ACS,NSF61,UBA
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
Pump housing:	Stainless steel
Pump housing:	EN 1.4401
Pump housing:	AISI 316
Impeller:	Stainless steel
Impeller:	EN 1.4401
Impeller:	AISI 316
Material code:	G
Code for rubber:	E
Installation:	
Range of ambient temperature:	-4 .. 131 °F
Maximum operating pressure:	232.06 psi
Max pressure at stated temp:	232 psi / 194 °F
Max pressure at stated temp:	145 psi / 250 °F
Type of connection:	NPT(F)
Size of inlet connection:	1 inch
Size of outlet connection:	1 inch
Connect code:	S
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-4 .. 248 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft ³
Electrical data:	
Motor standard:	NEMA
Frame size:	80CB
IE efficiency class:	IE3 / NEMA Premium
Rated power - P2:	1.48 HP
Mains frequency:	60 Hz
Suitable for 50/60 Hz:	N
Rated voltage:	3 x 208-230YY/440-480Y V
Service factor:	1.00
Rated current:	5,2-5,1/2,55-2,65 A
Rated speed:	3430-3470 rpm
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	NONE
Cable included (Yes/No):	N
Controls:	
Frequency converter:	None
Others:	
Terminal box position:	12
Minimum efficiency index, MEI ≥:	0.7
Net weight:	36.6 lb
Gross weight:	42.1 lb
Country of origin:	US
Custom tariff no.:	8413.70.2040



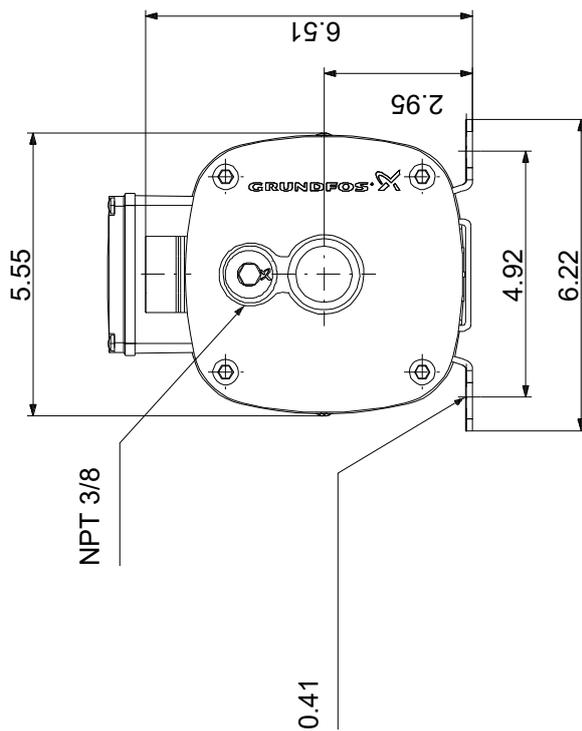
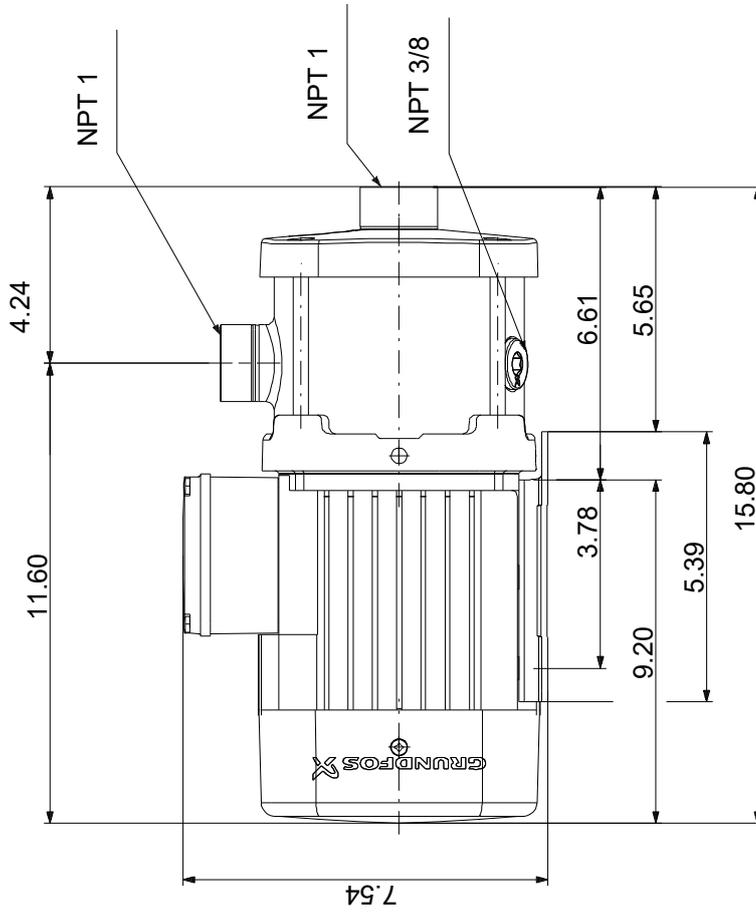
Pumped liquid = Water
 Liquid temperature during operation = 68 °F
 Density = 62.29 lb/ft³



99155390 CM 3-5 A-S-G-E-AQQE E-A-A-N 60 Hz



99155390 CM 3-5 A-S-G-E-AQQE E-A-A-N 60 Hz



99155390 CM 3-5 A-S-G-E-AQQE E-A-A-N 60 Hz

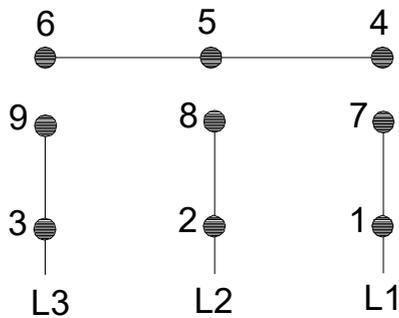


WARNING

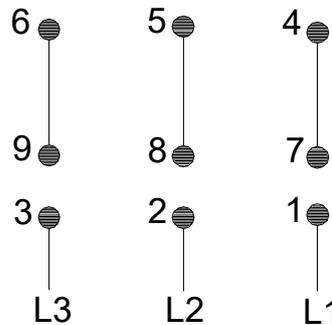
MOTOR MUST BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES BY TRAINED PERSONNEL TO PREVENT SERIOUS ELECTRICAL SHOCKS.

TO SERVICE MOTOR, DISCONNECT POWER SOURCE FROM MOTOR AND ANY ACCESSORY DEVICES AND ALLOW MOTOR TO COME TO A COMPLETE STAND STILL.

LOW VOLTAGE 60Hz. 208-230V



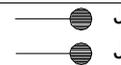
HIGH VOLTAGE 60Hz: 460V 50Hz: 400V



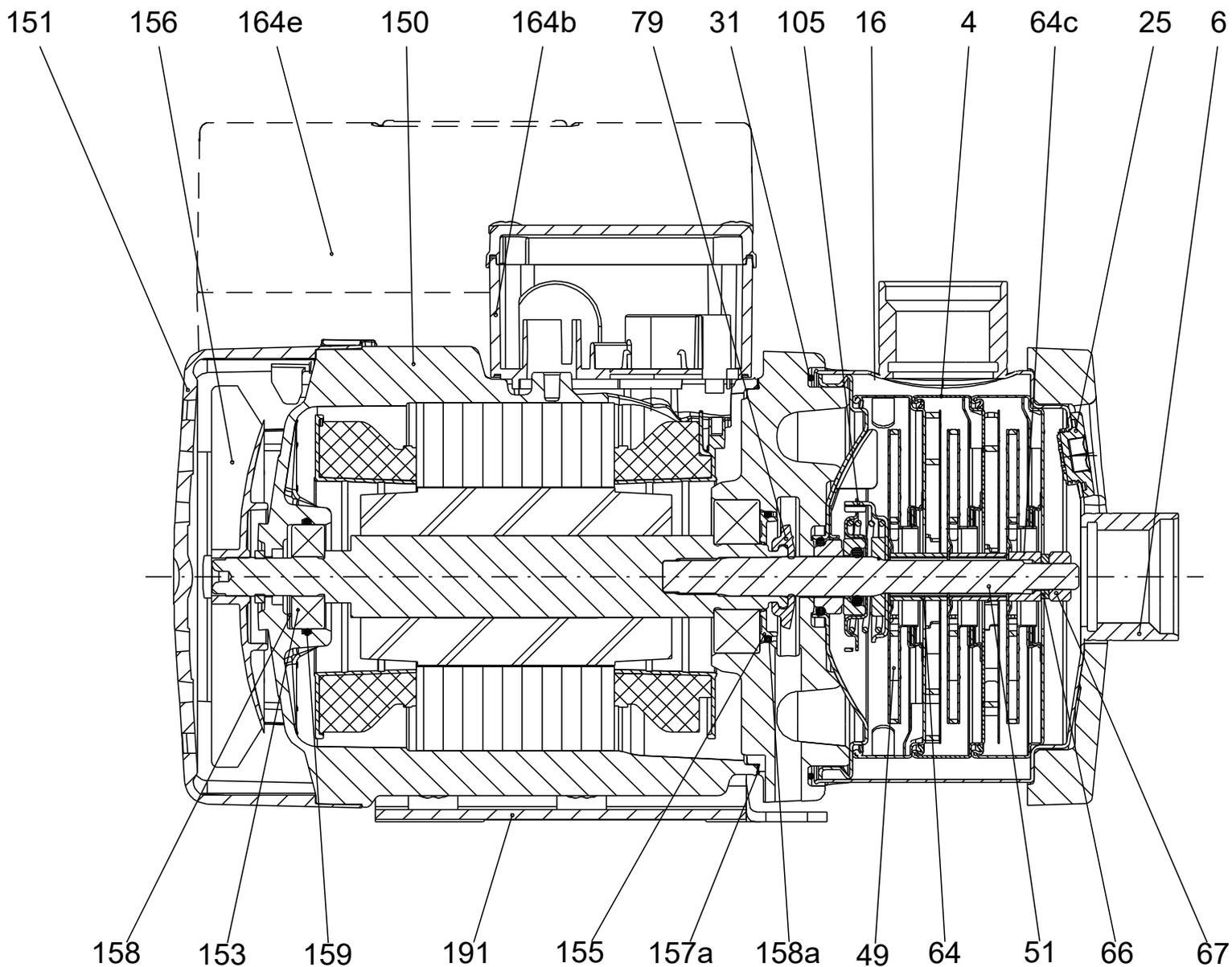
96553852

INTERCHANGE ANY TWO LINE WIRES TO REVERSE ROTATION

THERMOSTAT LEADS
(WHEN PROVIDED)



Sectional drawing



165x100

Spare parts CM 3-5, Product No. 99155390
Produced After 0927 (production year and week number)

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
-	Kit, fan cover, black			96279720	1	pcs
151b	Label				1	pcs
151a	Label				1	pcs
151	Fan cover				1	pcs
152	Pan head thread forming screw				2	pcs
-	Kit, fan cover, black/red			92780557	1	pcs
151b	Label				1	pcs
151a	Label				1	pcs
151	Fan cover				1	pcs
152	Pan head thread forming screw				2	pcs
-	Kit, Impeller and spacing pipe			92685341	1	pcs
49	Impeller cpl.				5	pcs
64a	Spacing pipe				4	pcs
-	Kit, Motor bearing			96932399	1	pcs
151a	Installation indicator				1	pcs
153	Ball bearing				1	pcs
154	Ball bearing				1	pcs
155	Bearing cover				1	pcs
155	Bearing cover				1	pcs
157a	Gasket				1	pcs
157a	Gasket				1	pcs
157a	Gasket				1	pcs
158a	O-ring				1	pcs
158	Waved washer				1	pcs
159a	Seal ring				1	pcs
159	O-ring				1	pcs
-	Kit, Neck ring			96932397	1	pcs
45	Neck ring				14	pcs
65	Neck ring retainer				14	pcs
-	Kit, Plug			96932395	1	pcs
-	Drain plug cpl.				2	pcs
11	O-ring				1	pcs
25	Plug				1	pcs
11	O-ring				2	pcs
-	Kit, Seals			96932440	1	pcs
31	O-ring				1	pcs
31	O-ring				1	pcs
64c	Clamp				1	pcs
66	Wedge lock washer				1	pcs
67	Lock nut				1	pcs
102	O-ring				1	pcs
102	O-ring				1	pcs
103	Seal ring, stationary				1	pcs
104	Seal ring, rotating				1	pcs
107	O-ring				1	pcs
107	O-ring				1	pcs
108	Compression spring				1	pcs
111a	Stop ring				1	pcs
111	Retainer				1	pcs
112	Driver for shaft seal				1	pcs
-	4 Bulk, Chamber cpl. (5 PC)			97690021	3	pcs
45	Bulk, Neck ring (24 PC)			96536194	1	pcs
65	Bulk, Neck ring retainer (8 PC)			99490745	1	pcs
65	Bulk, Neck ring retainer (24 PC)			99490747	1	pcs
+ 4	Bulk, Chamber cpl. (10 PC)			96547663	3	pcs
+ 4	Chamber cpl.			98371223	3	pcs
- 5a	Bulk, Chamber cpl. (10 PC)			98371222	1	pcs
65	Retainer for seal ring			99812852	1	pcs
+ 5a	Chamber cpl.			96588149	1	pcs
6a	Flange			98428397	1	pcs
16	Collar sleeve cpl.			98470958	1	pcs

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
26	Hex socket head cap screw			99246462	4	pcs
31	Bulk, O-ring (10 PC)			98345019	1	pcs
+ 32	Cover			98821903	1	pcs
45	Bulk, Neck ring (24 PC)			96536194	1	pcs
65	Retainer for seal ring			99812852	1	pcs
65	Bulk, Neck ring retainer (8 PC)			99490745	1	pcs
65	Bulk, Neck ring retainer (24 PC)			99490747	1	pcs
66	Bulk, Wedge lock washer (10 PC)			96536157	1	pcs
67	Bulk, Lock nut (10 PC)			98277008	1	pcs
102	Bulk, O-ring (10 PC)			98277010	1	pcs
103	Bulk, Seal ring, stationary (10 PC)			99140489	1	pcs
104	Bulk, Seal ring, rotating (10 PC)			98277444	1	pcs
107	Bulk, O-ring (10 PC)			98275967	1	pcs
151a	Bulk, Installation indicator (10 PC)			97768602	1	pcs
152	Bulk, Cross recess countersunk screw (4 PC)			99332927	4	pcs
156	Fan			92715443	1	pcs
191	Base plate			97823648	1	pcs