



PURCHASING DEPARTMENT
DIVISION OF BUDGET & FINANCE

PUR-1661
ADDENDUM NO. 1
INVITATION TO BID

GRINDER PUMPS

DATE: Thursday, January 25, 2024

BIDS DUE: Wednesday, February 7, 2024
2:00 P.M.(EDT/EST)

To Bidders:

This Addendum is hereby made a part of the Contract Documents on which all bids will be based and is issued to correct and clarify the original documents.

Please acknowledge receipt of this Addendum at the appropriate space on the Proposal Form. This Addendum consists of one (1) page and one (1) attachment.

NOTE: All Bidders must enter the Washington County Administration Complex through either the front door at the 100 West Washington Street entrance or through the rear entrance (w/blue canopy roof) which is handicap accessible and must use the elevator to access the Purchasing Department to submit their bid and/or to attend the Pre-Bid Conference. Alternate routes are controlled by a door access system. The general public will be subject to wand search and will be required to remove any unauthorized items from the building prior to entry. Prohibited items include but are not limited to: Weapons of any type; Firearms, ammunition, and explosive devices; Cutting instruments of any type - including knives, scissors, box cutters, work tools, knitting needles, or anything with a cutting edge, etc.; Pepper spray, mace, or any other chemical defense sprays; and Illegal substances.

ITEM NO. 1: Inquiry: Attached please find our submittal package and technical specifications for Boesch Pumps to be listed as an approved equal in the Grinder Pumps project (PUR-1661).

Response: Boesch Grinder Pumps are not considered an equal to Liberty Grinder Pumps.

By Authority of:

Rick F. Curry, CPPO
Director of Purchasing

(NOTE: The wording of all "Inquiries" submitted are displayed exactly as received.)

100 West Washington Street, Suite 3200 | Hagerstown, MD 21740-4748 | P: 240.313.2330 | F: 240.313.2331 | Hearing Impaired: 7-1-1

WWW.WASHCO-MD.NET



102 NE 2nd Street
Suite 510
Boca Raton FL 33432
Arturo Garcia, President
(954) 483 9269 Cell
arturo@wws-llc.com
matias@wws-llc.com
wws-llc.com

January 23, 2024

Rick F. Curry
CPPO, Director of Purchasing
Washington County Purchasing Department
100 West Washington Street
Third floor, Suite 3200
Hagerstown, MD 21740
(240) 313-2330

Grinder Pumps

PUR-1661

RE: APPROVED EQUAL

Good afternoon,

Please find enclosed the technical specifications for the Boesch Grinder Pump Model BG200/1-230 and Boesch Sump Pump Model BC100/1-230.

We are seeking to be an approved equal for the Grinder Pumps project. We believe the Boesch Pumps meets and exceeds the specified manufacturers referenced in this solicitation.

Please let us know if you have any questions. We look forward to hearing from you.

Thank you,

A handwritten signature in blue ink, appearing to read "Arturo Garcia", is positioned above the printed name.

Arturo Garcia



Wastewater Solutions LLC
102 NE 2nd Street Suite 510
Boca Raton, FL 33432 US
(954) 483-9269
arturo@wws-llc.com
wws-llc.com

Scope and Submittals

ADDRESS

Lisa Brown
lbrown@washco-md.net
240-313-2330

**2742D
THE BOARD OF COUNTY
COMMISSIONERS OF
WASHINGTON COUNTY
GRINDER PUMPS
BID NO. PUR-1661**

DATE 01/23/2024

DESCRIPTION	QTY
ITEM 2	60
BOESCH GRINDER PUMP MODEL BG200/1-230	
2 HP 1/60/230V 3450 RPM	
1-1/4" FLANGED DISCHARGE	
CAST IRON SEMI-OPEN IMPELLER	
410 SS SHAFT	
CARBON / CERAMIC UPPER MECHANICAL SEAL	
SILICON CARBIDE / SILICON CARBIDE LOWER MECHANICAL SEAL	
30 FT OF POWER CABLE	
ITEM 3	5
BOESCH SUMP PUMP MODEL BC100/1-230	
1 HP 1/60/230V 3450 RPM	
2" NPT VERTICAL DISCHARGE	
CAST IRON VORTEX IMPELLER	
STAINLESS STEEL SHAFT	
CARBON / CERAMIC UPPER MECHANICAL SEAL	
SILICON CARBIDE / SILICON CARBIDE LOWER MECHANICAL SEAL	
30 FT OF POWER CABLE	

DESCRIPTION	QTY
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ITEM 4

2

SINGLE PHASE DUPLEX CONTROL PANEL

- INDOOR/OUTDOOR NEMA 4X PANEL ENCLOSURE: HEAVY DUTY POLYCARBONATE WITH STAINLESS STEEL LOCKABLE LATCHES
- DUPLEX PROVIDES: TWO-PUMP ALTERNATION AND HIGH DEMAND TWO-PUMP OPERATION
- PUMP CONTROL VISIBLE INDICATORS: PUMP #1 AND #2 HAND-OFF-AUTO (H.O.A.) SWITCH, GREEN PUMP RUN LIGHTS, RED PUMP FAULT LIGHTS WITH RESET BUTTON, AND POWER ON LIGHT
- ALARM VISIBLE INDICATORS: HIGH RED BEACON ALARM LIGHT, ALARM TEST AND SILENCE BUTTONS
- ALARM HORN SOUNDS AT 85 DECIBELS AT 10 FEET
- REMOTE MONITORING BY DRY CONTACTS: HIGH LIQUID, PUMP RUN(S), AND PUMP FAULT(S)
- UPGRADED PUMP PROTECTION: MOTOR PROTECTIVE SWITCHES INCLUDED FOR BOTH PUMPS (BRANCH CIRCUIT PROTECTION, ADJUSTABLE OVERLOAD AND DISCONNECT) AND THERMAL CUTOUT WITH INDICATORS
- UL LISTED FOR THE UNITED STATES AND CANADA
- N.O EXTERNALLY WEIGHTED FLOAT SWITCH X 30 FT (4)

ITEM 5

50

SINGLE PHASE SIMPLEX CONTROL PANEL

- INDOOR/OUTDOOR NEMA 4X PANEL ENCLOSURE: HEAVY DUTY POLYCARBONATE WITH STAINLESS STEEL LOCKABLE LATCHES
- PUMP CONTROL VISIBLE INDICATORS: PUMP HAND-OFF-AUTO (H.O.A.)SWITCH, GREEN PUMP RUN LIGHT, RED PUMP FAULT LIGHT WITH RESET BUTTON, AND POWER ON LIGHT
- ALARM VISIBLE INDICATORS: HIGH RED BEACON ALARM LIGHT, ALARM TEST AND SILENCE BUTTONS
- ALARM HORN SOUNDS AT 85 DECIBELS AT 10 FEET
- REMOTE MONITORING BY DRY CONTACTS: HIGH LIQUID, PUMP FAULT, PUMP RUN
- UPGRADED PUMP PROTECTION: MOTOR PROTECTIVE SWITCH (BRANCH CIRCUIT PROTECTION, ADJUSTABLE OVERLOAD AND DISCONNECT) AND A THERMAL CUTOUT WITH INDICATOR
- UL LISTED FOR THE UNITED STATES AND CANADA
- N.O EXTERNALLY WEIGHTED FLOAT SWITCH X 30 FT (3)

WARRANTY: 12 MONTHS FROM THE DATE OF STARTUP OR 18 MONTHS FROM THE DATE OF DELIVERY. WHICHEVER OCCURS FIRST.

THE BOARD OF COUNTY

COMMISSIONERS OF WASHINGTON

COUNTY

GRINDER PUMPS

BID NO. PUR-1661

WASTEWATER SOLUTIONS LLC

CAGE CODE: 7TWY1

DUNS NUMBER: 079918568
EIN: 47-1877641

Accepted By

Accepted Date

ITEM 2





www.BoeschPumps.com

SUBMERSIBLE GRINDER PUMPS

BG SERIES

60 HZ



BOESCH PUMPS INC
Art Chibli
(305) 999-1769
achibli@boeschpumps.com
14031 SW 143rd Court Miami, FL 33186

BG SERIES

SUBMERSIBLE GRINDER PUMP



Grinder Ability



Features

- Robust construction
- Superior heat dissipation
- EKK Eagle Burgmann double mechanical seal CA/CE & SIC/SIC
- Semi-open impeller design prevents clogging by ground solids
- Radial grinder kit made in AISI 440C, corrosion resistant material and hardened to 55-60 HRC
- Specially designed high torque startup by centrifugal switch built-in for single phase motor
- Direct connect to pipe with horizontal discharge with inner thread
- Built-in Run/Start Capacitor(1 Phase only)

Specifications

Liquid Temperature		0~40°C (32~104°F)	
Submersible depth		10M	
Motor Part	Frequency	60Hz	
	Pole	2 Pole	
	Type	Dry Type	
	Insulation	Class B	
	Protection	IP 68	
Pump Part	Protector	Auto-Cut	
	Bearing	Ball Type	
	Mechanical seal	Double Mechanical Seal	
	Impeller	Semi-open Impeller	

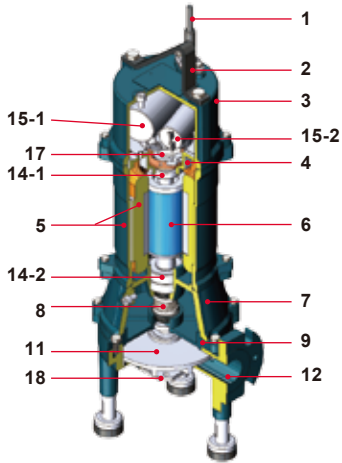
Applications

- Wastewater treatment
- Sewage water
- Drainage of wastewater from individual residences, apartment buildings, recreational developments, motels.
- Transferring wastewater, schools, federal, state and local parks
- To transfer various wastewater and sewage

Data Chart

Type	Output		Discharge	F.L.A.			Rated		Maximum		Weight(W/O Cable)	
	HP	kW		1ø 230V	3ø 230V	3ø 460V	Head FT	Cap. GPM	Head FT	Cap. GPM	1ø-kg	3ø-kg
BG150	1.5	1.1	1-1/4"	7.8A	6A	3A	46	30	65.5	50	29.4	29.4
BG200	2	1.5	1-1/4"	11A	8A	4A	72	30	94	46	32	32
BG300	3	2.2	1-1/4"	-	8.6A	4.3A	79	35	109	47	-	33.6
BG500	5	3.7	2"	-	14.8A	7.4A	85	60	124	84	-	41.2
BG750	7.5	5.5	2"	-	22.2A	11.1A	115	70	160	82.5	-	46.2

» QG Guide rail systems for easy-out/easy-in plumbing is optional for 1.5~7.5HP.
» All single-phase pumps can be equipped with float switch upon request.



Parts and Material List

No.	Part	Material
1	Cable	H07RN-F/SJTOW/STOW
2	Handle	ASTM A36
3	Motor Cover	ASTM A48 Class 30
4	Bracket	ASTM A48 Class 30
5	Motor Housing + Stator	ASTM A48 Class 30
6	Shaft with Rotor	AISI 410
7	Oil Chamber	ASTM A48 Class 30
8	Mechanical Seal	Upper: CA/CE Lower: SIC/SIC
9	Seal Housing	ASTM A48 Class 30
11	Impeller	ASTM A48 Class 30
12	Pump Casing	ASTM A48 Class 30
14-1	Upper Bearing	NTN/TPI
14-2	Lower Bearing	NTN/TPI
15-1	Run Capacitor	1 Phase only
15-2	Start Capacitor	1 Phase only
17	Centrifugal switch	1 Phase only
18	Cutter Set	AISI 440C

TPI is a family brand of NTN group.



Semi-open Impeller



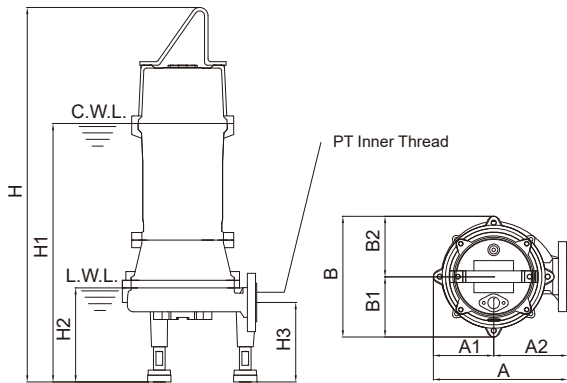
Bottom view of grinder



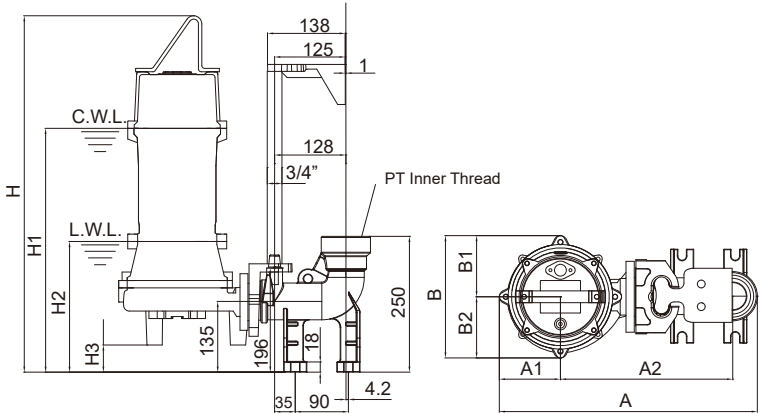
Grinder kit
AISI 440C / HRC55~60



QG Guide Rail



BG150~BG300



BG150~BG300 + QG

Dimensions (mm)

Type	A	A1	A2	B	B1	B2	H	H1	H2	H3
BG150	230(445)	102	128(300)	206	103	103	640(630)	445(432)	160(150)	135(50)
BG200	230(445)	102	128(300)	206	103	103	640(630)	445(432)	160(150)	135(50)
BG300	230(445)	102	128(300)	206	103	103	680(670)	485(472)	160(150)	135(50)
BG500	283(500)	119	164(337.3)	239	114	125	669(637)	509(477)	186(154)	151(29)
BG750	283(500)	119	164(337.3)	239	114	125	709(677)	549(517)	186(154)	151(29)

» (QG) identifies BG pump with QG Q.D.C.

MOTOR / PUMP SPECIFICATIONS

ITEM		DESCRIPTION
LIMITS	Liquid Temp	0~40°C
	Application	Commercial / Industrial / Municipal use
TYPE	Frequency	60Hz
	Motor	2P (3450RPM) Dry Motor
	Insulation	Class B
	Start Method	Direct On Line
	Protection	IP 68
	Protector	Auto-Cut
	Bearing	Ball Type
	Mech. Seal	Dual. Mechanical Seal
	Impeller	Semi-Open Impeller
MATERIAL	Motor Cover	ASTM A48 Class 30
	Motor Housing+Stator	ASTM A48 Class 30
	Shaft with Rotor	AISI 410
	Mech. Seal	Upper: CA/CE; Lower: SIC/SIC
	Pump Casing	ASTM A48 Class 30
	Impeller	ASTM A48 Class 30
	Cable	H07RN-F / SJTOW / STOW



MOTOR / PUMP DATA CHART

MODEL	OUTPUT		DISCHARGE	PHASE	1Ø			WEIGHT W/O CABLE
	HP	KW	INCHES	VOLTAGE	115V	208V	230V	LBS
BG150/1	1.5	1.1	1-1/4"	FULL LOAD AMPS	-	8.6A	7.8A	65
BG200/1	2	1.5	1-1/4"		-	12.2A	11A	71

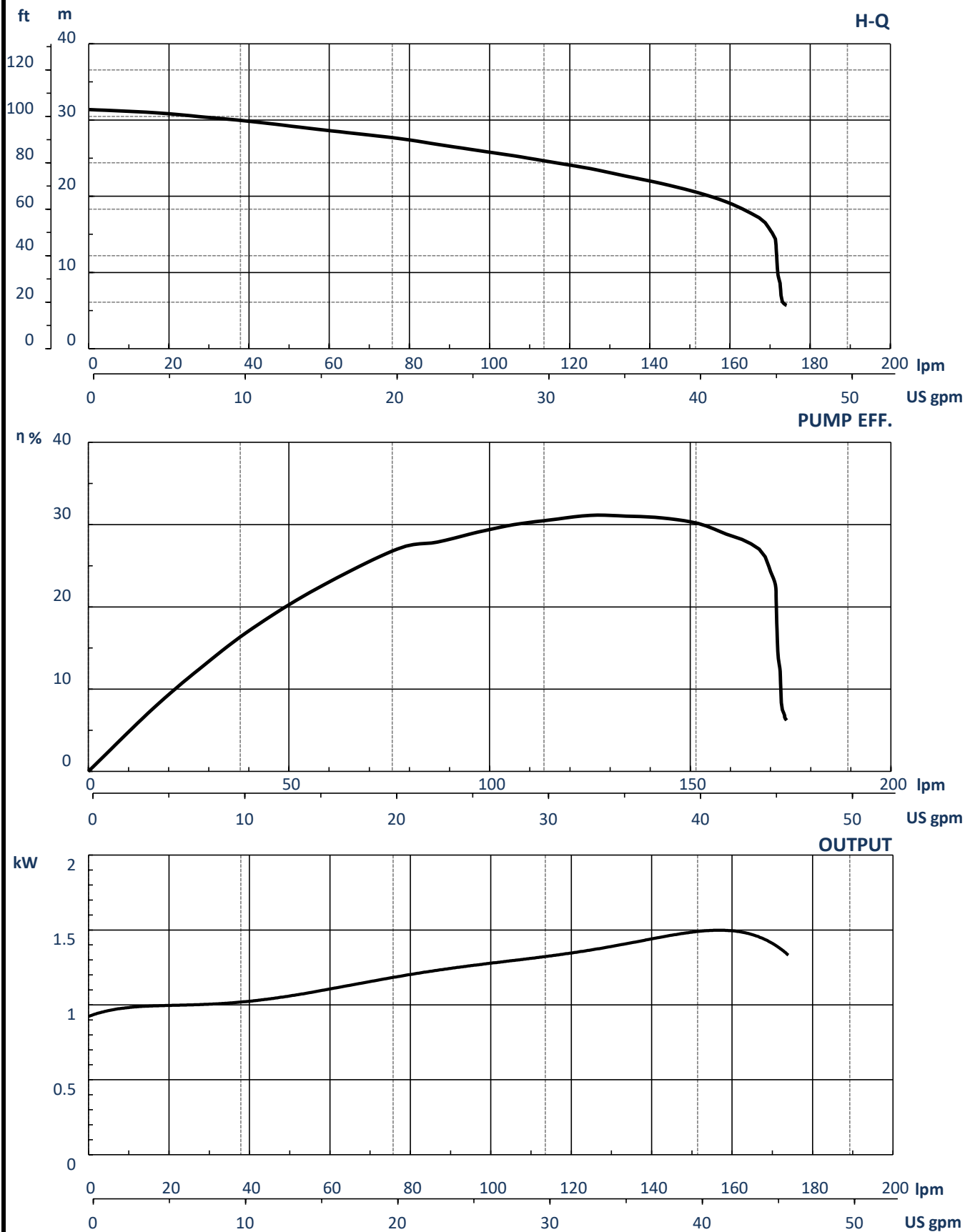
MODEL	OUTPUT		DISCHARGE	PHASE	3Ø			WEIGHT W/O CABLE
	HP	KW	INCHES	VOLTAGE	208V	230V	460V	LBS
BG150/3	1.5	1.1	1-1/4"	FULL LOAD AMPS	6.6A	6A	3A	65
BG200/3	2	1.5	1-1/4"		8.8A	8A	4A	71
BG300/3	3	2.2	1-1/4"		9.5A	8.6A	4.3A	74
BG500/3	5	3.7	2"		16.4A	14.8A	7.4A	91
BG750/3	7.5	5.5	2"		24.5A	22.2A	11.1A	102

MOTOR / PUMP CONSTRUCTION MATERIAL

PART	MATERIAL	PART	MATERIAL
Cable	H07RN-F/STJOW/STOW	Mechanical Seal	Upper: CA / CE
Handle	ASTM A36	Mechanical Seal	Lower: SIC / SIC
Motor Cover	ASTM A48 Class 30	Seal Housing	ASTM A48 Class 30
Bracket	ASTM A48 Class 30	Impeller	ASTM A48 Class 30
Motor Housing + Stator	ASTM A48 Class 30	Pump Casing	ASTM A48 Class 30
Shaft with Rotor	AISI 410	Upper/Lower Bearing	NTN/TPI
Oil Chamber	ASTM A48 Class 30	Run Capacitor	1 Phase only
Centrifugal Switch	1 Phase only	Start Capacitor	1 Phase only
Cutter Set	AISI 440C		

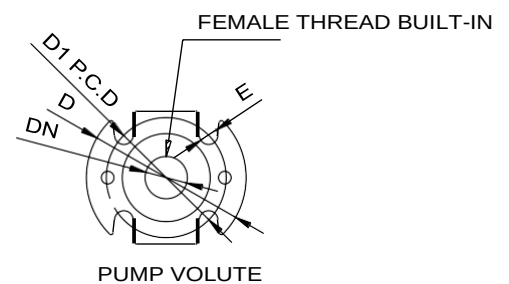
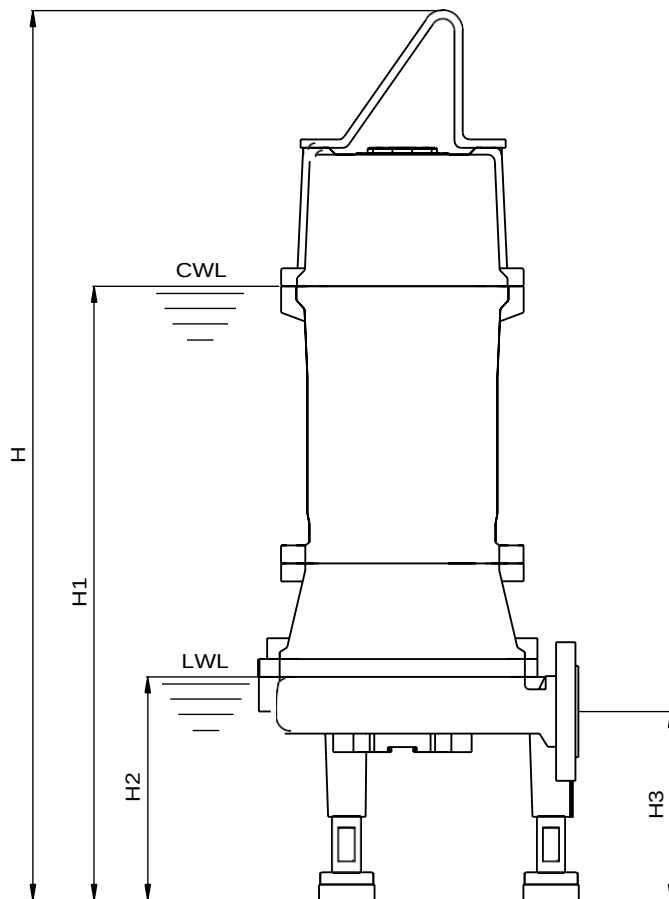
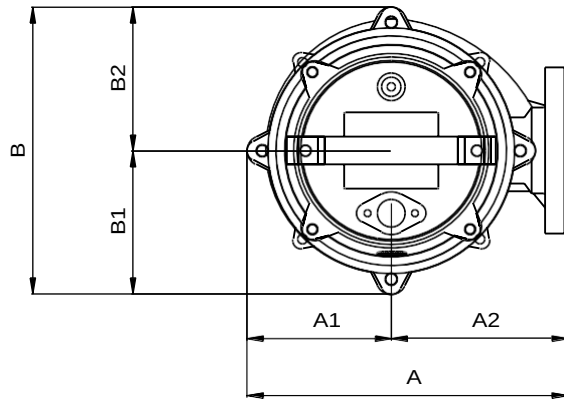
PUMP PERFORMANCE REPORT

MODEL	BG200		HEAD	RATED
FREQUENCY	60 HZ			80 ft / 24.3 m
DISCHARGE	1-1/4 inches / 32 mm		CAPACITY	30 gpm / 113.5 lpm
OUTPUT	2 hp / 1.5 kW		POLE / RPM	2 poles / 3450 rpm



DIMENSIONAL DRAWING

MODELS: BG150 – BG300 (1.5~3HP)



MODEL	A	A1	A2	B	B1	B2	D	D1	D2	DN	E	F	H	H1	H2	H3	WT
BG150	9.06	4.02	5.04	8.11	4.06	4.06	4.72	3.54	3.46	1¼	0.55	3/8	25.20	17.52	6.30	5.31	64.7
BG200	9.06	4.02	5.04	8.11	4.06	4.06	4.72	3.54	3.46	1¼	0.55	3/8	25.20	17.52	6.30	5.31	70.4
BG300	9.06	4.02	5.04	8.11	4.06	4.06	4.72	3.54	3.46	1¼	0.55	3/8	26.77	19.09	6.30	5.31	73.9

CWL: CONTINUOUS RUNNING WATER LEVEL
LWL: LOWEST RUNNING WATER LEVEL
WT: WEIGHT WITHOUT CABLE

DIMENSIONS: INCHES
WEIGHT: LBS
PIPE CONNECTION TYPE: NPT

ITEM 3





www.BoeschPumps.com

**2" FULL FREE PASSAGE
SUBMERSIBLE SEWAGE PUMP**

BC SERIES

60 HZ



BOESCH PUMPS INC
Art Chibli
(305) 999-1769
achibli@boeschpumps.com
14031 SW 143rd Court Miami, FL 33186



BC SERIES

SERIES 60HZ

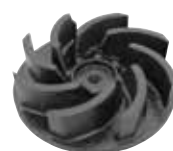
2" FULL FREE PASSAGE
SUBMERSIBLE SEWAGE PUMP



BC Series auto coupling foot



Elbow Kit (Optional)



Vortex Impeller

Features

- Vortex impeller design
- 2" discharge with PT inner thread
- 2" (50mm) solid free passage
- EKK Eagle Burgmann double mechanical seal
- CA/CE & SIC/SIC
- Stainless Steel motor housing

Applications

- For heavy-duty applications with soiled biological wastewater, sewage, rainwater
- For both domestic and professional use

Data Chart

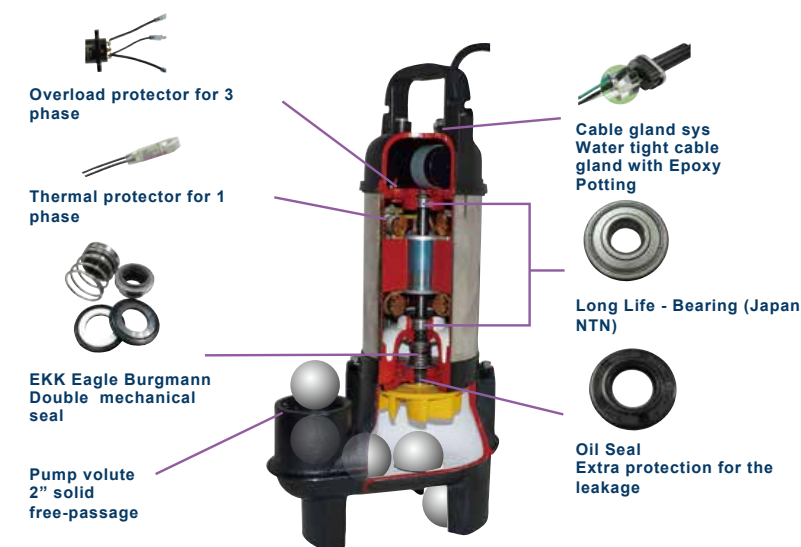
Type	Output		Discharge	F.L.A.			Rated		Maximum		Free Passage	Weight(W/O Cable)	
	HP	KW		1Ø 230V	3Ø 230V	3Ø 460V	Head FT	Cap. GPM	Head FT	Cap. GPM		1Ø-kg	3Ø-kg
BC50	0.5	0.37	2"	4.5A	3A	1.5A	15	55	24	95	50	12.9	12.9
BC50Q	0.5	0.37	2"	4.5A	3A	1.5A	15	50	22	95	50	14.3	14.3
BC75	0.75	0.55	2"	5.5A	3.6A	1.8A	19.7	65	31	106	50	13.9	13.9
BC75Q	0.75	0.55	2"	5.5A	3.6A	1.8A	19.7	60	28	105	50	15.3	15.3
BC100	1	0.75	2"	7A	5A	2.5A	23	75	37.7	125	50	15.4	15.4
BC100Q	1	0.75	2"	7A	5A	2.5A	23	70	33.5	125	50	16.8	16.8
BC150	1.5	1.1	2"	9.3A	6.2A	3.1A	26	105(100)	46.5	158.5	50	24.2	24.2
BC150Q	1.5	1.1	2"	9.3A	6.2A	3.1A	26	100(95)	43	158.5	50	26.2	26.2
BC200	2	1.5	2"	10.5A	7A	3.5A	36	105	55	190	50	25.2	25.2
BC200Q	2	1.5	2"	10.5A	7A	3.5A	36	100	52.5	191	50	27.2	27.2

» BC series standard version features a vertical, threaded outlet pump body.
» (Q) in the name-coding identifies the pump with horizontal flanged outlet.

» Auto coupling foot is suitable for BC-Q type models.
» All single-phase pumps can be equipped with float switch upon request.
» Elbow Kit is optional for BC-Q horizontal flanged outlet pump.

Specifications

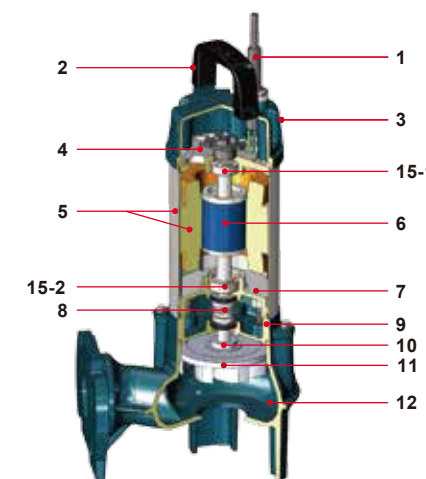
Motor Part	Liquid Temperature	0~40°C (32~104°F)
	Submersible depth	10M
	Frequency	60Hz
	Pole	2 Pole
	Type	Dry Type
	Insulation	Class B
Pump Part	Protection	IP 68
	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical Seal	Double Mechanical Seal
	Impeller	Vortex Impeller



BC Series (Q) with flanged discharge



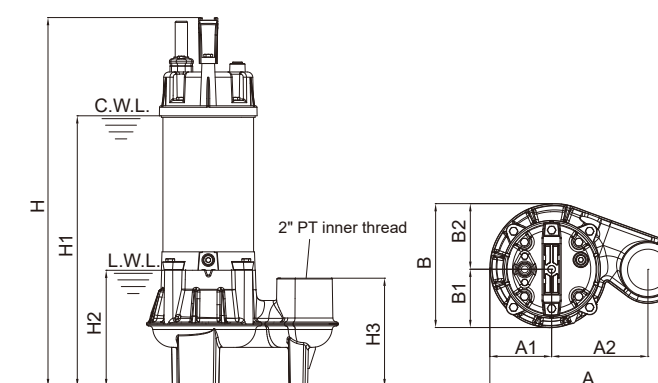
BC Series with Elbow Kit



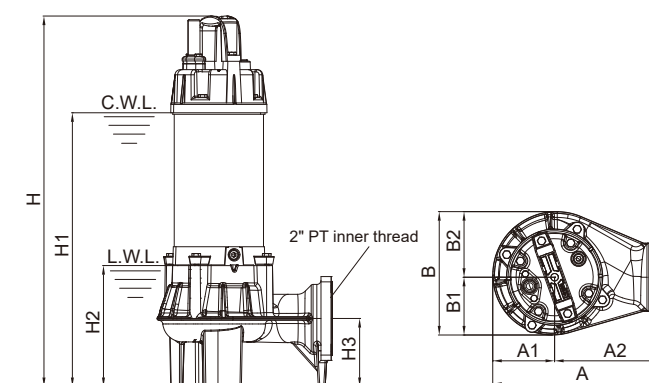
Parts and Material List

No.	Part	Material
1	Cable	H07RN-F/SJTOW/STOW
2	Handle	Nylon6
3	Motor Cover	PA66+30GF (0.5~1HP)
		ASTM A48 Class 30 (1.5~2HP)
4	Bracket	ASTM A48 Class 30
5	Motor Housing + Stator	AISI 304
6	Shaft with Rotor	AISI 410
7	Oil Chamber	ASTM A48 Class 30
8	Mechanical Seal	Upper : CA / CE
		Lower : SIC / SIC
9	Seal Housing	ASTM A48 Class 30
10	Lip Seal	BUNA N
11	Impeller	ASTM A48 Class 30
12	Pump Casing	ASTM A48 Class 30
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI

TPI is a family brand of NTN group.



BC50~200



BC50Q~200Q

Dimensions (mm)

Type	A	A1	A2	B	B1	B2	H	H1	H2	H3
BC50	260	89	125	170	90	80	466	336	151	141
BC50Q	235	85	150	170	85	85	470	342	161	90
BC75	260	89	125	170	90	80	482	352	151	141
BC75Q	235	85	150	170	85	85	486	358	161	90
BC100	260	89	125	170	90	80	496	366	151	141
BC100Q	235	85	150	170	85	85	500	372	161	90
BC150	272	93	130	187	87	100	506	376	151	143
BC150Q	248	93	155	190	95	95	510	373	158	90
BC200	272	93	130	187	87	100	520	396	151	143
BC200Q	248	93	155	190	95	95	530	393	158	90

MOTOR / PUMP SPECIFICATIONS

ITEM		DESCRIPTION
LIMITS	Liquid Temp	0~40°C
	Application	Commercial / Industrial / Municipal use
TYPE	Frequency	60Hz
	Motor	2P (3450RPM) Dry Motor
	Insulation	Class B
	Start Method	Direct On Line
	Protection	IP 68
	Protector	Auto-Cut
	Bearing	Ball Type
	Mech. Seal	Dual. Mechanical Seal
	Impeller	Vortex Impeller
	Motor Cover	0.5~1HP:PA66+30GF; 1.5~2HP: ASTM A48 Class 30
MATERIAL	Motor Housing+Stator	AISI 304
	Shaft with Rotor	AISI 410
	Mech. Seal	Upper: CA/CE; Lower: SIC/SIC
	Pump Casing	ASTM A48 Class 30
	Impeller	ASTM A48 Class 30
	Cable	H07RN-F / SJTOW / STOW



MOTOR / PUMP DATA CHART

MODEL	OUTPUT		DISCHARGE	PHASE	1Ø			FREE PASSAGE	WEIGHT W/O CABLE
	HP	KW	INCHES	VOLTAGE	115V	208V	230V	INCHES	LBS
BC50/1	0.5	0.37	2	FULL LOAD AMPS	9A	5A	4.5A	2	29
BC75/1	0.75	0.55	2		11A	6A	5.5A	2	31
BC100/1	1	0.75	2		14A	7.7A	7A	2	34
BC150/1	1.5	1.1	2		18.6A	10.3A	9.3A	2	53
BC200/1	2	1.5	2		-	11.6	10.5A	2	55

MODEL	OUTPUT		DISCHARGE	PHASE	3Ø			FREE PASSAGE	WEIGHT W/O CABLE
	HP	KW	INCHES	VOLTAGE	208V	230V	460V	INCHES	LBS
BC50/3	0.5	0.37	2	FULL LOAD AMPS	3.3A	3A	1.5A	2	29
BC75/3	0.75	0.55	2		4A	3.6A	1.8A	2	31
BC100/3	1	0.75	2		5.6A	5A	2.5A	2	34
BC150/3	1.5	1.1	2		6.9A	6.2A	3.1A	2	53
BC200/3	2	1.5	2		7.7A	7A	3.5A	2	55

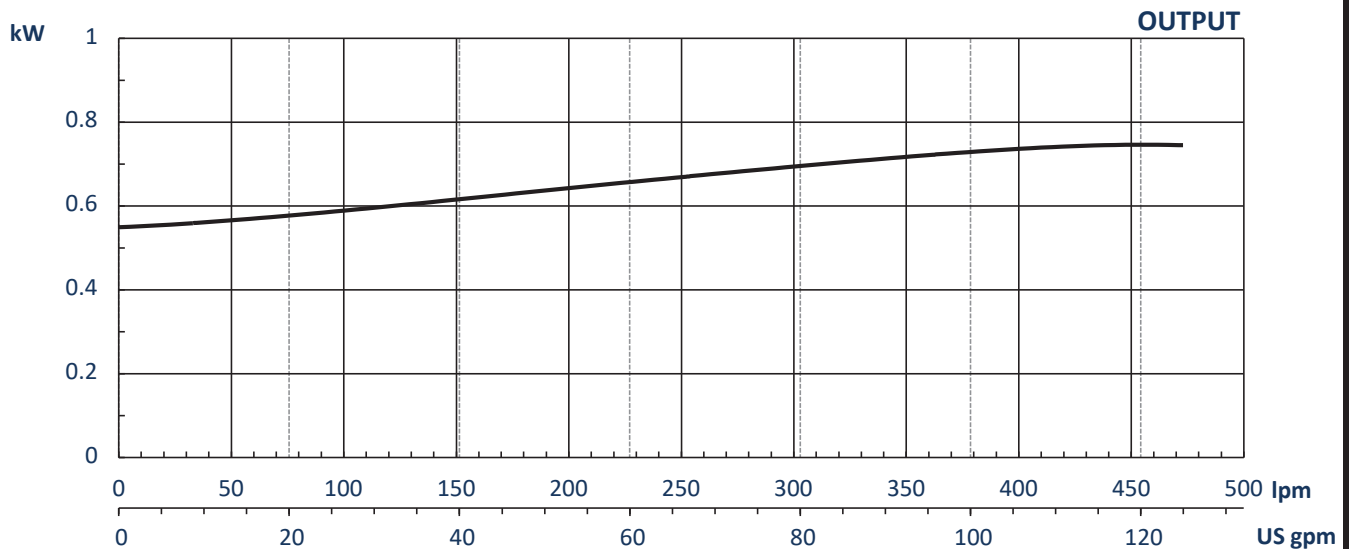
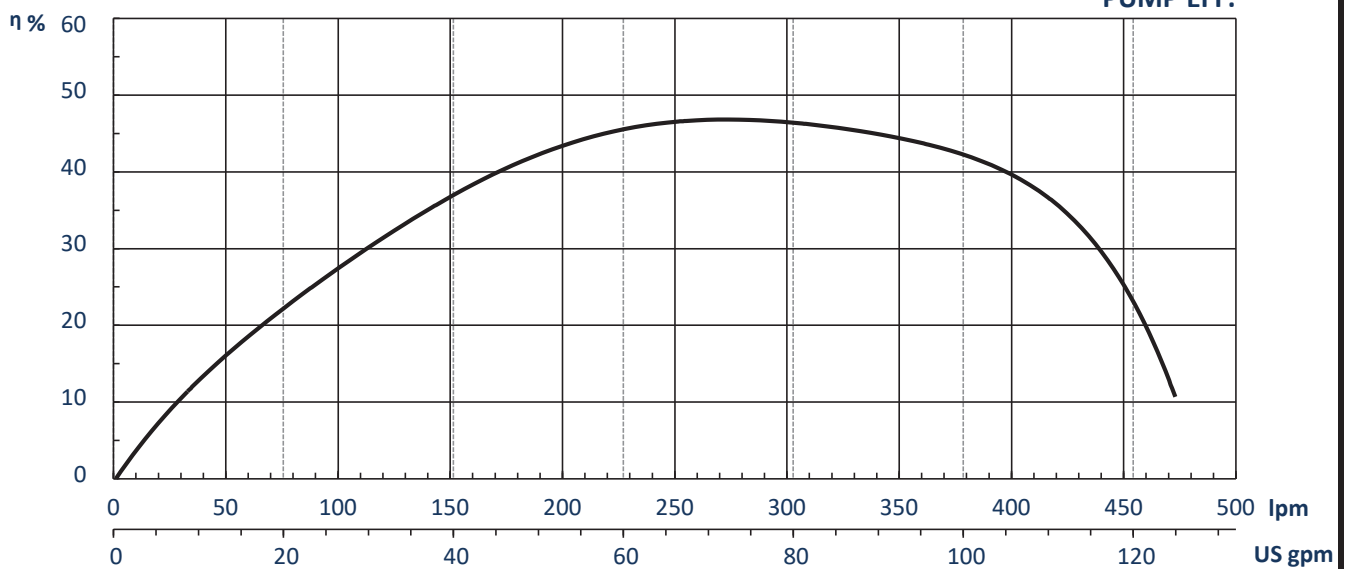
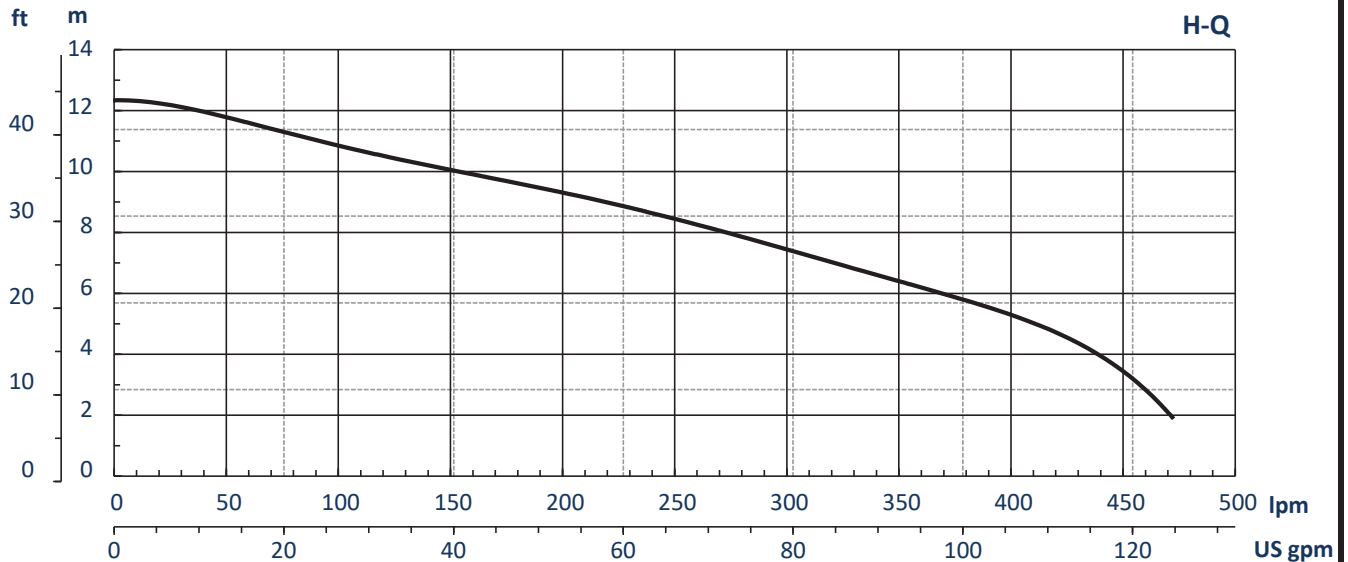
MOTOR / PUMP CONSTRUCTION MATERIAL

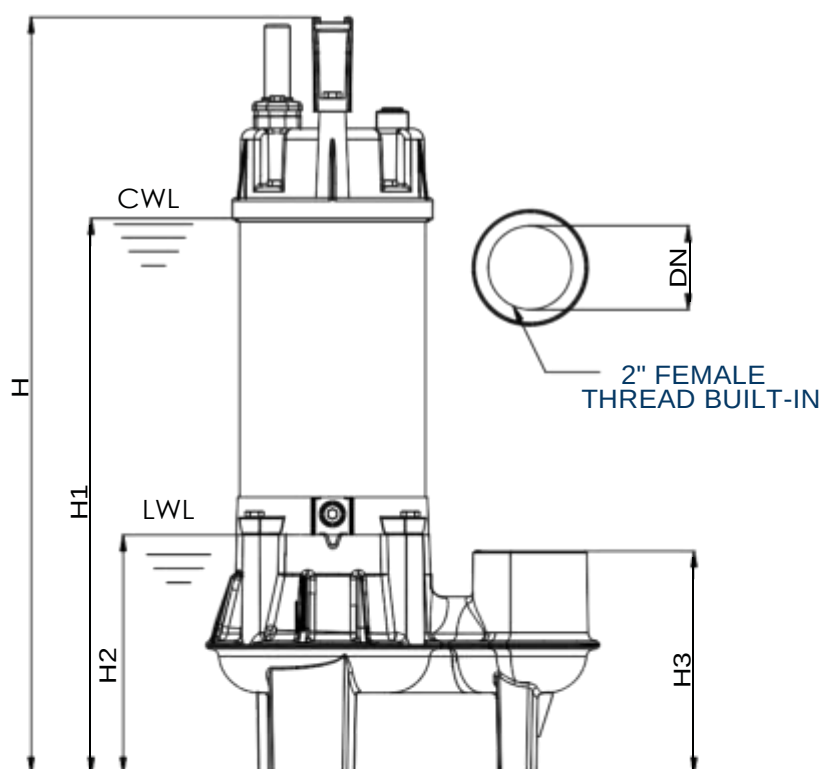
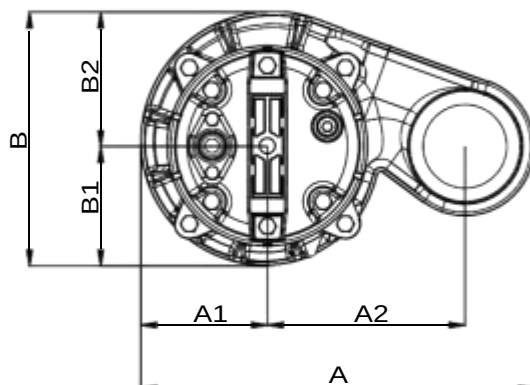
PART	MATERIAL
Cable	H07RN-F/STJOW/STOW
Handle	Nylon 6
Motor Cover	PA66+30GF (0.5~1HP)
Motor Cover	ASTM A48 Class 30 (1.5~2HP)
Bracket	ASTM A48 Class 30
Motor Housing + Stator	AISI 304
Shaft with Rotor	AISI 410
Oil Chamber	ASTM A48 Class 30

PART	MATERIAL
Mechanical Seal	Upper: CA / CE
Mechanical Seal	Lower: SIC / SIC
Seal Housing	ASTM A48 Class 30
Lip Seal	BUNA N
Impeller	ASTM A48 Class 30
Pump Casing	ASTM A48 Class 30
Upper Bearing	NTN/TPI

PUMP PERFORMANCE REPORT

MODEL	BC100		RATED
FREQUENCY	60 HZ		20 ft / 6 m
DISCHARGE	2 inches / 50 mm	CAPACITY	100 gpm / 378 lpm
OUTPUT	1 hp / 0.75 kW	POLE / RPM	2 poles / 3450 rpm



DIMENSIONAL DRAWING
MODELS: BC50 - BC200 (0.5 - 2HP) THREADED DISCHARGE

DIMENSIONS: INCHES
WEIGHT: LBS
PIPE CONNECTION TYPE: NPT

MODEL	A	A1	A2	B	B1	B2	DN	H	H1	H2	H3	WT
BC50	10.24	3.50	4.92	6.70	3.54	3.15	2	18.35	13.23	5.94	5.55	28.40
BC75	10.24	3.50	4.92	6.70	3.54	3.15	2	18.98	13.86	5.94	5.55	30.60
BC100	10.24	3.50	4.92	6.70	3.54	3.15	2	19.53	14.41	5.94	5.55	34.00
BC150	10.71	3.66	5.12	7.36	3.43	3.94	2	19.92	14.80	5.94	5.63	53.24
BC200	10.71	3.66	5.12	7.36	3.43	3.94	2	20.47	15.59	5.94	5.63	55.44

CWL: CONTINUOUS RUNNING WATER LEVEL
LWL: LOWEST RUNNING WATER LEVEL
WT: WEIGHT WITHOUT CABLE

ITEM 4



Duplex Control Panels

Duplex control panels will control two 120/208/240V single phase or two 208/240/480V three phase pumps designed for dewatering, wastewater, and sewage applications.

Duplex control panels come standard with a clear front NEMA 4X rated enclosure, IEC rated contactors, and motor protective switches. All panels are UL listed for the United States and Canada, and come standard with a five-year warranty.



Features

- Indoor/outdoor NEMA 4X panel enclosure: Heavy duty polycarbonate with stainless steel lockable latches
- Duplex provides: Two-pump alternation and high demand two-pump operation
- Pump control visible indicators: Pump #1 and #2 hand-off-auto (H.O.A.) switch, green Pump Run lights, red Pump Fault lights with reset button, and Power On light
- Alarm visible indicators: High red beacon alarm light, alarm test and silence buttons
- Alarm horn sounds at 85 decibels at 10 feet
- Remote monitoring by dry contacts: High Liquid, Pump Run(s), and Pump Fault(s)
- Upgraded pump protection: Motor protective switches included for both pumps (branch circuit protection, adjustable overload and disconnect) and thermal cutout with indicators
- UL listed for the United States and Canada

Applications

- Sewage pump chambers
- Grinder pumps
- Sump pump basins
- Lift stations



Duplex Control Panels

Duplex Single Phase: 120/208/240VAC

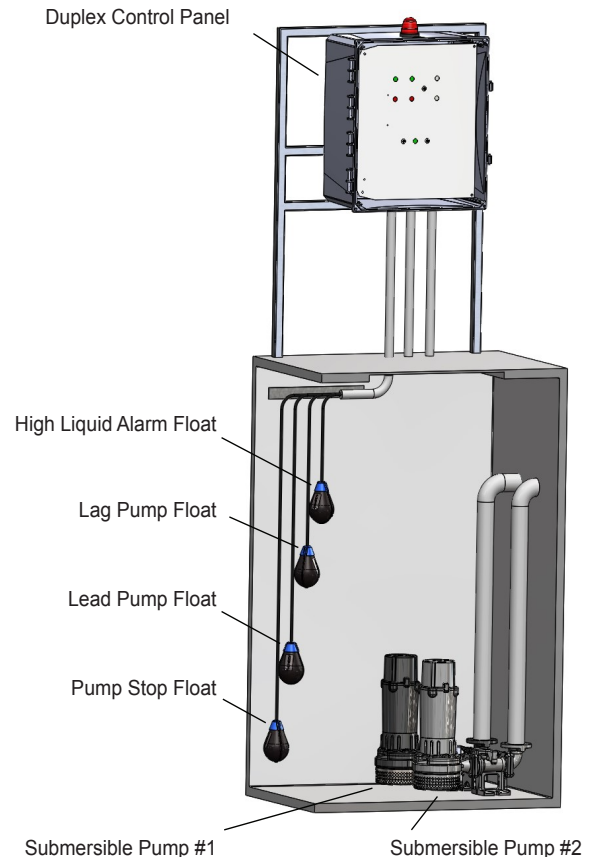
Model	Pump Full Load Amp Rating
WD1P-4-1021	0.0-7.0 FLA
WD1P-4-1022	7.0-15.0 FLA
WD1P-4-1023	15.0-22.0 FLA
WD1P-4-1024	22.0-28.0 FLA
WD1P-4-1025	28.0-36.0 FLA

Note: Thermal overload protection is generally provided in single phase pumps. To request a specific overload on the single phase models, contact the factory. Each panel includes a motor protective switches that will provide accurate pump circuit breaker protection.

Duplex Three Phase: 208/240/480VAC

Model	Pump Full Load Amp Rating
WD3P-4-3021	1.0-1.6 FLA
WD3P-4-3022	1.6-2.5 FLA
WD3P-4-3023	2.5-4.0 FLA
WD3P-4-3024	4.0-6.3 FLA
WD3P-4-3025	6.0-10.0 FLA
WD3P-4-3026	9.0-14.0 FLA
WD3P-4-3027	13.0-18.0 FLA
WD3P-4-3028	17.0-23.0 FLA
WD3P-4-3029	20.0-25.0 FLA
WD3P-4-3030	24.0-32.0 FLA
WD3P-4-3031	30.0-40.0 FLA
WD3P-4-3032	37.0-50.0 FLA
WD3P-4-3033	48.0-65.0 FLA
WD3P-4-3034	65.0-115.0 FLA

Typical Installation of Duplex Control Panel



Custom Options

Option(s)	Description	Option(s)	Description
24	Pump Exerciser	LAD/LAW	Lightning Secondary Surge Arrestor (LAD Delta / LAW Wye)
28	Power On Dry Contact (Normally Open)	LL	Low Level Alarm
3R	Painted Steel Enclosure	MD	Main Disconnect; Up to 125 FLA
AF	Alarm Flasher	MD2	Main Disconnect; 125 to 200 FLA
AH	Anti-Condensation Heater	PM	Phase Monitoring
C	Additional Cord Length Per Foot Per Component*	PX	Pump Portal® Wireless Remote Communication
CCD	Cycle Counter w/LCD Display and Reset	SFD	Seal Failure Circuit w/ Indicator Lights
CO	Convenience Outlet (User to supply 120 VAC)	S3	No Floats Option
ETD	Elapsed Time Meter w/ LCD Display and Reset	SS4	Upgraded Enclosure (304 Stainless Steel)
GR	Generator Receptacle, Includes Transfer Switch	SS6	Upgraded Enclosure (316 Stainless Steel)
ISD	Intrinsically Safe		

*Additional cord length greater than 20': Specify after C. Example: WD1P-4-1021-C50. Indicates 50' cord lengths for all floats.

REVDATE: 0521

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	J	UPDATED DRY CONTACT RATINGS	5/4/21	JED
DATE: 11/4/14		TITLE: WD1P-4-(1021-1024) CONTROL SCHEMATIC		
DATE: 11/4/14				
SIZE B	DWG NO. 1525	PART NO. WD1P-4-(1021-1024)		REV J
SCALE NONE			SHEET 1 OF 2	

REVDATE: 0521

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	J	UPDATED DRY CONTACT RATINGS	5/4/21	JED

FIELD WIRING CONNECTIONS

The diagram illustrates the field wiring connections for the WD1P-4-(1021-1024) control schematic. It includes three terminal blocks (TB 1, TB 2, TB 3) for power and two terminal blocks (TS 1, TS 2) for control signals.

Terminal Block TB 1: Contains terminals 1 and 2. Terminal 1 is connected to L1 (120/208/240VAC, 1-PHASE, 60Hz). Terminal 2 is connected to L2/N (120/208/240VAC, 1-PHASE, 60Hz).

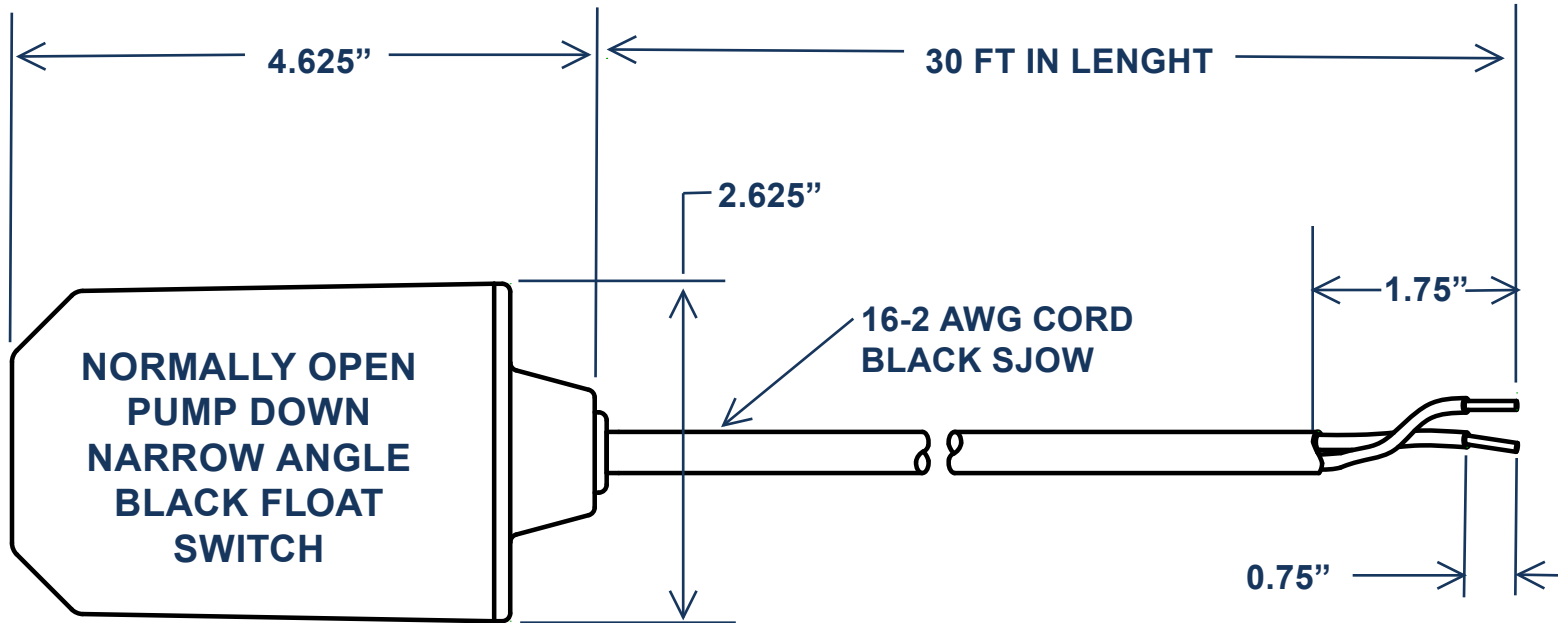
Terminal Block TB 2: Contains terminals 1 and 2. Terminal 1 is connected to PUMP 1 (120/208/240VAC, 1-PHASE, 60Hz). Terminal 2 is connected to PUMP 2 (120/208/240VAC, 1-PHASE, 60Hz).

Terminal Block TB 3: Contains terminals 1 and 2. Terminal 1 is connected to PUMP 1 (120/208/240VAC, 1-PHASE, 60Hz). Terminal 2 is connected to PUMP 2 (120/208/240VAC, 1-PHASE, 60Hz).

Terminal Block TS 1: Contains terminals 1 through 10. Terminal 1 is connected to PHASE (120/240VAC, 1-PHASE, 60Hz). Terminal 2 is connected to NEUTRAL (120/240VAC, 1-PHASE, 60Hz). Terminal 3 is connected to STOP FLOAT (N.O.). Terminal 4 is connected to LEAD FLOAT (N.O.). Terminal 5 is connected to LAG FLOAT (N.O.). Terminal 6 is connected to HIGH LIQUID FLOAT (N.O.).

Terminal Block TS 2: Contains terminals 1 through 10. Terminal 1 is connected to ALARM (N.O.). Terminal 2 is connected to PUMP1 RUN (N.O.). Terminal 3 is connected to PUMP2 RUN (N.O.). Terminal 4 is connected to PUMP1 FAULT (N.O.). Terminal 5 is connected to PUMP2 FAULT (N.O.). Terminal 6 is connected to COMMON (N.O.). Terminal 7 is connected to PUMP1 TEMP (REMOVE FACTORY INSTALLED JUMPERS WHEN CONNECTING TEMPERATURE INPUTS). Terminal 8 is connected to PUMP2 TEMP (REMOVE FACTORY INSTALLED JUMPERS WHEN CONNECTING TEMPERATURE INPUTS). Terminal 9 is connected to PUMP1 TEMP (REMOVE FACTORY INSTALLED JUMPERS WHEN CONNECTING TEMPERATURE INPUTS). Terminal 10 is connected to PUMP2 TEMP (REMOVE FACTORY INSTALLED JUMPERS WHEN CONNECTING TEMPERATURE INPUTS).

NORMALLY OPEN MECHANICAL FLOAT SWITCH X 30 FT

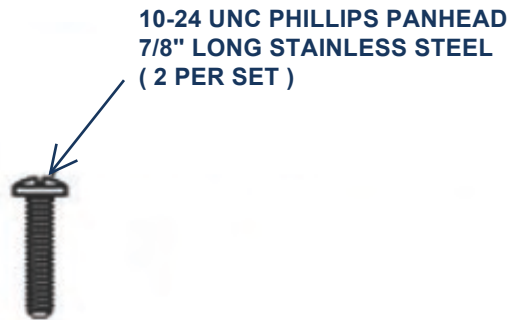
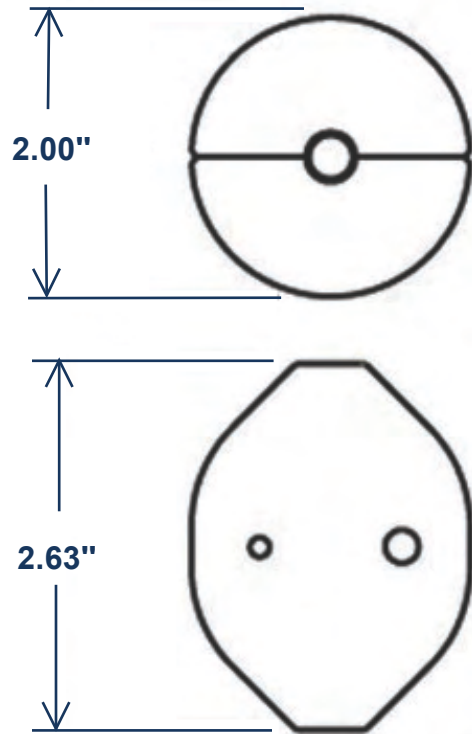


OPERATING ANGLE: CONTACTS CLOSED @ 25° ABOVE
HORIZONTAL CONTACTS OPEN @ 10°
BELOW HORIZONTAL

ELECTRICAL RATINGS: 1/4 H.P. @ 120/240 VAC
10 AMPS @ 120/240 VAC 34.8 LRA

FLOAT MATERIAL: A.B.S.

FLOAT WEIGHT



**WEIGHT: TOTAL WEIGHT OF ASSEMBLED
PRODUCT IS 1LB 4 OZ AND CAN VARY BY 2OZ**

MATERIAL: GREY IRON

FINISH: 1 MIL ZINC PLATING

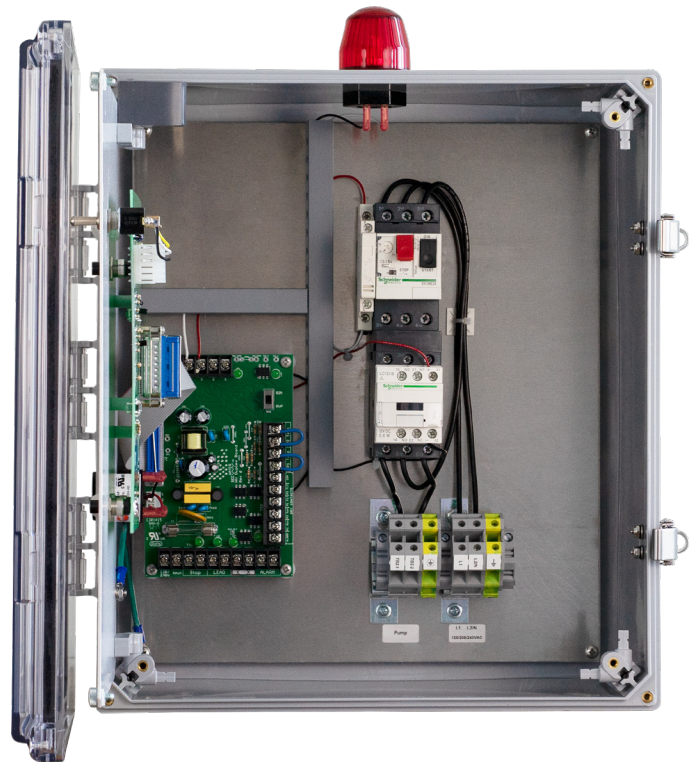


ITEM 5



Simplex Control Panels

Simplex control panels will control a 120/208/240V single phase or a 208/240/480V three phase pump in sewage pump chambers, sump pump basins, and lift stations. Simplex control panels come standard with a clear front NEMA 4X rated enclosure, an IEC rated contactor, and a motor protective switch. All panels are UL listed for the United States and Canada, and come standard with a five-year warranty.



Features

- Indoor/outdoor NEMA 4X panel enclosure: Heavy duty polycarbonate with stainless steel lockable latches
- Pump control visible indicators: Pump hand-off-auto (H.O.A.) switch, green Pump Run light, red Pump Fault light with reset button, and Power On light
- Alarm visible indicators: High red beacon alarm light, alarm test and silence buttons
- Alarm horn sounds at 85 decibels at 10 feet
- Remote monitoring by dry contacts: High Liquid, Pump Fault, Pump Run
- Upgraded pump protection: Motor protective switch (branch circuit protection, adjustable overload and disconnect) and a thermal cutout with indicator
- UL listed for the United States and Canada

Applications

- Sewage pump chambers
- Grinder pumps
- Sump pump basins
- Lift stations



Simplex Control Panels

Simplex Single Phase: 120/208/240VAC

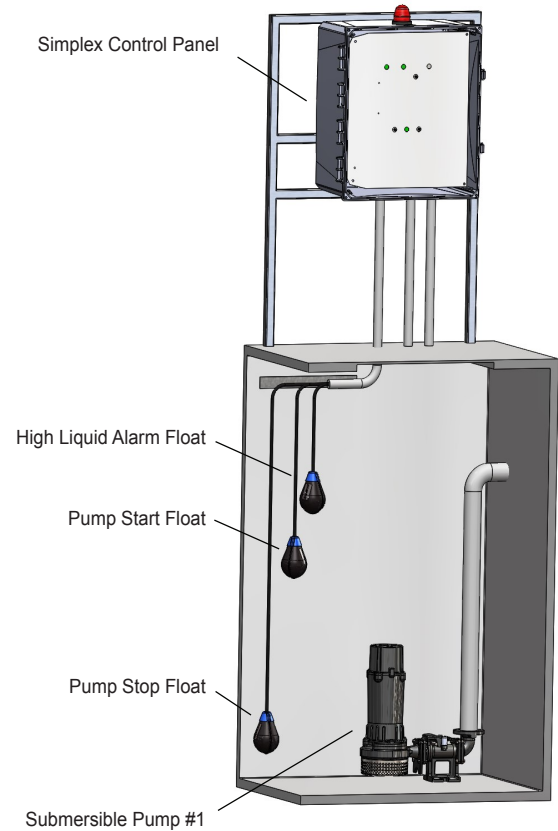
Model	Pump Full Load Amp Rating
WS1P-TP-1001	0-7.0 FLA
WS1P-TP-1002	7.0-15.0 FLA
WS1P-TP-1003	15.0-22.0 FLA
WS1P-TP-1004	22.0-28.0 FLA
WS1P-TP-1005	28.0-36.0 FLA

Note: Thermal overload protection is generally provided in single phase pumps. To request a specific overload on the single phase models, contact the factory. Each panel includes a motor protective switch that will provide accurate pump circuit breaker protection.

Simplex Three Phase: 208/240/480VAC

Model	Pump Full Load Amp Rating
WS3P-TP-3001	1.0-1.6 FLA
WS3P-TP-3002	1.6-2.5 FLA
WS3P-TP-3003	2.5-4.0 FLA
WS3P-TP-3004	4.0-6.3 FLA
WS3P-TP-3005	6.0-10.0 FLA
WS3P-TP-3006	9.0-14.0 FLA
WS3P-TP-3007	13.0-18.0 FLA
WS3P-TP-3008	17.0-23.0 FLA
WS3P-TP-3009	20.0-25.0 FLA
WS3P-TP-3010	24.0-32.0 FLA
WS3P-TP-3011	30.0-40.0 FLA
WS3P-TP-3012	37.0-50.0 FLA
WS3P-TP-3013	48.0-65.0 FLA
WS3P-TP-3014	65.0-115.0 FLA

Typical Installation of Simplex Control Panel



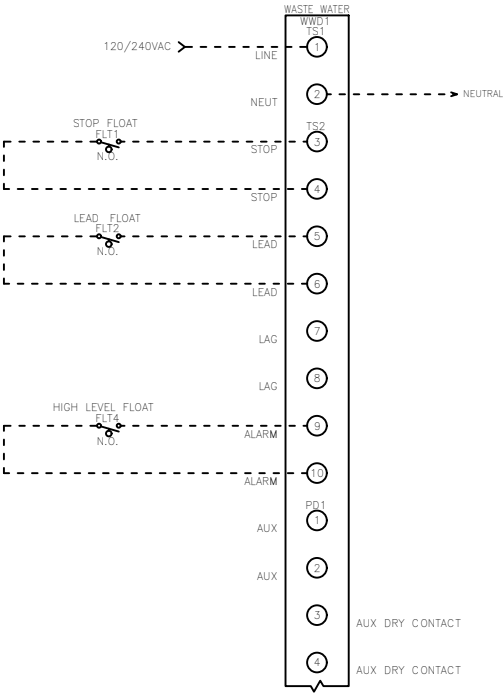
Custom Options

Option(s)	Description	Option(s)	Description
24	Pump Exerciser	LAD/LAW	Lightning Secondary Surge Arrestor (LAD Delta / LAW Wye)
28	Power On Dry Contact (Normally Open)	LL	Low Level Alarm
3R	Painted Steel Enclosure	MD	Main Disconnect; Up to 125 FLA
AF	Alarm Flasher	MD2	Main Disconnect; 125 to 200 FLA
AH	Anti-Condensation Heater	PM	Phase Monitoring
C	Additional Cord Length Per Foot Per Component*	PX	Pump Portal® Wireless Remote Communication
CC	Cycle Counter w/LCD Display and Reset	SF	Seal Failure Circuit w/ Indicator Lights
CO	Convenience Outlet (User to supply 120 VAC)	S3	No Floats Option
ETD	Elapsed Time Meter w/ LCD Display and Reset	SS4	Upgraded Enclosure (304 Stainless Steel)
GR	Generator Receptacle, Includes Transfer Switch	SS6	Upgraded Enclosure (316 Stainless Steel)
IS	Intrinsically Safe		

*Additional cord length greater than 20': Specify after C. Example: WS1P-TP-1003-C50. Indicates 50' cord lengths for all floats.

FNAME: WS1P-TP-(1001-1004)

REVDATE: 0621



----- DASHED LINE INDICATES FIELD WIRING.

USE COPPER CONDUCTORS ONLY.

TEMPERATURE RATING OF CONDUCTORS IS TO BE:
60°C (140°F) FOR UNDER 100A.
75°C (167°F) FOR OVER 100A.

BRANCH CIRCUIT PROTECTION SHALL BE PROVIDED BY THE INSTALLER: MUST BE SIZED ACCORDING TO PUMP/MOTOR MANUFACTURING SPECIFICATIONS.

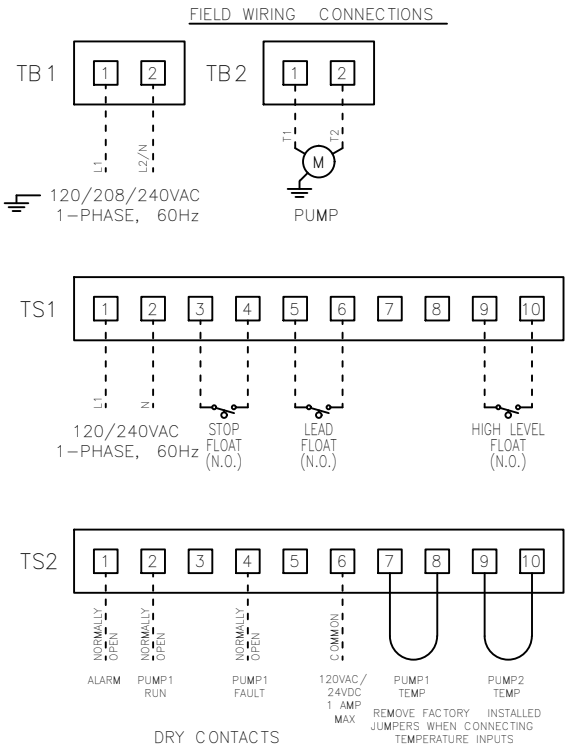
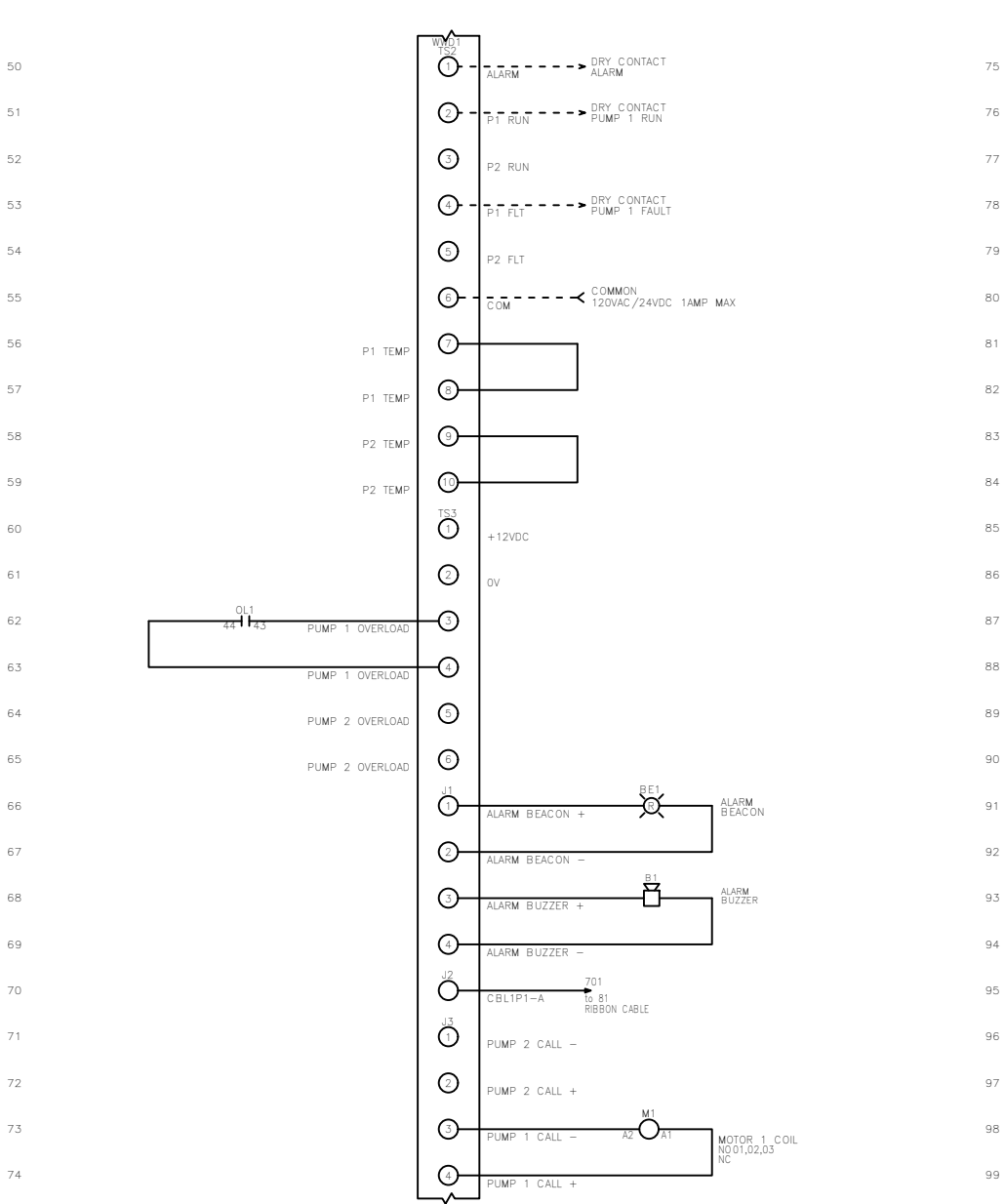
VERIFY CORRECT OPERATION OF CONTROL PANEL AFTER INSTALLATION IS COMPLETE.

FIELD WIRING TORQUE SPECS.		DRAWN BY: MM	DATE: 10/25/14						
TERMINAL BLOCK UT 2,5	5 IN-LB	APPROVED BY:	DATE:						
TERMINAL BLOCK UT 4	7 IN-LB	KM	10/25/14	TITLE: WS1P-TP-(1001-1004) CONTROL SCHEMATIC					
TERMINAL BLOCK UT 6	15 IN-LB								
TERMINAL BLOCK UT 10	15 IN-LB			THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND SHALL NOT BE USED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.					
TERMINAL BLOCK UT 16	25 IN-LB								
TERMINAL BLOCK UT 35	30 IN-LB								
TS1, TS2, J1, J2 & J3 PCB	9 IN-LB								
TRANSFORMER H1F, H2F & H3F	15 IN-LB								
TRANSFORMER H1, H2 & H3	10 IN-LB								
DS1 VLS3P63-125 R2	45 IN-LB								
DS1 LK4JU3CN 100A	36 IN-LB								
DS1 LK4MU3N 200A	200 IN-LB								
		</							

FRAME: WS1P-TP-(1001-1004)

REVDATE: 0621

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	AUTHOR
	L	UPDATED WWD BOARD REVISION	6/15/21	AO



----- DASHED LINE INDICATES
FIELD WIRING.

USE COPPER CONDUCTORS ONLY.

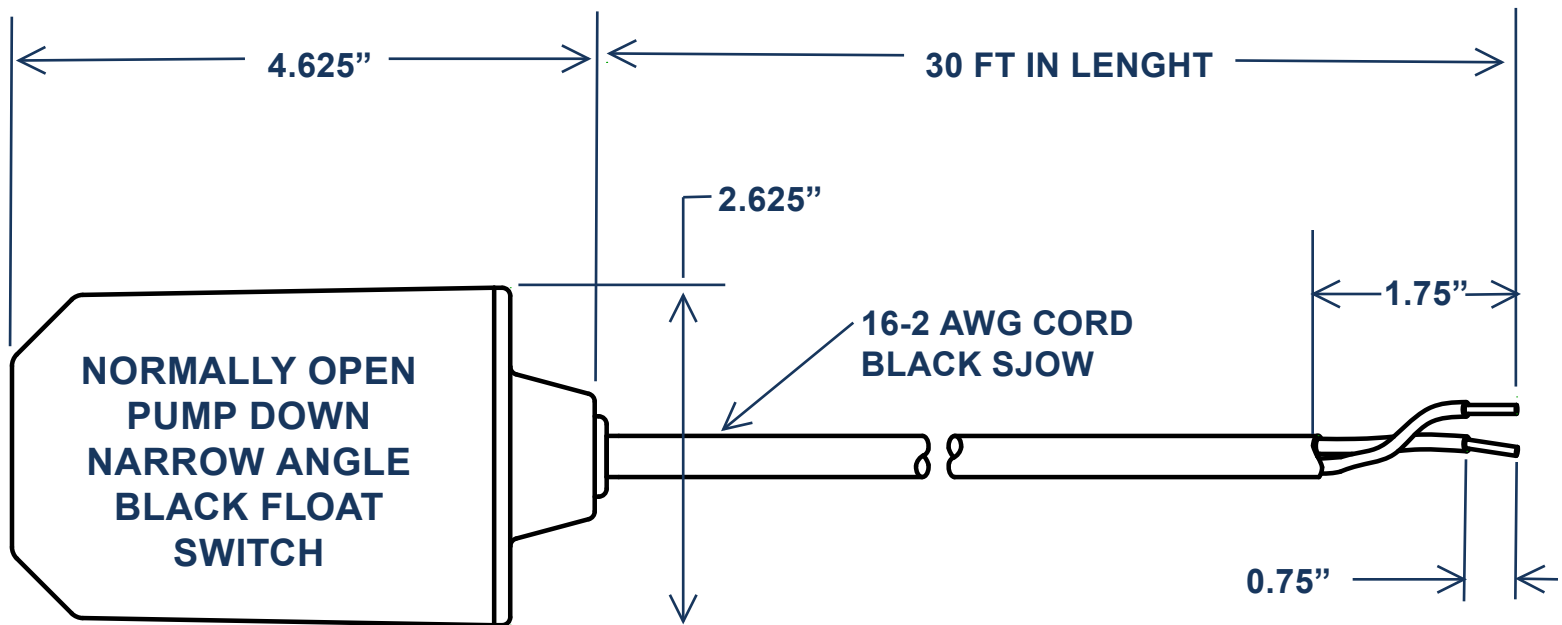
TEMPERATURE RATING OF CONDUCTORS IS TO BE:
60°C (140°F) FOR UNDER 100A.
75°C (167°F) FOR OVER 100A.

BRANCH CIRCUIT PROTECTION SHALL BE PROVIDED BY
THE INSTALLER: MUST BE SIZED ACCORDING TO
PUMP/MOTOR MANUFACTURING SPECIFICATIONS.

VERIFY CORRECT OPERATION OF CONTROL PANEL
AFTER INSTALLATION IS COMPLETE.

FIELD WIRING TORQUE SPECS.		DRAWN BY:	DATE:				
TERMINAL BLOCK UT 2,5	5 IN-LB	MM	10/25/14				
TERMINAL BLOCK UT 4	7 IN-LB	APPROVED BY:	DATE:	TITLE:			
TERMINAL BLOCK UT 6	15 IN-LB	KM	10/25/14				
TERMINAL BLOCK UT 10	15 IN-LB	THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND SHALL NOT BE USED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.		WS1P-TP-(1001-1004) CONTROL SCHEMATIC			
TERMINAL BLOCK UT 16	25 IN-LB						
TERMINAL BLOCK UT 35	30 IN-LB						
TS1, TS2, J1, J2 & J3 PCB	9 IN-LB						
TRANSFORMER H1F, H2F & H3F	15 IN-LB						
TRANSFORMER H1, H2 & H3	10 IN-LB						
DS1 VLS3P63-125 R2	45 IN-LB						
DS1 LK4JU3CN 100A	36 IN-LB			SIZE	DWG NO.	PART NO.	REV
DS1 LK4MU3N 200A	200 IN-LB	B	1523	WS1P-TP-(1001-1004)	L		
		SCALE	NONE			SHEET	2 OF 2

NORMALLY OPEN MECHANICAL FLOAT SWITCH X 30 FT

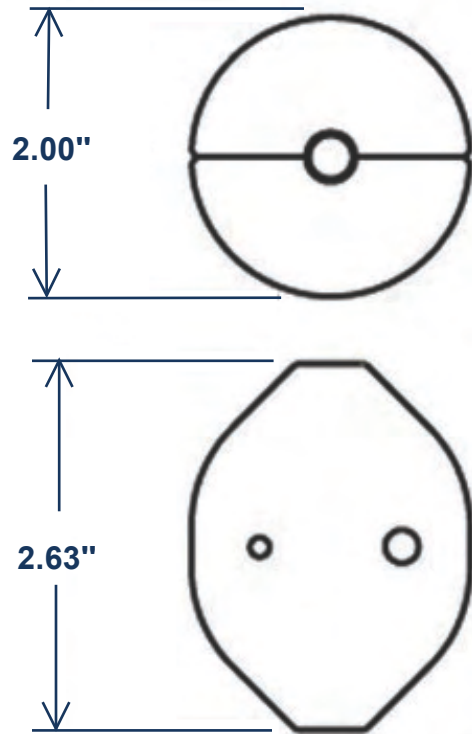


OPERATING ANGLE: CONTACTS CLOSED @ 25° ABOVE HORIZONTAL
CONTACTS OPEN @ 10° BELOW HORIZONTAL

ELECTRICAL RATINGS: 1/4 H.P. @ 120/240 VAC
10 AMPS @ 120/240 VAC 34.8 LRA

FLOAT MATERIAL: A.B.S.

FLOAT WEIGHT



10-24 UNC PHILLIPS PANHEAD
7/8" LONG STAINLESS STEEL
(2 PER SET)



**WEIGHT: TOTAL WEIGHT OF ASSEMBLED
PRODUCT IS 1LB 4 OZ AND CAN VARY BY 2OZ**

MATERIAL: GREY IRON

FINISH: 1 MIL ZINC PLATING

