

**SUBMITTAL** 

DIVISION: 22

NO.: 221116-02

Title:

Domestic Water - Domestic Water Booster Pump Product Data

PRIORITY:

High

Division: 22

No.: 221116-02 Contract No.: E6L38 LEAD Project No.: 18-04

DESIGN TEAM REVIEW									
Rev	. Description	Received	From	Sent	То	Returned	Forwarded	Status	Days Held
Α	Domestic Water - Domestic Water Booster Pump Product Data	13-Nov-19	KL	14-Nov-19	APCTE			OUT FOR REVIEW	

FDOT REVIEW									
Rev. Description	Received	From	Sent	То	Returned	Forwarded	Status	Days Held	
nevi bescription	1100011100	110111	50				- Julius		



#### Walker

Project Submittal Number:

No Exception Taken Resubmittal not Required Resubmittal not Required Revise and Resubmit

Submittal Not Required Revise and Resubmit

Drawings have been reviewed for design intent and general compliance with the information given in the contract documents. Deviations from contract documents shall be clearly identified and are not reviewed nor accepted unless identified. Contractor is responsible for dimensions, quantities, fabrication, processes, and techniques of construction, coordination of its work with that of all other

trades and satisfactory performance of its work.



## Submittal #114.0 22 1116G (PGTH) - DOMESTIC WATER PIPING (WALKER)

Kaufman Lynn Construction, Inc. 3185 S. Congress Avenue Delray Beach, Florida 33445 Phone: 561-361-6700

Fax: 561-361-6979

**Project:** 1074 - Golden Glades Multimodal Transportation Facility SW Quadrant of the Golden Glades Interchange Miami-Dade Florida

Printed On: 11/13/2019 07:27 PM

SPEC SECTION:	22 1116G (PGTH) - DC (WALKER)	R PIPING	IPING SUBMITTAL MANAGER:		Tom Reeder (Kaufman Lynn Construction, Inc.)			
STATUS:	Open			DATE CREAT	ED:	11/13/2019		
ISSUE DATE:	11/13/2019			REVISION:		0		
RESPONSIBLE Integ Miami LLC CONTRACTOR:				RECEIVED FI	ROM:	Eduardo Pereira		
RECEIVED DATE:	SUBMIT BY:		12/2/2019					
FINAL DUE DATE: 11/21/2019								
SUB JOB:			COST CODE:	COST CODE:				
				TYPE:	TYPE: Product Data			
APPROVERS:	Mario Rojas (A & P Co	nsulting Trans	portation Engi	neers Corp.)				
BALL IN COURT: Joanna Flores (Lea	d Engineering Contrac	tors)						
DISTRIBUTION:	ıfman Lynn Constructi				ruction. Inc.)	, Leonor Flores (Kaufn	an Lumn	
	, Joanna Flores (Lead	Engineering Co	ontractors) , Al	bert Acevedo (F		Construction, Inc.)	ian Lynn	
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Construction, Inc.) DESCRIPTION: ATTACHMENTS:	stic Water - Domestic Wa					Construction, Inc.)	ian Lynn	
Construction, Inc.) DESCRIPTION: ATTACHMENTS: #22 1116G-2 Domes	stic Water - Domestic Wa					ATTACHMENTS		
Construction, Inc.) DESCRIPTION: ATTACHMENTS: #22 1116G-2 Domes	DRKFLOW SUBMITTER/	ater Booster Cor	ntroller_Pump -	Submitted.pdf  RETURNED	Kaufman Lynn		COMMENTS	

#### KL SUBMITTAL #22 1116G-2





FO-INTEG-PROJECT-PO0001-REV.03 Gestión de Control de Calidad / Quality Management

Information

Submittal # #48

Status: In Review

Task/tareas condition Legend

Overdue Issue On Time Delayed Start Inactive

Project (CDC) - Empresa/ Integ Miami LLC

COMPANY:

Project (CDC) - CDC ( Centro I-PLUMBING-GGMTF-021919

de Costo)

Project (CDC) - Customer Kaufman Lynn Construction

Name

Project (CDC) - Ubicacion 15890 Northwest 7th Avenue, Miami, Florida 33169

Submittal

Title: DOMESTIC WATER BOOSTER

Spec Section: SECTION 22 1005 Description: DOMESTIC WATER BOOSTER

SECTION 22 1116

Submittal Type: Product Data

Submitted On: 16-10-2019 Responsible Contractor: Integ Miami LLC

Submittal Manager: Eduardo Pereira

Issue Date: 18-10-2019 12:00 AM Final Due Date: 25-10-2019

Lead Time: 5

Ball in Court: Kaufman

Attachment

Attachment: 48 Submittal Simplex Booster Controller.pdf

**Linked Drawings:** 

Notes:

Stamp Info

Stamp Date: 14-10-2019

Other Name:

Show Stamp on PDF:

Submittal logs

Add Submittal LOG



Checking is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Any action shown is subject to the requirements of the plans and specifications. Subcontractor is responsible for dimensions within shall be confirmed and correlated at the job site, laboration processes and techniques sequences of construction, coordination of hisher work with that of all rades, and the satisfactory performance of hisher work.

DATE: 11/13/2019 BY: T. REEDER.

10/14/2019 PROYECTOS INTEG -



Revision #	Date Submittal REV	Attachement Document:	Comments:
No submittal lo	gs found		

Submittal Approval	
Approval	Name/Title:
Signature	

Created today at 8:06 AM (PDT). Last updated by <a href="mailto:pma@integca.com">pma@integca.com</a>, <a href="pMA">PMA</a> today at 2:52 PM (PDT). Owned by <a href="pma@integca.com">pma@integca.com</a>, <a href="pma@integca.com">PMA</a>.

Reviewed Submittal No. #22 1116G-2

Reviewed Make Corrections Noted

Submit Specified Item

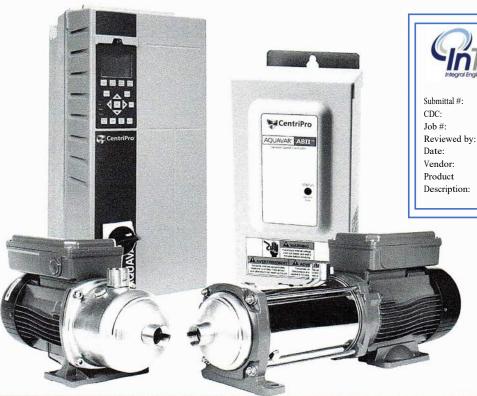
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DATE: 11/13/2019 BY: T. REEDER



#### **TECHNICAL BROCHURE**

BAQUAeABII R4



Reviewed for general conformance to the contract documents. This review does relieve the vendor of the responsibility of making the work conform to the plans and the FDOT Design Standars.

I-PLUMBING-GGMTF-021919

EDUARDO PEREIRA 10/14/2019

REVISION

DOMESTIC WATER BOOSTER

\* Available up to 100 GPM systems

# Aquavar e-ABII

#### VARIABLE SPEED CONSTANT PRESSURE SYSTEMS

- 1 HP thru 5 HP Pressure Booster Packages
- 1AB2 and 2AB2 Prewired Pump/Controller Kits







RAUFMAN LYNN CONSTRUCTION - SUBMITTAL
Project No. 1074 Submittal No. #22 1116G-2

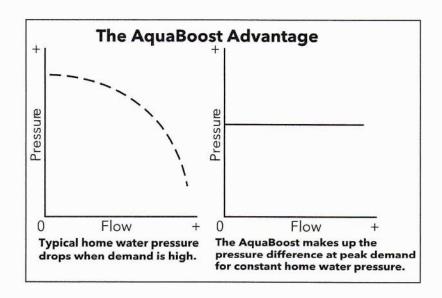
Reviewed Make Corrections Noted
Submit Specified Item
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Any action shown is subject to the requirements of the plans and specifications. Subcontractor is responsible for dimensions which shall be confirmed and correlated at the job site, labrication processes and techniques sequences of construction, coordination of hishway work with that of all trades, and the

#### **FEATURES**

The e-AB2 variable speed pump controller and complete booster package kits, provide an economical answer for municipal water district customers with low water pressure. Both domestic and light commercial applications can benefit. As water use increases, the controller changes pump speed to maintain pressure. Large supply tanks are eliminated and less wear and tear on your pump and motor.

DATE: 11/13/2019

Think of it as "Cruise Control" for your pump! The e-AB2 is available with a range of flow rates to handle homes with up to four baths, irrigation, filtration and fire suppression systems. Light commercial applications up to 100 GPM at 55 PSI boost. The e-AB2 is available as either a separate controller or as part of a complete pump package with everything you need to plumb it to a domestic water line.





1 HP and 2 HP Controller



3 HP and 5 HP Controller

## AQUAVAR IPC CONTROLLER PROVIDES CONSTANT PRESSURE CONTROL PLUS MORE FOR THE 3 HP AND 5 HP MOTOR SIZES (REPLACES 3AB2 AND 5AB2 CONTROLLER)

#### **NEW FEATURES**

- Programmed to motor electrical characteristics; just select set pressure.
- Application specific "Start-Up Genie" guides you through quick and easy commissioning
- · Removable, graphical control panel with display
- Alarm Log records the last 5 alarms
- Hand on, Auto on, and Off buttons for easy pump operation at the keypad No toggling between local and remote operation!
- Capable of controlling up to 2 fixed speed pumps, with one standard drive
- Duplex variable speed pumping control with auto lead/lag and alternate



## e-AB2 HYDRAULIC SELECTION (e-HM and MCS)

CEET	PSI	V	V GPM								
FEET	BOOST	5-10	20	30	40	50	60	70	80	90	100
46	20	1	4	4	9	9	9	9	9	14	14
58	25	1	4	4	9	9	9	9	14	14	14
69	30	1	4	4	10	10	14	14	14	14	14
81	35	1	4	4	10	10	14	14	14	14	14
92	40	2	4	5	11	11	14	14	14	14	14
104	45	2	5	5	11	11	14	14	14	14	14
116	50	2	5	5	11	11	14	14	14	14	15
127	55	2	5	6	11	11	14	14	15	15	15
139	60	3	6	6	12	12	15	15	15	15	
150	65	3	6	7	12	12	15	15	15		
162	70	3	6	7	12	12	15	15	15		
173	75	3	7	8	12	12	13				
185	80	3	7	8	12	13	13				

### e-AB2 CONFIGURATIONS (e-HM and MCS)

Selection	Part Number	Description	
	1151AB21HM04	115v 1HP 1" disch, 1" suct V6P N3R wired	
<b>→</b> 1	1AB21HM04	230v 1HP 1" disch, 1" suct V6P N3R wired	
2	1151AB21HM06	115v 1HP 1" disch, 1" suct V6P N3R wired	
2	1AB21HM06	230v 1HP 1" disch, 1" suct V6P N3R wired	
3	2AB23HM06	230v 2HP 1" disch, 1" suct V6P N3R wired	
	1151AB25HM03	115v 1HP 1" disch, 1.25" suct V15P N3R wired	
4	1AB25HM03	230v 1HP 1" disch, 1.25" suct V15P N3R wired	
5	2AB25HM04	230v 2HP 1" disch, 1.25" suct V15P N3R wired	
6	2AB25HM05	230v 2HP 1" disch, 1.25" suct V15P N3R wired	
7	2AB25HM06	230v 2HP 1" disch, 1.25" suct V15P N3R wired	
	3AVN35HM07	230v 3HP 1" disch, 1.25" suct IPC-N3R	
8	3AVN15HM07	230v 3HP 1" disch, 1.25" suct IPC-N1	
9	2AB22MS1G2D2	230v 2HP 1.25" disch, 1.5" suct V15P N3R wired	
10	2AB210HM02	230v 2HP 1.25" disch, 1.5" suct V15P N3R wired	
	3AVN310HM03	230v 3HP 1.25" disch, 1.5" suct IPC-N3R	
11	3AVN110HM03	230v 3HP 1.25" disch, 1.5" suct IPC-N1	
12	5AVN310HM04	230v 5HP 1.25" disch, 1.5" suct IPC-N3R	
12	5AVN110HM04	230v 5HP 1.25" disch, 1.5" suct IPC-N1	
4.0	5AVN310HM05	230v 5HP 1.25" disch, 1.5" suct IPC-N3R  KAUFMAN LYNN CONSTRUCT Project No. 1074 Submittal No.	ION - SUBI
13	5AVN110HM05	230v 5HP 1.25" disch, 1.5" suct IPC-N1	Make Correcti
***	5AVN32MS1J2K2	230v 5HP 1.25" disch, 1.5" suct IPC-N3R  Submit Specified Item Checking is only for general conformance with the d	
14	5AVN12MS1J2K2	230v 5HP 1.25" disch, 1.5" suct IPC-N1  and general compliance with the information given in Any action shown is subject to the requirements of it Subcontractor is responsible for dimensions which a	the plans and spec shall be confirmed
45	5AVN315HM03	230v 5HP 1.5" disch, 2" suct IPC-N3R  construction, coordinate of his/her work with that o	of all trades, and th
15	5AVN115HM03	230v 5HP 1.5" disch, 2" suct IPC-N1	DER

<sup>\* 1</sup> HP available in 115 volt input models. Items 8, 11 thru 15 do not include tank. Recommend bladder tank, sized to 20% of pump flow (gpm). Pressure Transducer supplied with all configurations.

NOTE: PSI is boosting pressure, NOT total system pressure.



#### INPUT AND OUTPUT POWER (VOLTAGE AND PHASE)

- All 1AB2 and 2AB2 require single-phase input power o All will work on 1Ø, 208-230V input power o 1151AB2's will work on 1Ø, 115V input power
- All controllers output three-phase, 230 Volt power
- All pumps are equipped with three-phase motors

#### 1151AB21HM04

- 115v SINGLE PHASE INPUT
- 1 HP variable speed controller (1AB2); Nema 3R
- Pump (e-HM 4 stg) and Tank (V6P) included
- Wall mount set; Transducer; pre-wired

#### 1AB21HM04

- 230v SINGLE PHASE INPUT
- 1 HP variable speed controller (1AB2); Nema 3R
- Pump (e-HM 4 stg) and Tank (V6P) included
- Wall mount set; Transducer; pre-wired

#### 1151AB21HM06

- 115V SINGLE PHASE INPUT
- 1 HP variable speed controller (1AB2); Nema 3R
- Pump (e-HM 6 stg) and Tank (V6P) included
- Wall mount set; Transducer; pre-wired

#### 1AB21HM06

- 230v SINGLE PHASE INPUT
- 1 HP variable speed controller (1AB2); Nema 3R
- Pump (e-HM 6 stg) and Tank (V6P) included
- Wall mount set; Transducer; pre-wired

#### 2AB23HM06

- 230v SINGLE PHASE INPUT
- 2 HP variable speed controller (2AB2); Nema 3R
- Pump (e-HM 6 stg) and Tank (V6P) included
- Wall mount set; Transducer; pre-wired

#### 1151AB25HM03

- 115V SINGLE PHASE INPUT
- 1 HP variable speed controller (1AB2); Nema 3R
- Pump (e-HM 3 stg) and Tank (V15P) included
- Wall mount set; Transducer; pre-wired

#### 1AB25HM03

- 230v SINGLE PHASE INPUT
- 1 HP variable speed controller (1AB2); Nema 3R
- Pump (e-HM 3 stg) and Tank (V15P) included
- Wall mount set; Transducer; pre-wired

#### 2AB25HM04

- 230v SINGLE PHASE INPUT
- 2 HP variable speed controller (2AB2); Nema 3R
- Pump (e-HM 4 stg) and Tank (V15P) included
- Wall mount set; Transducer; pre-wired

#### 2AB25HM05

- 230v SINGLE PHASE INPUT
- 2 HP variable speed controller (2AB2); Nema 3R
- Pump (e-HM 5 stg) and Tank (V15P) included
- Wall mount set; Transducer; pre-wired

#### 2AB25HM06

- 230v SINGLE PHASE INPUT
- 2 HP variable speed controller (2AB2); Nema 3R
- Pump (e-HM 6 stg) and Tank (V15P) included
- Wall mount set; Transducer; pre-wired

#### 3AVN35HM07

- 230v SINGLE PHASE INPUT
- 3 HP variable speed controller (Aquavar IPC); Nema
- Pump (e-HM 7 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

#### 3AVN15HM07

- 230v SINGLE PHASE INPUT
- 3 HP variable speed controller (Aquavar IPC);
- Pump (e-HM 7 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

#### 2AB22MS1G2D2

- 230v SINGLE PHASE INPUT
- 2 HP variable speed controller (2AB2); Nema 3R
- Pump (MCS) and Tank (V15P) included
- Wall mount set; Transducer; pre-wired

#### 2AB210HM02

- 230v SINGLE PHASE INPUT
- 2 HP variable speed controller (2AB2); Nema 3R
- Pump (e-HM 2 stg) and Tank (V15P) included
- Wall mount set; Transducer; pre-wired

#### 3AVN310HM03

- 230v SINGLE PHASE INPUT
- 3 HP variable speed controller (Aquavar IPC); Nema 3R
- Pump (e-HM 3 stg) and Transducer (included)
- Tank (not included) and wiring (by others)





**DIMENSIONS** (For Reference Only - Do not use for construction purposes)

#### e-HM PUMPS

Capacities - to 12 GPM (1HM)

to 23 GPM (3HM)

to 45 GPM (5HM)

Rotation - Right hand clockwise,

viewed from motor end

Materials - 316L stainless steel for all liquid

handling components

Motor – 1 HP, TEFC, Three Phase, 208-230/460V

DATE: 11/13/2019 BY: T. REEDER

- 1.5 HP, TEFC, Three Phase, 208-230/460V

- 2 HP, TEFC, Three Phase, 208-230/460V

Pipe Connections –  $1 \times 1 \text{ NPT (1HM/3HM)}$ 

- 1 x 11/4 NPT (5HM)

Maximum Temperature of Water - 120° F

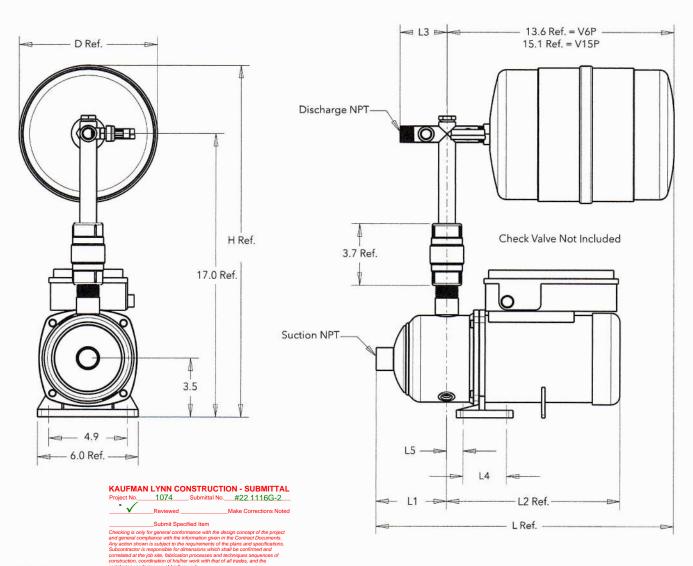
NOTE: Tank Liquid Temperature Limit is 120° F

Pump Liquid Temperature Limit is 212° F

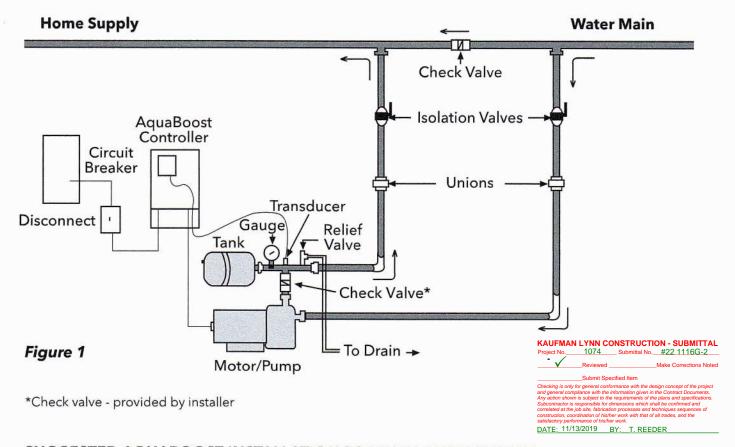
**Maximum System Working Pressure** – 145 psi

Seal - Carbon / Silicon Carbide / EPR

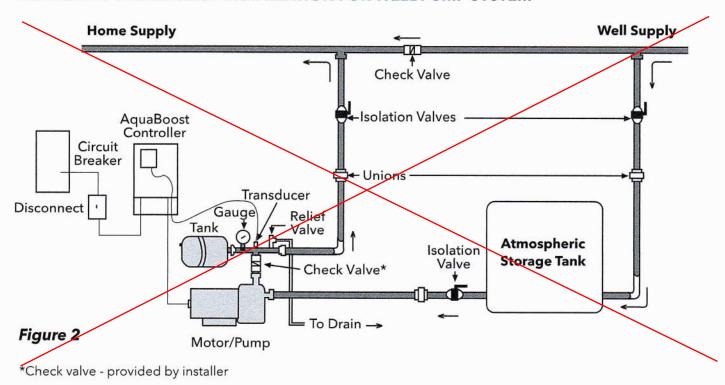
Overload protection, starters, heaters not required. Dimensions are in inches.



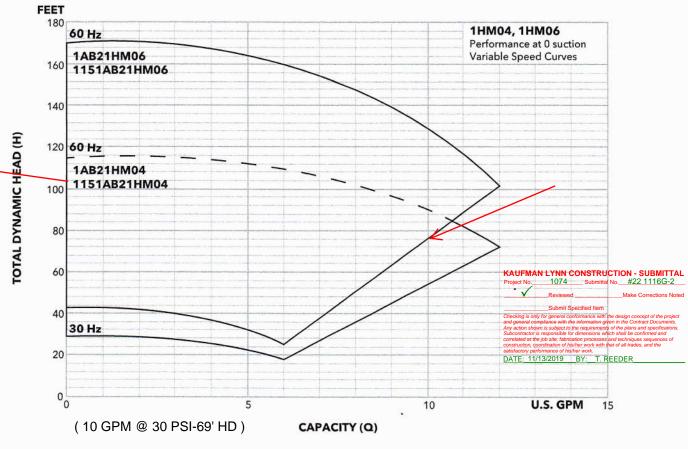
#### SUGGESTED AB2 INSTALLATION FOR MUNICIPAL WATER SYSTEM

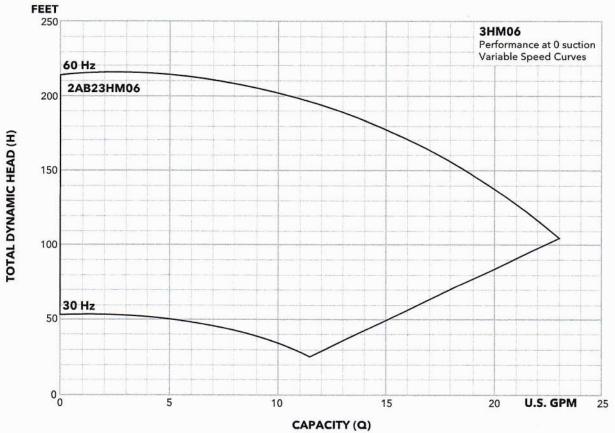


#### SUGGESTED AQUABOOST INSTALLATION FOR WELL PUMP SYSTEM











#### **AQUAVAR ABII CONTROLLER FEATURES**

**Input Power\***  $-208-230V \pm 15\%$ , single phase (controller only)

**Output Power** – Up to 230V three phase (based on input voltage). Motor rated for 208-230V, ±10%.

**Maximum Output Current** – 4.2 amps – 1AB2 (1 HP) 4 – 6.9 amps – 2AB2 (2 HP)

**Input Controls** – Up and down buttons to set pressure.

**Signal Lights** – Power on, pump running, inverter stopped, pump stopped, standby, faults/errors.

Electrical Efficiency - Over 95% at full load

**Protection Against** – Short circuit, under voltage, overload, motor temperature, dead heading, run out, suction loss, sensor fault, bound pump, over voltage, static discharge. **Note:** Suction loss/run out is set for minimum 10 psi at discharge!

Ambient Temperature - 34° F to 104° F

Maximum Humidity – 95% at 104° F, non-condensing

**Air Pollution** – Avoid mounting in areas with excessive dust, acids, corrosives and salts.

Approvals – (Listing on Controller Only)

**Controller Enclosure** – Outdoor, NEMA 3R, IP 43 (Rain-tight)

Mounting - Wall mount with mounting hardware.

**Cooling** – Convection with cast aluminum heat sink.

- 3 HP, 5 HP with temperature fan

**Transducer** – 0.5 - 4.5 VDC with 5 VDC power supply, 100 psi range, 10-foot 3-wire shielded cable.

**Input Wire** – 5 feet of 14, 10 or 8 gauge cable. Depending on size, cable is pre-wired to controller and motor conduit box.

**Output Wire** – 10 feet of 14 gauge cable. Cable is prewired to controller and pump motor (when provided).

\*Low input voltage may affect motor operation.

## **1AB2** (114.30) 4.50 **2AB2** (57.15) 2.25 .33 0 0 (242.04) 9.53 (232.56) 9.16 (3) 600 (16.51) (157.90)(81.28) (135.36) 5.33 (237.06) (259.08) 0 1/5" Liquid Tight (12.07)\_ KAUFMAN LYNN CONSTRUCTION - SUBMITTAL

#### PRESSURE RANGE

Nominal Range – Field adjustable from 20 - 85 psi, total system pressure.

**WARNING** 

DO NOT SET REQUIRED SYSTEM PRESSURE ABOVE 85 PSI. SEVERE DAMAGE TO PLUMBING COULD RESULT. PLUMB RELIEF VALVE OUTSIDE OR TO A DRAIN.