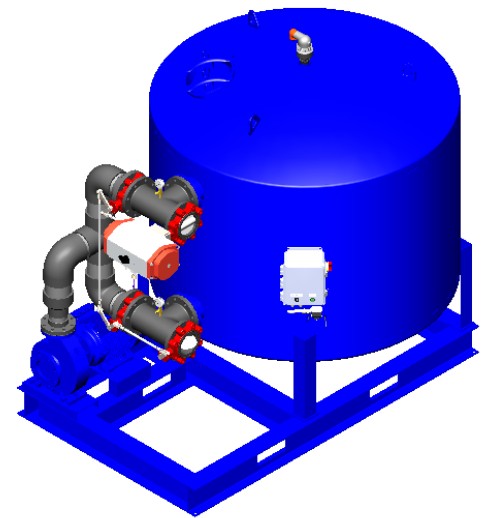
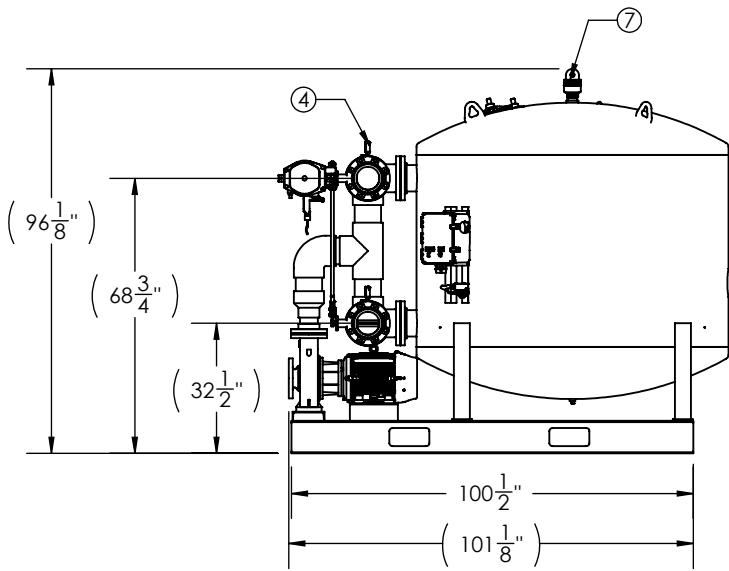
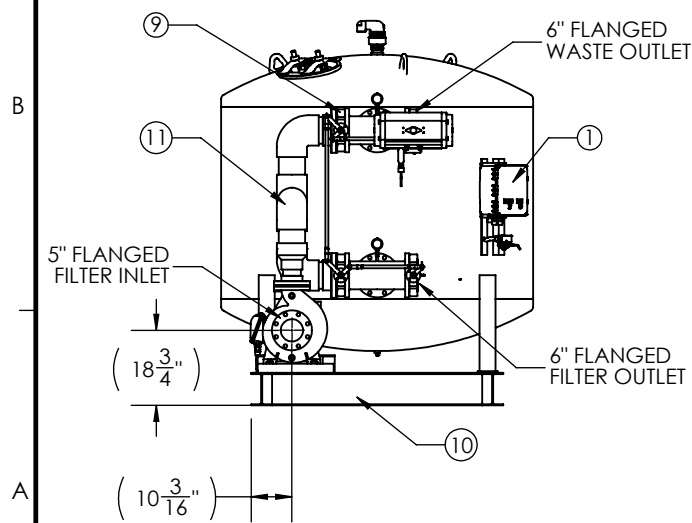


BASE DETAIL



NOTES

- 1) ALL DIMENSIONS ARE GIVEN IN INCHES UNLESS OTHERWISE SPECIFIED.
- 2) DESIGN CONDITIONS:  
663 GPM @ 100 PSI  
MAX TEMP 140°F  
FLOODED SUCTION REQUIRED
- 3) BACKWASH FLOWRATE: 500-663 GPM
- 4) REQUIRED AIR PRESSURE: 80-100 PSI
- 5) APPROXIMATE MASS:  
SYSTEM: 4565 LBS  
OPERATING: 21277 LBS



#	COMPONENT
1	NEMA 4X, UL, 460V/3PH/60Hz CONTROL PANEL
2	MEDIA TANK: 78" EPOXY COATED CARBON STEEL
3	PUMP: 15HP 1800RPM, 460/3/60, 663 GPM @ 50' TDH
4	INLET/OUTLET PRESSURE GAUGES: 2.5" O-100 PSI, LIQ FILLED
5	MEDIA: UNIGRAN #50 (X150), UNIGRAN #475 (X94)
6	UNDERDRAIN/OVERDRAIN: SLOTTED PVC/ SCH 80 PVC
7	AIR RELIEF VALVE: BARAK 2"NPT
8	PNEUMATIC VALVE ACTUATOR: BRAY S93-210
9	FILTER VALVES: BRAY S-31, BUTTERFLY, EPDM SEATS
10	BASE: EPOXY COATED CARBON STEEL I-BEAM
11	FACE PIPE: 6" PVC SCH 80

**amiad** WATER SYSTEMS  
 120-J TALBERT ROAD  
 MOORESVILLE, NC 28117  
 PH: (704) 662-3133  
 FAX: (704) 662-3155

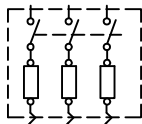
THIS DRAWING, AND THE INFORMATION CONTAINED HEREIN, IS THE PROPERTY OF AMIAD WATER SYSTEMS. ANY USE OR REPRODUCTION THEREOF WITHOUT THE WRITTEN PERMISSION OF AMIAD WATER SYSTEMS ENGINEERING DEPARTMENT IS STRICTLY PROHIBITED.

DRAWING DATE: 7/27/2016	DRAWING TITLE: BMF-78 CS TANK WITH FACE PIPING AND PUMP
SCALE: 1:48	DRAWING NUMBER: <b>210490-000005</b>
SHEET 1 OF 2	CAT NUMBER: 210490-000005
DRAWN BY: MAV	REV. NO. 0
CHECKED BY: SAL	GENERAL TOLERANCES (EXCEPT AS NOTED)
APPROVED BY: _____	ANGULAR ± 1° FRACTIONAL ± 1/8" Dec: 2 PL ± 0.05", 3 PL ± 0.010"

NO.	REVISION NOTES	DATE	BY

460V/3 $\phi$ /60 Hz

L1 L2 L3

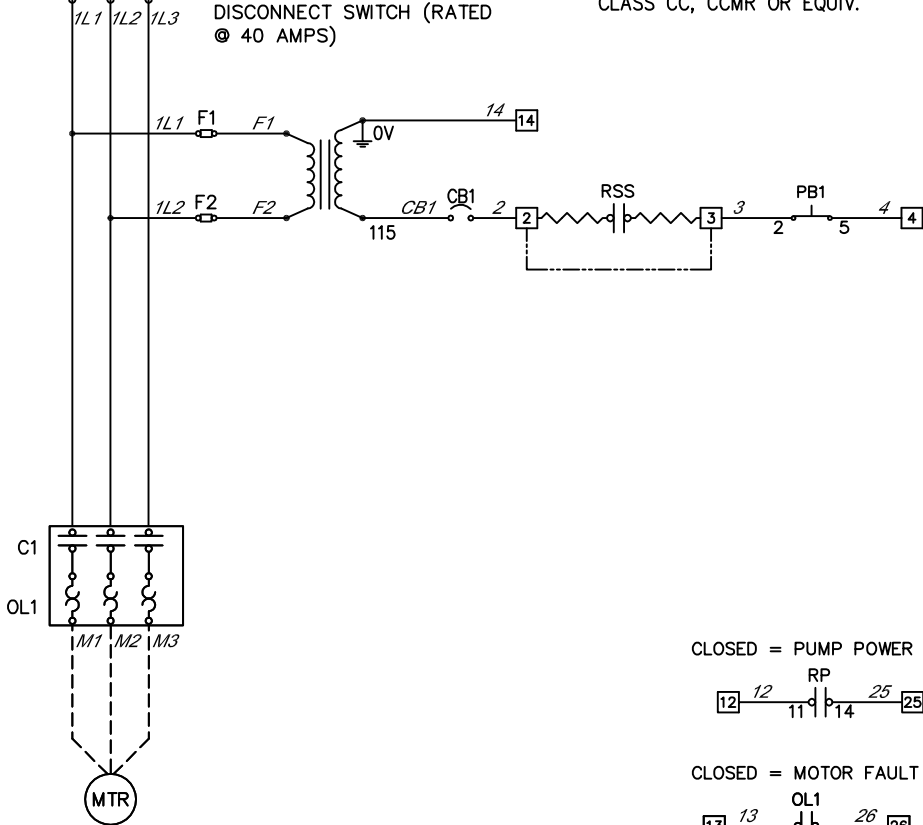


MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION PROVIDED BY OTHERS (MAXIMUM OF 70A DUAL TIME DELAY FUSE OR 100A INVERSE TIME BREAKER RECOMMENDED)

150VA TRANSFORMER		
Voltage	Fuse	Location
460	1A	H1-H4
230	2A	H2-H4
208	2A	H3-H4

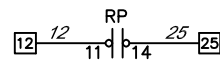
LOCKABLE NON-FUSED DISCONNECT SWITCH (RATED @ 40 AMPS)

ALL PRIMARY FUSING TO BE LITTELFUSE CLASS CC, CCMR OR EQUIV.

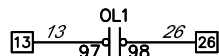


MAX. VOLTAGE: 600V  
MAX. AMPERES: 39.00A

CLOSED = PUMP POWER ON



CLOSED = MOTOR FAULT

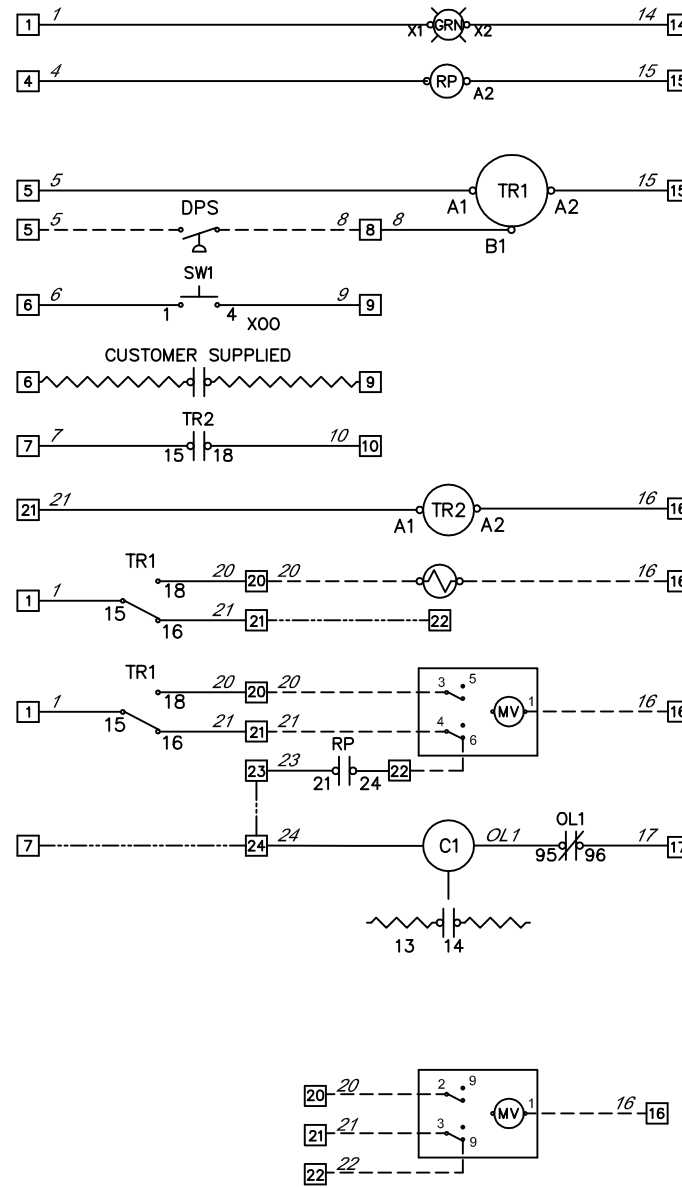


POWER	POWER	460V/3~/60HZ
	TOTAL FLA	40 AMPS
	SCCR	5 kA RMS SYMMETRICAL, 600V MAX.
	LARGEST MTR.	35 HP

ENCLOSURE	STANDARD	UL 508A
	SIZE	12"L x 10"W x 6"D
	UL RATING	TYPE 4X
	MATERIAL	POLYCARBONATE

- GROUND PER 2011 NATIONAL ELECTRICAL CODE ARTICLE 250.
- PANEL WIRING:  
SHOP/FIELD WIRING: \_\_\_\_\_  
CUSTOMER'S WIRING: \_\_\_\_\_  
FACTORY INSTALLED JUMPER: \_\_\_\_\_
- USE COPPER WIRE RATED 60°C MINIMUM UNLESS OTHERWISE SPECIFIED.
- DISCONNECT SWITCH TORQUE REQUIREMENTS: 35 LB IN. CONTACTOR/OVERLOAD TORQUE REQUIREMENTS: 7-10 LB IN.
- SIZE THE MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION PER 2011 NATIONAL ELECTRICAL CODE ARTICLE 430.

- CONDUIT HUBS AND FITTINGS MUST HAVE THE SAME UL ENVIRONMENTAL RATING AS THE CONTROL PANEL ENCLOSURE.
- WIRE COLORS ARE AS FOLLOWS—LINE=BLACK, AC=RED, NEUTRAL=WHITE, DC+=BLUE, DC-=WHITE/BLUE, GROUND=GREEN/YELLOW, EXTERNAL SOURCE=YELLOW.
- SET MOTOR OVERLOADS ACCORDING FLA ON MOTOR DATA PLATE
- ALL MOTOR WIRING TO BE AT LEAST CU, 75° RATED.
- TB1= [5] TBA= (1) TBB= (1)



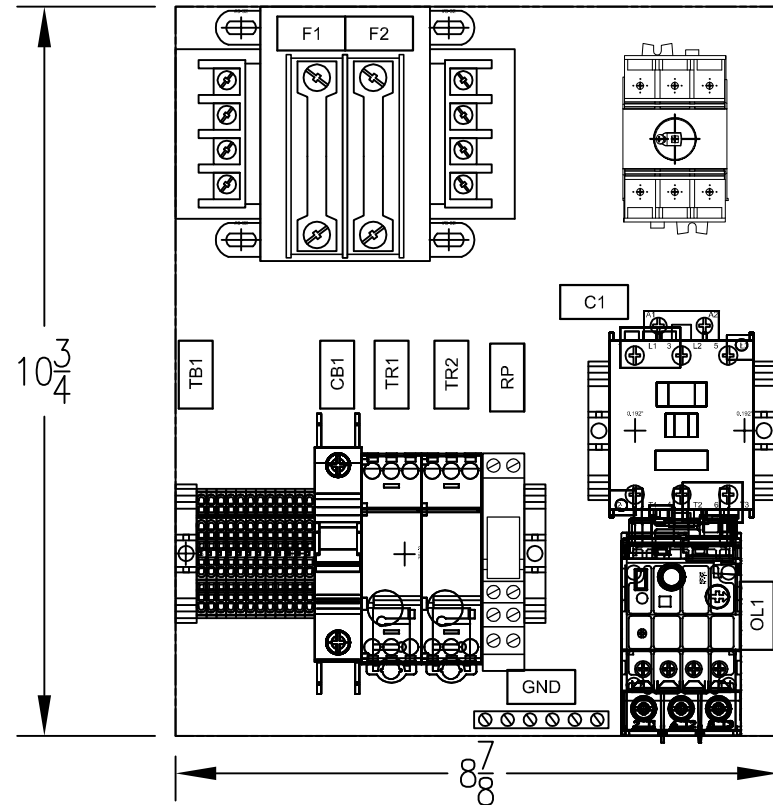
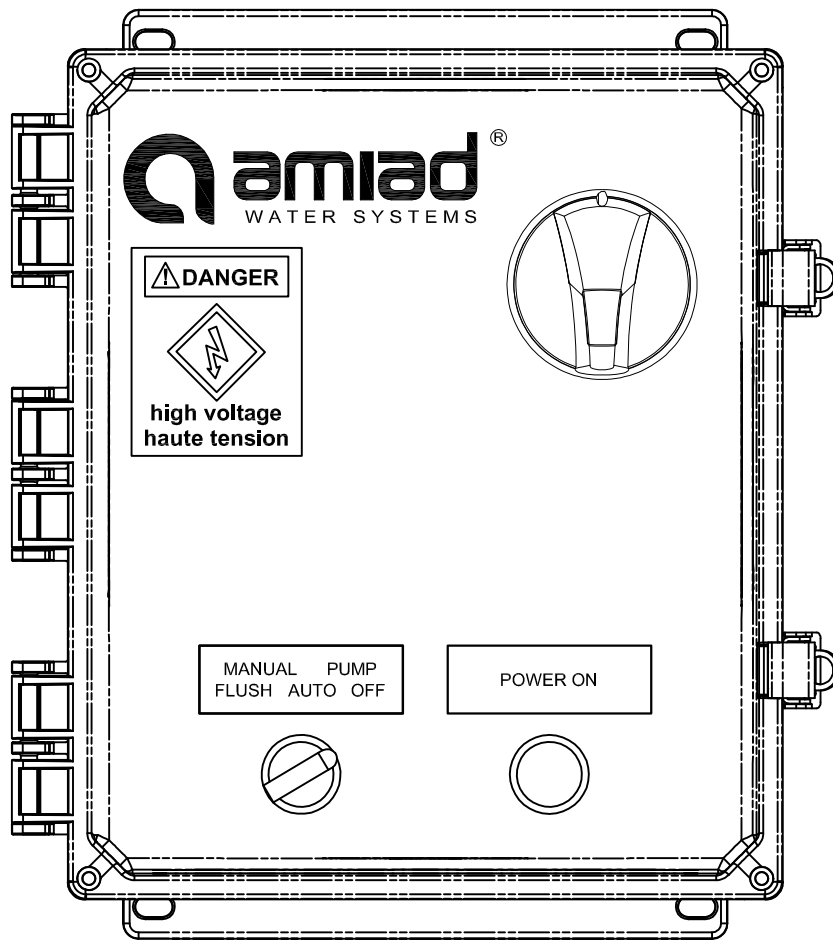
- POWER ON LIGHT
- PUMP POWER ON
- FLUSH DURATION (2 MIN) DIFFERENTIAL PRESSURE
- LOCAL FLUSH START
- REMOTE FLUSH START
- CYCLE TIMER
- CYCLE TIMER (0.05S-60HRS) FLUSH VALVE OPTIONS (SHOP TO ADD JUMPER FROM TB21 TO TB22 IF SOLENOID FLUSH VALVE IS USED)
- SYSTEM PUMP (REMOVE JUMPER FROM TB7 TO TB24 FOR EXTERNAL SOURCE FLUSH; REMOVE MECHANICAL JUMPER FROM TB23 TO TB24 FOR SYSTEM FLUSH)
- MOTOR ON DRY CONTACTS
- OPTIONAL BRAY ACTUATOR

**Amiad** WATER SYSTEMS 120-J TALBERT ROAD MOORESVILLE, NC 28117 USA (704) 662-3133 FAX (704) 662-3155

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF AMIAD WATER SYSTEMS. ANY USE OR REPRODUCTION THEREOF WITHOUT THE WRITTEN PERMISSION OF AMIAD WATER SYSTEMS ENGINEERING DEPARTMENT IS STRICTLY PROHIBITED.

5	10/5/2017	DELETE COUNTER	RAM	DRAWING DATE:	05/09/2014	DRAWING TITLE:	1F 460V/3~ UNI/SOL PEP 16.01-40A WIRING DIAGRAM
4	08/31/2016	ADD COUNTER, FIX PUMP "SOURCE" POWER	RAM	SCALE:	1" = 1"	DRAWING NUMBER:	720102-002093-ELC
3	07/27/2015	ADD OPTIONAL BRAY ACTUATOR	RAM	SHT.	1 of 2	REV. NO.	5
2	07/10/2014	MOTOR CONTROL	CEH	DRAWN BY:	JTE	CATALOG NUMBER:	720102-002093
1	06/03/2014	WIRE LABELS	JTE	CHKD BY:	---	GENERAL TOLERANCES	(EXCEPT AS NOTED)
NO. DATE NOTES				APP. BY: ---		ANGULAR ±1° FRACTIONAL ± 1/8" DEC: 2PL±0.05", 3PL±0.010"	

NO.	DATE	NOTES	BY
GENERAL REVISIONS			



UPPER LEVEL

1	2	3	4	5	6	7	8	9	10	11	12	13
---	---	---	---	---	---	---	---	---	----	----	----	----

LOWER LEVEL

14	15	16	17	18	19	20	21	22	23	24	25	26
----	----	----	----	----	----	----	----	----	----	----	----	----

**NOTE**

- ALL HARDWARE WILL INCLUDE ONE MECHANICAL LOCK AND A FLAT WASHER.
- THE ONLY EXCEPTION IS IF THE MECHANICAL SCREW IS A SELF-THREADING SCREW.
- IF BOLT/SCREW NEEDS TO GO THROUGH A THROUGH-HOLE, THE BOLT/SCREW WILL NEED A FLAT WASHER ON BOTH SIDES OF THE MATERIAL AND MECHANICAL LOCK BEFORE THE NUT.
- ALL HARDWARE HAS TO THREAD AT LEAST TWO COMPLETE TURNS THROUGH THE NUT/THREADED HOLE
- IF VISIBLE, NO HARDWARE WILL EXTEND PAST THREE THREADS OUT OF THE NUT/THREADED HOLE.
- BACKPLANE AND DEAD FRONT IF REQUIRED ARE TO BE GROUNDED ACCORDING NEC 70E.
- UNLESS OTHERWISE NOTED, ALL CONTACTORS WILL BE AB 100-C, OVERLOADS AB 193 E-1, CONTROL RELAYS AB 700-HLT, AND CIRCUIT BREAKERS AB 1489.

**amiad**® WATER SYSTEMS 120-J TALBERT ROAD  
MOORESVILLE, NC 28117 USA  
(704) 662-3133 FAX (704) 662-3155

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF AMIAD WATER SYSTEMS. ANY USE OR REPRODUCTION THEREOF WITHOUT THE WRITTEN PERMISSION OF AMIAD WATER SYSTEMS ENGINEERING DEPARTMENT IS STRICTLY PROHIBITED.

DRAWING DATE: 05/09/2014	DRAWING TITLE: 1F 460V/3~ UNI/SOL PEP 16.01-40A WIRING DIAGRAM	
SCALE: 1" = 3"	DRAWING NUMBER: 720102-002093-ELC	REV. NO. 5
SHT. 2 of 2	CATALOG NUMBER: 720102-002093	
DRAWN BY: JTE	GENERAL TOLERANCES (EXCEPT AS NOTED)	ANGULAR ±1° FRACTIONAL ± 1/8" DEC: 2PL±0.05", 3PL±0.010"
NO. DATE	NOTES	BY
GENERAL REVISIONS		
CHKD BY: ---	APP. BY: ---	