

Welcome

HCT WaterSOLV™ Flow Switch System

Description: Flow Switch Controller

We've said it from day one, nobody wants a pump station injection system that causes problems. Unable to find an existing "system", that was also reasonably priced, somewhat generic and dependable, we ended up having a system designed.

It's a FLOW – Switch - Controller. The box mounts to the pump station cabinet, a wire connects to the flow sensor connectors within the pump station, when there is flow, it powers the three receptacles outside the box to initiate up to three pumps to begin pumping. The pumps we offer can also take an input from the flow "meter", so that if the pump station flowrates vary significantly, and the flow meter can send flow rate signals, the pumps can operate from the signals to administer the proper vol. of product(s). This one box should work with just about any pump station and flow switch or flow meter. See images and diagrams below.

Description: Chemical Injection Pumps

Pumps need to accomplish specific needs:

- Compatible with the pressure of the system
- Inject a range of product that is compatible with the product volume and the flow rate of the system
- Compatible with the varying chemicals applied
- Reliable, dependable and weather resistant
- If the pump station provides variable flow rates, the pump must be able to process a signal from the flow sensor meter to adjust the injection rate
- If the pump fails, it needs to be easily replaceable
- Therefore, we supply the WALCHEM, EWN SERIES METERING PUMP No. C16TCUR - 1.3 GPH x **150 PSI**, 1/4" x 3/8" CONNECTIONS, PVDF PUMP HEAD, PTFE + EPDM DIAPHRAGM, CE VALVE BALLS, FKM SEATS / O-RING, PTFE GASKET, 115 V, 50/60Hz

Description: Injection Quill

Along with the pump comes a factory injection quill but most factory injection quills are inadequate as they do not extend into the piping to the half way mark. So, for each pump, HCT includes a one piece constructed, PVDF, long tube extension quill that can be cut down to meet the exact needs of the installation. See product sheet below.

Installation

Whether you are in the city center or a remote destination, odds are you have a pump station service provider that can install this system for you.

System Requirements

1. Flow switch or flow meter (usually in the existing pump station)
2. 1 injection port for each pump used, ideally 1 inch FPT which allows for reducing.
 - a. WaterSOLV™ BC is injection on the suction side of the pump station, into the wet well
 - b. WaterSOLV™ Curative is installed on the discharge side of the pump station
 - c. Fertilizers should go into the discharge side of the pump station
3. 110 V outlet to power the Flow Switch Controller



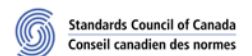
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Scottsdale, AZ 85254
(888) 788-5807
info@hctlc.com
www.hctlc.com

Well-Klean® Solutions
Water Well Rehabilitation

WaterSOLV™
Making Water a Better Solution

Well-Klean®, WaterSOLV™ Water
Treatment for Agronomy,
WaterSOLV™ GROW &
WaterSOLV™ pHix are tradenames
of HCT, LLC

Select Solutions Registered with:



California Department of Food
and Agriculture

4. Mounting bolts and screws for the Flow Switch Controller
5. Proper placement of product containers.
 - a. WaterSOLV™ BC is usually a 53 gl. drum
 - b. WaterSOLV™ Curative is usually a 265 gl. tote, or 55 gl. drum.
 - c. WaterSOLV™ pHix (if used in place of BC and Curative) is usually 4 times the BC and Curative volume
6. Pumps Placement
 - a. Pump suction lines should not be more than 8 ft.
 - b. Pump discharge lines should not be more than 16 ft.
 - c. Ideally the pump is placed on top of the container
 - i. Shielded from chemistry vapors and weather
 - ii. Adequate tubing and placement for inserting new containers of product
7. Keep Curative container lid on, avoid the release of fumes, maintain adequate ventilation
8. Keep BC out of the direct sunlight, well vented, loose/open cap and out of direct sunlight and UV exposure

Installation Requirements

1. System has to be depressurized or the injection of discharge side injection quills.
2. Chemicals need to be in place for the calibration of chemical application rates

CAUTIONS:

1. No overhead chemical lines
2. Cover chemical lines on discharge side with flexible vinyl conduit
3. Curative and BC concentrates are never to mix at full strength, ever – they will react violently in about 12 seconds. In case of mixture, dilute 10-fold minimum with water immediately
4. Containers should have spill ways, separated, and into lakes or into ponds. Avoid flushing concentrated solutions into any drain unless significantly diluted.
5. Curative fumes, gaseous and moisture vapors are extremely corrosive, the liquid itself is not corrosive to the skin yet long term exposure to metals or minerals will cause corrosion.

Personal Protection Equipment

HazMat – users must become familiar with the storage and handling requirements including water, eye wash stations, suitable protective wear.

Support

HCT, LLC - (480) 650-6955 – support@hctllc.com – www.hctllc.com – Scottsdale, AZ

Flow Switch Controller - Front
Power cord, and three plug-in cords for pumps



SPECIFICATIONS

SAFETY RATING

150 psi - PVC, CPVC, PVDF

1500 psi - Alloy

CHECK VALVE

NO

SAF-T-SEAL TIP

OPTIONAL

QUICK DISCONNECT

NO

VALVE/PROCESS CONNECTION SIZE

1/2" MNPT

INLET CONNECTION SIZE

1/2" MNPT

SOLUTION TUBE SIZE

3/8"

SOLUTION TUBE ID

(PVC, CPVC, & SAF-T-SEAL ALLOY)

0.423"

SOLUTION TUBE ID

(NON-SAF-T-SEAL ALLOY)

0.493"

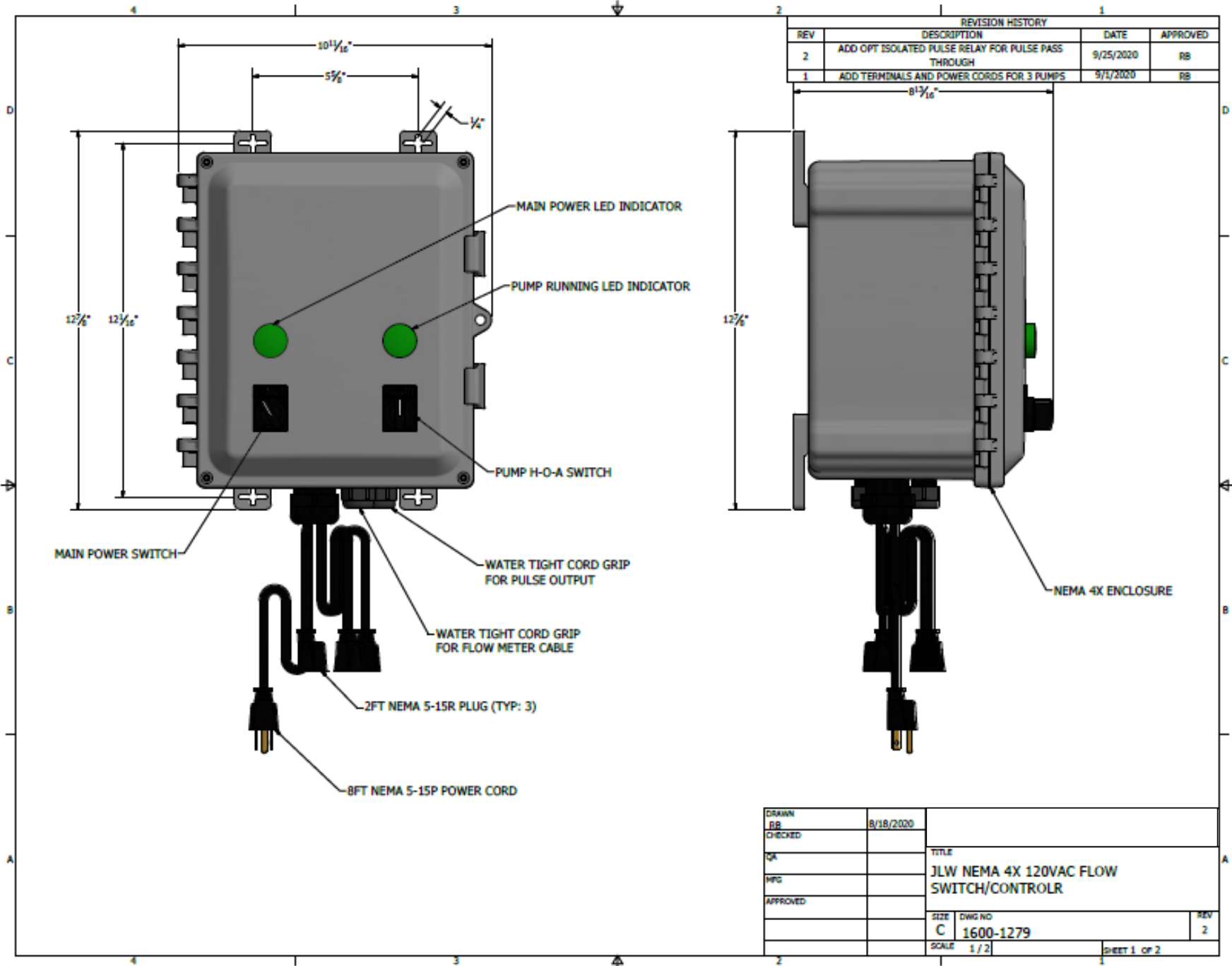
SOLUTION TUBE OD (ALL)

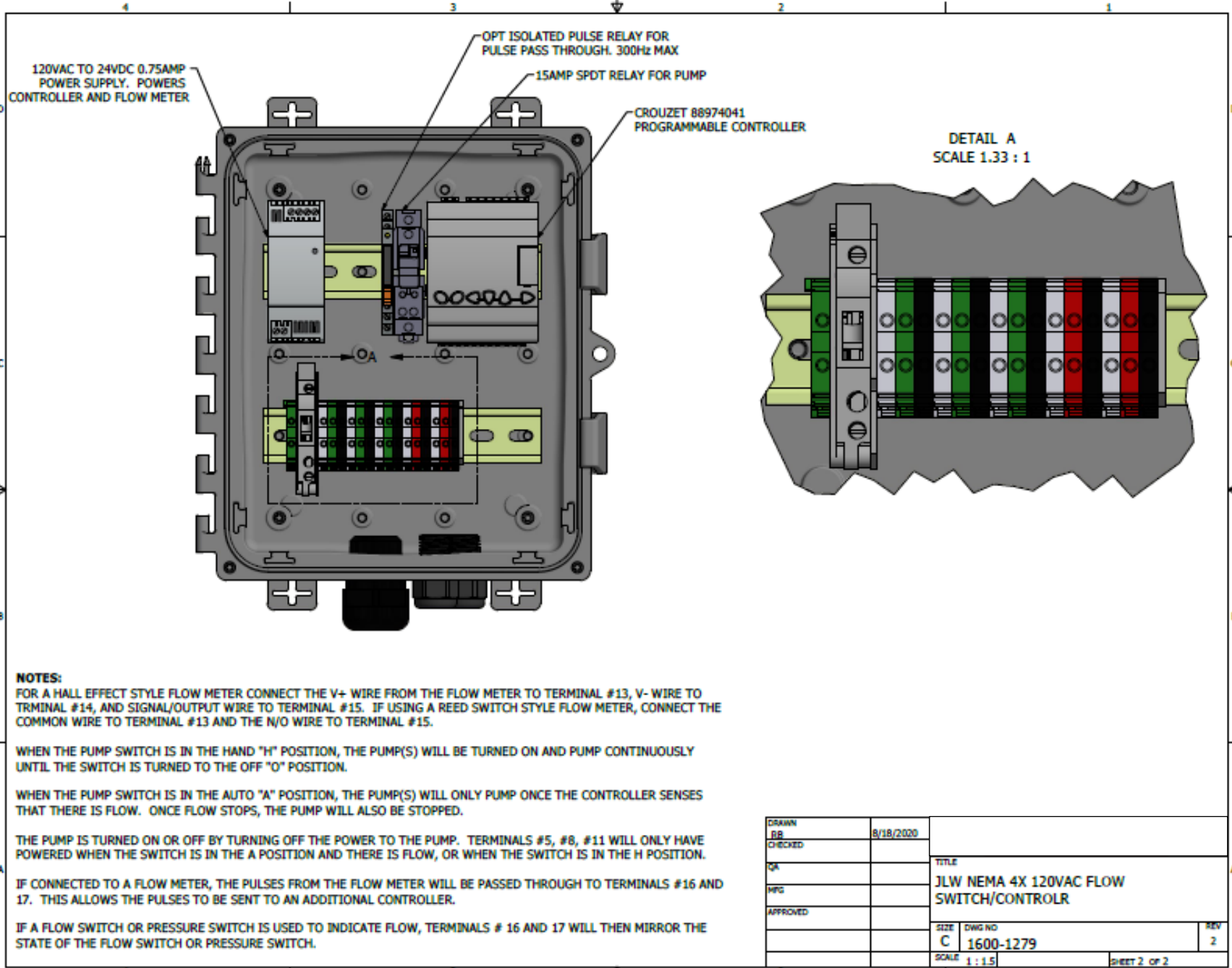
0.675"

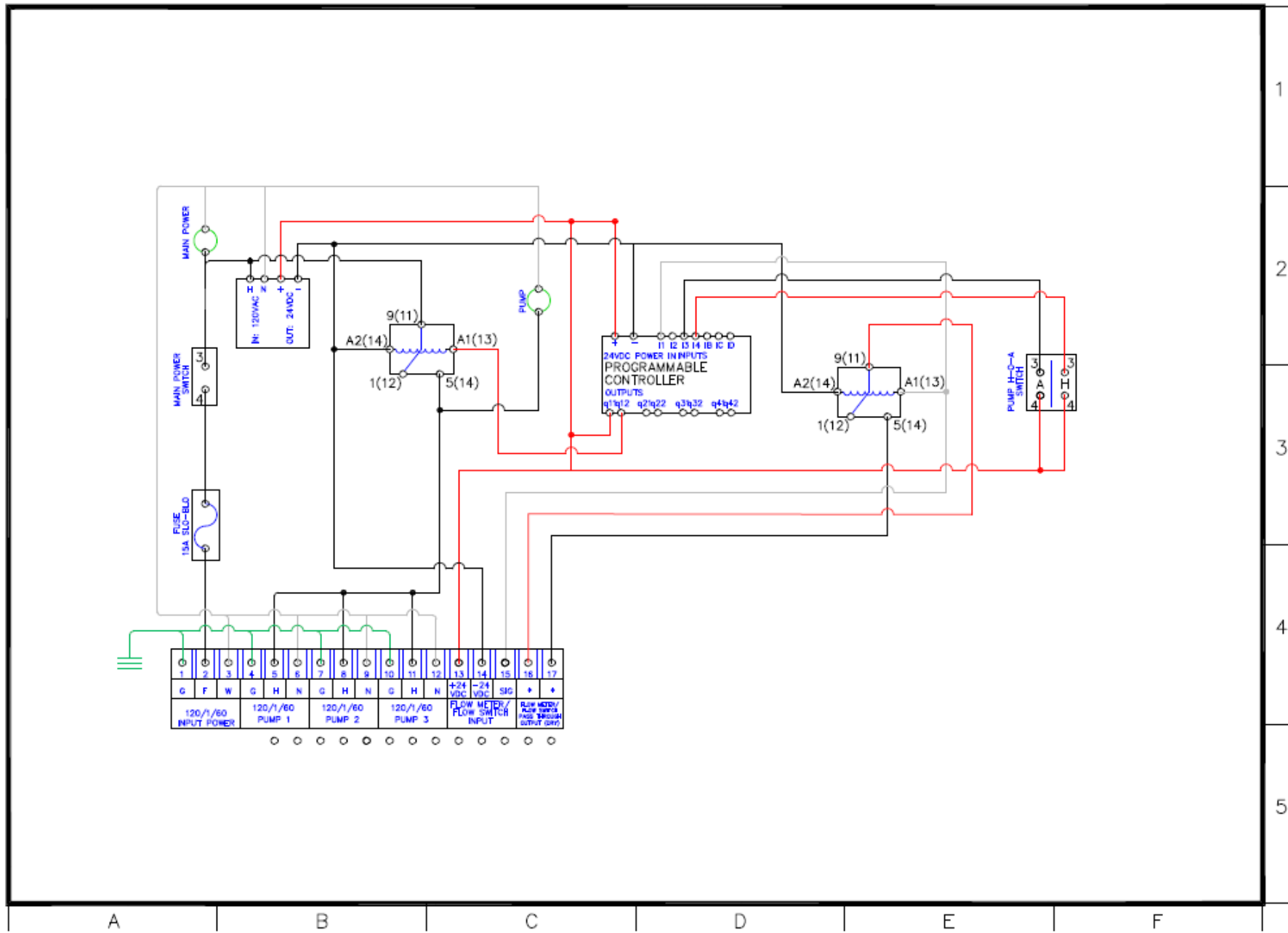
(A) OPERATING LENGTH

2.25"









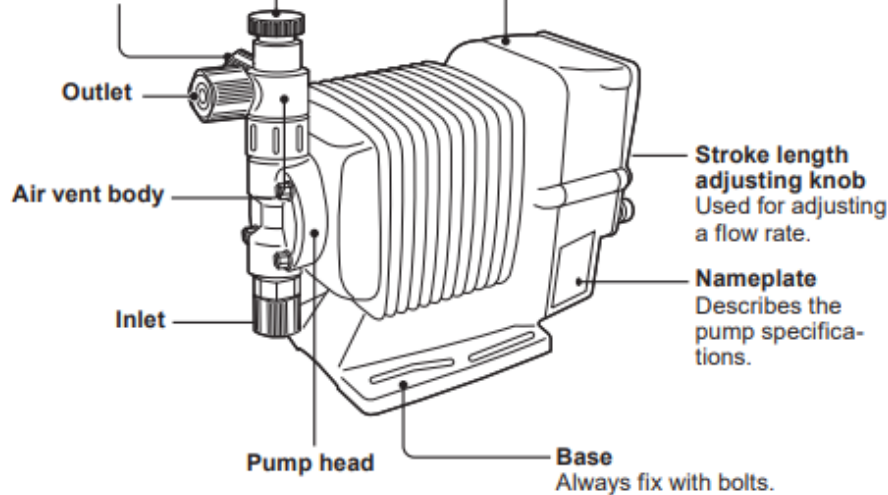
Walchem IWAKI EWN Series Pump - (360spm) (1.3 gph)

Adjusting screw

Used for opening the air vent port.

Air vent port

Always connect a tube. Be sure to return the tube end to a supply tank or a container. The air vent port can rotate 90 degrees.



Control unit

Used for the start/stop of the pump and stroke rate adjustment/programming.

Stroke length adjusting knob
Used for adjusting a flow rate.

Nameplate
Describes the pump specifications.

Base
Always fix with bolts.

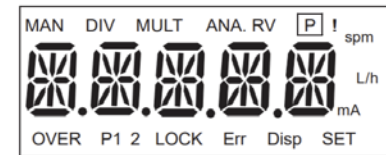
Display

An operational status, a selected mode and a programmed value are shown here.

START/STOP key
Used for starting/stopping the pump operation.

EXT key
Used for entering the EXT mode.

UP key
Used for increasing numeric values or selecting a programming mode.



DOWN key
Used for decreasing numeric values or selecting a programming mode.

LED
Lights as the pump is turned on and blinks at each shot.

DISP key
Used for checking flow information or changing units.

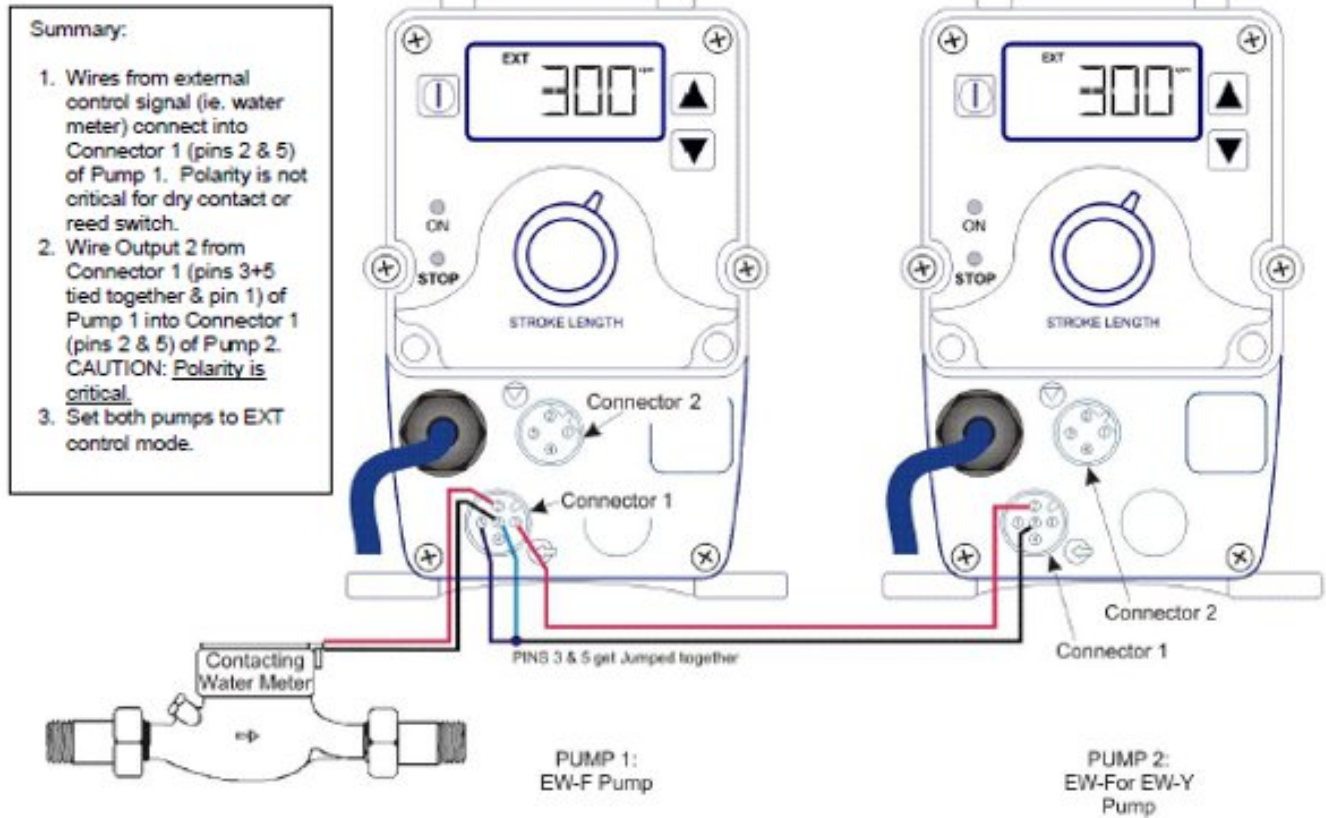
Users Manual: https://www.dropbox.com/s/ce8eythksc6y1rh/EWN-R%20Users%20Manual%20US_T690-5.pdf?dl=0

E90495 - CONNECTOR ASSEMBLY, 5-PIN, EW(N)/IX OUTPUTS
Walchem Metering Pump

Only used where there are flow meters. Not used where there are flow switches (on/off)



Pump Wire Connection is Series



ADDITIONAL NOTES:

In both examples, the first pump can also be run in MAN mode instead of an external control signal. An EW-F 2nd pump will be a straight forward 1:1 follower, or an EW-Y 2nd pump can be programmed to run faster or slower than the first by multiplying or dividing the signals.

REFERENCE:

- Connector 1: P/N E90495 (Digital and Analog Input + Outputs for EW-F)
- Connector 2: P/N E90494 (Stop and Pre-Stop Inputs)
- Connector 3: P/N E90496 (PosiFlow Input)
- Connector 4: P/N E90497 (Outputs on EW-Y)

Flow Switch Wire Connections

Wiring and Installation:

Before powering the flow controller, connect the flow meter or switch as directed below. All wiring and connections shall complete to local codes. The controller has two (2) liquid tight cord grips for the flow meter input and pulse passthrough. If a cord grip is not used, a suitable plug needs to be used to prevent the ingress of water.

The maximum input frequency for the unit is 300 Hz.

For a three (3) wire Flow Meter:

- Connect the V+ wire to Terminal #13
- Connect the V-, or ground wire to Terminal #14
- Connect the Signal, or Pulse Output, wire to Terminal #15

Note: The control panel provides 24VDC to power the flow meter

For a two (2) wire Flow Meter or Flow Switch:

- Connect the V+ wire to Terminal #13
- Connect the Signal, or Pulse Output, wire to Terminal #15

Note: The control panel provides 24VDC to power the flow meter or flow switch.

For passing the Flow Meter or Flow Switch signal to a PLC or SCADA system:

- Connect the V+ wire from the PLC or SCADA to Terminal #16
- Connect Terminal #17 to the appropriate digital input of the PLC or SCADA.

Note: This is a dry contact with a maximum rating of 3 amps at 24VDC.

Operation:

Once all wiring connections have been made inside the controller and the unit's power cord plugged into a 120VAC source, plug the power cord of the metering pump(s) into the supplied receptacles. Next turn the Main Power switch to the ON position.

To test the pumps, or manually operate them, turn the Pump switch to the Hand "H" position. Operating the controller in Hand mode should only be done to test the pumps.

When the Pump switch is in the Auto "A" position, the pumps will only turn on when flow is detected.





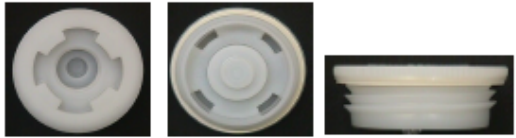
Pricing:

Flow Switch Controller \$2,988.30 ea.
Walchem Pump with Quill and Connector \$1,594.69 ea.
Plus, Tax & Delivery

Approval Operations:
Approval Engineering:
Approval Customer Service:

MAUSER CORP. RANCHO CUCAMONGA
PRODUCT DEFINITION SHEET

Page: 1 of 2 Rev. 01
Effective Date: 11/25/08
Print Date: 6/14/2011

PDS/Drum Part #: 055CN00UL1		Change Controlled Process Stamp:	
Picture(s) of Drum 	Specific Manufacturing Line:		
	Raw Materials		
	Resin L99 HMWPE Resin	Color# (wt%) A91 (1.0%)	
	Specific Resin(s)	Color Description Natural	
	Embossments		
	Regulatory 1.  1H1/Y1.9/100/** USA/M-4602 2.2mm 2.  1H1/Y1.4/100/** USA/M-4602 WITH VENTED CLOSURE ** Last two digits of current year	Custom	
	Specific Comments 1. Requires gallon markers.		
Bung Opening 1 = NPS  L16-WL : 2" NPT Plug & EPDM Gasket	Capseal 1	Weepholes Required? YES	
Bung Opening 2 = Buttress  L10-WL : 2" Buttress Plug & EPDM Gasket	Capseal 2	Bag Part #: Label Part # (Placement): Stencil # (Placement): Pallet Part #: Pallet Arrangement: 9+9	

Packaging - Specification

container for transport

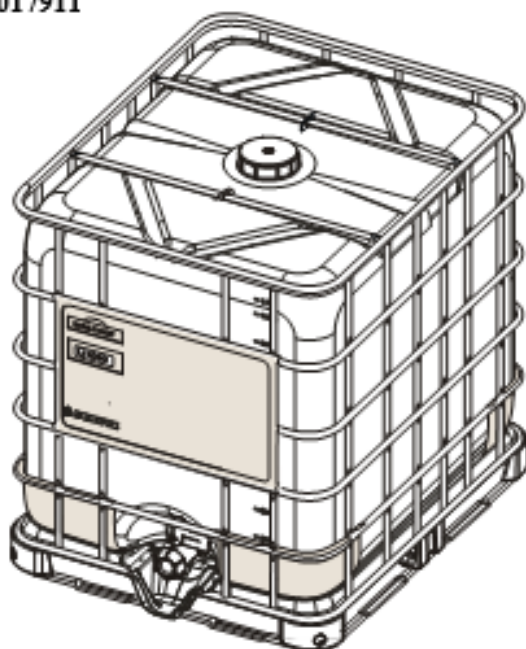
SCHÜTZ

MX 330 UN / Std / 6" red TP, 2" solid buttress plug
Integrated butterfly valve, 2" male camlock (1pc), steel frame pallet
1 plate, ticket

SCHÜTZ
200 Aspen Hill Road
North Branch, NJ 08876

Date: July 28, 2010
Page 1 of 2

Material number: MX 4017911



Technical data:

Rated volume:	330	gal
Overflow volume:	334	gal
Length:	48	in
Width:	40	in
Height with pallet:	53	in
Filling opening:	6	in
Discharge opening:	2	in
Fork opening - height	2.5	in
Label plate:	4	piece
Corner Protector:	NA	
Weight: approx	143	lbs

Nominal Specifications

Chemical Use:

On Average, can vary significantly, 1-1.5 totes of Curative and 1-2 drums of BC per year, average 18-hole course.