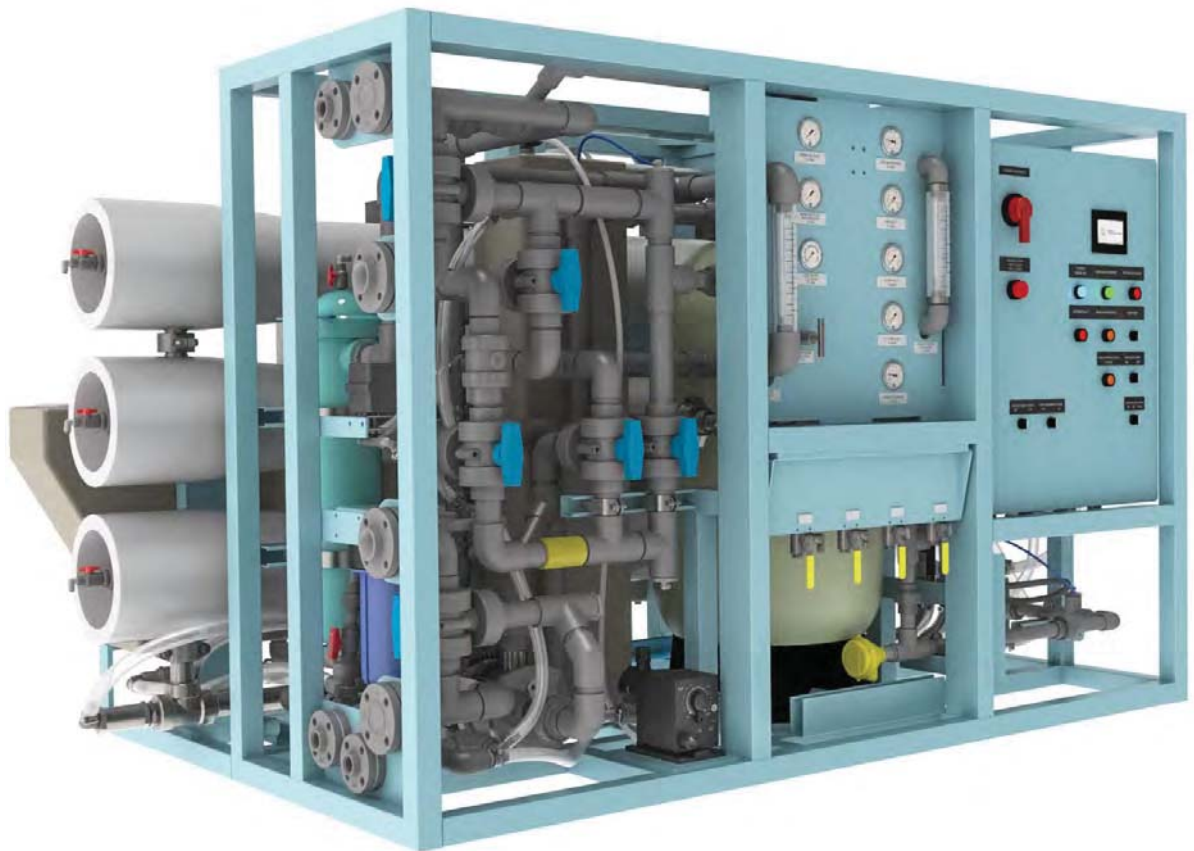


APPENDIX 'A'

AQUA-SEP Series 3

Revision D November 2014

DRAWINGS



Compass
water solutions

1 2 3 4 5 6 7 8

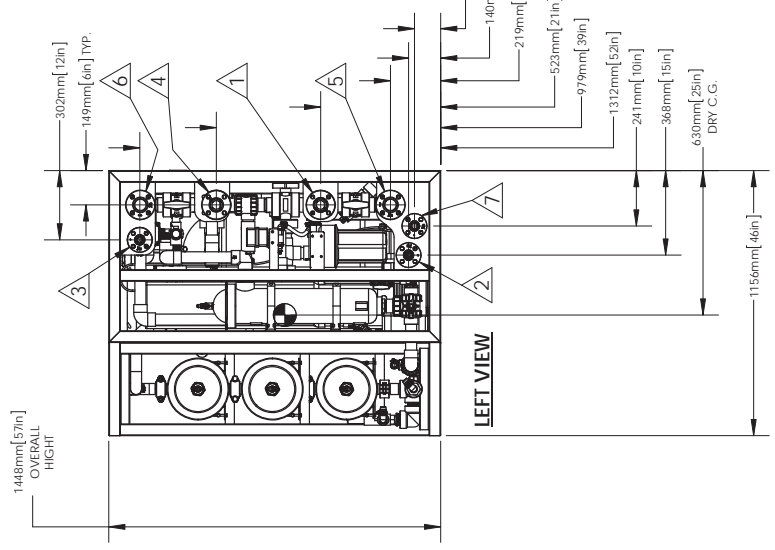
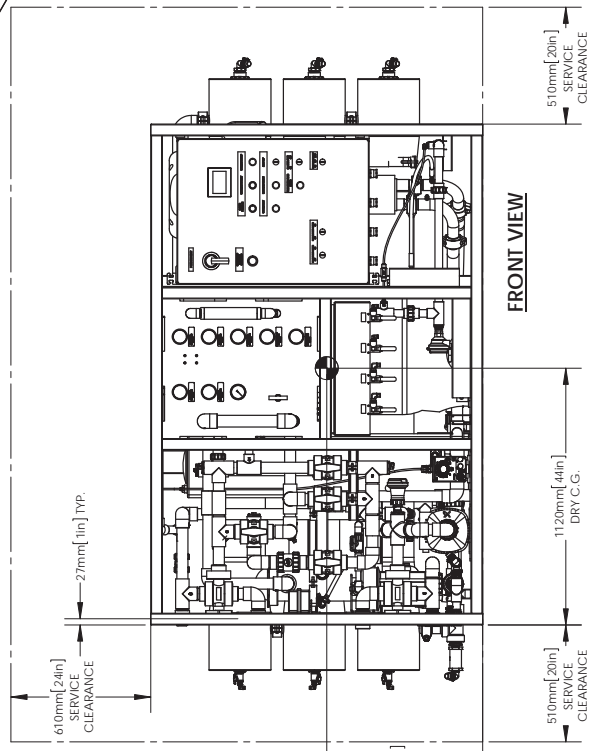
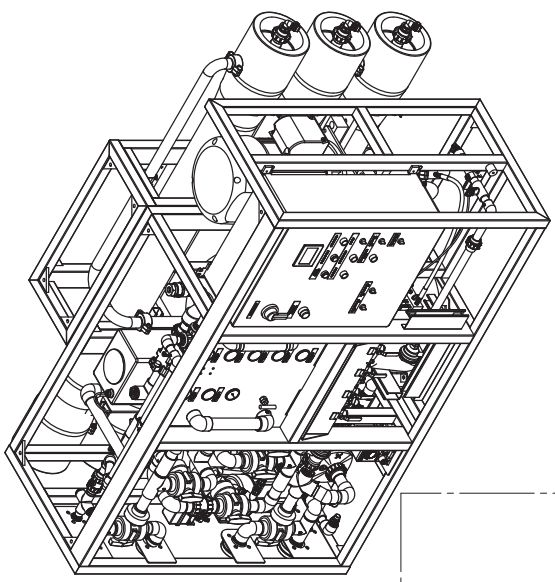
NOTES

- FOR PLAN VIEW, FOOTPRINT, DIMENSIONS AND WEIGHTS SEE SHEET 2
- SERVICE CLEARANCE FOR THE REMOVAL OF THE MEMBRANE ELEMENTS CAN BE FROM THE LEFT OR THE RIGHT SIDE OF THE AQUA-SEP UNIT.

TEMPERATURE	
RANGE	4 °C - 35 °C (39 °F - 95 °F)
DESIGN	25 °C (77 °F)

PRESSURES	
DESIGN: 36,000 TDS @ 25 °C	
OPERATING	51.7 BAR (751 PSI)
MAXIMUM	68.9 BAR (1,000 PSI)

INTERFACE	90m ³ /day		100m ³ /day	
	l/hr	gpm	l/hr	gpm
SEA WATER IN	8,176	36	8,176	36
BRINE WATER DISCHARGE	4,429	19.5	4,020	17.7
PRODUCT WATER OUT	3,748	16.5	4,156	18.3



NUMBER	DESCRIPTION	INTERFACE CONNECTIONS (P.V.C. 150# ANSI FLAT FACED FLANGES)	
		METRIC SIZE	IMPERIAL SIZE
1	SEA WATER INLET	40 MM	1.50"
2	FRESH WATER INLET	25 MM	1"
3	PRODUCT WATER OUTLET	25 MM	1"
4	BRINE WATER DISCHARGE	40 MM	1.50"
5	MEMBRANE CHEMICAL CLEANING INLET (BLIND FLANGE INSTALLED FOR CIP OPTION)	40 MM	1.50"
6	MEMBRANE CHEMICAL CLEANING OUTLET (BLIND FLANGE INSTALLED FOR CIP OPTION)	40 MM	1.50"
7	GRAVITY DRAIN	25 MM	1"

A	REVISED DESCRIPTIONS	2015.03.25	E.L.
LTR	DESCRIPTION	DATE	BY
	REVISIONS		



DRAWING DESCRIPTION

GENERAL ARRANGEMENT SEA WATER DESALINATOR AQUA-SEP, SERIES III 60Hz, 90-100m³/day (ALL OPTIONS, NO CIP)

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE TOLERANCES ARE:	DATE
MM ± 1.0	2014.07.17
INCHES ± 1/2	DATE

DO NOT SCALE DRAWING
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS NOT TO BE REPRODUCED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.

BOM / PART NO.	DRAWING NO.
(AS) 90-100m ³ /day	1000000

SCALE: 3:64 SIZE B SHEET 1 OF 2 REV A

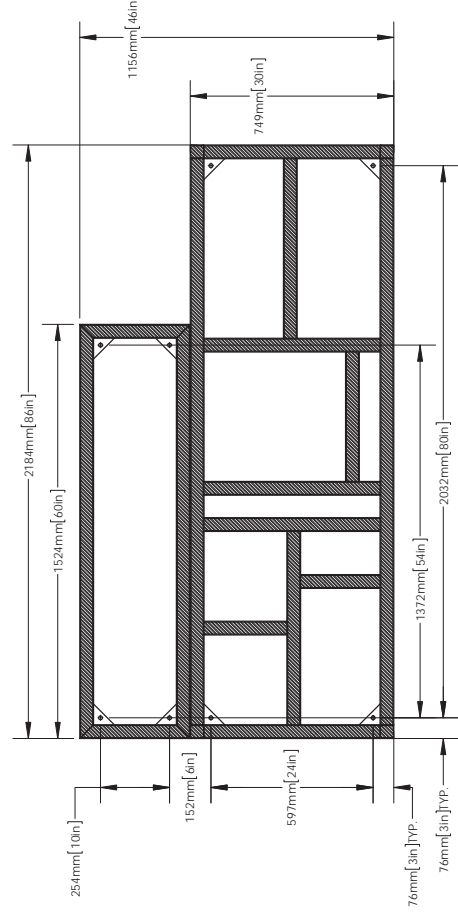
D C B A

1 2 3 4 5 6 7 8

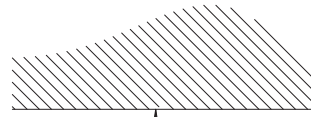
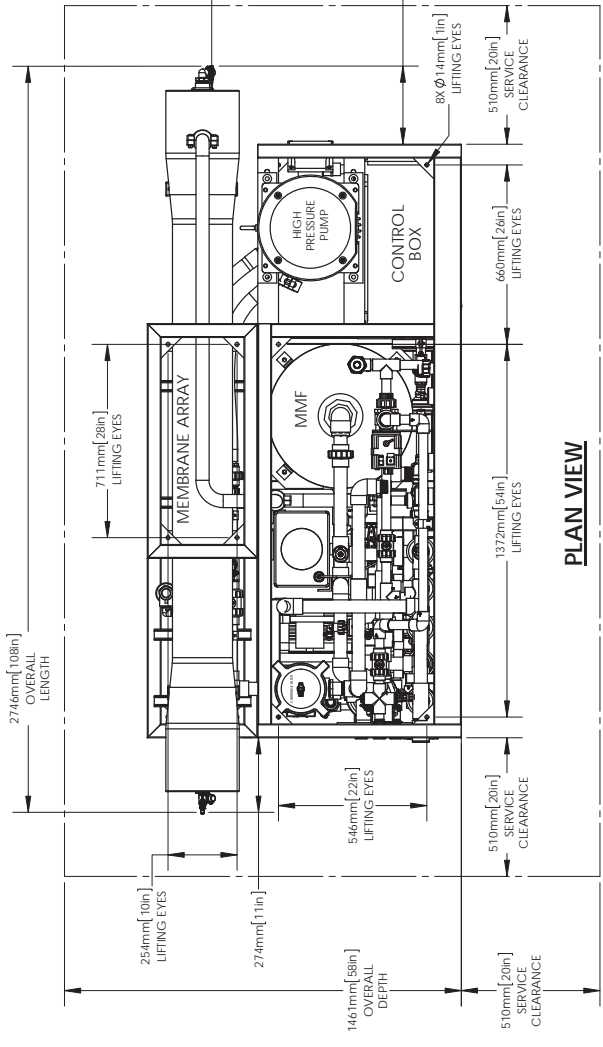
POWER REQUIREMENTS	
480VAC / 60Hz / 3PH (24.2 kW)	

APPROXIMATE OVERALL DIMENSIONS		
LENGTH	2730 MM	108"
WIDTH	1460 MM	58"
HEIGHT	1450 MM	57"

WEIGHTS (approx)	
DRY	1240kg (2,734 lbs.)
WET	1503kg (3,315 lbs.)



FOOTPRINT



A	REVISED DESCRIPTIONS	2015.03.26	E.L.
LTR	DESCRIPTION	DATE	BY

Compass
water solutions

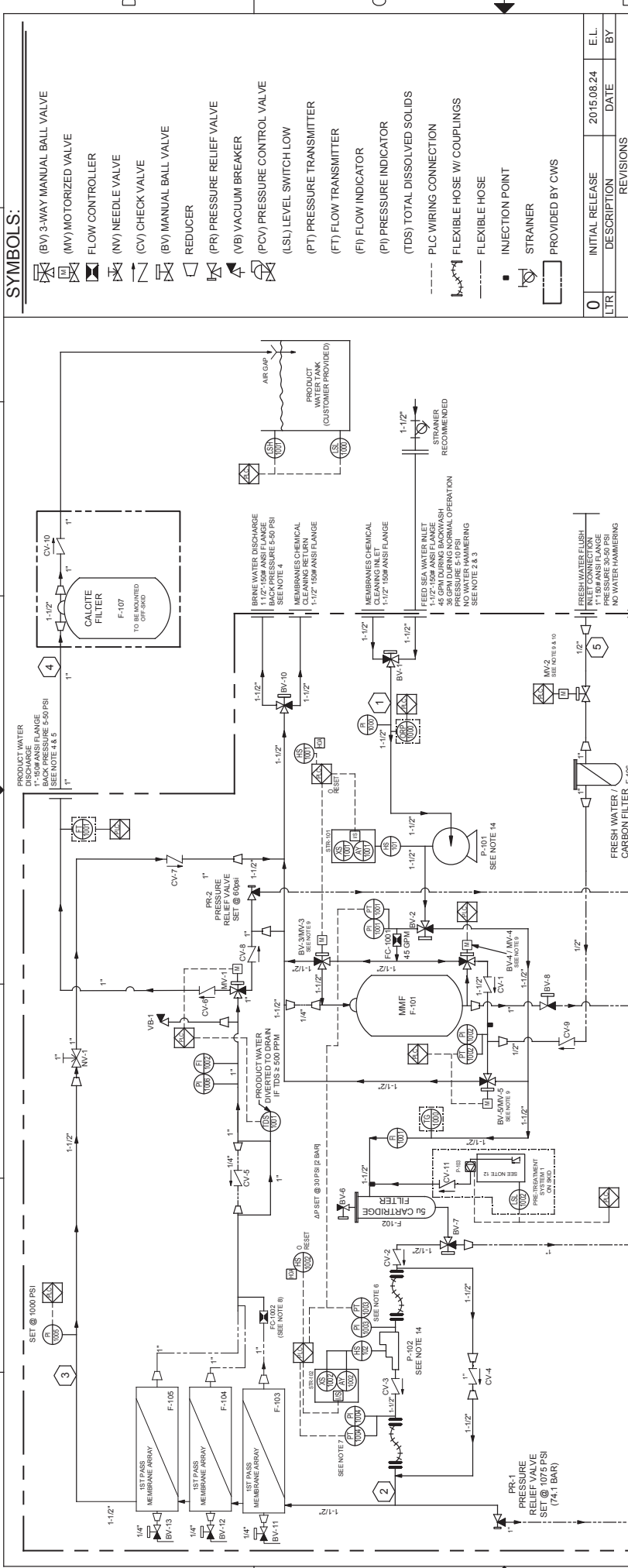
DRAWING DESCRIPTION
GENERAL ARRANGEMENT SEA WATER DESALINATOR AQUA-SEP, SERIES III 60Hz, 90-100m³/day (ALL OPTIONS, NO CIP)

UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:	DATE	8/26/2015
APPROVED BY:	DATE	
MM ± 1.0		
INCHES ± 1/2		
ANGLES ± 2°		

DO NOT SCALE DRAWING
 THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS NOT TO BE DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.

BOM / PART NO.	DRAWING NO.
(AS) 90-100m ³ /day	1000000

SCALE: 1:18 | SIZE B | SHEET 2 OF 2 | REV A



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LTR	DESCRIPTION	DATE	E.L.	BY
0	INITIAL RELEASE	2015.08.24		

REVISIONS

ASIII 100TPD P&ID
PIPING & INSTRUMENTATION DIAGRAM
SEA WATER DESALINATOR
AQUA-SEP SIII, AS3S100

DATE: 2015.03.30	DATE:
DRAWN BY: E. Lurd	APPROVED BY:
DO NOT SCALE DRAWING	
THIS DOCUMENT IS PRELIMINARY	
INFORMATION AND SHALL NOT BE USED	
OR DISCLOSED WITHOUT PRIOR WRITTEN	
AUTHORIZATION.	

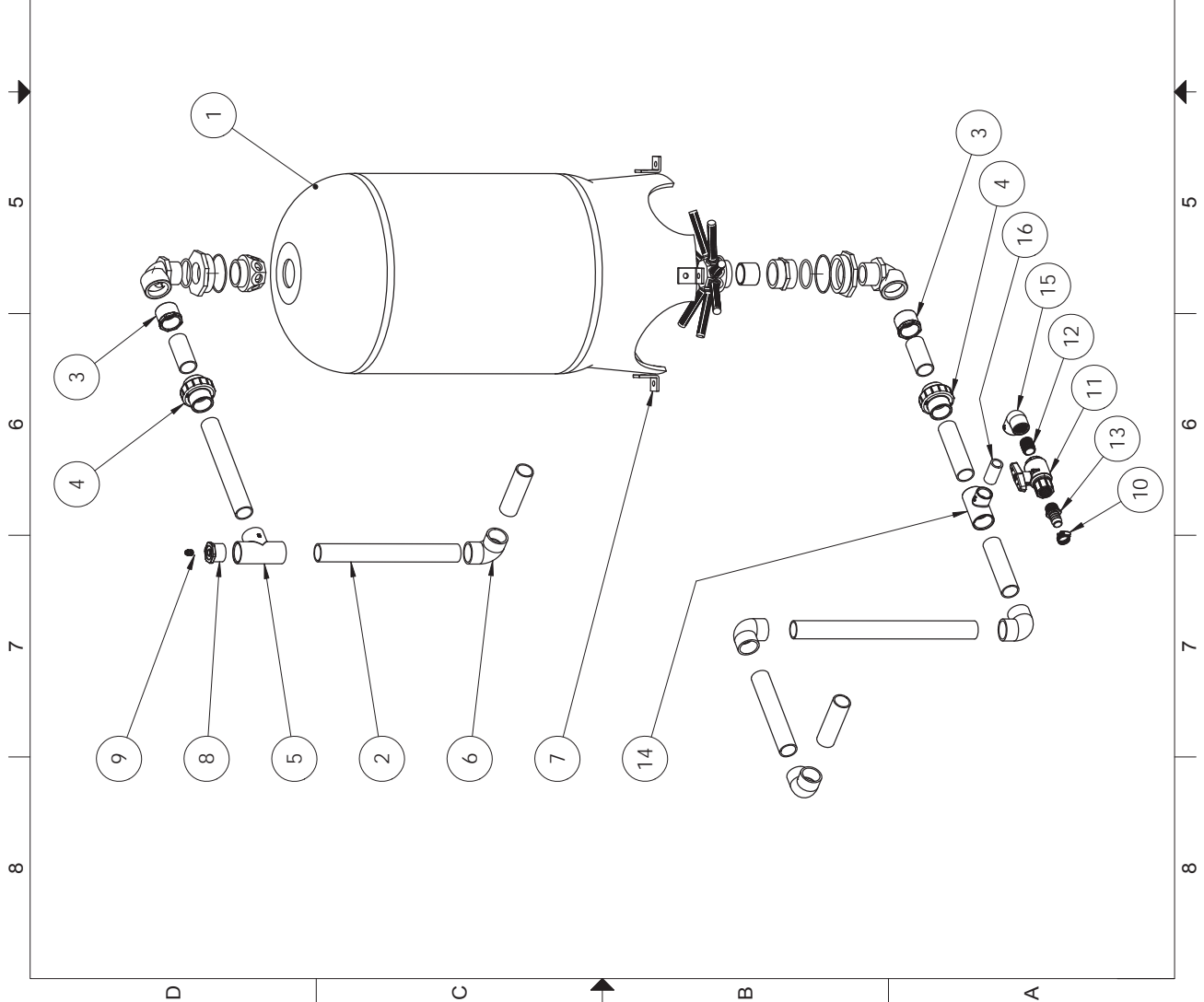
DRAWING NO.	J657-1000050
E.O.M. PART NO.	
SCALE: 1/1	SIZE B
SHEET 1	OF 1
REV 0	

GENERAL NOTES


1. ALL INTERCONNECTING PIPING, HOSES, TUBING AND WIRING IS TO BE CUSTOMER PROVIDED, INSTALLED AND SUPPORTED.
2. MATERIALS FOR FEED WATER PIPING TO BE PVC, FIBERGLASS, 316 STAINLESS STEEL, INTERNAL EPOXY-LINED CARBON STEEL, OR ANY APPROVED NON-FERROUS PIPING SYSTEM.
3. A CUSTOMER PROVIDED STRAINER 210 MICRON (70 MESH) MAXIMUM IS RECOMMENDED TO REMOVE LARGE DEBRIS THAT MAY DAMAGE OR RESTRICT THE FEED PUMP & FILTERS.
4. IF REJECT OR PRODUCT WATER DRAINS DOWN A VENT OR VACUUM BREAKER HIGHER THAN THE UNIT MUST BE INSTALLED BY CUSTOMER TO PREVENT SYPHON DRAINING OF SYSTEM WHEN TURNED OFF.
5. BACK PRESSURE IS NOT ALLOWED WHEN SYSTEM IS NOT RUNNING, OR CUSTOMER MUST INSTALL CHECK VALVE
6. SYSTEM SHUTDOWN IF 30 > PTT1003 > 85 PSI.
7. SYSTEM SHUTDOWN IF PTT1004 > 1025 PSI.
8. PERMEATE LINE FLOW CONTROLLER IS INSTALLED ON MODELS 80, 90, AND 100 TPD AS NEEDED.
9. BV IS STANDARD MV IS OPTIONAL. ~~BV IS ALWAYS REQUIRED FOR CIP.~~
10. ~~USE SUB-ASSEMBLY AS9FA600 WHEN CONFIGURED WITH CIP BV-16 GAN~~
~~BE REPLACED WITH MV-2 FOR AUTO-FW-OPTION.~~
11. PI IS STANDARD, PT 1001, 1002 and 1005 ARE OPTIONAL.
12. 18 U.S. GALLONS TANK PROVIDED FOR FIRST DOSING UNIT.
13. ~~TO BE INSTALLED FOR 2ND PASS OPTION.~~
14. P-102 BOOSTER PUMP
60HZ 50HZ
TYPE: CENTRIFUGAL CENTRIFUGAL
FLY: 84.5 PSI (6.5 BAR) 80 PSI (5.5 BAR)
TDR: 5.5 HP, 3PH 5 HP, 3PH

TEMP. 25°C	1	2	3	4	5	6
MEMBRANES	FEED SEA WATER INLET	MEMBRANES FEED	REJECT OUTLET	PRODUCT OUTLET	FLUSHING WATER	DRAIN
MP/HR	8.2	8.2	4	4.2	2.27	N/A
GPM	36	36	17.7	18.3	10	N/A
MIN. BAR / PSI	.3/5	3.4/500	3.0/440	ATM	3.4/3.5	ATM
MAX. BAR / PSI	.7/10	68/1000	68/985	3.4/50	ATM	ATM

ITEM NO.	PART NUMBER	Description	QTY.
1	ASMF30603	Media Filter Assembly, 21X36"	1
	TKKT5671	STRAINER, DIFFUSER TOP MTG THD	1
	TKKT7161	STRAINER HUB & LATERAL BIM MTG	1
	TKFG2136-1	MEDIA FILTER HOUSING, 21X36	1
	FSNS1440	FILTER SAND, NEXTSAND 14-40	3.8 CUFT
	FGVL0600	FILTER GRAVEL, 1/4" X 3/8"	1 CUTF
2	PPPX2400	Pipe, 1 1/2", PVC80	10
3	PBSX3224	BUSHING, 2 x 1.50, SL, PVC SCH80	2
4	PUSX2400	UNION, SLIP, PVC SCH80, 1-1/2"	2
5	PTSX2400	TEE, 1.50 SL, PVC80	1
6	PESX2400	Elbow 90Deg, 1.50" SL, PVC80	4
7	UNSA1026	UNI-STRUT 90 ANGLE - CONNECTOR	4
8	PBRX2404	BUSHING 1.5" x .25" SLxTH	1
9	ITSM0400	INSTANT TUBE FITTING, .25in, MNTP	1
10	HCPS1224	Hose Clamp, .75in to 1.5in	1
11	VBLX1600	VALVE, 2-WAY, 1.00IN FNTP PVC80	1
12	PNTX1600	NIPPLE, 1.00 IN CLOSE, PVC80	1
13	PAHX1600	HOSE BARB, 1.00 MNPT	1
14	PTSX2416	TEE, SLIP FIT, 1.50 X 1.00, PVC80	1
15	PERX1600	ELBOW, 1.00 S X T, PVC80	1
16	PPPX1600	Pipe 1" x 2.5" Lg, PVC80	1



A	Added drain valve	2014.08.06	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



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water solutions

Assembly Drawing

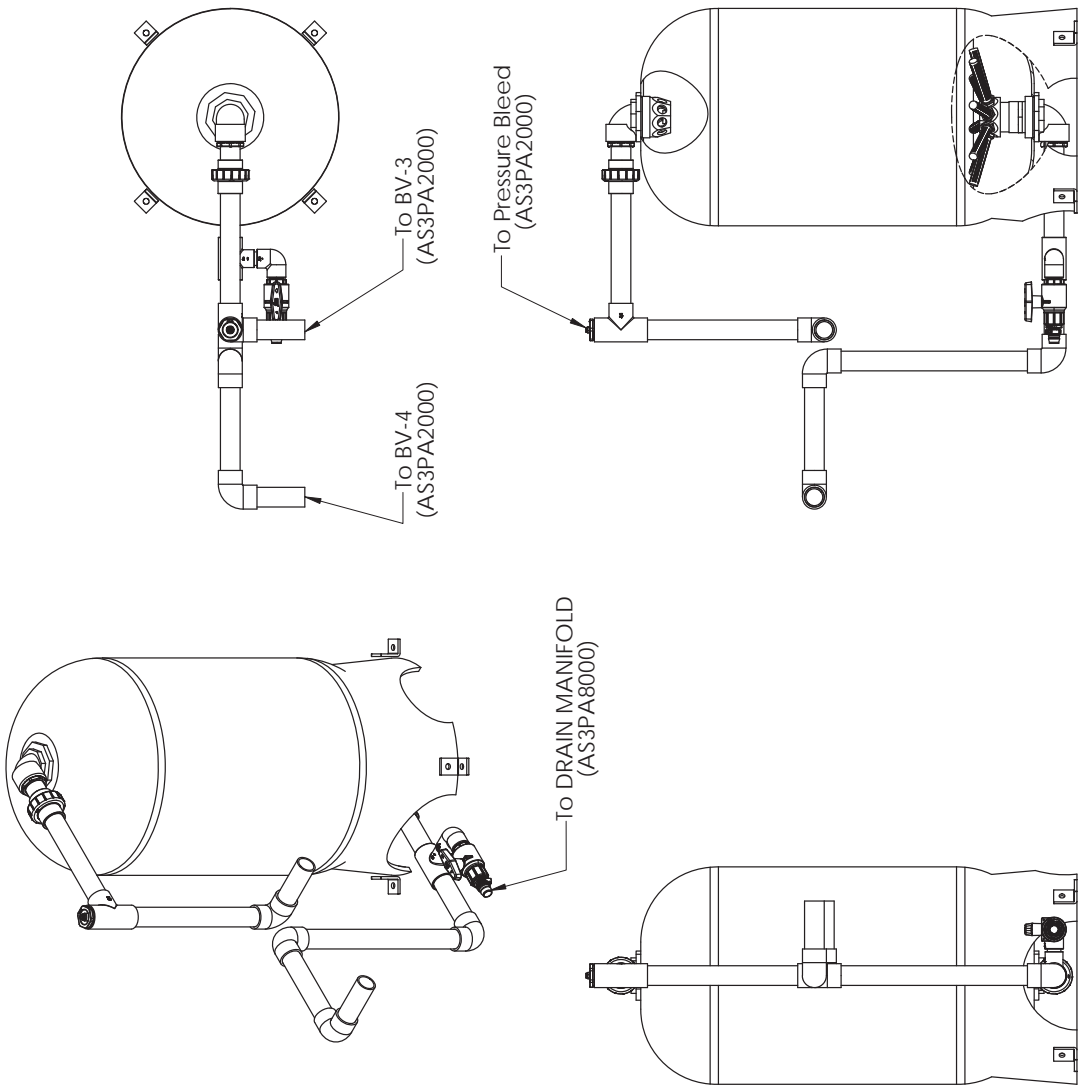
AS3s Media Filter Assembly

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DRAWN BY: E.Lud	DATE: 10/20/14
	APPROVED BY:	DATE:
DO NOT SCALE DRAWING		
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNCLASSIFIED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.		
INCHES ± .118		
ANGLES ± 2°		
DRAWING NO. AS3FA1000		

SCALE: 1:12 | SIZE B | SHEET 1 OF 2 | REV A

1 2 3 4 5 6 7 8

D C B A



A	Added Drain Valve	2014.08.06	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

AS3s Media Filter Assembly

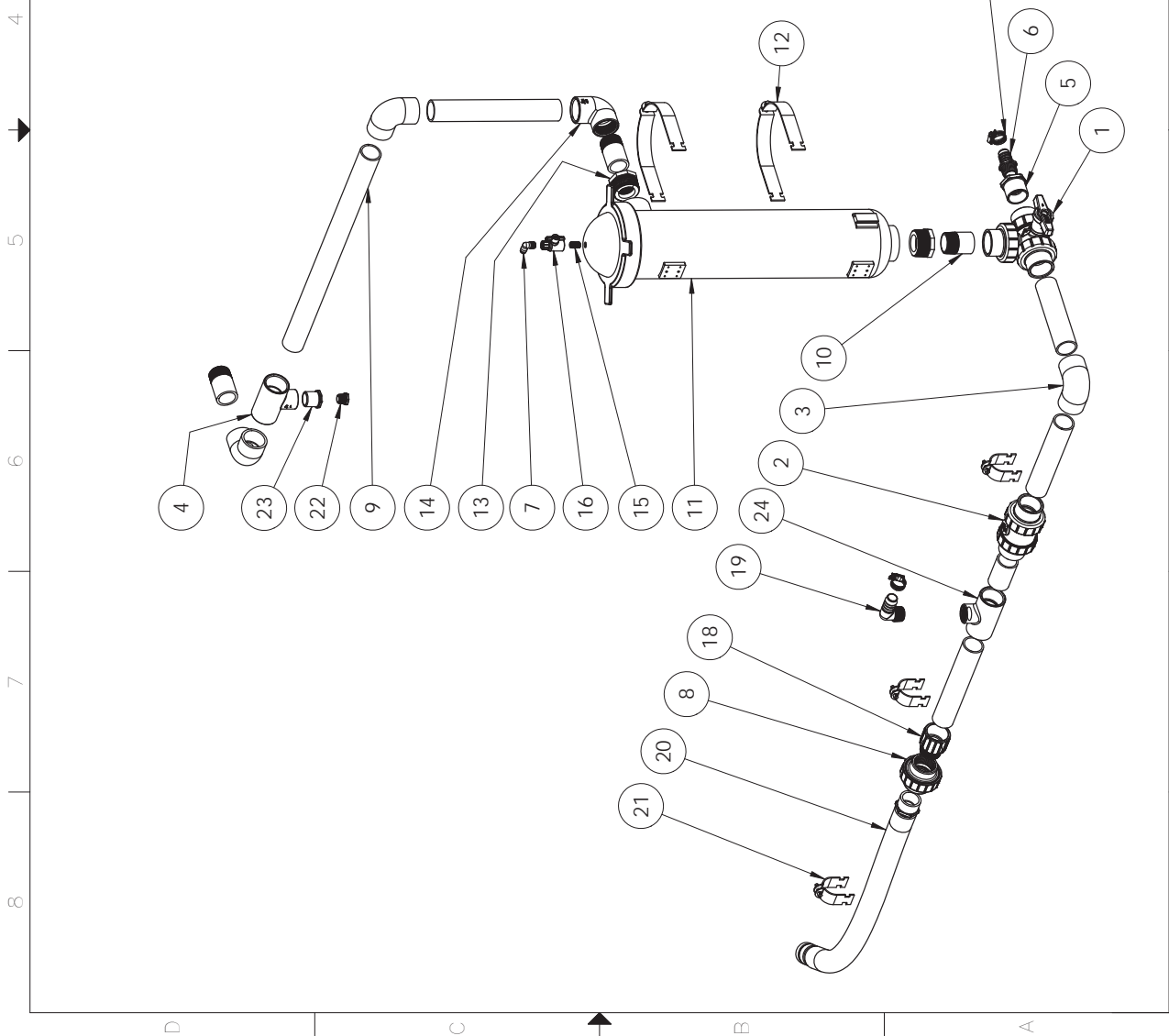
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INCHES ± 1/16	APPROVED BY:
ANGLES ± 2°	DATE:
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNLAWFULLY DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.	


DRAWING NO. AS3FA1000

SCALE: 1:12 SIZE B SHEET 2 OF 2 REV A

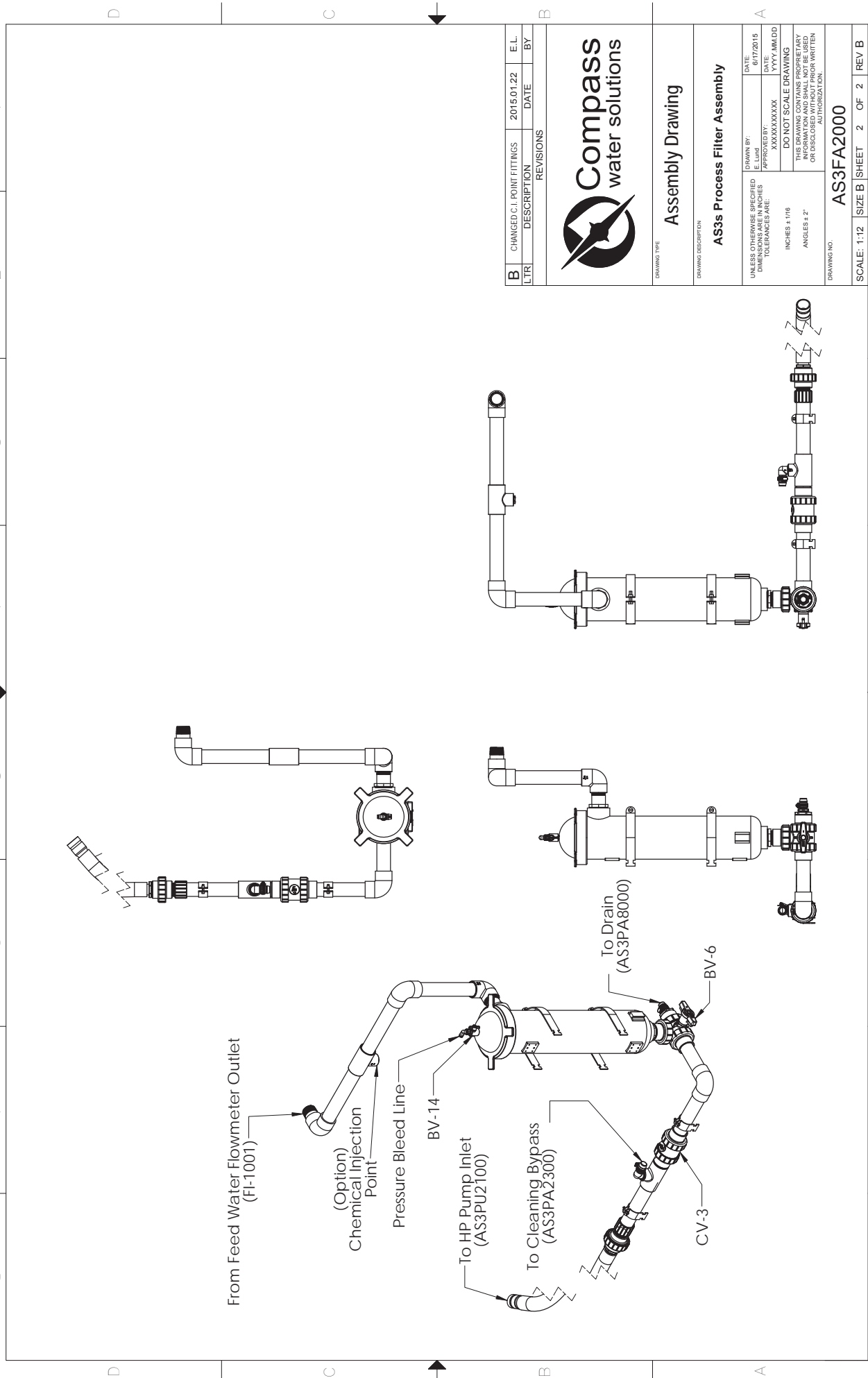
2 1 3 4 5 6 7 8

ITEM NO.	PART NUMBER	Description	QTY.
1	VBTX2403	BALL VALVE, HORZ, 3WAY 1.5" STU	1
2	VBCX2402	VALVE, BALL CHECK 1.5" STU, PVC80	1
3	PESX2400	Elbow 90Deg, 1.50" SL, PVC80	3
4	PTSX2416	TEE, SLIP FIT, 1.50 X 1.00, PVC80	1
5	PBRX2416	BUSHING 1.5" x 1" SxT	1
6	PAHX1600	HOSE BARB, 1.00 MNPT	1
7	ITEM0400	INSTANT TUBE FITTING, ELBOW, 1/4", MNIP	1
8	PUTX2400	PIPE UNION, 1.5in FNPT	1
9	PPPX2400	Pipe, 1 1/2", PVC80	6
10	PNTX2412	Threaded Nipple, 1.50in x 3, Sch80, CUT	3
11	FHXC0100	PRE FILTER CARTRIDGE HOUSING	1
12	UNIS9600	UNI-CLAMP, 6" PIPE SS	2
13	PBTX3224	BUSHING, 2in x 1.5in NPT, PVC80	2
14	PERX2400	1.5" ELBOW, 90DEG, PVC80	1
15	PNTX0400	NIPPLE, CLOSE, .25 NPT	1
16	VBLX0400	VALVE, BALL 1/4"NPT PVC80	1
17	HCPST224	Hose Clamp, .75in to 1.5in	2
18	PARX2400	Adapter, 1.5" SxT, PVC80	1
19	PEHX1600	HOSE BARB, ELBOW 1in, NPT, PVC80	1
20	AS3HF2000	Suction Hose, 30" x 1.50" NPT x Vic.	1
21	UNIS2400	Pipe Clamp, 1.50", 316L SS	3
22	PPTX0800	PIPE PLUG, 1/2" PVC, SCH 80, THRD	1
23	PBRX1608	PIPE BUSHING, 1"Sx1/2" PVC80	1
24	PTRX2416	REDUCING TEE, 1.5IN x 1IN, SLxTh	1



	
Assembly Drawing	
AS3s Process Filter Assembly	
DRAWING TYPE AS3s Process Filter Assembly	DRAWING DESCRIPTION AS3s Process Filter Assembly
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DRAWN BY: E.L.UD APPROVED BY: XXXXXXXXXXXX DATE: 6/17/2015 DATE: YYYY.MM.DD
INCHES ± .118 ANGLES ± 2°	DO NOT SCALE DRAWING THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNCLASSIFIED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.
DRAWING NO. AS3FA2000	SCALE: 1:10 SIZE B SHEET 1 OF 2 REV B

1 2 3 4 5 6 7 8



B	CHANGED	C.I.	POINT FITTINGS	2015.01.22	E.L.
LTR	DESCRIPTION	DATE	BY		



Assembly Drawing

AS3s Process Filter Assembly

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DATE: 6/17/2015
INCHES ± 1/16	DATE: XXXXXXXXXX
ANGLES ± 2°	DATE: YYYY.MM.DD
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS NOT TO BE DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.	

DRAWING NO. **AS3FA2000**

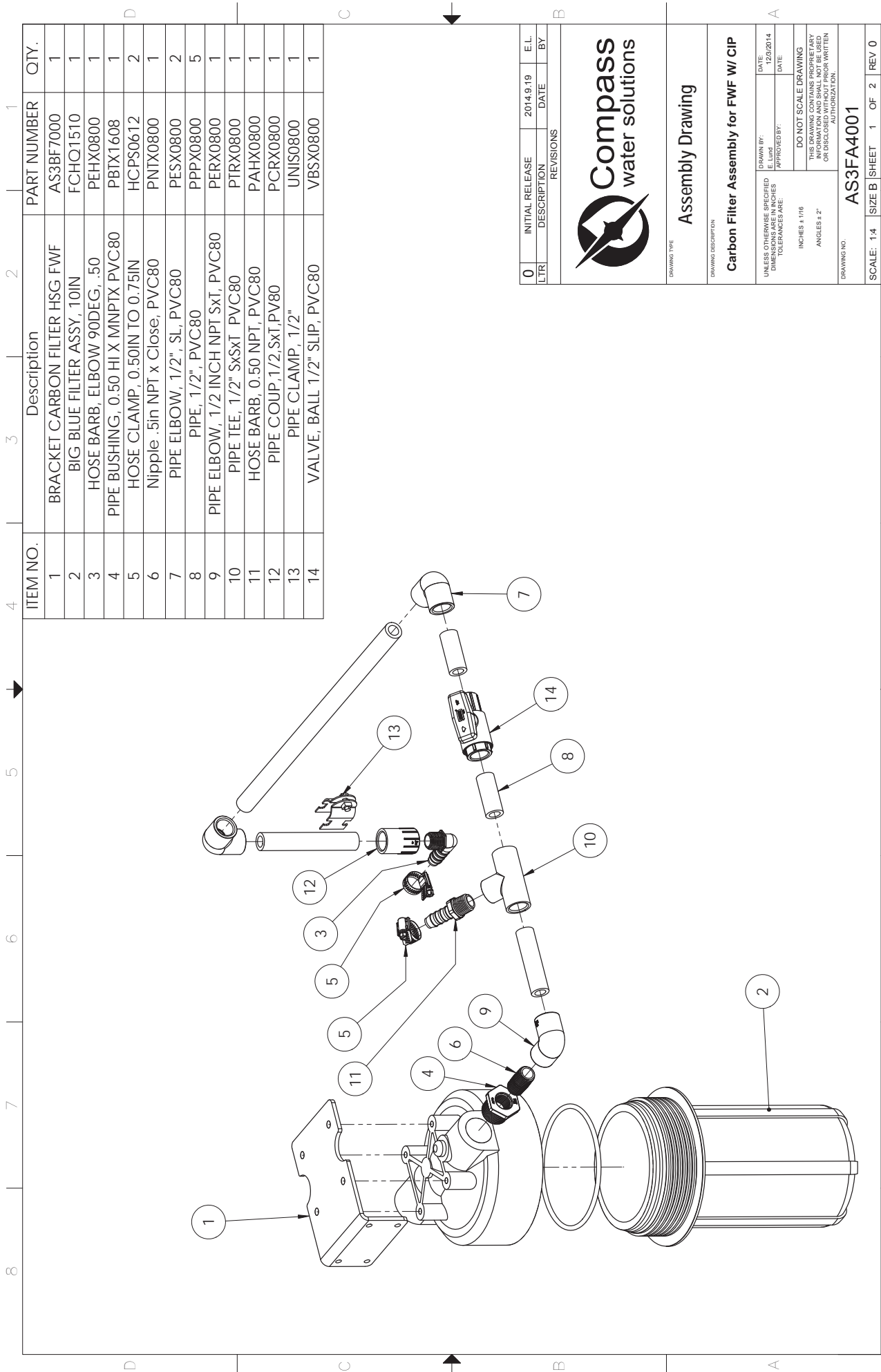
SCALE: 1:12 | SIZE B | SHEET 2 OF 2 | REV B

D D

C C

B B

A A



ITEM NO.	Description	PART NUMBER	QTY.
1	BRACKET CARBON FILTER HSG FWF	AS3BF7000	1
2	BIG BLUE FILTER ASSY, 10IN	FCHO1510	1
3	HOSE BARB, ELBOW 90DEG, .50	PEHX0800	1
4	PIPE BUSHING, 0.50 HI X MNPTX PVC80	PBTX1608	1
5	HOSE CLAMP, 0.50IN TO 0.75IN	HCPS0612	2
6	Nipple .5in NPT x Close, PVC80	PNIX0800	1
7	PIPE ELBOW, 1/2", SL, PVC80	PESX0800	2
8	PIPE, 1/2", PVC80	PPPX0800	5
9	PIPE ELBOW, 1/2 INCH NPT SxT, PVC80	PERX0800	1
10	PIPE TEE, 1/2" SxSxT PVC80	PTRX0800	1
11	HOSE BARB, 0.50 NPT, PVC80	PAHX0800	1
12	PIPE COUP, 1/2,SxT,PV80	PCRX0800	1
13	PIPE CLAMP, 1/2"	UNIS0800	1
14	VALVE, BALL 1/2" SLIP, PVC80	VBSX0800	1

0	INITIAL RELEASE	2014.9.19	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

Carbon Filter Assembly for FWF w/ CIP

DRAWING TYPE		DATE	
DRAWN BY:	E.Lud	12/2/2014	
APPROVED BY:		DATE	

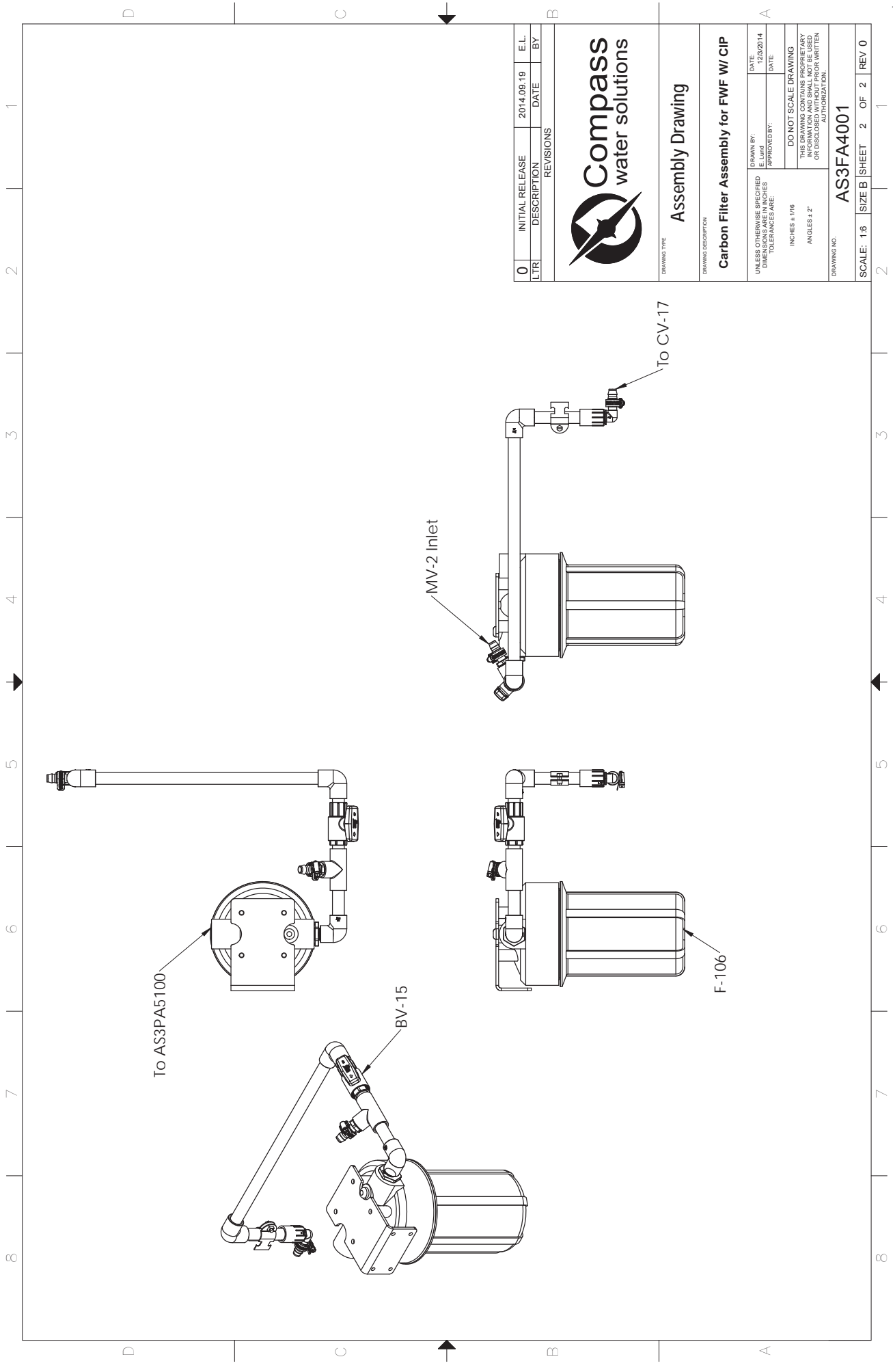
UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:

INCHES ± .118
ANGLES ± 2°

DO NOT SCALE DRAWING
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNLAWFULLY REPRODUCED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.

DRAWING NO.
AS3FA4001

SCALE:	1:4	SIZE B	SHEET	1	OF	2	REV	0
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0	INITIAL RELEASE	2014.09.19	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

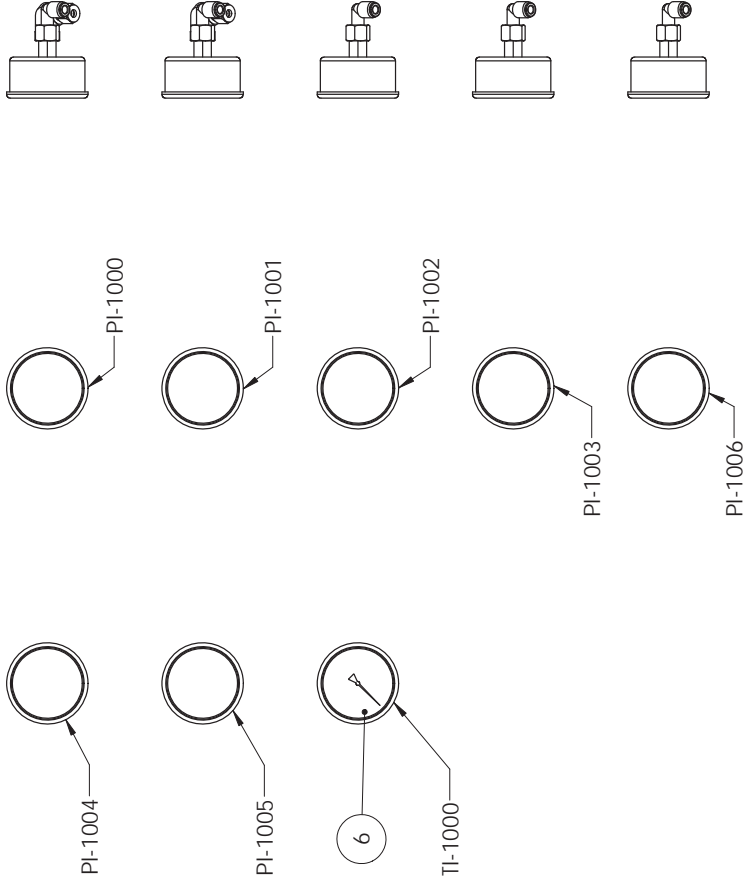
DRAWING TYPE		DATE	
DATE	12/2/2014	DATE	
DRAWN BY:	E. Luid	APPROVED BY:	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:			
INCHES ± 1/16			
ANGLES ± 2°			
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS NOT TO BE DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.			

DRAWING DESCRIPTION	
Carbon Filter Assembly for FWF W/ CIP	
DRAWING NO.	AS3FA4001

SCALE:	1:6	SIZE B	SHEET	2	OF	2	REV	0
--------	-----	--------	-------	---	----	---	-----	---

1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	QTY.
1	LOW PRESSURE GAUGE -30 to 100psi	GALK0416	2
2	LOW PRESSURE 0-160PSI	GALK0417	3
3	HIGH PRESSURE 0-2000PSI	GALK0418	2
4	0.25" Compression x FNPT Elbow, 316ss	CEFS0400	2
5	INSTANT TUBE ELBOW 90, 1/4" OD TUBE X 1/4" FNPT	ITEF0400	5
6	TEMPERATURE GAUGE, 2.5" U-CLAMP, 0-150 F/C, CAPILLARY CONNECTION	GATK0820	1



NOTE: SEE AS31A1001 FOR GAUGES WITH CALIBRATION CERTIFICATES

INITIAL RELEASE	2015.08.25	C.L.
LTR	DESCRIPTION	DATE
REVISIONS		



Assembly Drawing

DRAWING TYPE	
AS31A1102	

DRAWING DESCRIPTION	
AS31A1102 ASSEMBLY, 2.5" GAUGES, W/ TEMPERATURE GAUGE	

DATE	DATE
2015.08.25	2015.08.25

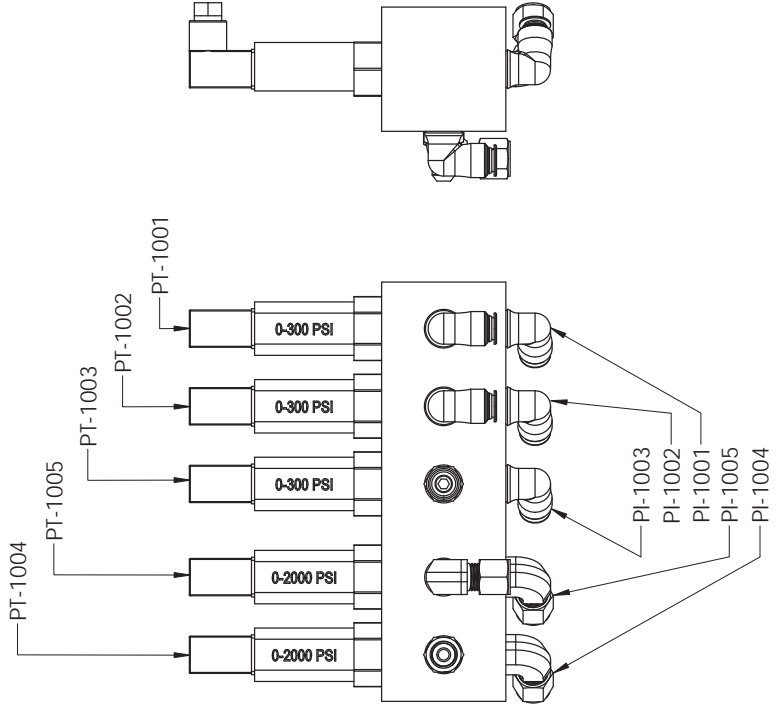
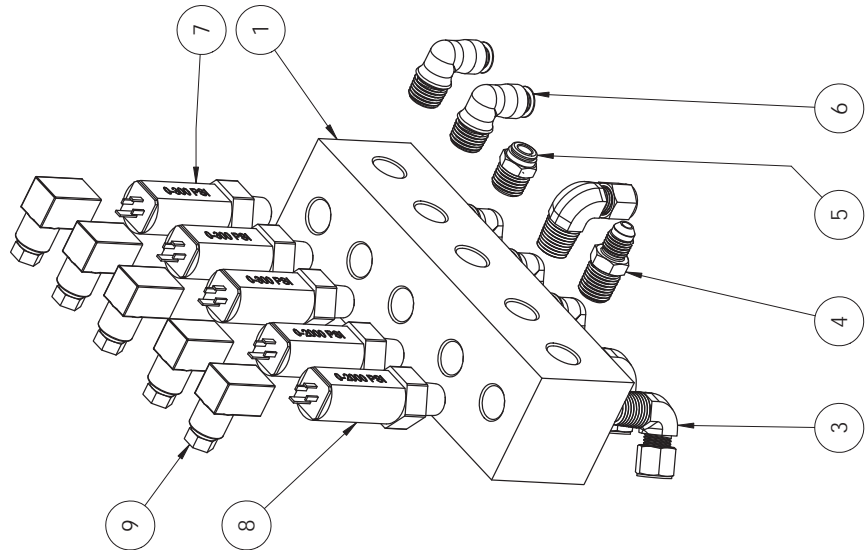
DATE	DATE
2015.08.25	2015.08.25

DATE	DATE
2015.08.25	2015.08.25

SCALE: 1:4	SIZE B	SHEET 1	OF 1	REV. 00
1:4	B	1	1	00

1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	QTY.
1	MANIFOLD BLOCK LOW/HIGH PRESS	ASMB306065	1
2	PIPE PLUG, .25in NPT	PPTX0400	3
3	COMPRESSION FITTING, 90DEG ELBOW, 1/4" MNPT, 316L SS	CEMS0400	3
4	FLARE CONN, 1/4" T37xMNPT SS	FCMS0437	1
5	INSTANT TUBE FITTING, .25in, MNTP	ITSM0400	1
6	INSTANT TUBE FITTING, ELBOW, 1/4", MNTP	ITEM0400	5
7	TRANSDUCER 0-300 PSI 1/4NPT 4-20mA	IPTD0400	1
8	TRANSDUCER 0-1000 PSI 1/4NPT 4-20mA	IPTD0401	1
9	1/4 DIN Plug Connector	ECHY5195	2



INITIAL RELEASE	2014.12.29	E.L.
DESCRIPTION	DATE	BY
REVISIONS		
0		



Assembly Drawing

AS3 - Pressure Indicator Manifold Block Assembly

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DATE: 3/27/2015
INCHES ± .118	APPROVED BY:
ANGLES ± 2°	DATE:
DO NOT SCALE DRAWING	
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNAUTHORIZED FOR DISCLOSURE WITHOUT PRIOR WRITTEN AUTHORIZATION.	

DRAWING NO. AS3IA2001

SCALE: 1:2 SIZE B SHEET 1 OF 1 REV 0

D

C

B

A

D

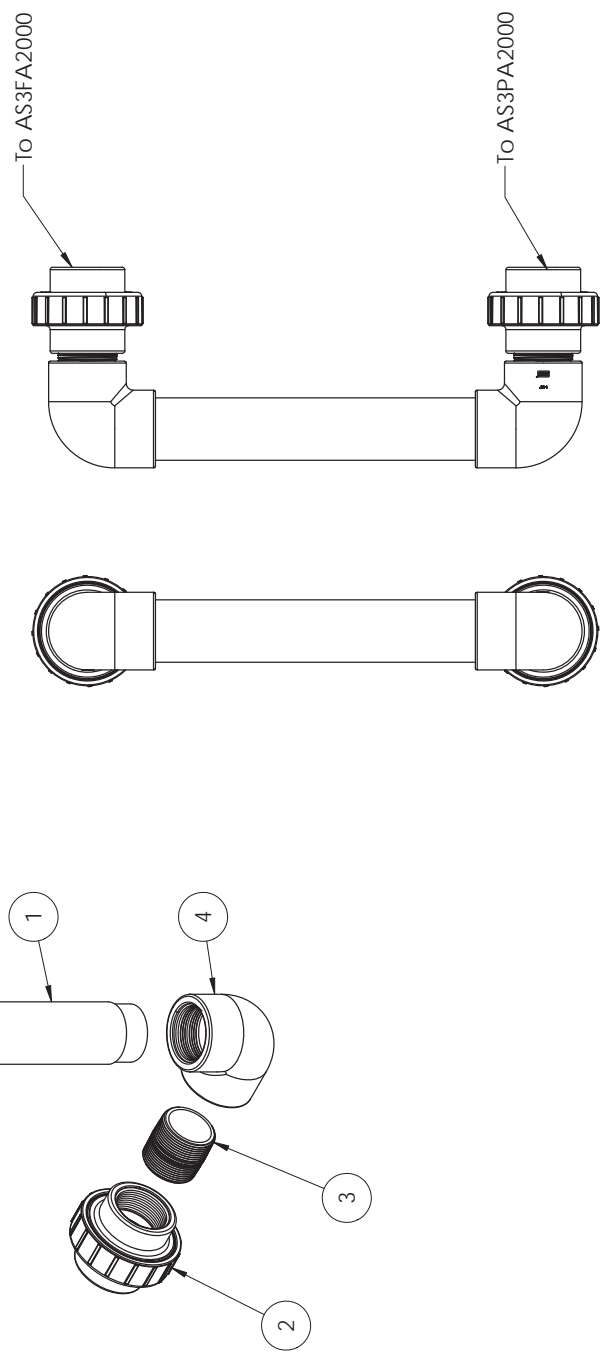
C

B

A

1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	QTY.
1	FEED WATER FLOWMETER 8-40GPM	FMTR42040LN	1
2	PIPE UNION, 1.5in FNPT	PUTX2400	2
3	NIPPLE, 1.5in x CLOSE	PNTX2400	2
4	ELBOW, 1.5IN NPT, SCH80	PETX2400	2



0	INITIAL RELEASE	2014.05.09	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

DRAWING TYPE		DATE	
DRAWING DESCRIPTION		10/02/2014	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DRAWN BY:	DATE:	DATE:
	E.LUD	XXXXXX	YYYY.MM.DD
	APPROVED BY:	XXXXXX	YYYY.MM.DD
DO NOT SCALE DRAWING			
INCHES ± 1/16			
ANGLES ± 2°			
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNLAWFULLY REPRODUCED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.			

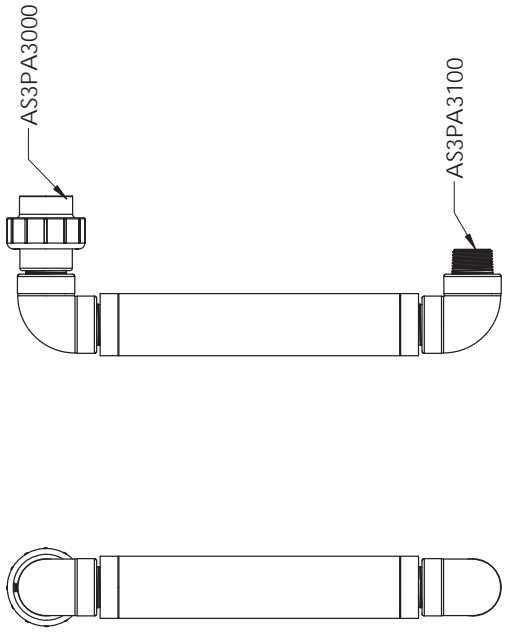
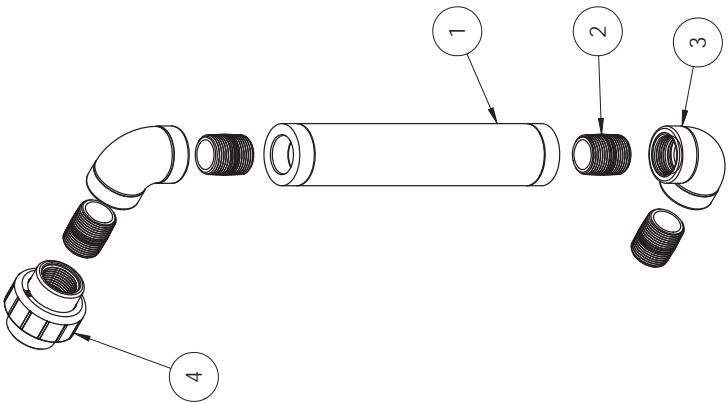
DRAWING NO.	AS31A4000
SCALE: 1:4	SIZE B
SHEET 1	OF 1
REV 0	

D C B A

D C B A

1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	QTY.
1	PRODUCT FLOWMETER 2-20 GPM	FMTR41000LN-16	1
2	NIPPLE, 1.00 IN CLOSE, PVC80	PNTX1600	4
3	1" PIPE ELBOW, 90deg, NPT PVC80	PETX1600-SR	2
4	PIPE UNION, 1in, SxT	PURX1600	1



B	SEE ECN-10032	2014.10.15	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

DRAWING TYPE		DRAWING DESCRIPTION	
AS3 Product Flowmeter 0-30 GPM			
DATE	1/16/2015	DRAWN BY:	E.Lud
APPROVED BY:	XXXXXXXXXX	DATE:	YYYY.MM.DD
TOLERANCES ARE:			
INCHES ± 1/16			
ANGLES ± 2°			

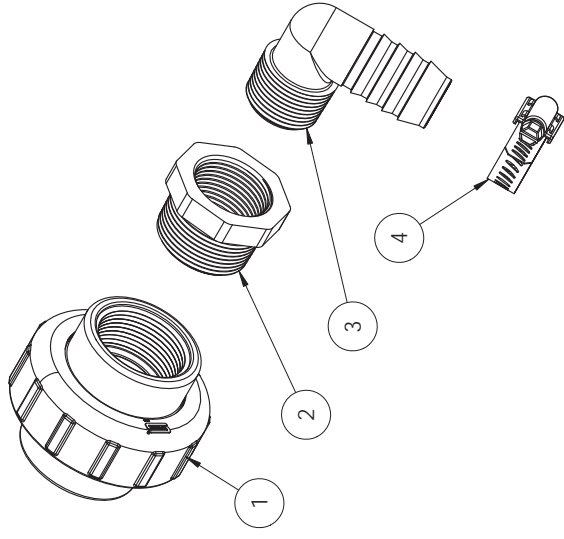
DRAWING NO. AS31A4001			
SCALE: 1:4	SIZE B	SHEET 1	OF 1
REV B			

D C B A

D C B A

1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	QTY.
1	Union, 1.25in TH, PVC80	PUTX2000	1
2	Pipe Bushing, 1.25" x 1" NPT	PBTX2016	1
3	HOSE BARB, ELBOW 1in, NPT, PVC80	PEHX1600	1
4	Hose Clamp, .75in to 1.5in	HCPS1224	1



D

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B	SEE ECN-10036	2014.11.12	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

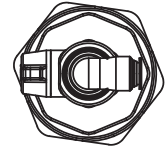
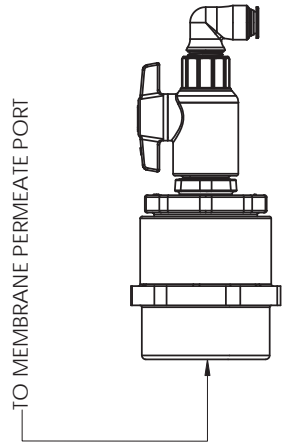
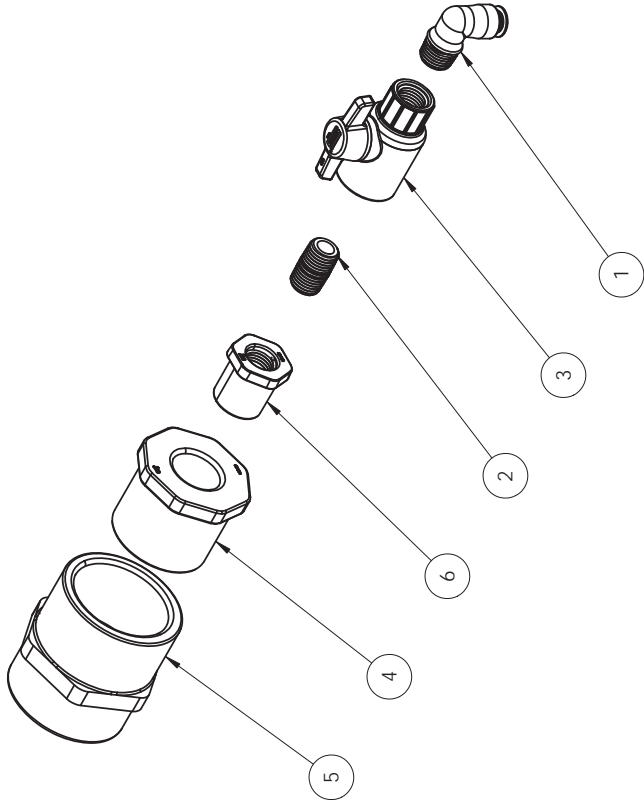
DRAWING TYPE		DATE	
DRAWING DESCRIPTION		12/2/2014	
Membrane Permeate Outlet, Pipe Assembly		DATE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:		DRAWN BY:	
INCHES ± 1/16		APPROVED BY:	
ANGLES ± 2°		DATE	
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNLAWFULLY DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.			
DRAWING NO.			

SCALE: 1:2	SIZE B	SHEET 1	OF 1	REV B
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2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	QTY.
1	INSTANT TUBE ELBOW 90deg, .25in, MINTP	ITEM0400	1
2	NIPPLE, CLOSE, .25 NPT	PNTX0400	1
3	VALVE, BALL 1/4"NPT PVC80	VBLX0400	1
4	BUSHING, 1.25 NPT X .50 NPT	PBSX2008	1
5	PIPE COUP, 1 1/4,SXT,PVC80	PCRX2000	1
6	Bushing, .50in x .25in SxT	PBRX0804	1



B	SEE ECN-10036	2014.11.12	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

Membrane Test Port, Pipe Assembly

UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:	DRAWN BY: E.LUND	DATE: 1/16/2015
	APPROVED BY: XXXXXXXXXXXX	DATE: YYYY.MM.DD
INCHES ± 1/16		
ANGLES ± 2°		
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS NOT TO BE DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.		

DRAWING NO.	AS3MA5000
SCALE: 1:2	SIZE B SHEET 1 OF 1 REV B

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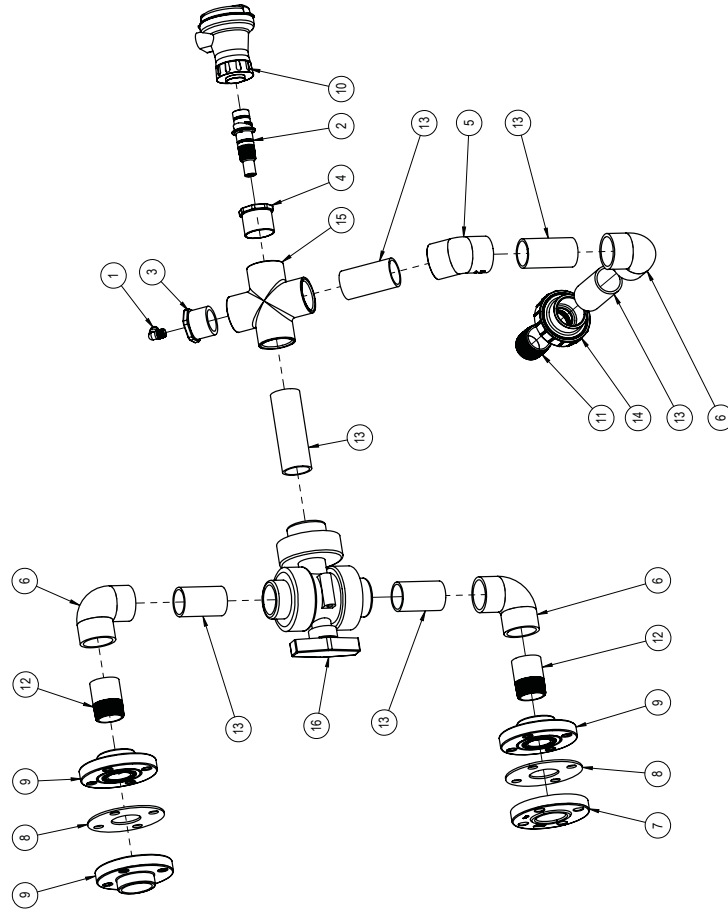
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GENERAL NOTES

- ASSEMBLE ON SERIES II FRAME PRIOR TO CUTTING PIPE.

COMPONENT DESCRIPTIONS & CONNECTIONS

- TO PI-1000
- ORP SENSOR
- TO BOOSTER PUMP
- SEA WATER INLET
- BLIND FLANGE



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ITEM0400	INSTANT TUBE FITTING, ELBOW, 1/4", MNTP	1
2	ORPE2725	ORP ELECTRODE, FLAT, SURFACE	1
3	PBRX2404	BUSHING, 1.5" x .25" SLxTH	1
4	PBRX2412	Bushing, 1.5in x .75in, SxT	1
5	PDSX2400	ELBOW, 45DEG., 1.50 SL, PVC80	1
6	PESX2400	Elbow 90Deg, 1.50" SL, PVC80	3
7	PFBX2400	PIPE FLANGE, 1 1/2"-15# BLIND PVC	1
8	PFKR2400	Flange Gasket, 1.50in, Buna-N	2
9	PFTX2400	PIPE FLANGE, 1.5"-15# THD PVC	3
10	PHPA2750	SIGNET, 2750 PRE AMP FOR PH/ORP	1
11	PNTX2400	NIPPLE, 1.5in x CLOSE	1
12	PNTX2410-C	Threaded Nipple, 1.50in x 2 1/2", Sch80	2
13	PPPX2400	PIPE, 1 1/2", SCH80, PVC 3FT.	3FT.
14	PURX2400	UNION, 1.5in, SxT	1
15	PXSX2400	PIPE CROSS, 1.5 SL, PVC80	1
16	VBRX2400	1.5", 3-Way Ball Valve (2 Hole) PVC80	1

LTR	DESCRIPTION	DATE	BY

REVISIONS



DRAWING TYPE

ASSEMBLY DRAWING

DRAWING DESCRIPTION
SEA WATER INLET WITH ORP

NEXT LEVEL ASST.

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 FINISHES TO BE GRACED
 C) USE CASTLE-NUT SIZE/LENGTH ON ALL THROUHOLES
 D) ALL PIPE THREAD CONNECTIONS ARE TO BE MADE TO ANOTHER ASST.
 E) CONNECTION POINT TO ANOTHER ASST.

THROUGH-HOLE FINISH
 DRAWN BY
 A. ESPINOZA
 CHECKED BY
 DATE: 8/24/15
 APPROVED BY
 DATE:

DO NOT SCALE DRAWING
 IN ORDER TO DETERMINE DIMENSIONS, REFER TO THE ORIGINAL DRAWING. DIMENSIONS SHALL BE TO CENTER UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS
 X .XX
 ±.10 ±.00 ±.1*

DRAWING NO.
AS3PA1002

SCALE: 1:8
 SHEET 1 OF 2
 REV -



AS3PA1002

SCALE: 1:6

SIZE: A

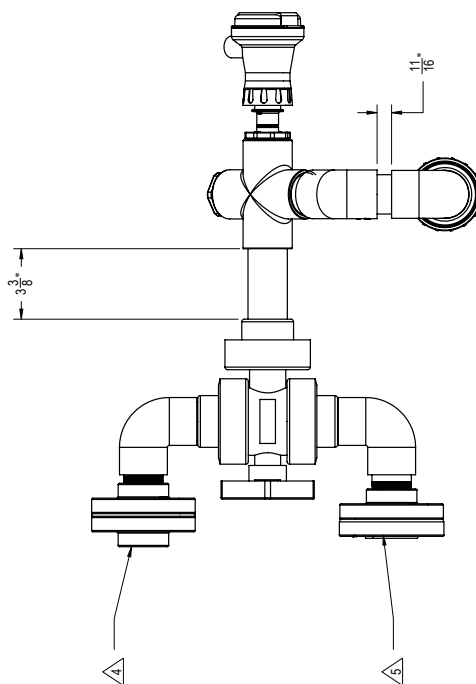
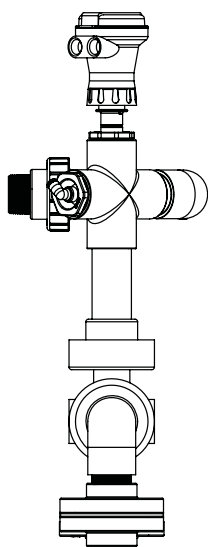
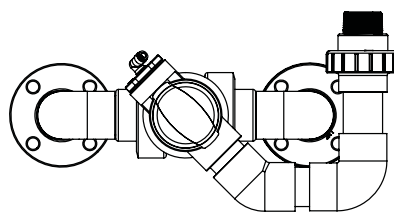
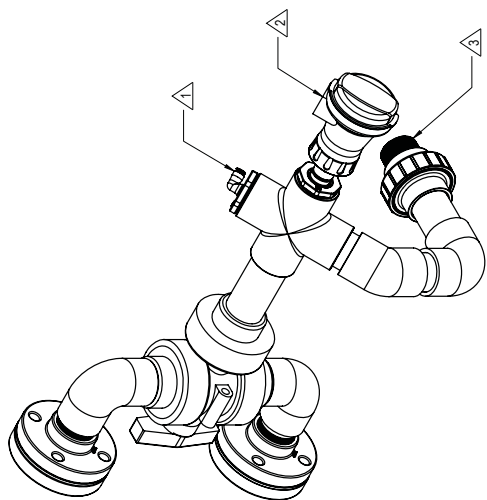
SHEET 2 OF 2

REV -

DRAWING NO.

DO NOT SCALE DRAWING

FOR INFORMATION ON HOW TO USE THIS DRAWING, PLEASE REFER TO THE COMPASS WATER SOLUTIONS WEBSITE FOR A COMPLETE LIST OF DRAWING CONVENTIONS.



1 2 3 4 5 6 7 8

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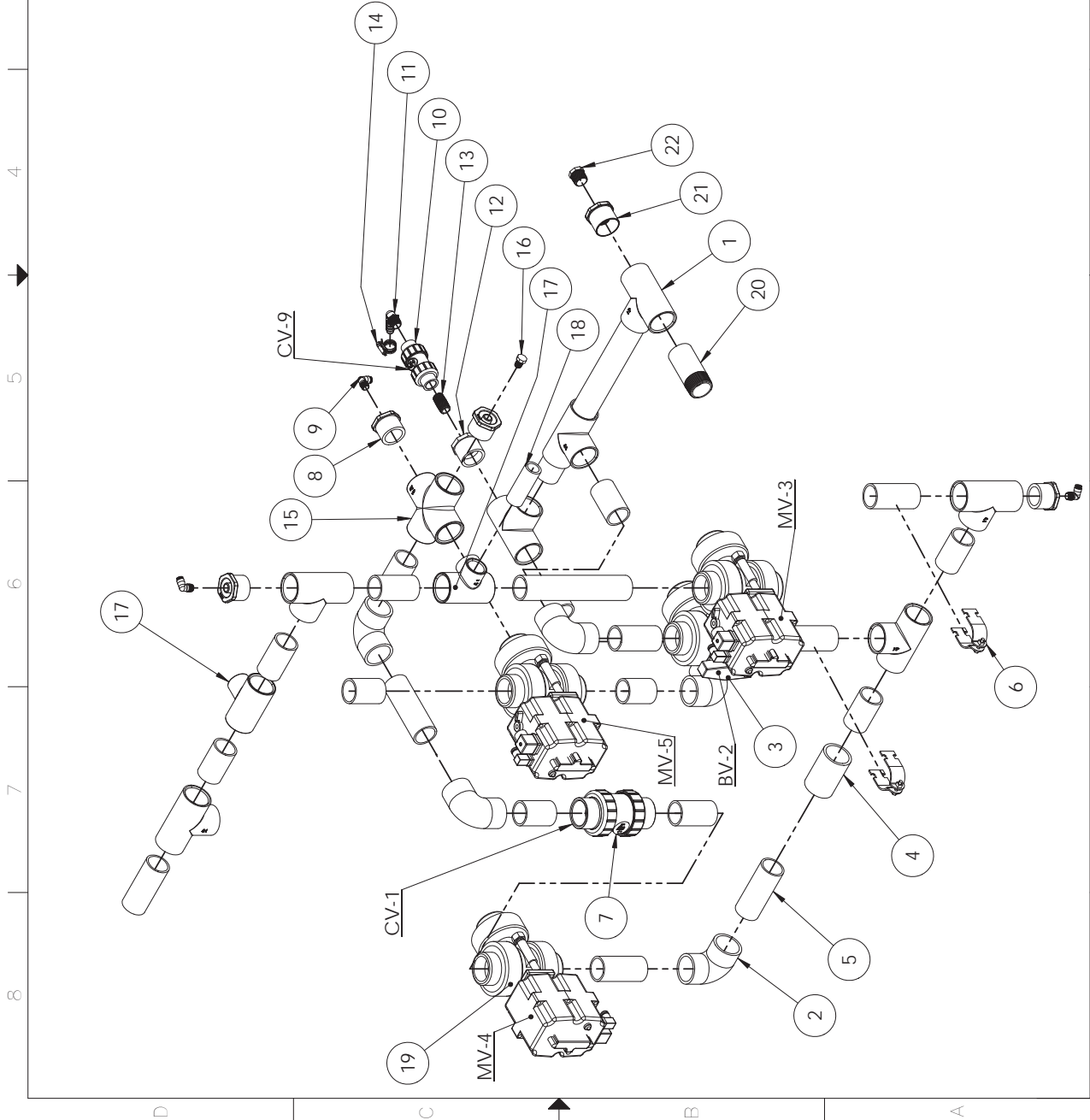
D


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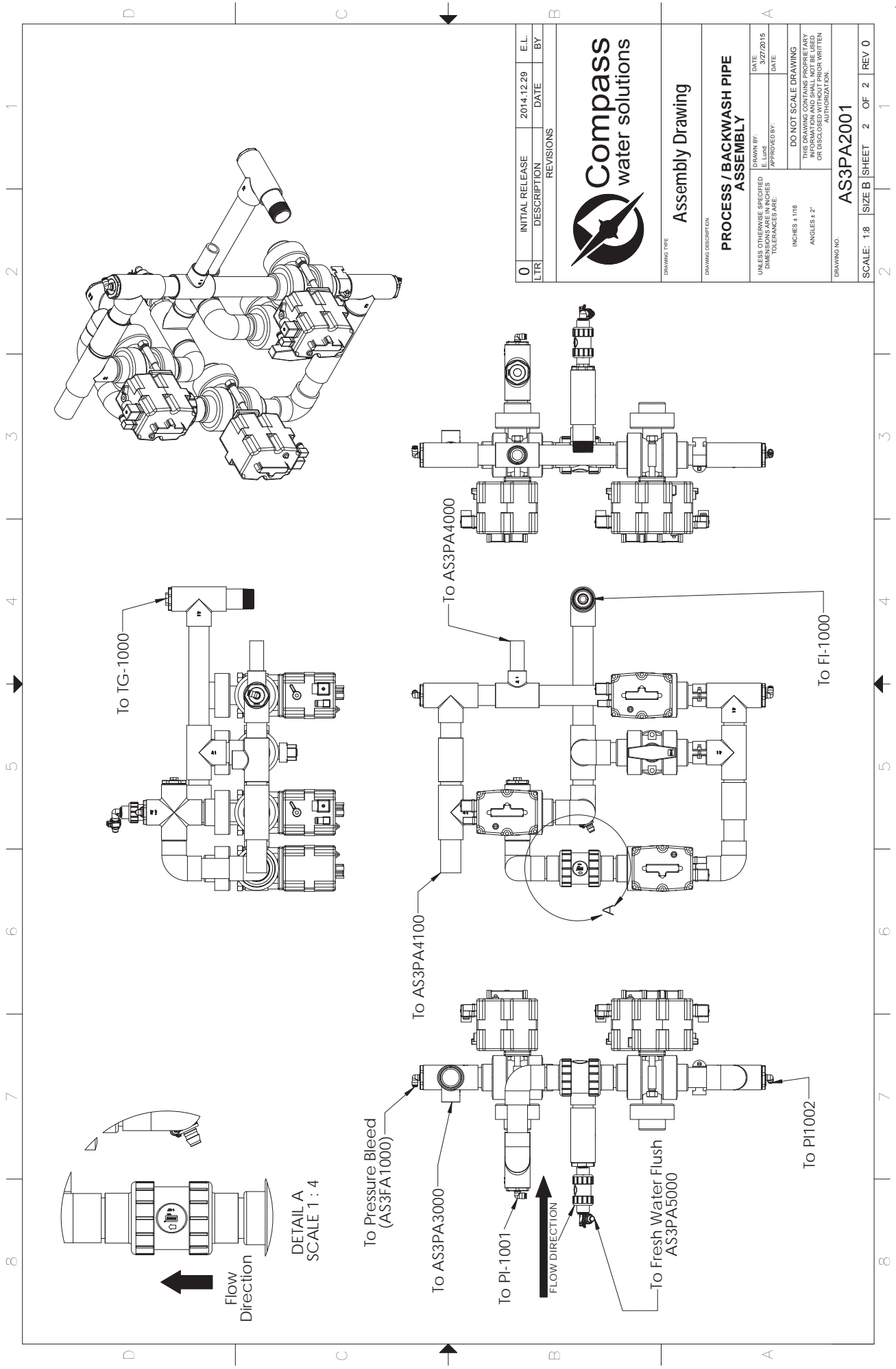
B

A

ITEM NO.	PartNo	Description	QTY.
1	PTSX2400	TEE, 1.50 SL, PVC80	7
2	PESX2400	Elbow 90Deg, 1.50" SL, PVC80	5
3	VBRX2400	1.5", 3-Way Ball Valve (2 Hole) PVC80	1
4	POSX2400	COUPLER ORIFICE PVC	1
5	PPPX2400	Pipe, 1 1/2", PVC80	23
6	UNIS2400	Pipe Clamp, 1.50", 316L SS	2
7	VBCX2402	VALVE, BALL CHECK 1.5" STU, PVC80	1
8	PBRX2404	BUSHING 1.5" x .25" SLxTH	4
9	ITEM0400	INSTANT TUBE FITTING, ELBOW, 1/4", MNTP	3
10	VBCX0800	Ball Check Valve, 1/2" PVC80	1
11	PEHX0800	HOSE BARB, ELBOW 90DEG, .50	1
12	PBRX2408	BUSHING, 1.5in x .5in, SLxT	1
13	PNTX0800	Nipple .5in NPT x Close, PVC80	1
14	HCPS0612	HOSE CLAMP, 0.50IN TO 0.75IN	1
15	PXSX2400	PIPE CROSS, 1.5 SL, PVC80	1
16	PPTX0400	PIPE PLUG, .25in NPT	1
17	PTSX2416	TEE, SLIP FIT, 1.50 X 1.00, PVC80	2
18	PPP1600	Pipe, 1", PVC80	1
19	VBTX2405	VALVE, ELEC., 3-WAY BALL VALVE (2 Hole)	3
20	PNTX2416-C	Threaded Nipple, 1.50in x 4.000, Sch80	1
21	PBRX2412	Bushing, 1.5in x .75in, SLT	1
22	PPTX1200	PIPE PLUG, 3/4", PVC, SCH 80, THRD	1



INITIAL RELEASE	2014.12.29	E.L.
DESCRIPTION	DATE	BY
REVISIONS		
 Compass water solutions		
Assembly Drawing		
PROCESS / BACKWASH PIPE ASSEMBLY		
DRAWING TYPE:		
DRAWING DESCRIPTION:		
UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:	DRAWN BY: 3/27/2015	DATE: 3/27/2015
	APPROVED BY:	DATE:
DO NOT SCALE DRAWING THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNAUTHORIZED FOR DISCLOSURE WITHOUT PRIOR WRITTEN AUTHORIZATION.		
DRAWING NO. AS3PA2001		
SCALE: 1:8	SIZE: B	SHEET 1 OF 2 REV 0



Flow Direction

DETAIL A
SCALE 1 : 4

To Pressure Bleed
(AS3FA1000)

To AS3PA3000

To PI-1001

FLOW DIRECTION

To Fresh Water Flush
AS3PA5000

To PI1002

To AS3PA4100

To AS3PA4000

To TG-1000

To FI-1000

INITIAL RELEASE	2014.12.29	E.L.
DESCRIPTION	DATE	BY
REVISIONS		
LTR		



Assembly Drawing

PROCESS / BACKWASH PIPE
ASSEMBLY

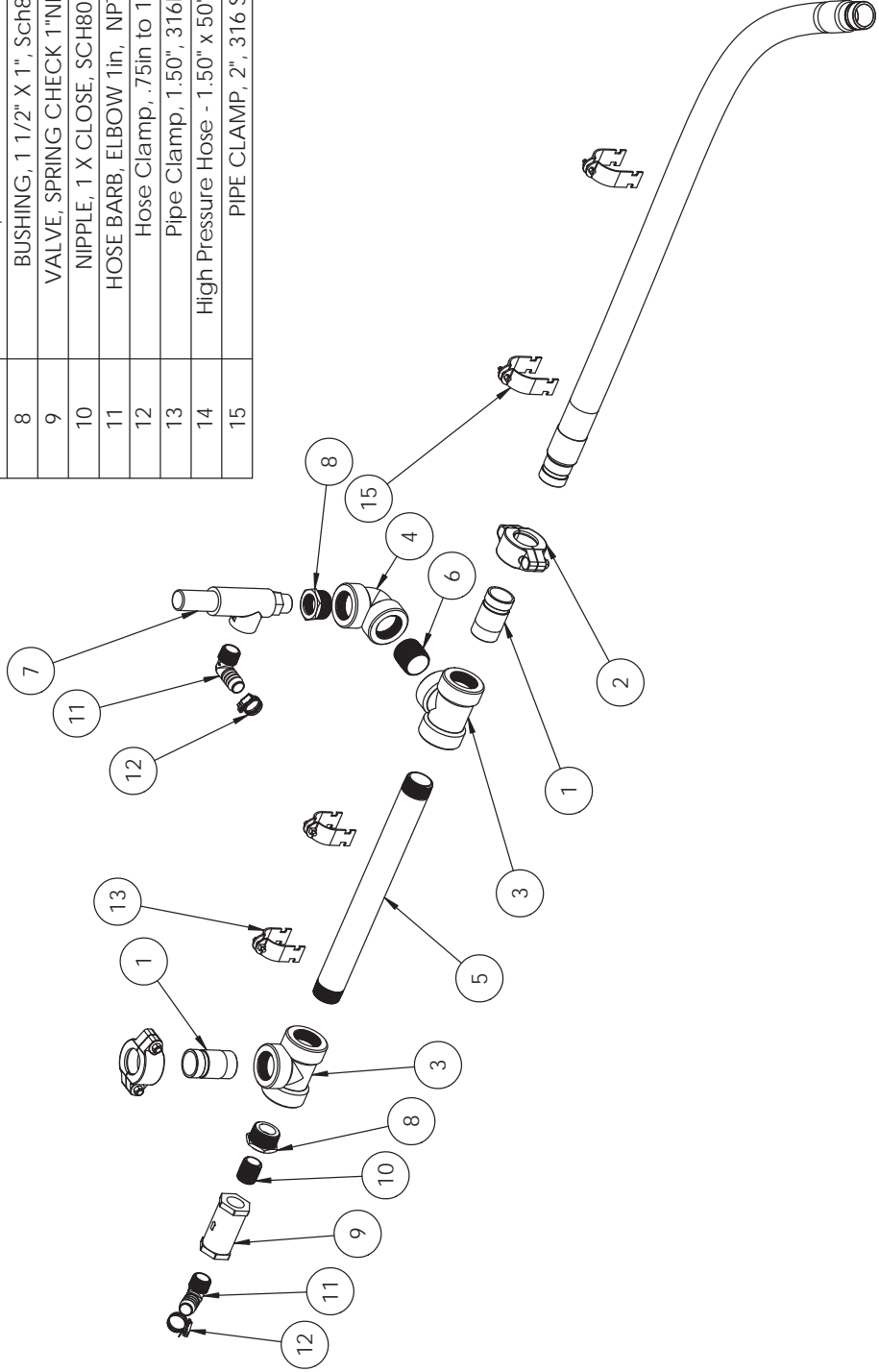
DATE	3/27/2015
DRAWN BY:	
APPROVED BY:	
DATE	
DO NOT SCALE DRAWING	
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DRAWING NO. AS3PA2001

SCALE: 1:8 | SIZE B | SHEET 2 OF 2 | REV 0

1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	QTY.
1	PIPE NIPPLE 1.5 VICx1.5 NPT	PNYD2415	2
2	PIPE VIC CPLG 1-1/2 SS 1400PSI	PVGS2402	2
3	PIPE TEE, 1-1/2" NPT X SS	PTXS2400	2
4	PIPE ELBOW, 1-1/2", TH SS SCH80	PEXS2400	1
5	1.5" Pipe Nipple, Sch80	PNXS2472	1
6	Nipple, Close, 1.50" NPT	PNXS2400	1
7	VALVE, RELIEF HI PSI 1.0IN NPT 316L SS	VRHS1600	1
8	BUSHING, 1 1/2" X 1", Sch80, NPT	PBXS2416	2
9	VALVE, SPRING CHECK 1"NPT 316SS	VLCS1600	1
10	NIPPLE, 1 X CLOSE, SCH80, SS316	PNXS1600	1
11	HOSE BARB, ELBOW 1in, NPT, PVC80	PEHX1600	2
12	Hose Clamp, .75in to 1.5in	HGCS1224	2
13	Pipe Clamp, 1.50", 316L SS	UNIS2400	2
14	High Pressure Hose - 1.50" x 50", VIC x VIC	ASHP2401	1
15	PIPE CLAMP, 2", 316 SS	UNIS3200	2



A	See ECN-10035	2014.11.05	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

AS3s Membrane Infeed Pipe Assembly, 2x3 Membrane Configuration

UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:

DRAWN BY:	E.Lud	DATE:	12/2/2014
APPROVED BY:	XXXXXXXXXX	DATE:	YYYY.MM.DD

DO NOT SCALE DRAWING

INCHES ± .016

ANGLES ± 2°

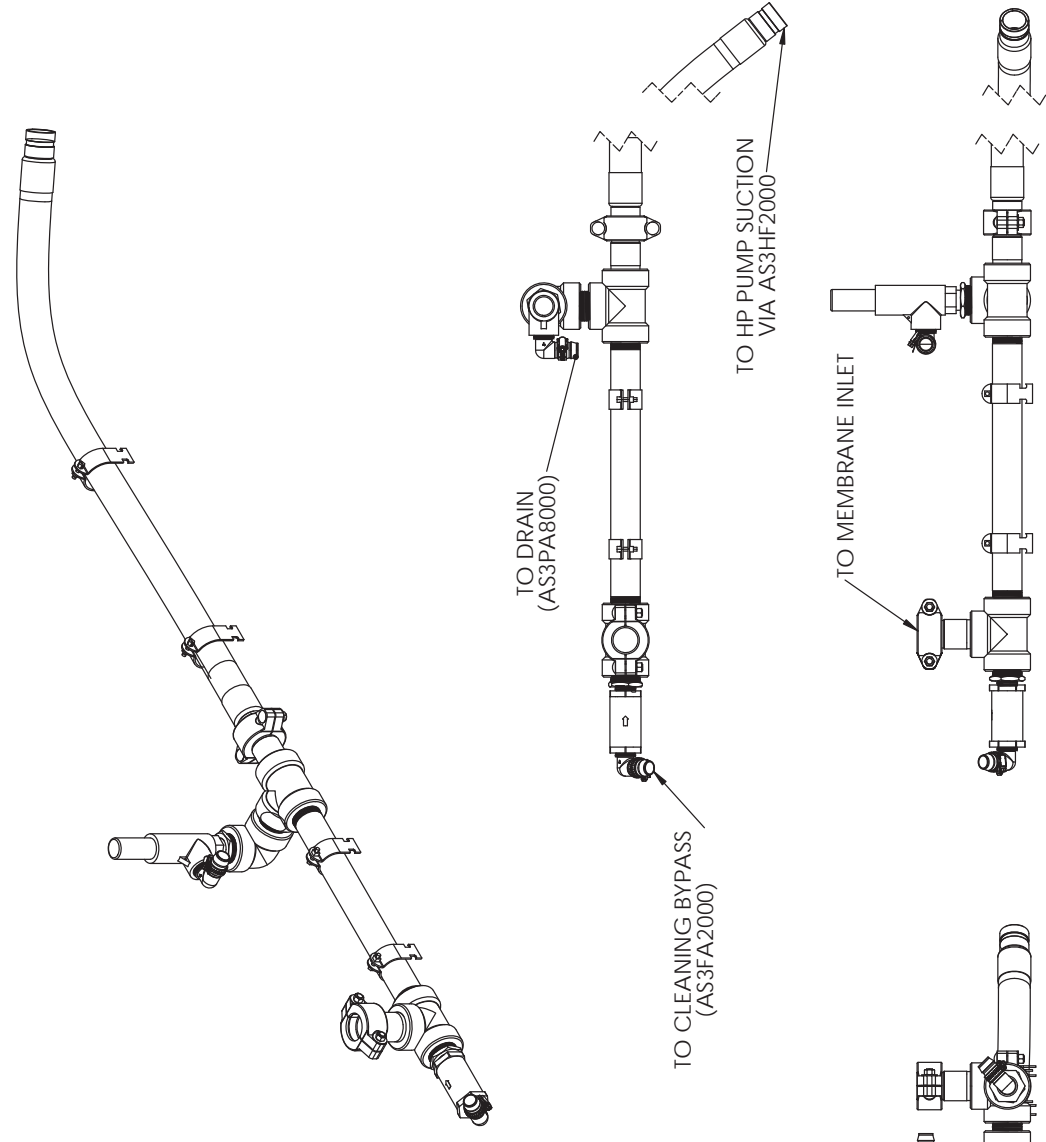
THIS DRAWING CONTAINS PROPRIETARY INFORMATION. IT IS NOT TO BE REPRODUCED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.

DRAWING NO. AS3PA2305

SCALE: 1:8 | SIZE B | SHEET 1 OF 2 | REV A

1 2 3 4 5 6 7 8

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A	See ECN-10035	2014.11.05	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

AS3s Membrane Infeed Pipe Assembly,
2x3 Membrane Configuration

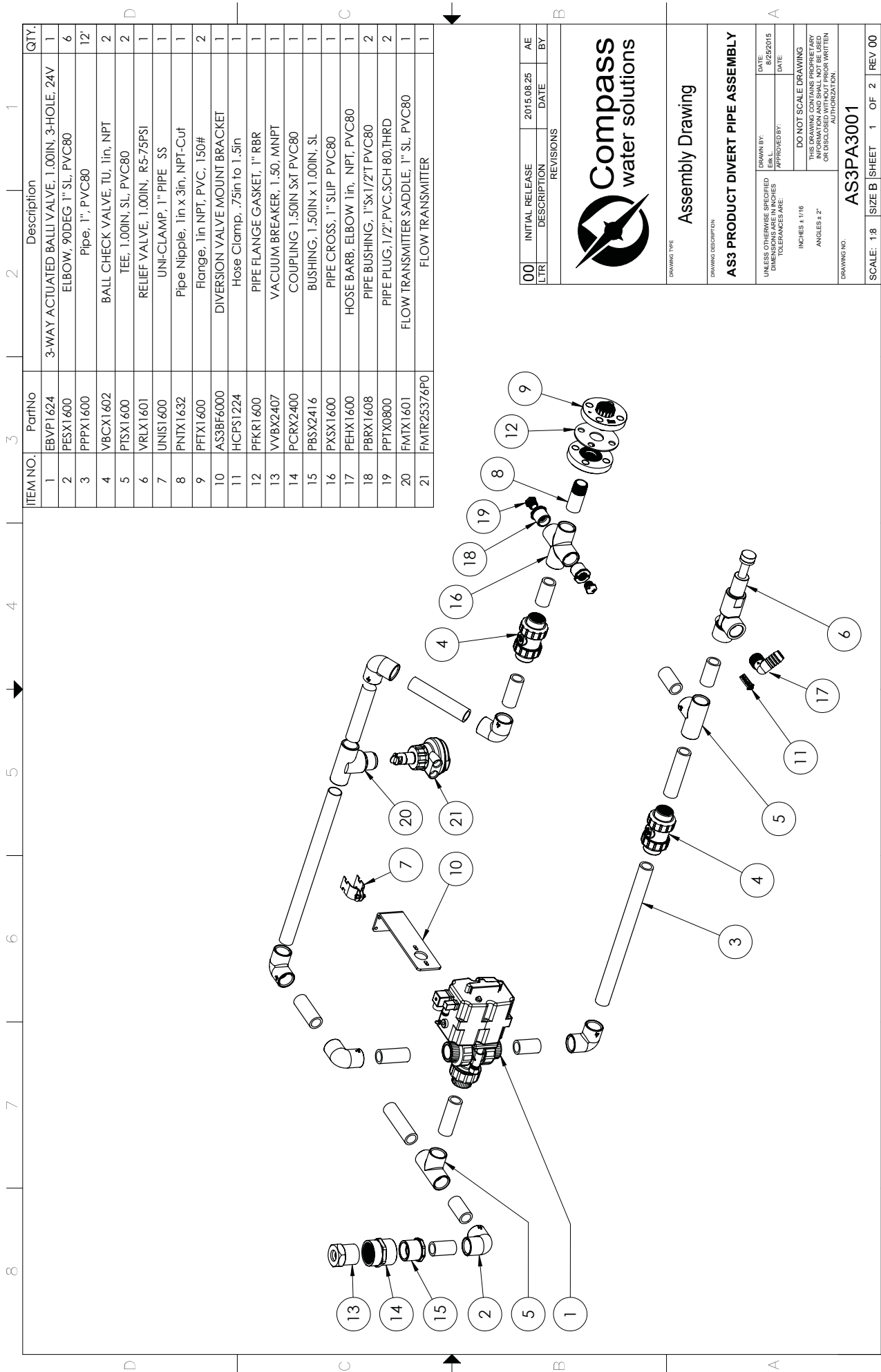
DATE	12/2/2014
DRAWN BY:	E.Lord
APPROVED BY:	XXXXXXXXXX
TOLERANCES ARE:	YYYY.MM.DD
DO NOT SCALE DRAWING	
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS NOT TO BE DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.	

INCHES ± 1/16
ANGLES ± 2°

SCALE: 1:8 | SIZE B | SHEET 2 OF 2 | REV A

AS3PA2305

DRAWING NO.



ITEM NO.	PartNo	Description	QTY.
1	EBVP1624	3-WAY ACTUATED BALL VALVE, 1.00IN, 3-HOLE, 24V	1
2	PESX1600	ELBOW, 90DEG 1" SL, PVC80	6
3	PPPX1600	Pipe, 1", PVC80	12'
4	VBCX1602	BALL CHECK VALVE, TU, 1in, NPT	2
5	PTSX1600	TEE, 1.00IN, SL, PVC80	2
6	VRLX1601	RELIEF VALVE, 1.00IN, R5-75PSI	1
7	UNIS1600	UNI-CLAMP, 1" PIPE, SS	1
8	PNTX1632	Pipe Nipple, 1in x 3in, NPT-Cut	1
9	PFTX1600	Flange, 1in NPT, PVC, 150#	2
10	AS3BF6000	DIVERSION VALVE MOUNT BRACKET	1
11	HCPS1224	Hose Clamp, .75in to 1.5in	1
12	PKR1600	PIPE FLANGE GASKET, 1" RBR	1
13	VVBX2407	VACUUM BREAKER, 1.50, MNPT	1
14	PCRX2400	COUPLING 1.50IN SXT PVC80	1
15	PBSX2416	BUSHING, 1.50IN x 1.00IN, SL	1
16	PXSX1600	PIPE CROSS, 1" SLIP PVC80	1
17	PEHX1600	HOSE BARB, ELBOW 1in, NPT, PVC80	1
18	PBRX1608	PIPE BUSHING, 1"SL/1/2" PVC80	2
19	PPTX0800	PIPE PLUG, 1/2", PVC, SCH 80, THRD	2
20	FMTX1601	FLOW TRANSMITTER SADDLE, 1" SL, PVC80	1
21	FMTR25376P0	FLOW TRANSMITTER	1

INITIAL RELEASE	2015.08.25	AE
DESCRIPTION	DATE	BY
REVISIONS		



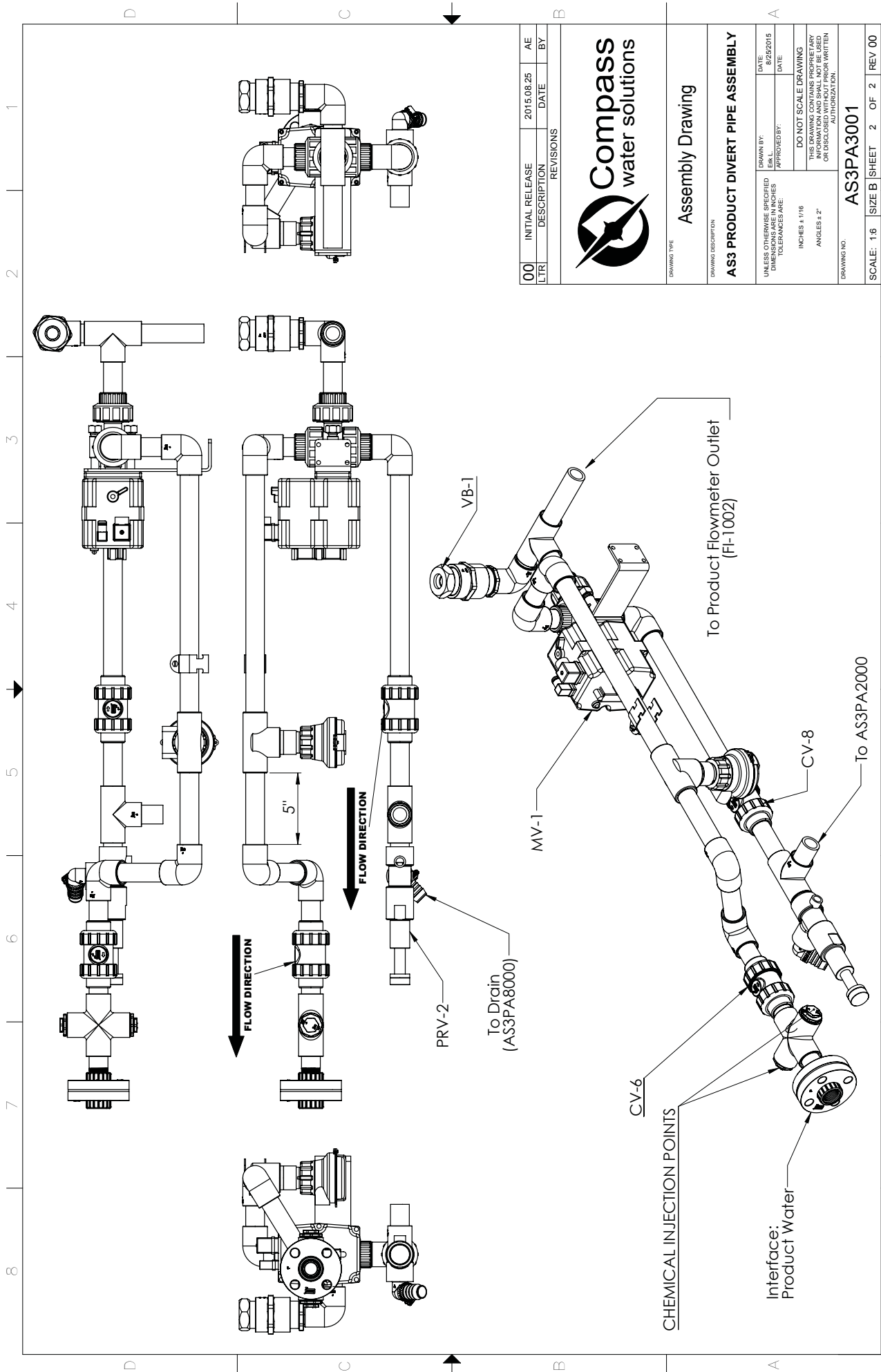
Assembly Drawing

AS3 PRODUCT DIVERT PIPE ASSEMBLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DATE
DRAWN BY: EBL	8/25/2015
APPROVED BY:	DATE:
DO NOT SCALE DRAWING	
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNCLASSIFIED OR DECLASSIFIED WITHOUT PRIOR WRITTEN AUTHORIZATION.	
INCHES ± 1/16	
ANGLES ± 2°	

DRAWING NO. AS3PA3001

SCALE: 1:8	SIZE B	SHEET 1	OF 2	REV.00
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00	INITIAL RELEASE	2015.08.25	AE
LTR	DESCRIPTION	DATE	BY
	REVISIONS		



Assembly Drawing

AS3 PRODUCT DIVERT PIPE ASSEMBLY

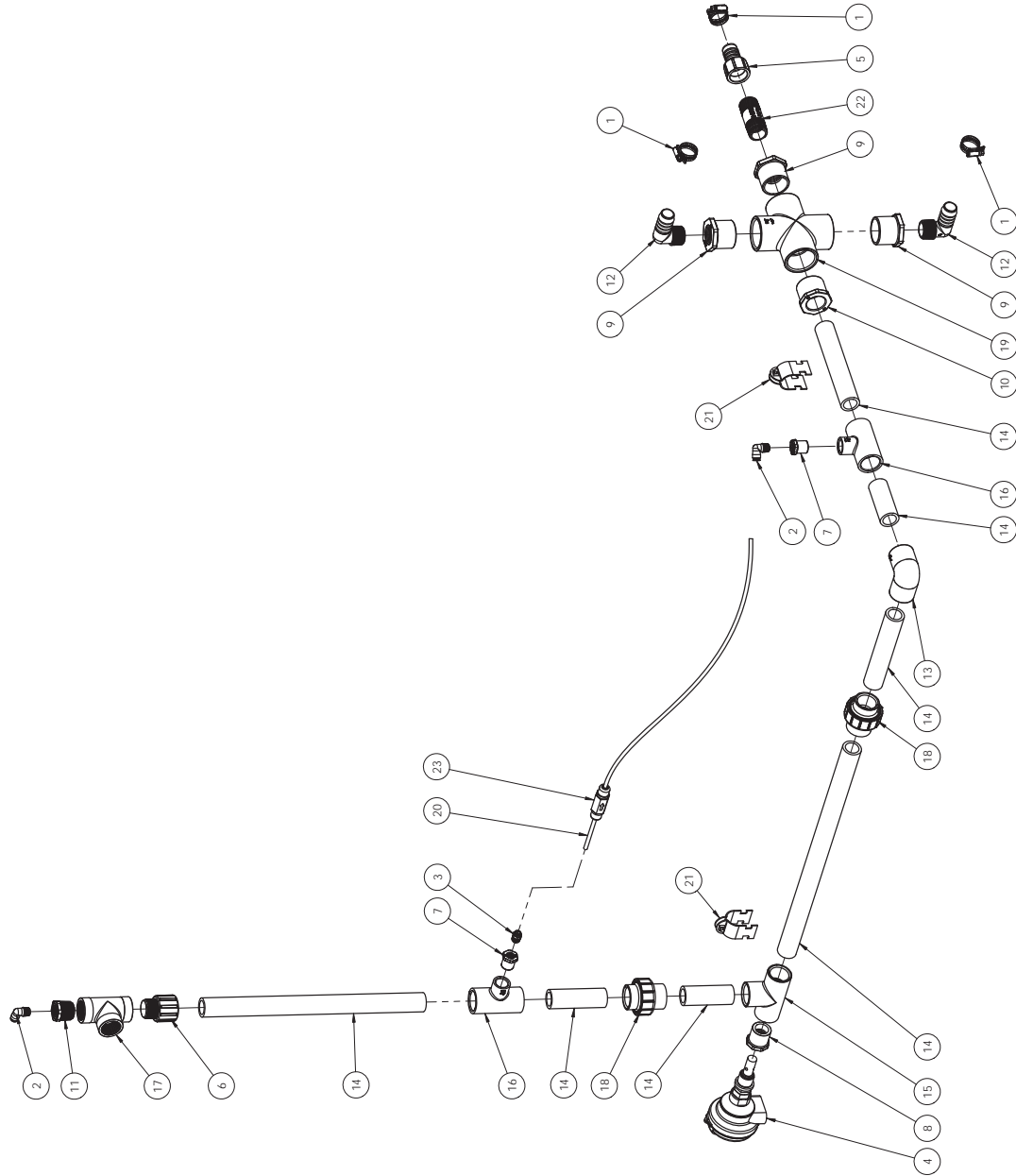
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DRAWN BY: EML	DATE: 8/25/2015
	APPROVED BY:	DATE:
DO NOT SCALE DRAWING		
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DRAWING NO. AS3PA3001

SCALE: 1:6 | SIZE B | SHEET 2 OF 2 | REV. 00

GENERAL NOTES


1. REFER TO SPEARS GENERAL JOINING METHOD FOR PIPE CONNECTION METHODS. CONTACT ENGINEERING IF YOU REQUIRE A COPY.
2. USE WELD-ON P-70 PRIMER AND WELD-ON 711 PVC CEMENT FOR SLIP-ON CONNECTIONS.
3. USE RECTORSEAL 5 PIPE THREAD SEALANT ON ALL PIPE THREAD CONNECTIONS.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	HCPS1224	Hose Clamp, .75in to 1.5in	3
2	ITEM0400	INSTANT TUBE FITTING, ELBOW, 1/4", MNIP	2
3	ITSM0400	INSTANT TUBE FITTING, .25in, MNIP	1
4	MPCS0200	TDS SENSOR, 3/4"NPT 1.0x4-20mA	1
5	PAGX1600	PIPE ADAPTER, 1"HxFNPT PVC	1
6	PARX1600	PIPE ADAPTER, 1" SxT PVC80	1
7	PBRX0804	Bushing, .50in x .25in SxT	2
8	PBRX1612	BUSHING, 1.00IN x .75IN, SxT	1
9	PBRX2416	BUSHING 1.5" x 1" SxT	3
10	PBSX2416	BUSHING, 1.50IN x 1.00IN, SL	1
11	PBTX1604	Pipe Bushing, 1in x .25in NPT	1
12	PEHX1600	HOSE BARB, ELBOW 1/2in, NPT, PVC80	2
13	PESX1600	ELBOW, 90DEG 1" SL, PVC80	1
14	PPPX1600	PIPE, 1" SCH 80 PVC 6FT.	6FT.
15	PTSX1600	TEE, 1.00IN, SL, PVC80	1
16	PTSX1608	PIPE TEE, 1"x1/2" SLIP PVC80	2
17	PTTX1600-SR	PIPE TEE, 1" NPT, PVC80, STEEL REINFORCED	1
18	PUSX1600	PIPE UNION, 1" SL, PVC80	2
19	PXSX2400	PIPE CROSS, 1.5 SL PVC80	1
20	TUPED402	TUBING, 1/4" BLUE POLYETHYLENE	1
21	UNIST600	UNI-CLAMP, 1" PIPE SS	2
22	VFCX1608	FLOW CONTROL, 1" MNPT 8 GPM	1
23	VSCX0400	Check Valve, .25 Tubing, Push to connect	1

LTR	DESCRIPTION	DATE	BY

REVISIONS



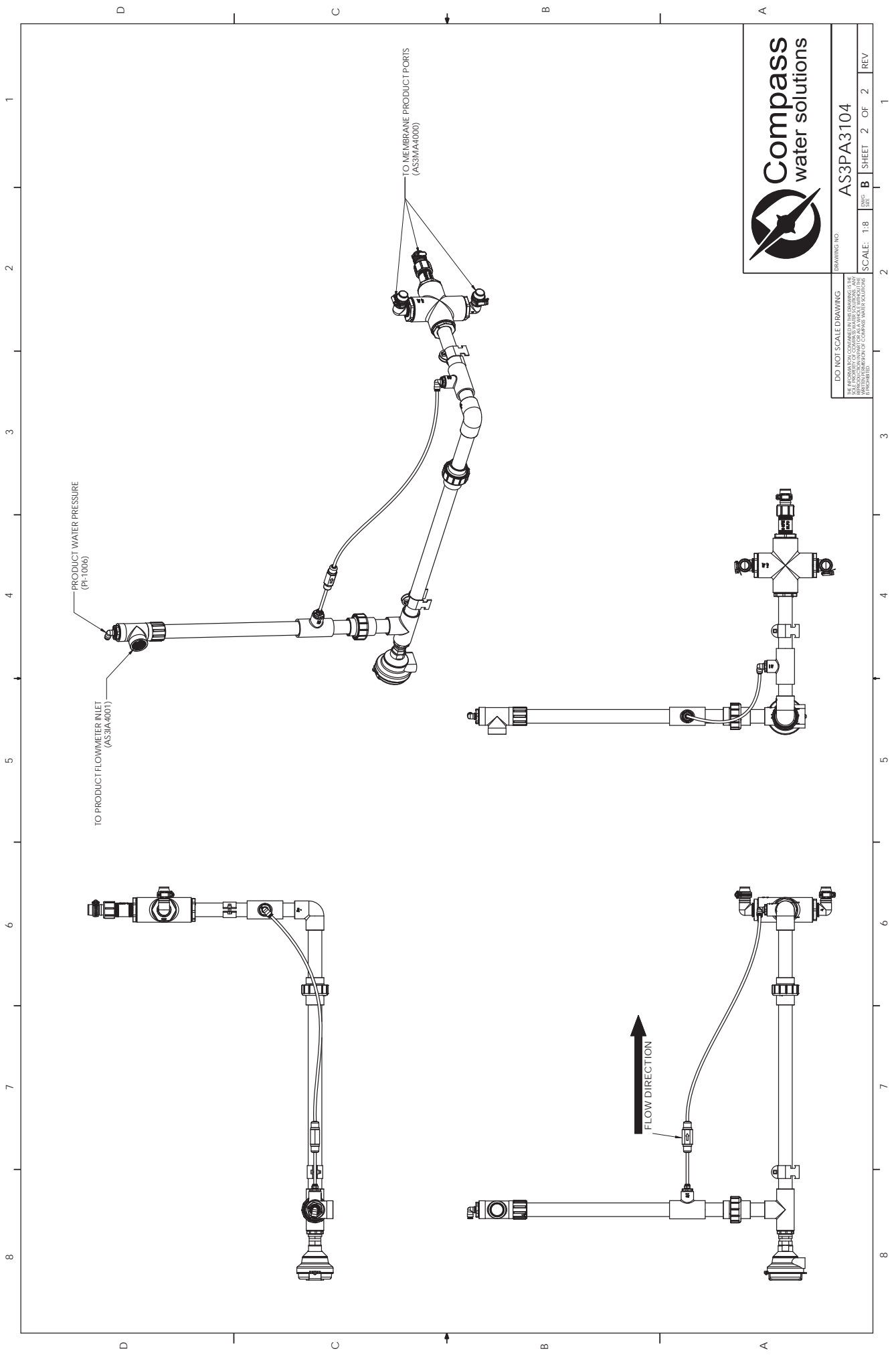
Compass
water solutions

**PRODUCT WATER & TDS ASSY,
3 INLET PORTS**

DRAWING DESCRIPTION	
MATERIAL:	TREATMENT:
UNLESS OTHERWISE SPECIFIED: A) DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE B) SURFACE FINISHES: 125, ✓ PER ANSI B46.1 C) SURFACE FINISHES: 125, ✓ PER ANSI B46.1 D) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED E) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED F) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED G) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED H) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED I) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED J) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED K) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED L) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED M) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED N) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED O) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED P) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED Q) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED R) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED S) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED T) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED U) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED V) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED W) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED X) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED Y) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED Z) HOLE AND DRILL DIMENSIONS: AS SHOWN UNLESS OTHERWISE SPECIFIED	

SCALE: 1:8 DWG: B SHEET 1 OF 2 REV 1

DRAWING NO: **AS3PA3104**

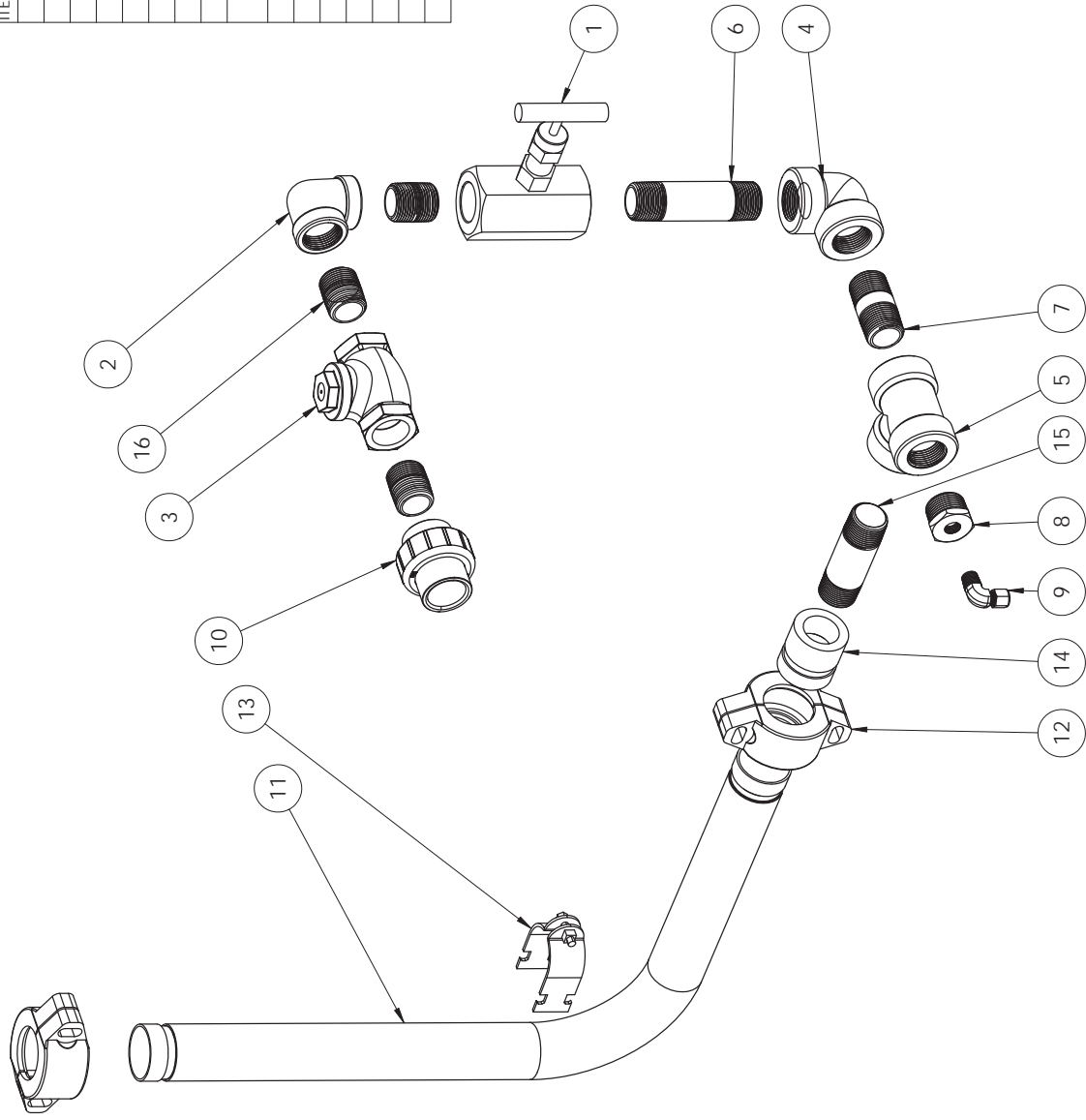


DRAWING NO		AS3PA3104	
SCALE: 1:8	SHEET: 2	OF: 2	REV

DO NOT SCALE DRAWING
 USE DIMENSIONS SHOWN IN THIS DRAWING IN THE
 FIELD. DIMENSIONS SHOWN IN THIS DRAWING ARE
 APPROXIMATE. DIMENSIONS OF COMPONENTS MAY VARY.
 DIMENSIONS OF COMPONENTS MAY VARY. DIMENSIONS
 OF COMPONENTS MAY VARY.

1 2 3 4 5 6 7 8

ITEM NO.	PartNo	Description	QTY.
1	VNDS1600	VALVE, NEEDLE 1" FNPT HPSS	1
2	PET1600	Elbow, 1in, SCH40	1
3	VSC1600	Swing Check Valve, 1in	1
4	PEX1600	PIPE ELBOW, 1.00 THREAD, SS SCH80	1
5	PTXS1600	TEE, 1.00IN, SS SCH80	1
6	PNXS1618	NIPPLE, 1.00IN x 4.50IN SS SCH80	1
7	PNXS1610	PIPE NIPPLE, 1 X 2-1/2, SS SCH80	1
8	PBXS1604	PIPE, BUSHING, 1.00 X 0.25 SS	1
9	CEMS0400	COMPRESSION FITTING, 90DEG ELBOW, 1/4" MNPT, 316L SS	1
10	PUSX1600	PIPE UNION, 1" SL, PVC80	1
11	AS3MF4000	Brine Reject Back Pressure Manifold	1
12	PVGS2402	Vic Coupling, 1.5", Duplex, 1,400 psi	2
13	UNIS2400	Pipe Clamp, 1.50", 316L SS	1
14	ASHA3066-DPX	Adapter, 1in FNPT x 1.5in VIC	1
15	PNIS1618	Nipple, 1in x 4.50in, Sch40	1
16	PNIS1600	Nipple, 1in x Close, Sch40	3



A	See ECN:10029	2014.10.02	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			

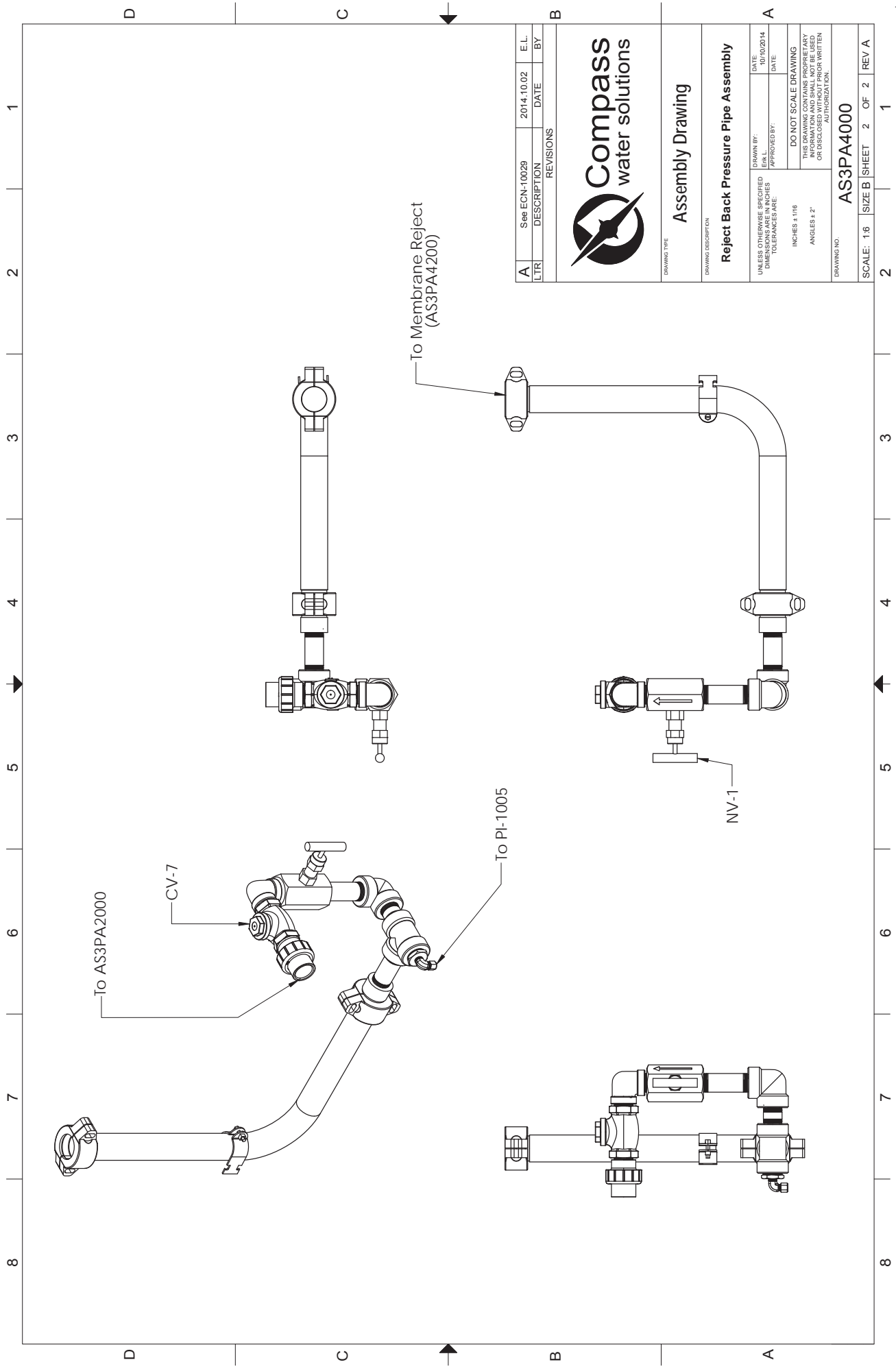


Assembly Drawing

Reject Back Pressure Pipe Assembly

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DRAWN BY:	DATE:
		10/10/2014
	APPROVED BY: <td>DATE:</td>	DATE:
DO NOT SCALE DRAWING		
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNCLASSIFIED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.		
DRAWING NO. AS3PA4000		

SCALE: 1:4	SIZE B	SHEET 1	OF 2	REV A



A	See ECN-10029	2014.10.02	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

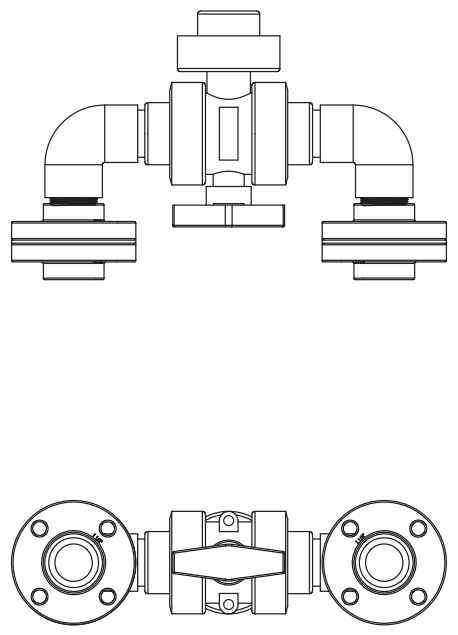
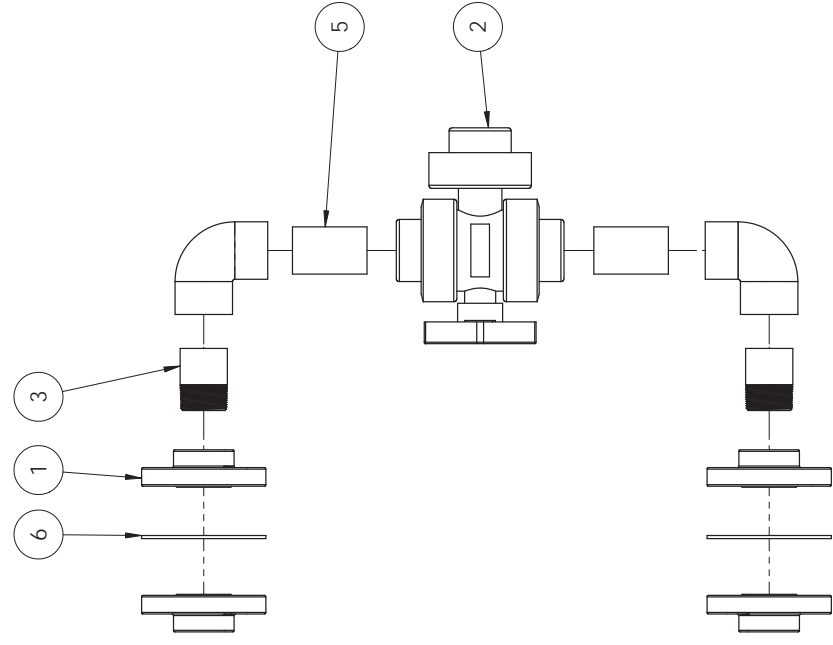
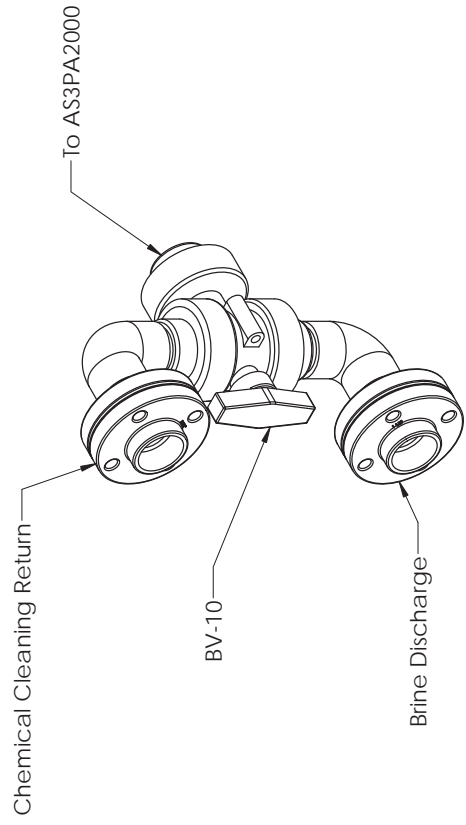
Reject Back Pressure Pipe Assembly

UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:	DATE: 10/10/2014
INCHES ± 1/16	DATE:
ANGLES ± 2°	
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS NOT TO BE DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.	

DRAWING NO.	AS3PA4000
SCALE: 1:6	SIZE B SHEET 2 OF 2 REV A

1 2 3 4 5 6 7 8

ITEM NO.	PART NUMBER	Description	QTY.
1	PFTX1600	Flange, 1.5", ANSI 150# PVC80	4
2	VBRX2400	1.5", 3-Way Ball Valve (2 Hole) PVC80	1
3	PNIX2410	Threaded Nipple, 1.50in x 2.500, Sch80	2
4	PESX2400	Elbow 90Deg, 1.50" SL, PVC80	2
5	PPPX2400	Pipe, 1 1/2", PVC80	2
6	PFKR2400	Flange Gasket, 1.50in, Buna-N	2



0	INITIAL RELEASE	2014.05.08	E.L.
LTR	DESCRIPTION	DATE	BY
	REVISIONS		



Assembly Drawing

Brine Discharge/ Cleaning Outlet Manifold

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DRAWN BY:	DATE:
MM ± 1.0	XXXXXXXXXX	10/10/2014
	APPROVED BY:	DATE:
	YYYY.MM.DD	YYYY.MM.DD

DO NOT SCALE DRAWING
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNAUTHORIZED FOR DISCLOSURE WITHOUT PRIOR WRITTEN AUTHORIZATION.

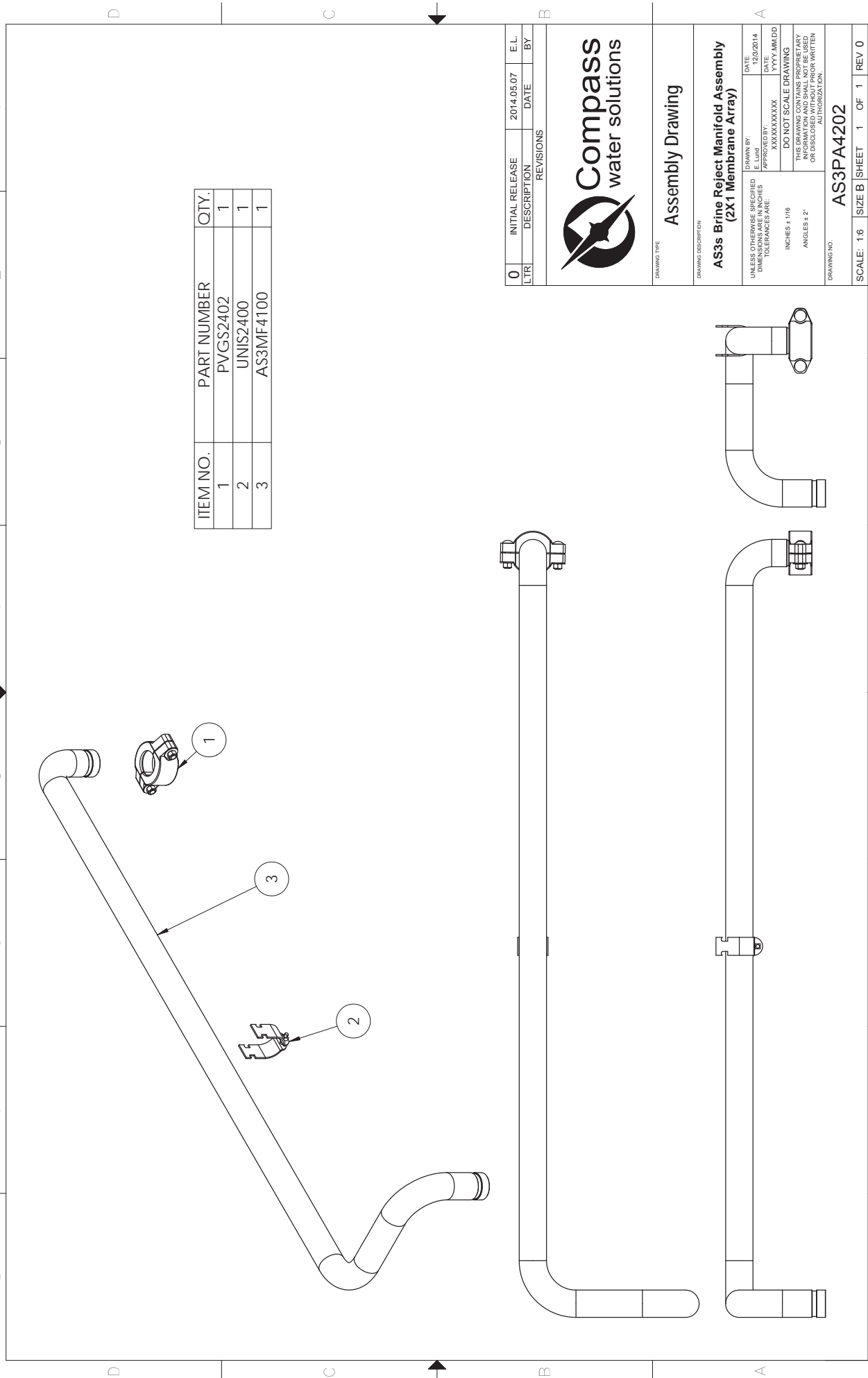
DRAWING NO. AS3PA4100

SCALE: 1:5	SIZE B	SHEET 1	OF 1	REV 0
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D C B A

D C B A

1 2 3 4 5 6 7 8



ITEM NO.	PART NUMBER	QTY.
1	PVGS2402	1
2	UNIS2400	1
3	AS3MF4100	1

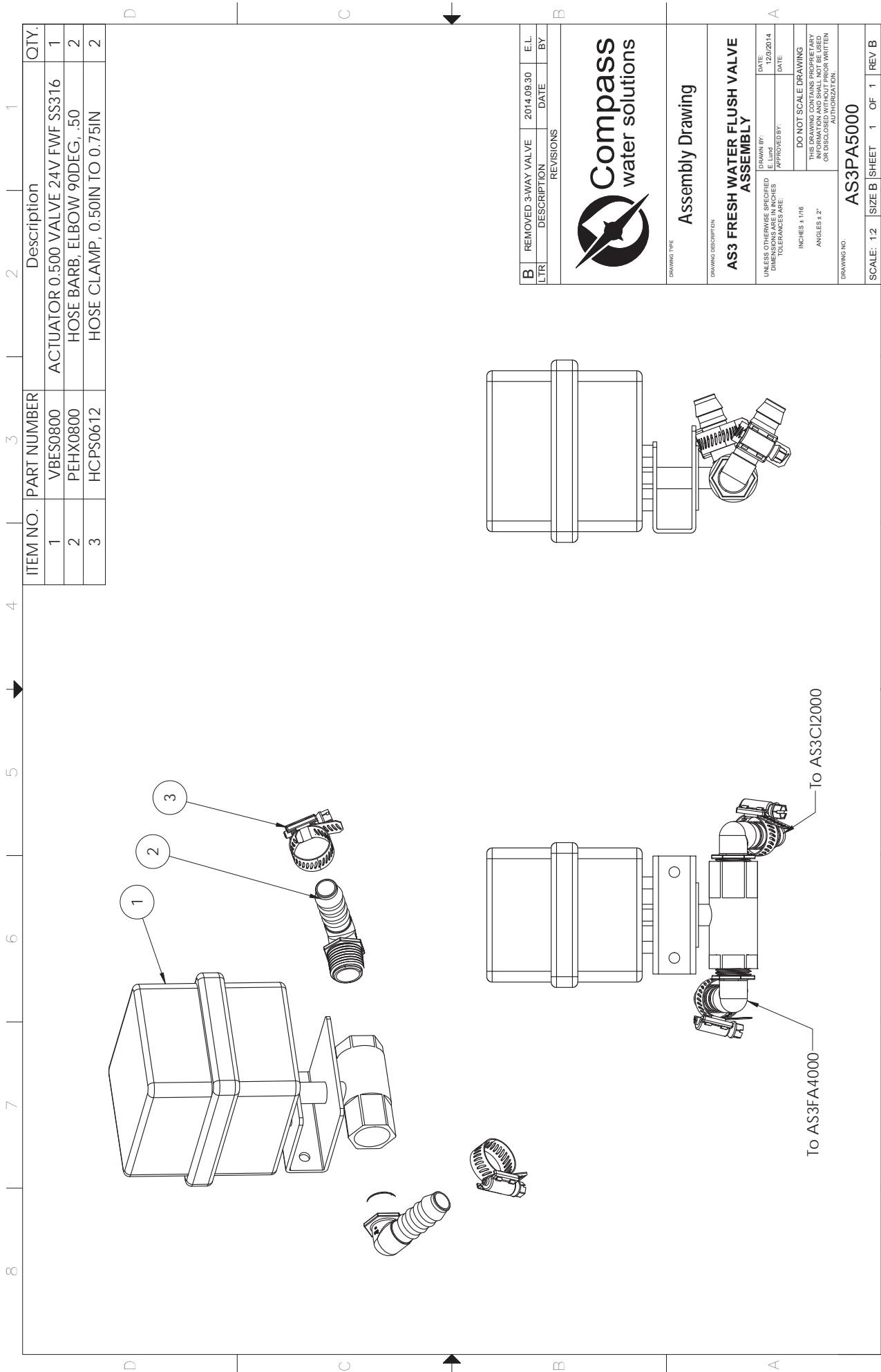
0	INITIAL RELEASE	2014.05.07	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

DRAWING TYPE		DATE	
DRAWING DESCRIPTION		12/2/2014	
AS3s Brine Reject Manifold Assembly (2X1 Membrane Array)		DATE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:		DRAWN BY: E.Lud	
INCHES ± 1/16		APPROVED BY: XXXXXXXXXX	
ANGLES ± 2°		DATE: YYYY.MM.DD	
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNLAWFULLY DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.			
DRAWING NO. AS3PA4202			

SCALE: 1:6	SIZE B	SHEET 1	OF 1	REV 0
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ITEM NO.	PART NUMBER	Description	QTY.
1	VBES0800	ACTUATOR 0.500 VALVE 24V FWF SS316	1
2	PEHX0800	HOSE BARB, ELBOW 90DEG, .50	2
3	HCPS0612	HOSE CLAMP, 0.50IN TO 0.75IN	2

REVISIONS			
LTR	DESCRIPTION	DATE	E.L. BY
B	REMOVED 3-WAY VALVE	2014.09.30	



Assembly Drawing

DRAWING TYPE	
Assembly Drawing	

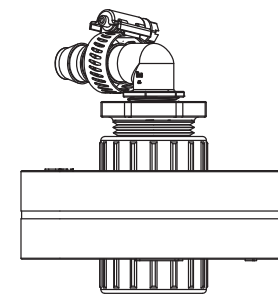
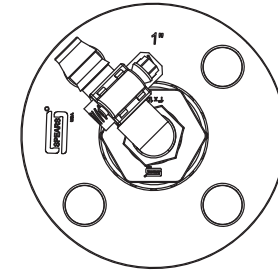
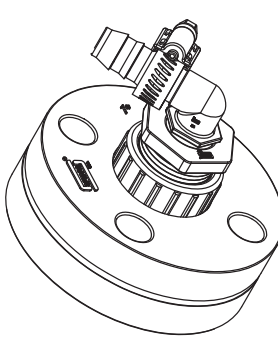
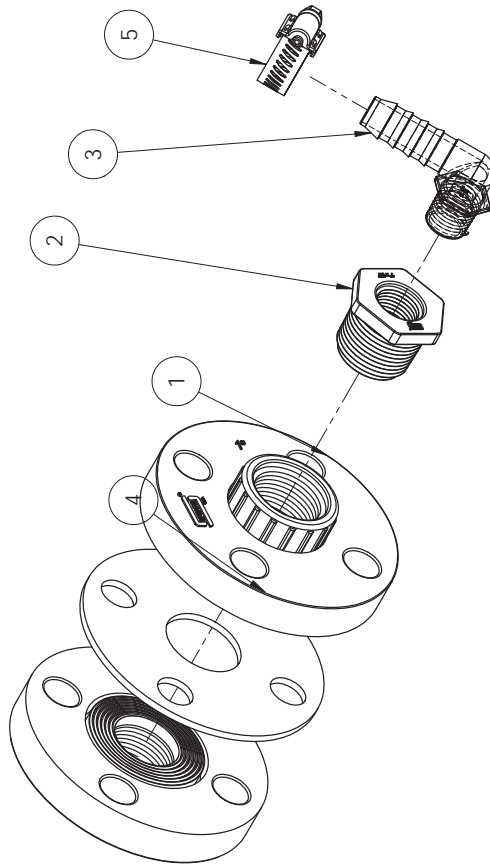
DRAWING DESCRIPTION	
AS3 FRESH WATER FLUSH VALVE ASSEMBLY	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	
FINISHES	DATE
TOLERANCES ARE:	DATE

DATE	12/2/2014
APPROVED BY:	
DO NOT SCALE DRAWING	
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS NOT TO BE REPRODUCED OR DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.	

DRAWING NO.	AS3PA5000
SCALE:	1:2
SIZE:	B
SHEET:	1
OF:	1
REV:	B

ITEM NO.	Description	PART NUMBER	AS3P A510 O/QT Y.
1	Flange, 1in NPT, PVC, 150#	PFTX1600	2
2	PIPE BUSHING, 0.50 HI X MNPTX PVC80	PBTX1608	1
3	HOSE BARB, ELBOW 90DEG, .50	PEHX0800	1
4	PIPE FLANGE GASKET, 1" RBR	PFKR1600	1
5	HOSE CLAMP, 0.50IN TO 0.75IN	HCPS0612	1



0	INITIAL RELEASE	2014.05.08	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

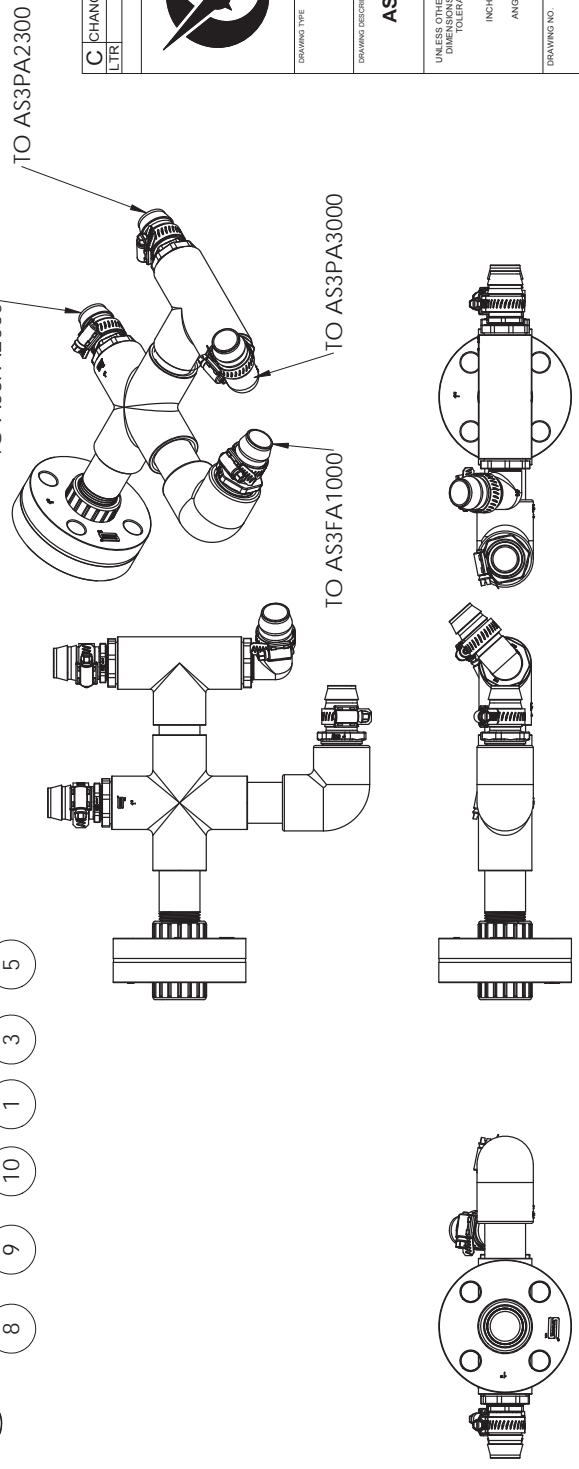
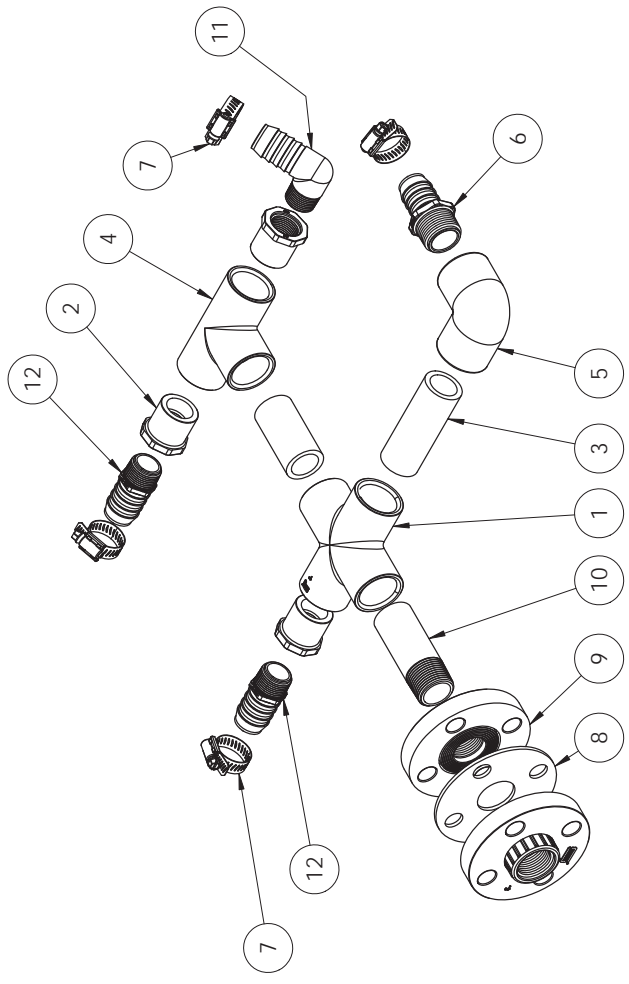
Fresh Water Flush Inlet Interface Pipe Assembly

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	DRAWN BY: E.Lord	DATE: 1/16/2015
	APPROVED BY: XXXXXXXXXXXX	DATE: YYYY.MM.DD
INCHES ± 1/16	DO NOT SCALE DRAWING	
ANGLES ± 2°	THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNAUTHORIZED FOR DISCLOSURE WITHOUT PRIOR WRITTEN AUTHORIZATION.	

DRAWING NO.	AS3PA5100
SCALE: 1:2	SIZE B
SHEET 1	OF 1
REV 0	

1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	QTY.
1	PIPE CROSS, 1" SLIP PVC80	PXSX1600	1
2	BUSHING, 1.00IN x .75IN, SxT	PBRX1612	3
3	Pipe 1", PVC80	PPPX1600	2'
4	TEE, 1.00IN, SL, PVC80	PTSX1600	1
5	ELBOW, 1.00 S X T, PVC80	PERX1600	1
6	HOSE BARB, 1.00 MNPT	PAHX1600	1
7	Hose Clamp, .75in to 1.5in	HCPST224	4
8	PIPE FLANGE GASKET, 1" RBR	PFKR1600	1
9	Flange, 1in NPT, PVC, 150#	PFTX1600	2
10	Pipe Nipple, 1in x 3.5in, NPT	PNTX1614	1
11	PIPE ELBW, 1"Hx3/4"MNPT PVC80	PEHX1612	1
12	PIPE ADAPTER, 1"Hx3/4"MNPT PVC80	PAHX1612	2



C CHANGED HOSE BARB SIZES		2015.01.21	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

AS3 DRAIN PIPE ASSEMBLY

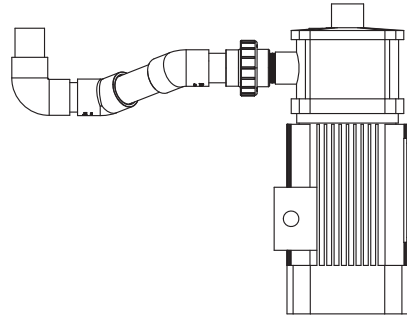
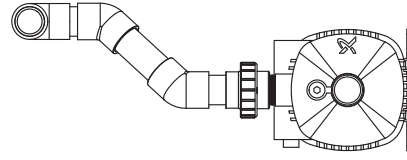
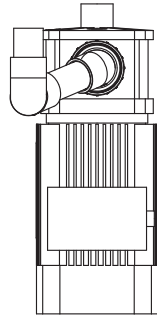
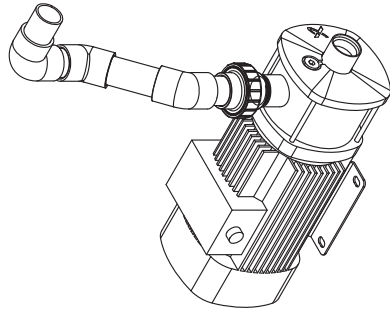
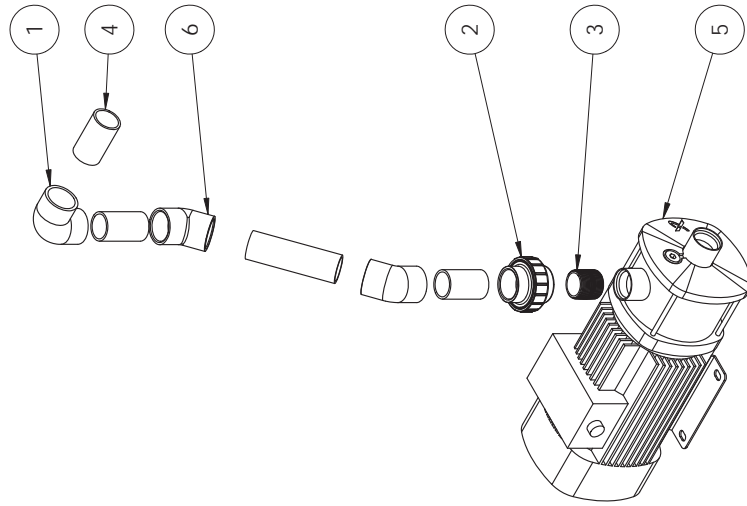
DATE: 3/27/2015	DATE:
DRAWN BY:	APPROVED BY:
UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:	
INCHES ± 1/16	
ANGLES ± 2°	
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNLAWFULLY DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.	


DRAWING NO. AS3PA8000

SCALE: 1/4"	SIZE B	SHEET 1	OF 1	REV C
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1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	QTY.
1	Elbow 90Deg, 1.50" SL, PVC80	PESX2400	1
2	UNION, 1.5IN, SxT	PURX2400	1
3	NIPPLE, 1.5in x CLOSE	PNTX2400	1
4	Pipe, 1 1/2", PVC80	PPPX2400	4'
5	PUMP/MTR, CM10-3, 3PH/60HZ	PMFS1021303	1
6	ELBOW, 45DEG., 1.50 SL, PVC80	PDSX2400	2



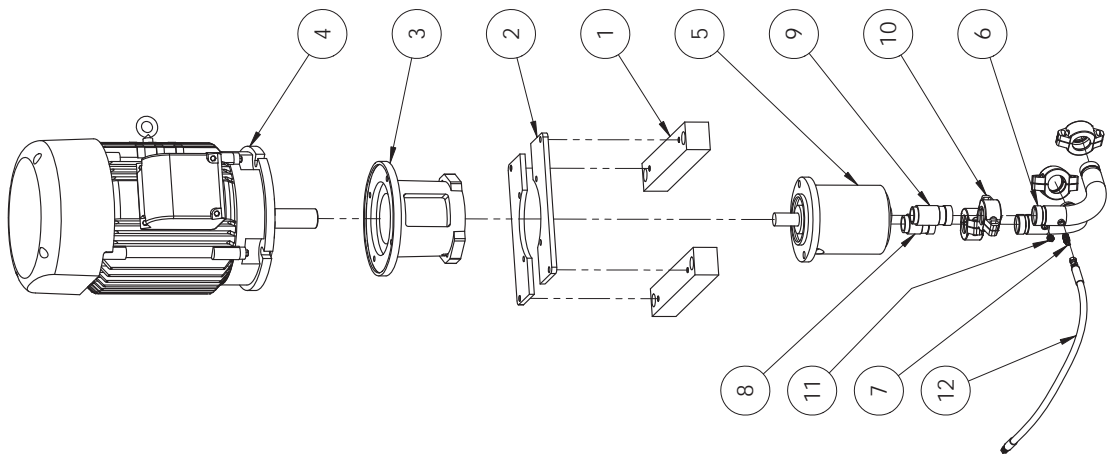
0	INITIAL RELEASE	2014.05.08	E.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			
			
Assembly Drawing			
AS3S Booster Pump Assembly			
DRAWING TYPE		DRAWING DESCRIPTION	
UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:	DRAWN BY:	DATE:	12/17/2014
INCHES ± 1/16	APPROVED BY:	DATE:	YYYY.MM.DD
ANGLES ± 2°	THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNLAWFULLY DISCLOSED WITHOUT PRIOR WRITTEN AUTHORIZATION.		
DRAWING NO.	AS3PU1000		
SCALE: 1:8	SIZE B	SHEET 1	OF 1 REV 0

D C B A

D C B A

1 2 3 4 5 6 7 8

ITEM NO.	Description	PART NUMBER	AS3P U210 O/QT Y.
1	RUBBER MOUNT DAMPENING BAR	VBIR0286	2
2	HP Pump Motor Mounting Plate - 60Hz	AS3BF2000	2
3	BELL HOUSING & COUPLER FOR APP 8.2/10.2	PPBH8201	1
4	284TC FRAME, 1.15 SF, CLASS F, TEFC 25HP, 230/460 60Hz 3PH, 50C AMB, IP54	MTRW1325-SB	1
5	HIGH PRESSURE PUMP APP8.2 DANFOSS, 41 GPM at 1800 RPM	PHDS8.2	1
6	AS3 - HI PRESSURE PUMP MANIFOLD	AS3MHP2400	2
7	FLARE CONN, 1/4" T37xMNPT SS	FCMS0437	1
8	ADAPTER W/O-RING 1 1/2 MPT X VIC	PVTD2400	1
9	CHECK VALVE 1.5" NPT x VIC DUPLEX	VBCD2400	1
10	Vic Coupling, 1.5", Duplex, 1,400 psi	PVGS2402	4
11	INSTANT TUBE FITTING, .25in, MNTP	ITSM0400	1
12	1/4" HP hose for Pressure Indication	AS3HF1001	1



00	INITIAL RELEASE	2015.08.26	C.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

DRAWING TYPE		DRAWING DESCRIPTION	
AS3 - HP Pump Assembly, 60Hz WITH MTRW1325-SB MOTOR			
DRAWN BY:	CHANE LEE	DATE:	2015.08.26
APPROVED BY:		DATE:	2015.08.26
C.L.		C.L.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:			
INCHES ± .118			
ANGLES ± 2°			
DO NOT SCALE DRAWING			
THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND IS UNAUTHORIZED FOR DISCLOSURE WITHOUT PRIOR WRITTEN AUTHORIZATION.			
DRAWING NO. AS3PU2103			

SCALE: 1:12	SIZE B	SHEET 1	OF 2	REV. 00
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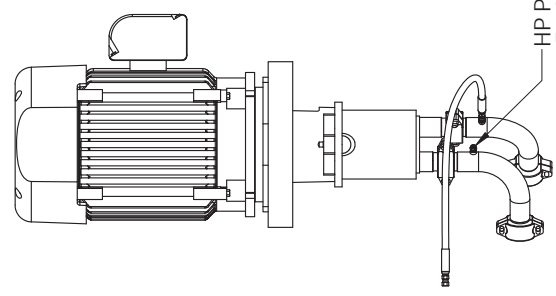
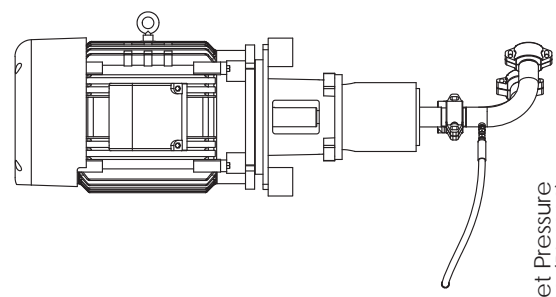
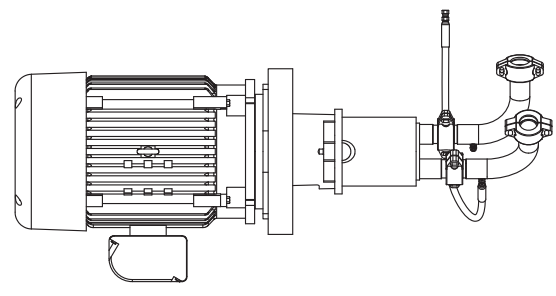
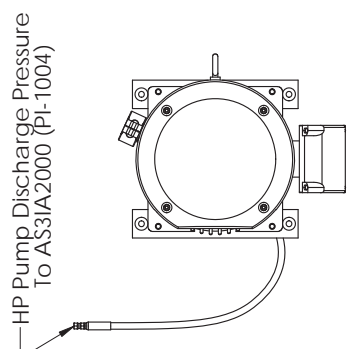
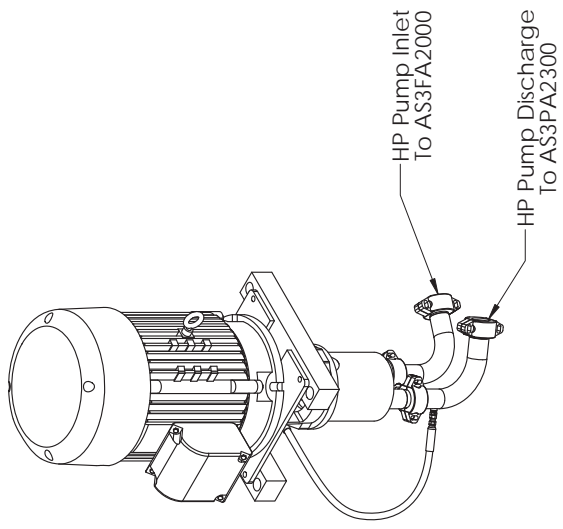
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1 2 3 4 5 6 7 8



00	SEE SHEET 1 OF 2	2015.08.26	C.L.
LTR	DESCRIPTION	DATE	BY
REVISIONS			



Assembly Drawing

AS3 - HP Pump Assembly, 60Hz
WITH MTRW1325-SB MOTOR

UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE:	DATE: 2015.08.26
DRAWN BY: CHANE LEE	DATE: 2015.08.26
APPROVED BY: C.L.	DATE: 2015.08.26
DO NOT SCALE DRAWING	
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AS3PU2103

SCALE: 1:12	SIZE B	SHEET 2	OF 2	REV. 00
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D

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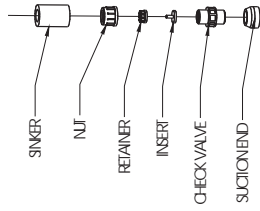
B

A

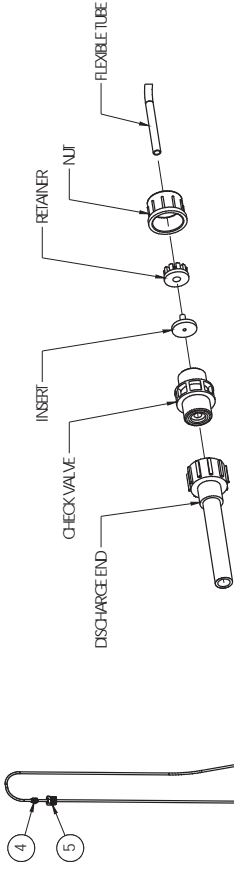
GENERAL NOTES

- 1. USE LOC TIE C5-A NUT-SEIZE LUBRICANT ON HARDWARE UNLESS OTHERWISE SPECIFIED.
- 2. CUT AT ASSEMBLY FOR PROPERTI.
- 3. REFER TO P&ID FOR INJECTION POINT LOCATION

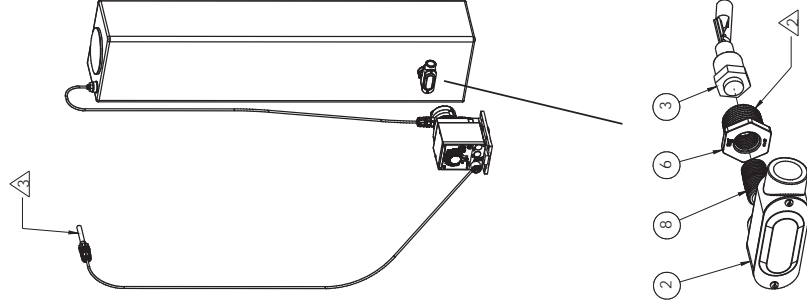
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ASC103076	CHEMICAL TANK, 18GAL	1
2	CSLB0800	CONDUIT BOX, 1/2" SLB AL	1
3	FLIS0808	FLOAT SWITCH, 1/2" MNPT GEM6	1
4	ITSV0400	INSTANT TUBE FITTING, 25ft MNIP	1
5	PBX1204	PIPE BUSH 3/4" X 1/4" TRD PVC80	1
6	PBX1608	PIPE BUSHING, 0.50 H X MNPTX PVC80	1
7	PMGYDD610	MEASURING PUMP, GF DDE 6-10	1
8	PNIX0800	Nipple, 5m NPT x Oase PVC80	1



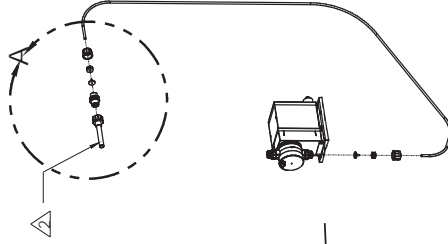
DETAIL B
SCALE 1:8



DETAIL A
SCALE 1:4



*** COMPONENTS SUPPLIED WITH DOSAGE PUMP ***



*** COMPONENTS SUPPLIED WITH DOSAGE PUMP ***

REV	DESCRIPTION	DATE	BY
	REVISIONS		

Compass
water solutions

CHEMICAL DOSING TANK ASSY

REVISIONS	DATE	BY
1	6/3/15	ALSPIN/DVA
2	6/3/15	ALSPIN/DVA

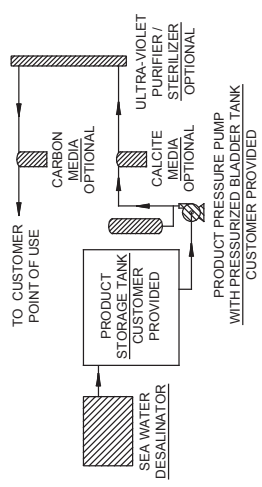
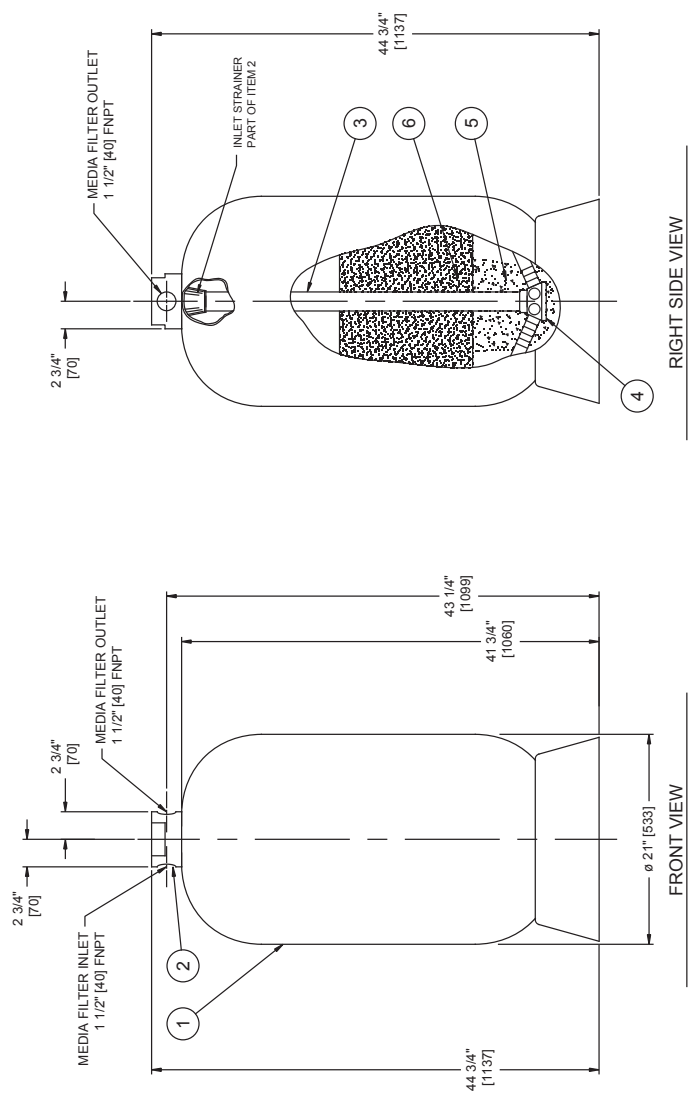
DRAWING NO: **ASC11000**

SCALE: 1:16 SHEET 1 OF 1 REV

REVISIONS		DATE	
LTR	DESCRIPTION		

INSTALLATION INSTRUCTIONS

- THE REMOTE CALCITE MEDIA FILTER IS PROVIDED AS A POST FILTRATION UNIT TO NEUTRALIZE THE PH BEFORE USAGE.
- INTERFACE CONNECTIONS:
 INLET: 1 1/2" FNPT (40MM)
 OUTLET: 1 1/2" FNPT (40MM)
- HOLDING CAPACITY:
 MEDIA FILTER TANK: 28 U.S. GAL. (106 LITRES)
 DRY WEIGHT: 477 LBS (216 KG)
 WET WEIGHT: 712 LBS (323 KG)
- DIMENSION IN BRACKETS ARE IN (MILLIMETERS).



LOADING INSTRUCTIONS

- ASSEMBLE AND GLUE PVC PIPE (ITEM 3), AND STRAINER (ITEM 4), AND DROP INTO PRESSURE VESSEL (ITEM 1) AS SHOWN. NOTE: STRAINER'S LATERAL ARMS MUST BE ASSEMBLED ON ITS HUB INSIDE THE VESSEL.
- ENSURE PVC PIPE (ITEM 3) IS LEVEL WITH TANK TOP AND PLUGGED WITH CAP OR TAPE TO PREVENT FILLING WHEN LOADING MEDIA.
- ENSURE THE PVC PIPE, AND STRAINER (ITEM 3 & 4) ARE FIRMLY PLANTED ON THE BOTTOM OF THE TANK AND CENTERED WHILE LOADING OR THE CONTROL VALVE (ITEM 2) WILL NOT SEAT TO THE TANK.
- ADD MEDIA IN ORDER AS SHOWN. FIRST LOAD IS FILTER GRAVEL (ITEM 5), AND FINAL LOAD IS CALCITE MEDIA (ITEM 6).
- REMOVE CAP OR TAPE FROM PVC PIPE (ITEM 3).
- INSTALL CONTROL VALVE (ITEM 2) TO THE TOP OF THE TANK (ITEM 1). MAKING SURE THE PVC PIPE (ITEM 3) IS IN THE CENTER OF THE CONTROL VALVE (ITEM 2) AND THE O-RING IS IN PLACE.
- LABEL THE MEDIA FILTER INLET (IN) ON THE PORT OF THE CONTROL VALVE (ITEM 2) THAT DIRECTS THE FLOW TO THE TOP OF THE MEDIA AND THE MEDIA FILTER OUTLET (OUT) ON THE PORT THAT IS CONNECTED DIRECTLY TO THE PVC PIPE (ITEM 3).

ITEM NO.	QTY.	DESCRIPTION	UNIT	QUANTITIES IN LBS	QUANTITIES IN LBS
6	300	FILTER MEDIA, CALCITE 16 X 40 MESH	CU FT		
5	1	FILTER GRAVEL, 18 - 1/4"	CU FT		
4	1	STRAINER, HUB & LATERAL - 1 1/2"	SF-5667		"PENTAIR" P.V.C.
3	3'	PIPE 1 1/2" X 36" LONG (CUT TO FIT)	PPP2400		P.V.C.
2	1	TANK HEAD, 1 1/2" FNPT IN/OUT PORTS X 4-8UN	TKHD2464		SCH 40 P.V.C.
1	1	PRESSURE VESSEL 21" DIA. X 36" LONG, 4"-8 UNC	TKFG2136		"PENTAIR" CFRPP STANDARDS SPECIFICATIONS

Coffin World Water Systems
 Design & Manufacture of Water Treatment Systems

INSTALLATION & ASSEMBLY
 REMOTE CALCITE FILTER, 21"
 AQUA-SEP, MULTI-USE

SCALE: 5/64 SIZE B SHEET 1 OF 1 REV

103537