Appendix F - WEGO Pump Mechanical Shop Drawings

Drawings for Approval

Project: Niagara People Mover Bus Garage

Customer: Nekison Engineering & Contractors Ltd.

By: Fabian Raymond
Xylem file #13-30-1542

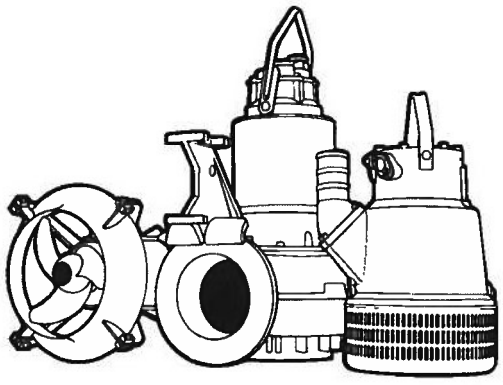
Storm Pumps: P-08 &P-09

.

IBI GROUP

THIS SHOP DRAWING HAS BEEN REVIEWED AS TO GENERAL ARRANGEMENT ONLY. DESIGN, DIMENSIONS AND COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

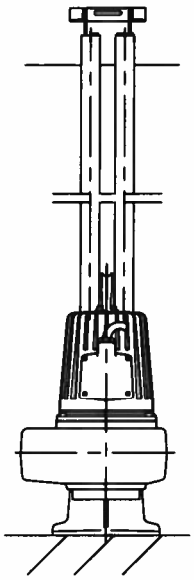
REVIEWED BY	DATE
REVIEW NOT REQUIRED	REVIEWED AS SUBMITTED
REVISE AS NOTED - DO NOT RESUBMIT	REVISE & RESUBMIT

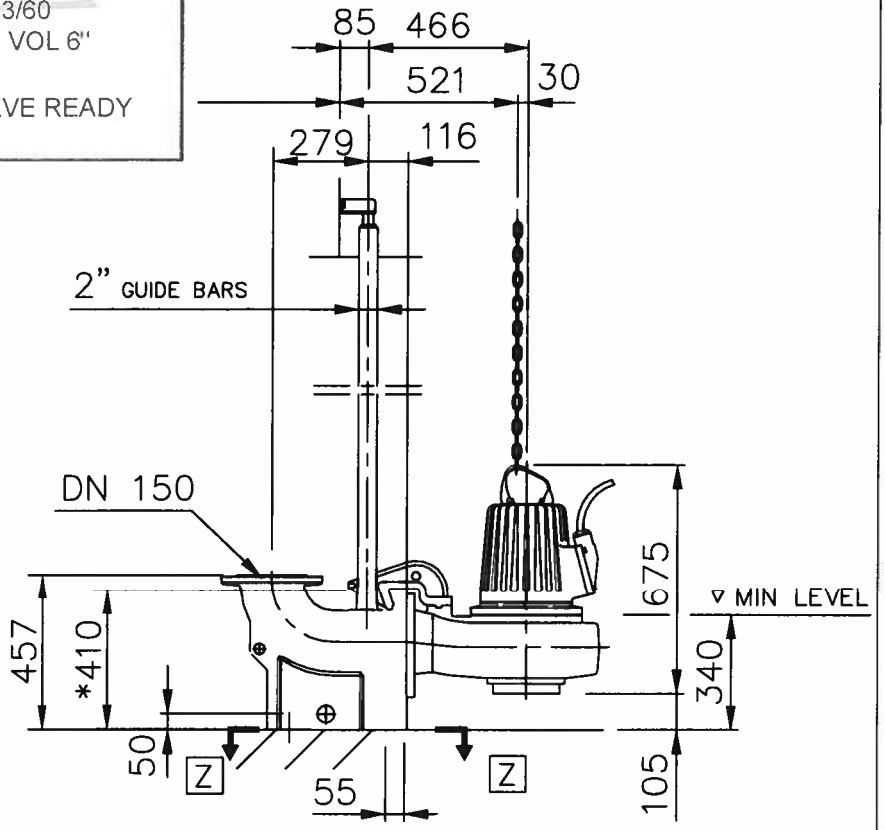


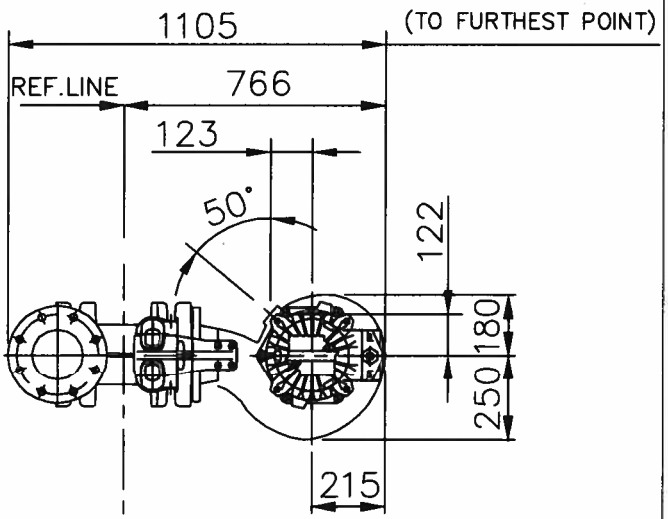
RECEIVED
MAY 27 2014
IBI GROUP

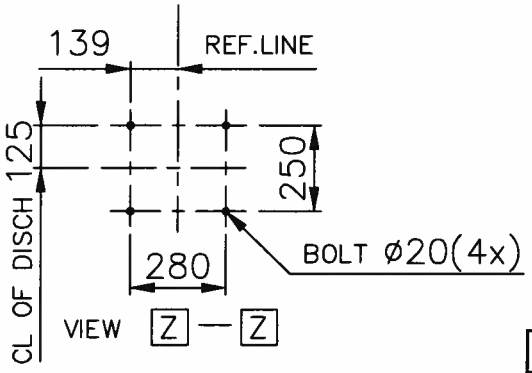
Registered in Canada

QTY 2 FLYGT MODEL NP-3127
SUBMERSIBLE PUMP 600 VOLT 3/60
10HP/7.5KW 1735 RPM LT IMP 425 VOL 6"
16M 4G2.5+2X1.5MM2
C/W FLS,ADAPTIVE N FLUSH VALVE READY









RECEIVED
MAY 27 2014
IBI GROUP

* DIMENSION TO ENDS OF GUIDE BARS

Weight (kg)	
Pump	Disch
159	91

AUTOCAD DRAWING	Denomination: Dimensional drwg CP,NP 3127 LT DN 150	Drawn by: DS / Checked by:	Date: 130326
		Scale: 1:20	Reg no: 5399
		7014200	4

xylem
Let's Solve Water

NP 3127 LT 3~ Adaptive 425

FLYGT

Performance curve

Pump

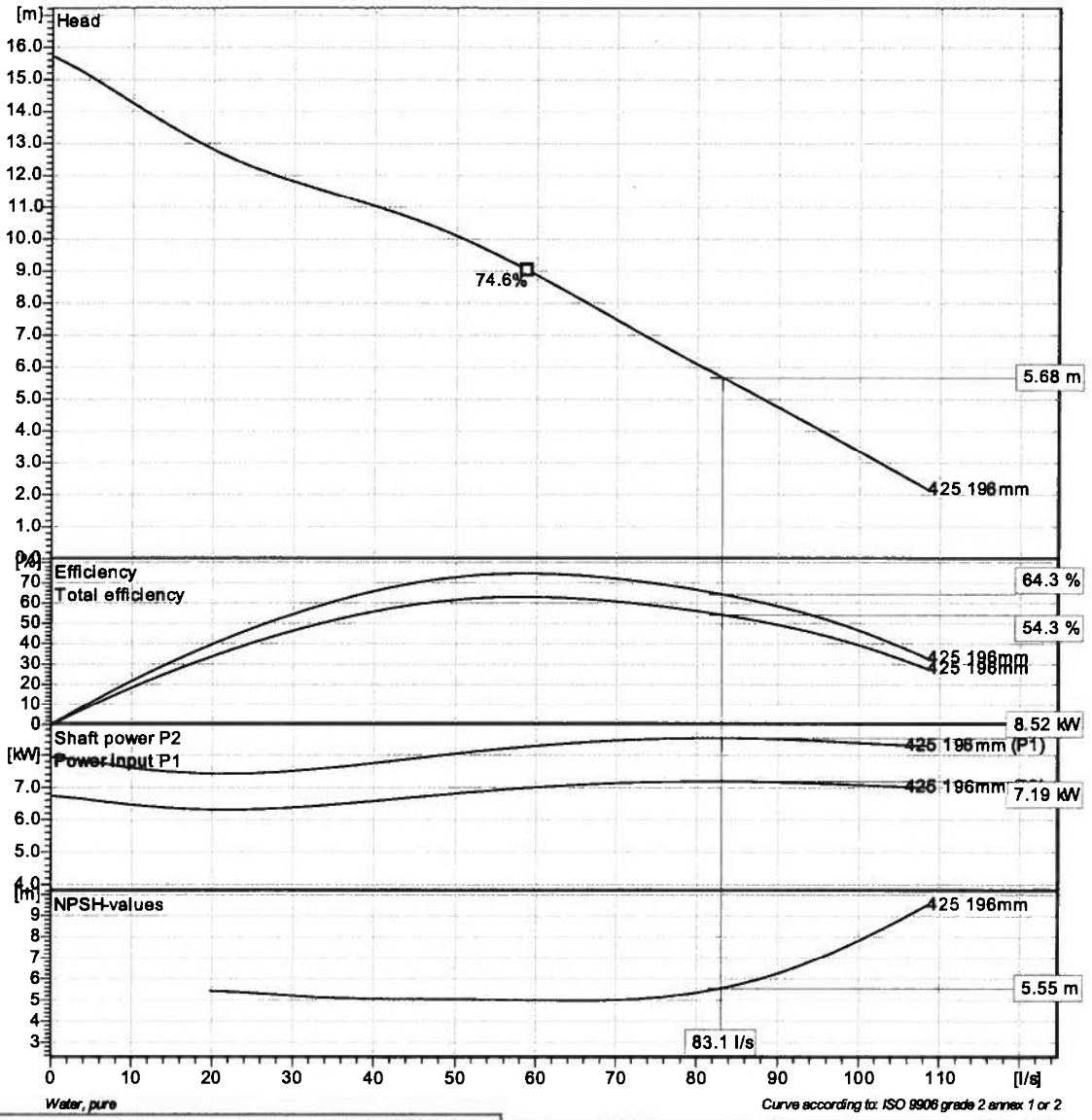
Discharge Flange Diameter	150 mm
Suction Flange Diameter	150 mm
Impeller diameter	196 mm
Number of blades	2

Motor

Motor #	N3127.160 21-12-4AL-W 10hp
Stator variant	52
Frequency	60 Hz
Rated voltage	600 V
Number of poles	4
Phases	3~
Rated power	7.46 kW
Rated current	9.7 A
Starting current	55 A
Rated speed	1735 rpm

Power factor	
1/1 Load	0.88
3/4 Load	0.86
1/2 Load	0.79

Efficiency	
1/1 Load	84.0 %
3/4 Load	85.0 %
1/2 Load	84.5 %



Duty point			Guarantee	
Flow	Head	Total eff.	HI:2000	Grade
81.6 l/s	5.55 m	51.7 %	Yes	Level A

Project	Project ID	Created by	Created on	Last update
			2014-05-22	

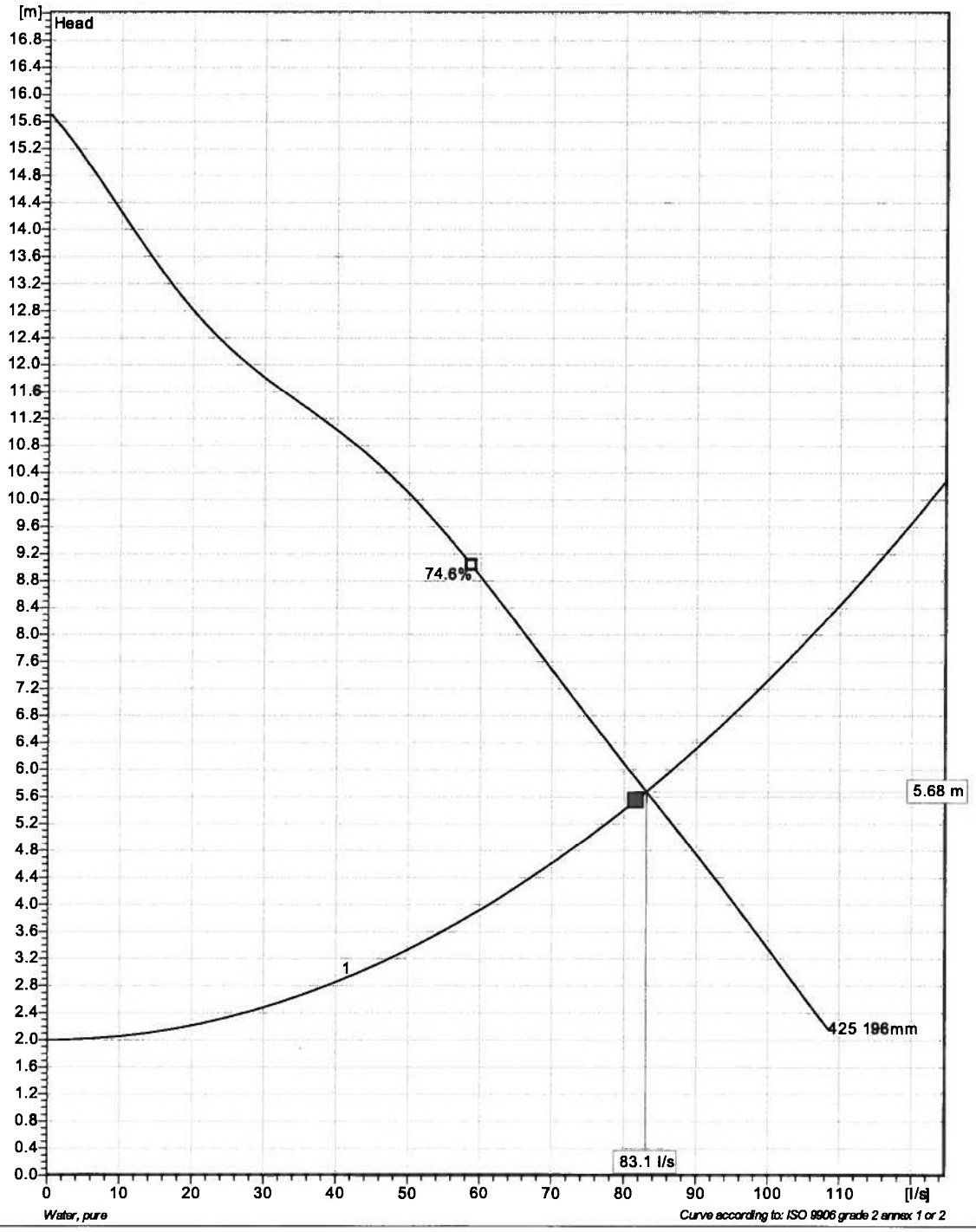
RECEIVED
MAY 27 2014
IBI GROUP

xylem
Let's Solve Water

NP 3127 LT 3~ Adaptive 425

FLYGT

Duty Analysis



Pumps running /System	Individual pump Flow	Head	Shaft power	Total Flow	Head	Shaft power	Hyd eff.	Specific energy	NPSHre
1	83.1 l/s	5.68 m	7.19 kW	83.1 l/s	5.68 m	7.19 kW	64.3 %	2.85E-5 kWh/l	5.55 m

Project	Project ID	Created by	Created on	Last update
			2014-05-22	

RECEIVED
MAY 27 2014
IBI GROUP

xylem	Station Equipment	DOCUMENT NO.	
		ES 8.1.3.1	
	Flush Valve Model 4901 Technical Information	SUPERSEDES	ISSUED
		04/2011	03/2013

PERFORMANCE : ONE FLUSH VALVE 4901 SHOULD BE SUFFICIENT TO HANDLE THE FLUSHING OF A PUMP STATION WITH A MAXIMUM DIAMETER OF 2.1 METERS.

LIQUID TEMPERATURE : MAX. 40° C.
FOR MINIMUM TEMPERATURE, REFER TO THE FREEZING POINT OF THE OIL USED IN THE VALVE OIL CASING.

FLUSHING TIME : THE RECOMMENDED FLUSHING PERIOD FOR THE 4901 IS 20 SEC. AND MAXIMUM 50 SEC. (CAN BE ADJUSTED BY THE REGULATING VALVE).

THE FLUSH VALVE IS OPEN WHEN THE PUMP STARTS AND CLOSES AFTER A CHOOSEN MIXING PERIOD. THE PUMP CONTINUES PUMPING UNTIL THE SHUT-OFF LEVEL IS REACHED. THE FLUSH VALVE OPENS AGAIN AT THE SHUT-OFF LEVEL.
EXECUTION WITHOUT OUTLET BEND AND WITHOUT OUTLET PIPE IS CALLED "SHORTER OUTLET".

STANDARD VERSION : (556 51 01) BLACK PAINTED VALVE BODY.

CLOSING DEVICE : CAST IRON BALL.

SPECIAL VERSION : (556 51 02) BLUE PAINTED VALVE BODY.

CLOSING DEVICE : POLYURETHANE BALL. (FOR LOW HEAD APPLICATIONS WITH 3085 AND 3102).

LIMITATIONS : AS THE OPERATION OF THE FLUSH VALVE DEPENDS ON THE PRESSURE AND FLOW PERFORMANCE OF THE PUMP, OPERATION CAN BE PREDICATED BY CALCULATION * IN BORDERLINE CASES.
THE LOWER LIMITS AT WHICH THE LIMITATIONS SHOULD BE CALCULATED ARE INDICATED IN THE TABLE.
THE MAXIMUM ALLOWABLE GEODETIC PUMP HEAD IS 70 METERS.

MAXIMUM ALLOWABLE PUMP HEAD : (FOR SPECIAL VERSION ONLY).
THE MAXIMUM ALLOWABLE GEODETIC PUMP HEAD IS 3.5 METERS.
THE MAXIMUM ALLOWABLE PUMP OPERATING HEAD (DUTY HEAD) IS 5.0 METERS. (CLOSED FLUSH VALVE).

MINIMUM PERMITTED GEODETIC *** PUMP HEAD WITHOUT CALCULATION

PUMP VERSION	CP 3085 3102 HT	CP/DP 3085 ** 3102 LT , MT	CP/DP 3127, 3140 3152, 3170, 3201 3300 LT/MT/HT
4901 TYPE OF OUTLET	STANDARD VERSION 556 51 01 (INCLUDES OUTLET BEND 586 68 00)		
OULET BEND 586 68 00	4.0m	4.5m	4.0m
SHORT OUTLET	4.0m	3.5m	3.0m
OULET PIPE 558 08 00 (OPTION)	4.0m	3.0m	2.5m

RECEIVED
MAY 27 2014
IBI GROUP

DIMENSIONS ARE IN mm

N.T.S.

xylem

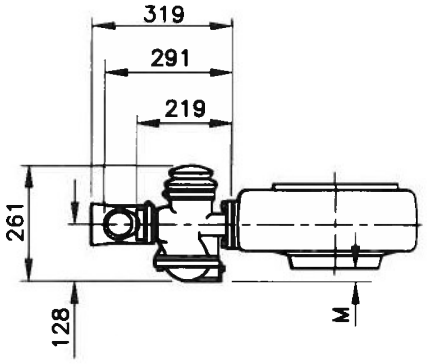
Station Equipment

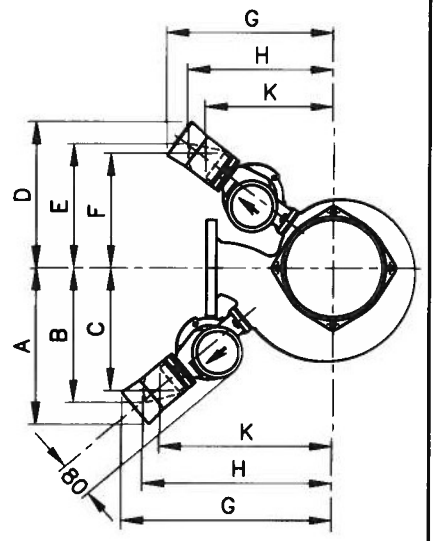
Dimensions Of Pumps With Mix Flush Valve Model 4901

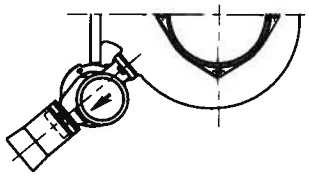
DOCUMENT NO.	
ES 8.1.4.1	
SUPERSEDES	ISSUED
04/2011	03/2013

Pump		Impeller(s)	Volute	A	B	C	D	E	F	G	H	K	M
3085	HT	252		391	351	293	—	—	—	315	284	267	68
	MT	434, 436 438, (440)*		382	336	295	—	—	—	398	355	328	45
	LT	414		387	345	291	—	—	—	380	346	327	18
3102	SH	257		SEE M-135815									
	HT	254		374	346	274	—	—	—	296	296	296	—
	MT	432, 433, 434 435		332	283	265	—	—	—	463	417	374	22
	LT	411, 412 441, 442	4"	352	303	279	—	—	—	479	433	395	30
		411, 412 441, 442	6"	389	341	309	—	—	—	449	403	369	30
3127	HT	481, 483 484, 485		412	363	338	—	—	—	452	405	367	14
	MT	432, 433 434, 436	4"	367	318	293	—	—	—	464	417	380	7
		432, 433 434, 436	6"	395	346	321	—	—	—	480	433	396	2
	LT	411, 412, 442		—	—	—	363	314	289	397	350	313	—
3140	HT	480, 481		412	363	338	—	—	—	450	403	366	—
	MT	436		395	346	326	—	—	—	548	500	459	—
	LT	612, 614		—	—	—	382	333	313	450	402	361	—
3152	SH	266, 267 268, 269		386	337	312	—	—	—	490	443	406	14
	HT	452, 454	4"	386	337	312	—	—	—	490	443	406	14
		452, 454	6"	353	304	288	—	—	—	527	479	436	—
	MT	432, 434, 436		395	346	326	—	—	—	548	500	459	—
	LT	620, 622, 624		—	—	—	432	384	352	432	386	352	—
3153	SH	273, 274 275, 276		—	—	—	399	351	319	400	355	321	—
	HT	461, 462, 463 464, 465, 466		—	—	—	369	320	295	427	381	342	18
	MT	433, 434, 435 436, 437		—	—	—	369	321	295	427	380	342	—
	LT	413, 414, 415, 416		—	—	—	369	320	295	427	381	342	23
		622, 623, 624, 625		—	—	—	428	381	349	429	383	349	72

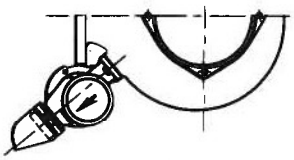
* SPECIAL APPLICATION







WITH STRAIGHT NOZZLE
(REFER TO DIM. A, D & G)



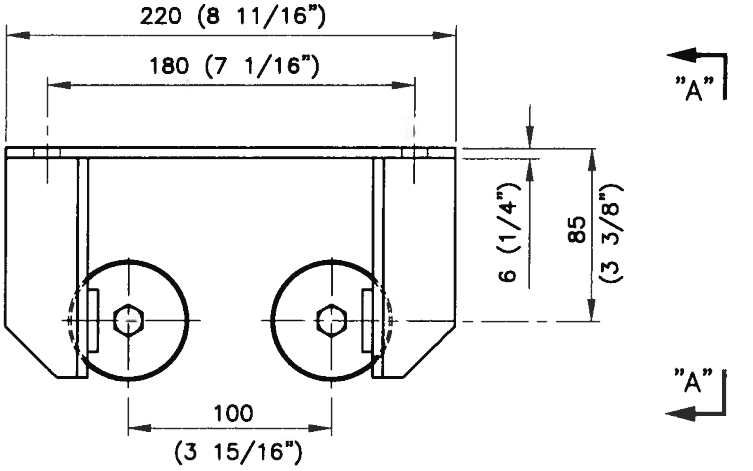
WITH ANGLE NOZZLE
(REFER TO DIM. B, E & H)

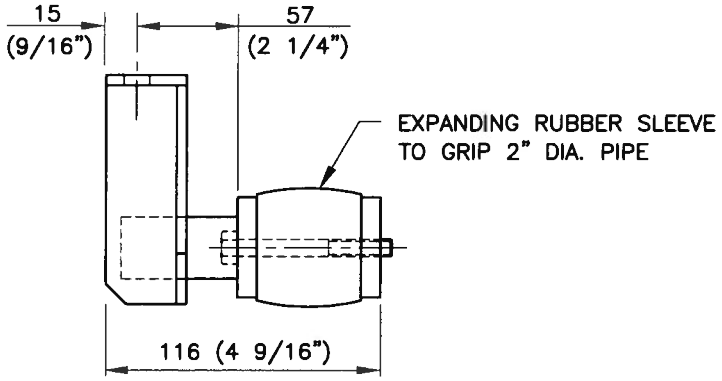
RECEIVED
MAY 27 2014
IRI GROUP

DIMENSIONS ARE IN mm

N.T.S.

xylem	Station Equipment	DOCUMENT NO.	
		ES 1.2.2	
	Upper Guide Bar Holder for 2" Guide Bar	SUPERSEDES	ISSUED
		07/2010	11/2012





VIEW "A"–"A"

PART NO. 13–52 06 04
(STAINLESS STEEL 316)

← Qty 1 per pump

USED FOR PUMPS:

DP 3067	CP/NP 3127
DP 3068	CP/NP 3140
CP/NP 3085	CP/NP 3152
CP/NP 3102	NP 3153
	NP 3171 (new installation)

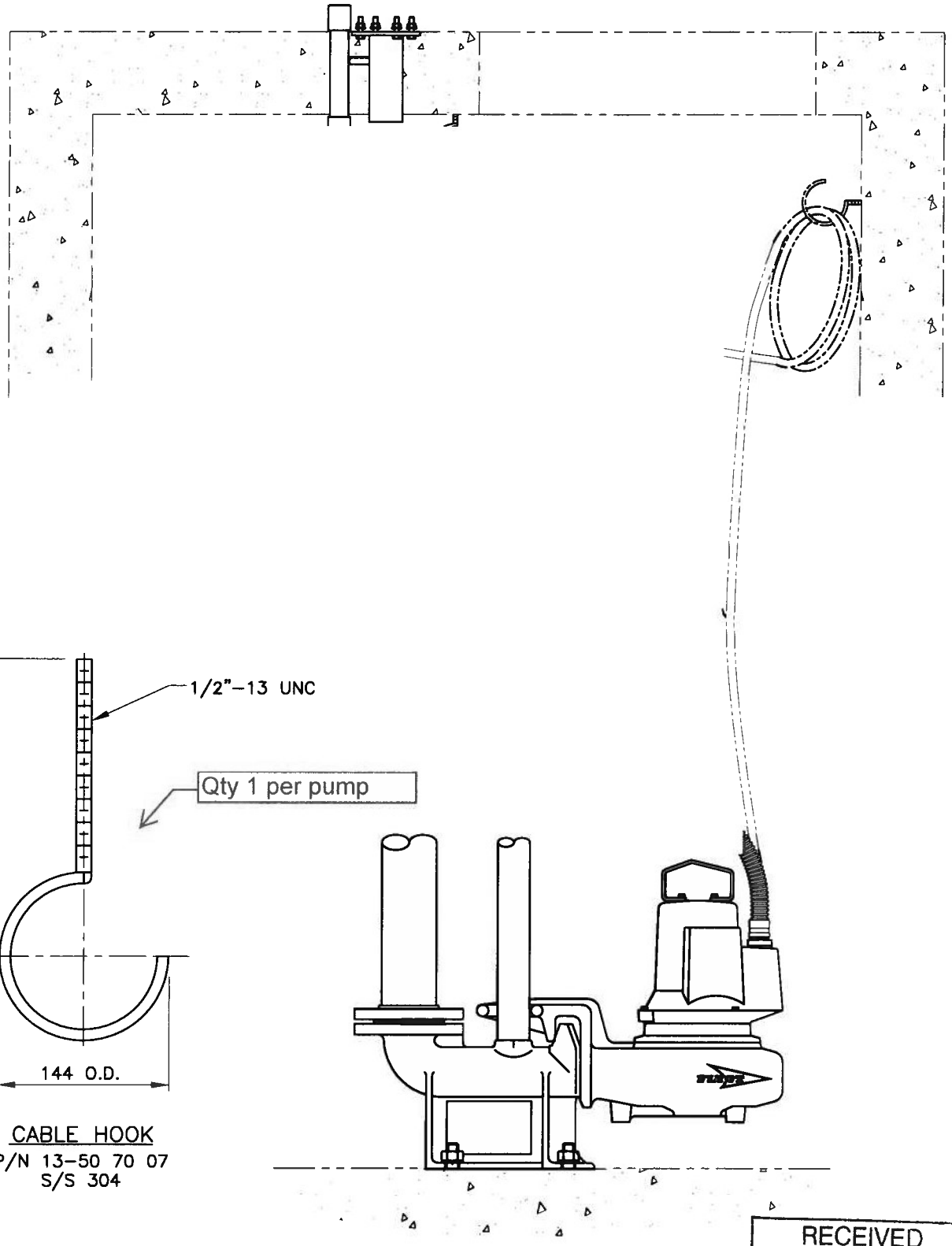
RECOMMENDED BOLTING MATERIAL : 2 BOLTS 7/16"–14 UNC
C/W NUTS & WASHERS (NOT SUPPLIED BY FLYGT)

RECEIVED
MAY 27 2014
IBI GROUP

DIMENSIONS ARE IN mm

N.T.S.

xylem	Station Equipment	DOCUMENT NO.	
		ES 10.3.5	
	Cable Suspending Method With Or Without Cable Protector System	SUPERSEDES	ISSUED
		12/2010	10/2012



CABLE HOOK
P/N 13-50 70 07
S/S 304

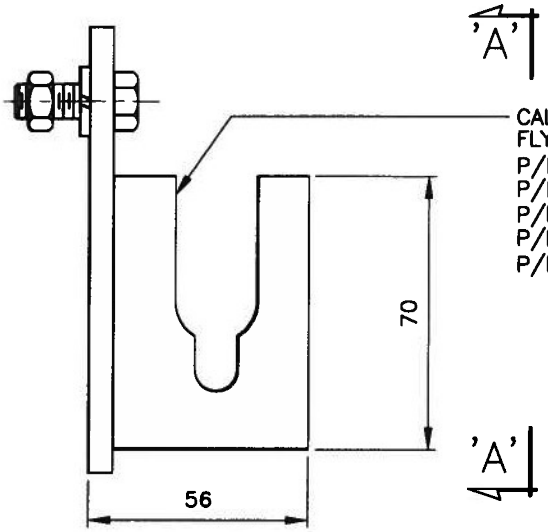
RECEIVED
MAY 27 2014
IBI GROUP

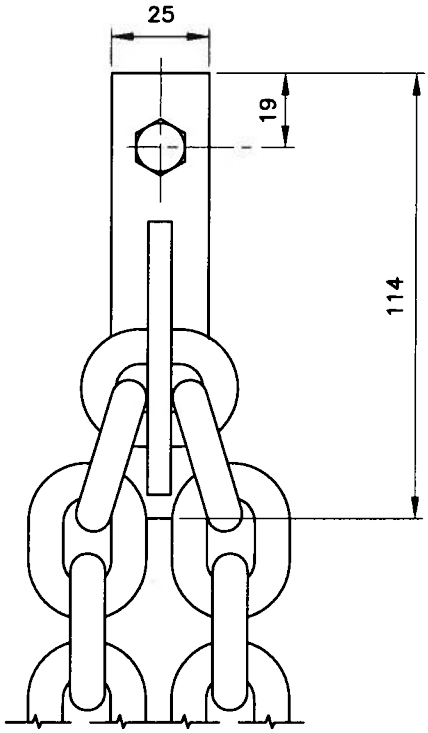
DIMENSIONS ARE IN mm

N.T.S.

xylem	Station Equipment	DOCUMENT NO.	
		ES 4.32.1.3	
	Galvanized Chain Hook P/N 13-52 03 51	SUPERSEDES	ISSUED
		08/2009	11/2012

QTY 1 PER PUMP





VIEW 'A'–'A'

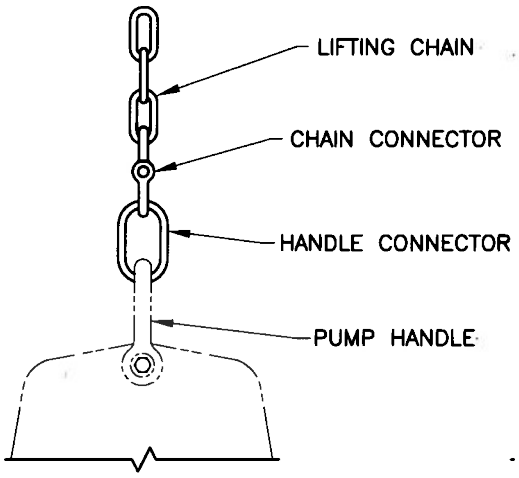
(NOT TO BE USED TO HANG PUMP)

SUPPLIED COMPLETE WITH A ZINC PLATED BOLT 3/8"–16 UNC X 1" LG., NUT AND LOCKWASHER

RECEIVED
MAY 27 2014
IBI GROUP

DIMENSIONS ARE IN mm

N.T.S.



TYPE 1

5m per pump

QTY 1

QTY 1

ALL ACCESSORIES ARE SUPPLIED LOOSE.
INSTALLATION ON PUMP BY CUSTOMER.

LIFTING ARRANGEMENT		CHAIN		CHAIN CONNECTOR		HANDLE CONNECTOR		SYSTEM CAPACITY kg.(lbs.)
TYPE	CATEGORY	SIZE	P/N	SIZE	P/N	SIZE	P/N	
1	A	9/32"	13-52 01 91	9/32"	13-52 01 93	1/2"	13-44 00 30	624 (1375)
	B	3/8"	13-52 02 07	3/8"	13-52 02 09	3/4"	13-44 00 75	1247 (2749)
	C	5/8"	13-45 00 12	5/8"	13-44 00 26	3/4"	13-44 00 75	2175 (4795)
2	A	3/8"	13-52 02 07	3/8"	13-52 02 09	5/8"	13-44 00 26	1247 (2749)
	B	5/8"	13-45 00 12	5/8"	13-44 00 26	1"	13-44 00 29	3220 (7098)
	C	3/4"	13-45 00 13	3/4"	13-44 00 27	1"	13-44 00 29	5035 (1110)
	D	7/8"	13-45 00 14	7/8"	13-44 00 28	1"	13-44 00 29	6100 (13448)
3	A	5/8"	13-45 00 12	N/R	N/R	5/8"	13-44 00 26	3220 (7098)
	B	1"	13-45 00 51	N/R	N/R	1"	13-44 00 29	8505 (18750)
	C	1 1/4"	13-45 00 52	N/R	N/R	1 1/4"	13-44 00 74	12927 (28500)

NOTES :

1 – CHAINS ARE :
- SUITABLE FOR OVERHEAD LIFTING PER N.A.C.M. AND ASTM A391
- MADE OF ALLOY STEEL, GRADE 80, HOT DIP GALVANIZED.
- QUANTITY = BY METER

2 – CHAIN CONNECTORS ARE :
- SUITABLE FOR OVERHEAD LIFTING PER N.A.C.M. AND ASTM A952
- MADE OF ALLOY STEEL, GRADE 80, PLATED
- QUANTITY = BY PIECE

3 – HANDLE CONNECTORS ARE :
- SUITABLE FOR OVERHEAD LIFTING PER N.A.C.M. AND ASTM A952
- MADE OF ALLOY STEEL, GRADE 80, PLATED (TYPES 2 & 3) OR HOT DIP GALVANIZED (TYPE 1).
- QUANTITY = BY PIECE

4 – SEE DOCUMENT NO. ES 4.40.1.1/ES 4.40.2.1/ES 4.40.2.2 FOR PROPER SELECTION.

RECEIVED
MAY 27 2014
IBI GROUP

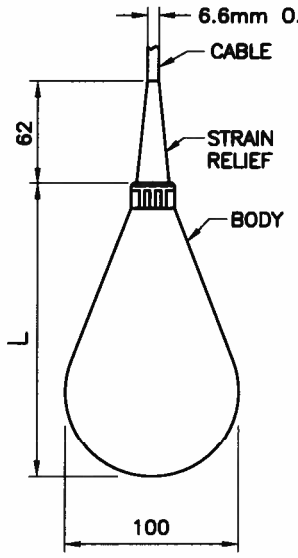
N/R: NOT REQUIRED

xylem

Station Equipment

ENM-10 Level Regulator
P/N 582 88 XX

DOCUMENT NO.	
ES 6.1.1	
SUPERSEDES	ISSUED
11/2010	02/2013



DESCRIPTION:

THE ENM-10 CONTAINS A MECHANICAL SWITCH IN A SEALED PLASTIC CASING. IT IS USED TO ACTIVATE ELECTRICAL DEVICES, SUCH AS PUMPS AND ALARMS, BASED ON THE LEVEL OF A LIQUID.

OPERATION:

THE ENM-10 LEVEL SENSOR IS SUSPENDED FROM ITS OWN CABLE. WHEN LIQUID REACHES THE SENSOR IT TILTS AND AN ECCENTRIC WEIGHT ACTIVATES A MECHANICAL SWITCH. THE ENM-10 DOES NOT FLOAT, BUT REMAINS SUSPENDED IN THE LIQUID.

MATERIALS:

BODY: POLYPROPYLENE (GREY)
STRAIN RELIEF: EPDM RUBBER
CABLE: SEE TABLE
WEIGHT: ZINC

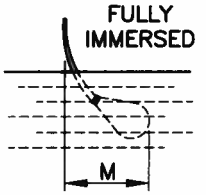
OPERATING PARAMETERS:

AMBIENT TEMPERATURE RANGES: 0° TO 60°C.

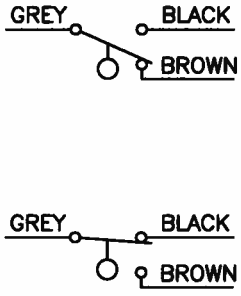
ELECTRICAL: CONDUCTORS: QTY. 3, 0.75mm DIA. (#19AWG)
INTERRUPTING CAPACITY OF MICRO SWITCH: AC RESISTIVE LOAD, 250V, 10A.
AC INDUCTIVE LOAD, 250V, 3A.(COSø=0.5)
DC 30V,5A

* WITH GOLD PLATED MICRO SWITCH: SAME AS ABOVE EXCEPT DC 24V 10mA

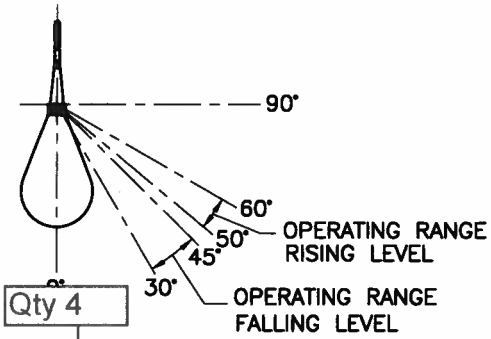
CSA APPROVED: LR 24026-6



SENSOR POSITION



SWITCH POSITION



SELECTION CHART

SPECIFIC GRAVITY	CABLE LENGTH meter	BODY LENGTH (L) mm	(M) MINIMUM FOR GOOD OPERATION	P/N N.B.R./P.V.C. GREY CABLE	P/N P.V.C. GREY CABLE	P/N P.V.C. RED CABLE	WEIGHT kg.	
0.65 – 0.80	20	194	250	582 88 09	582 88 18	N/A	2.0	
0.80 – 0.95	20	177	240	582 88 10	582 88 19	N/A	2.0	
0.95 – 1.10	6	163	225	582 88 11	582 88 20	582 88 55	1.2	
0.95 – 1.10	13	162	225	582 88 12	582 88 21	582 88 56	1.6	
0.95 – 1.10	20	162	225	582 88 13	582 88 22	582 88 57	2.0	*
0.95 – 1.10	30	162	225	582 88 36	582 88 82	N/A	3.0	
0.95 – 1.10	50	162	225	582 88 37	582 88 83	N/A	4.0	
0.95 – 1.10	100	162	225	582 88 38	N/A	N/A	7.0	
0.95 – 1.10	150	162	225	582 88 39	N/A	N/A	10.0	
1.05 – 1.20	20	142	205	582 88 14	582 88 23	N/A	2.0	
1.20 – 1.30	20	133	200	582 88 15	582 88 24	N/A	2.0	
1.30 – 1.40	20	130	195	582 88 16	582 88 25	N/A	2.0	
1.40 – 1.50	20	126	195	582 88 17	582 88 26	N/A	2.0	*

N/A= NON AVALABLE

* 594 79 20 WITH GOLD PLATED CONTACT IS DESIGN FOR LOW CURRENT, SLOW MOVEMENTS AND OIL.

DIMENSIONS ARE IN mm

N.T.S.

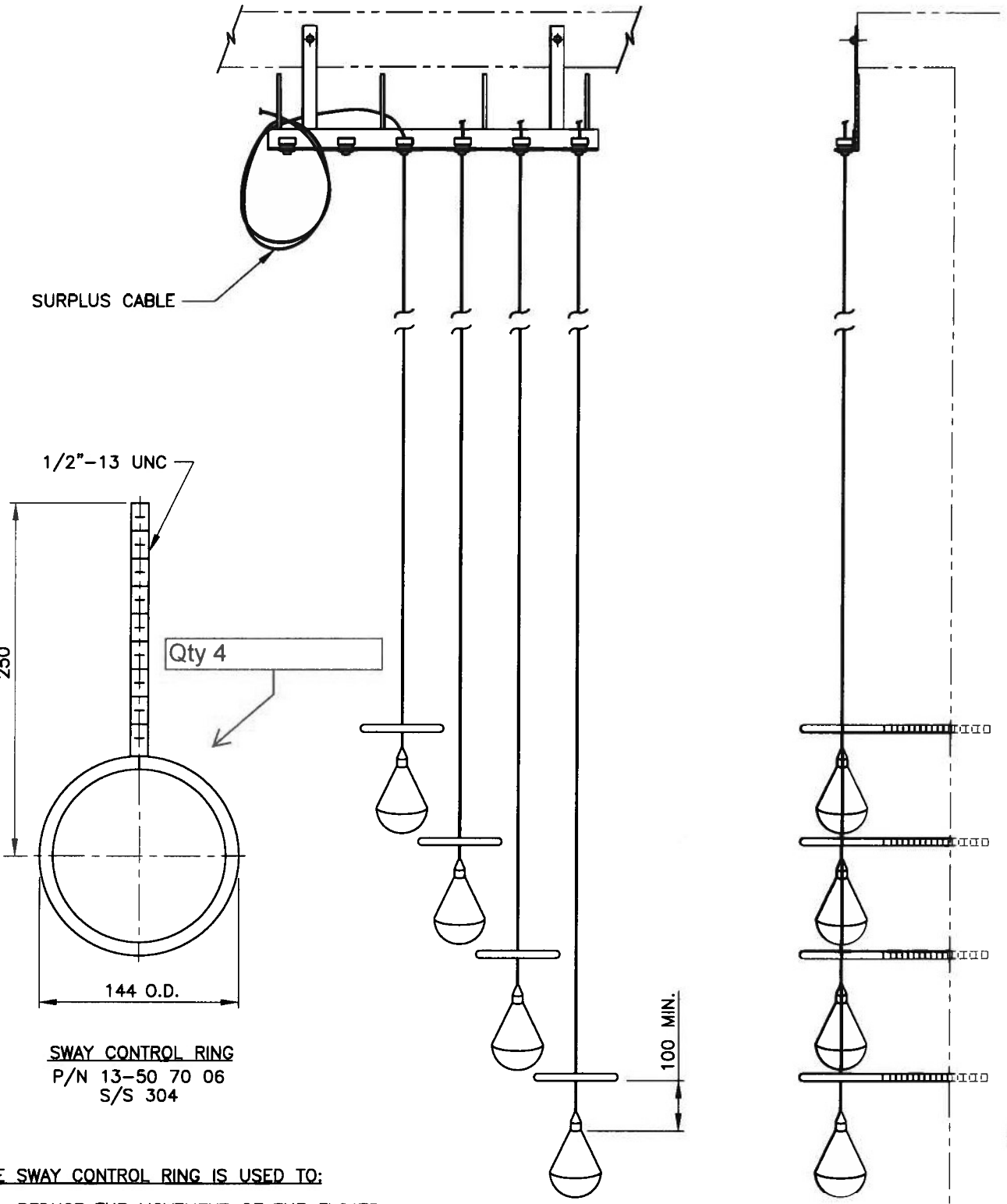
RECEIVED
MAY 27 2014
IBI GROUP

xylem

Station Equipment

Sway Control Ring
P/N 13-50 70 06

DOCUMENT NO.	
ES 6.4.1	
SUPERSEDES	ISSUED
11/2010	02/2013



SWAY CONTROL RING
P/N 13–50 70 06
S/S 304

THE SWAY CONTROL RING IS USED TO:

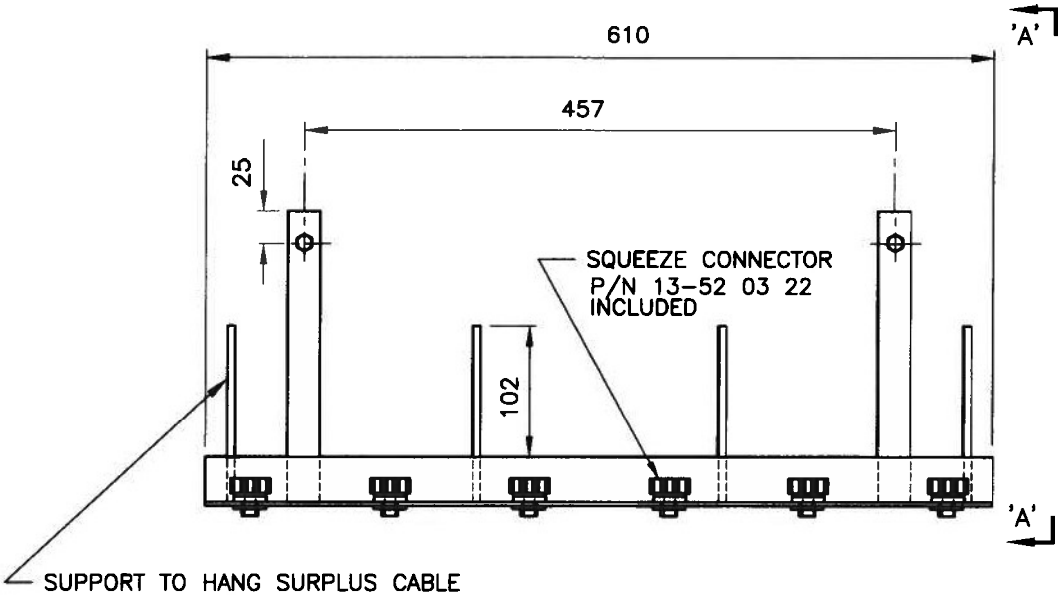
- REDUCE THE MOVEMENT OF THE FLOATS.
- AVOID THE POSSIBILITY, IN A TURBULANT ENVIRONMENT, THAT THE FLOAT CABLES BE ENTANGLED TOGETHER AND INTERFERE WITH EACH OTHER FOR PROPER FUNCTIONING.

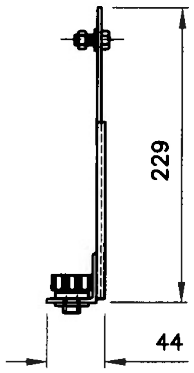
RECEIVED
MAY 27 2014
IBI GROUP

DIMENSIONS ARE IN mm

N.T.S.

xylem	Station Equipment	DOCUMENT NO.	
		ES 6.4.2	
	Horizontal Level Regulator Hanger	SUPERSEDES	ISSUED
		11/2010	02/2013





VIEW 'A'-'A'

GALVANIZED STEEL P/N 13-52 00 06 ← Qty 1

USED WITH ENM-10

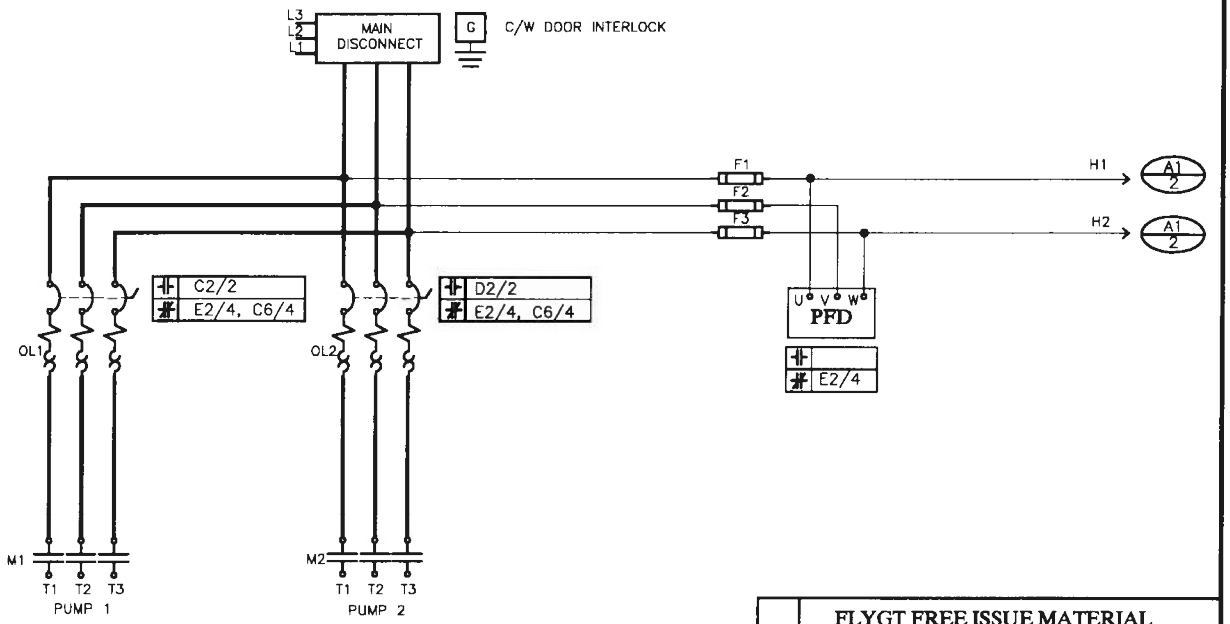
SEE DOC. ES 6.1.1

SUPPLIED WITH SQUEEZE CONNECTORS, NUTS & BOLTS 3/8"-16 UNC X 1" LG.

RECEIVED
MAY 27 2014
IBI GROUP

DIMENSIONS ARE IN mm

N.T.S.



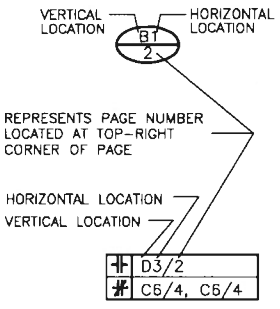
FLYGT FREE ISSUE MATERIAL

QTY	DESCRIPTION	PART NUMBER
1	LOGIMAC 210/220	13-50 90 **69**
2	MINI CAS II KIT	13-70 20 00

LEGEND

A	NORMALLY OPEN BREAKER STATUS CONTACT
B	NORMALLY CLOSED BREAKER STATUS CONTACT
F	FUSE (HRCI, TIME DELAY)
F4	FUSE (GDL 2/10 TIME DELAY OR EQUIVALENT)
M	CONTACTOR
OL	OVERLOAD
S	SELECTOR
TX	TRANSFORMER
TH	THERMOSTAT
I1-16	DIGITAL INPUT
Q1-12	DIGITAL OUTPUT
FL	FLASHER
TT	TIME TOTALIZER
PFD	PHASE FAILURE DETECTOR (GAVAZZI DPA)

REFERENCES:



NOTES:

1) ALL AC RELAYS & CONTACTOR MUST BE INSTALLED WITH RC SUPPRESSORS AND DC RELAYS WITH DIODE SUPPRESSORS.

RECEIVED
MAY 27 2014
IBI GROUP

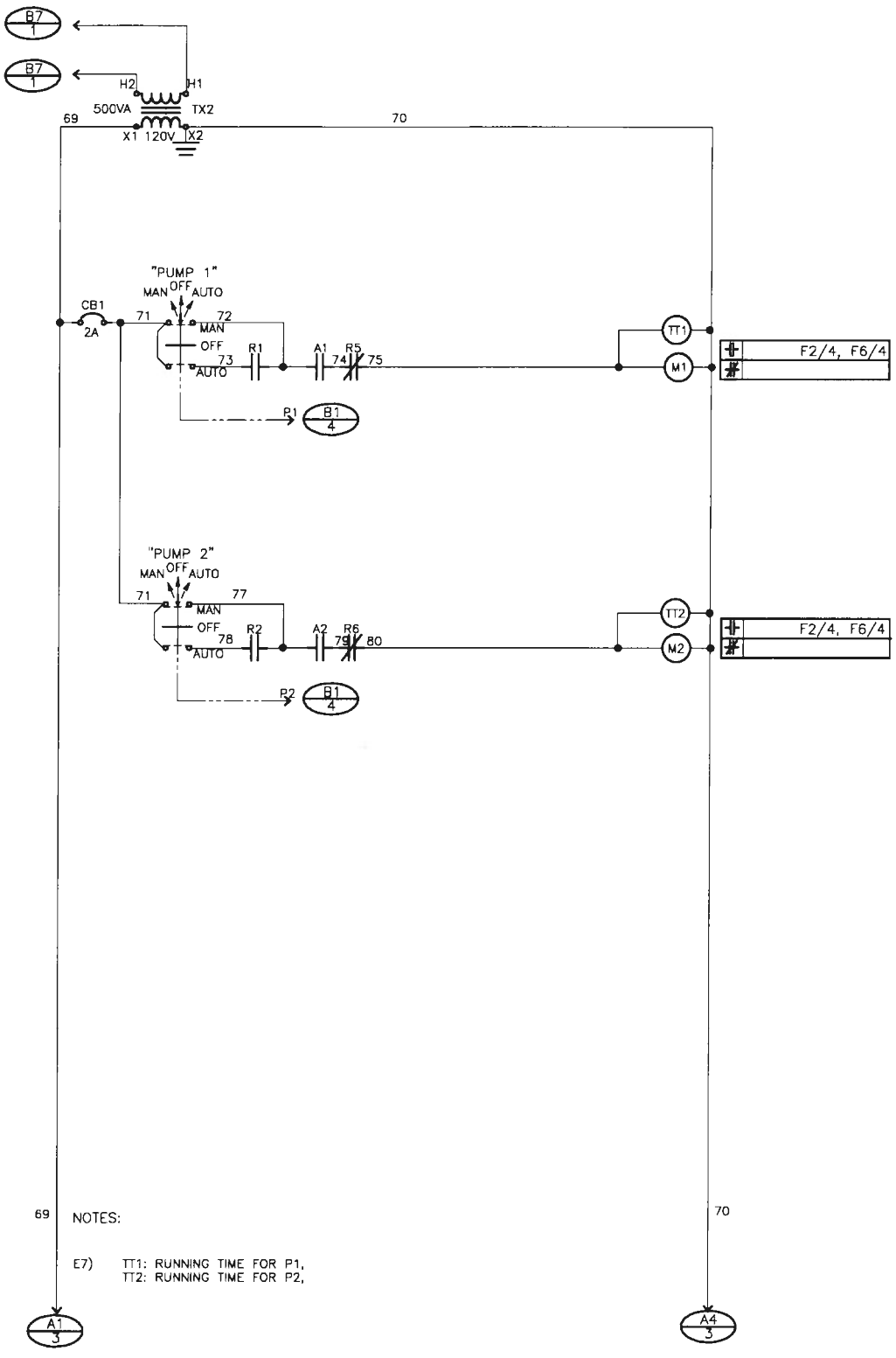
CE DESSIN ET L'INFORMATION DÉCRITE SONT LA PROPRIÉTÉ UNIQUE DE ITT WATER & WASTEWATER ET NE DOIVENT ÊTRE UTILISÉS OU COPIÉS SANS LA PERMISSION ÉCRITE DE/OU SOUS CONTRAT AVEC ITT WATER & WASTEWATER.
THIS DRAWING AND THE INFORMATION SHOWN THEREON IS THE SOLE PROPERTY OF ITT WATER & WASTEWATER AND MAY NOT BE USED OR COPIED WITHOUT THE EXPRESS PERMISSION IN WRITING OF/OR UNDER CONTRACT WITH ITT WATER & WASTEWATER.

ITT | Water & Wastewater

TITLE: Logimac 210/220 Controls Basic Schematic

CONTROLLER: LOGIMAC 210/220	PUMP MODEL: XXXX	QTY: 2	CUSTOMER:	DRAWING BY: Thomas Handfield	DATE: 7/15/1999	SCALE:	FORMAT: A
VOLTAGE: 600	PHASE: 3	CYCLE:	RATED BRAKE H.P.: XX	LOCATION: REFERENCE DRAWING	APPROVED BY:	DATE:	PROJECT No.: L210/220
OPTIONS: A6A;E7;H1;M5;V11;C2;G1;N1;U1;W3				DWG NO. E-17793			REVISION #

doc#: 17793 v#: 1 10/4/2010



NOTES:

E7) TT1: RUNNING TIME FOR P1,
TT2: RUNNING TIME FOR P2,

RECEIVED
MAY 27 2014
IBI GROUP

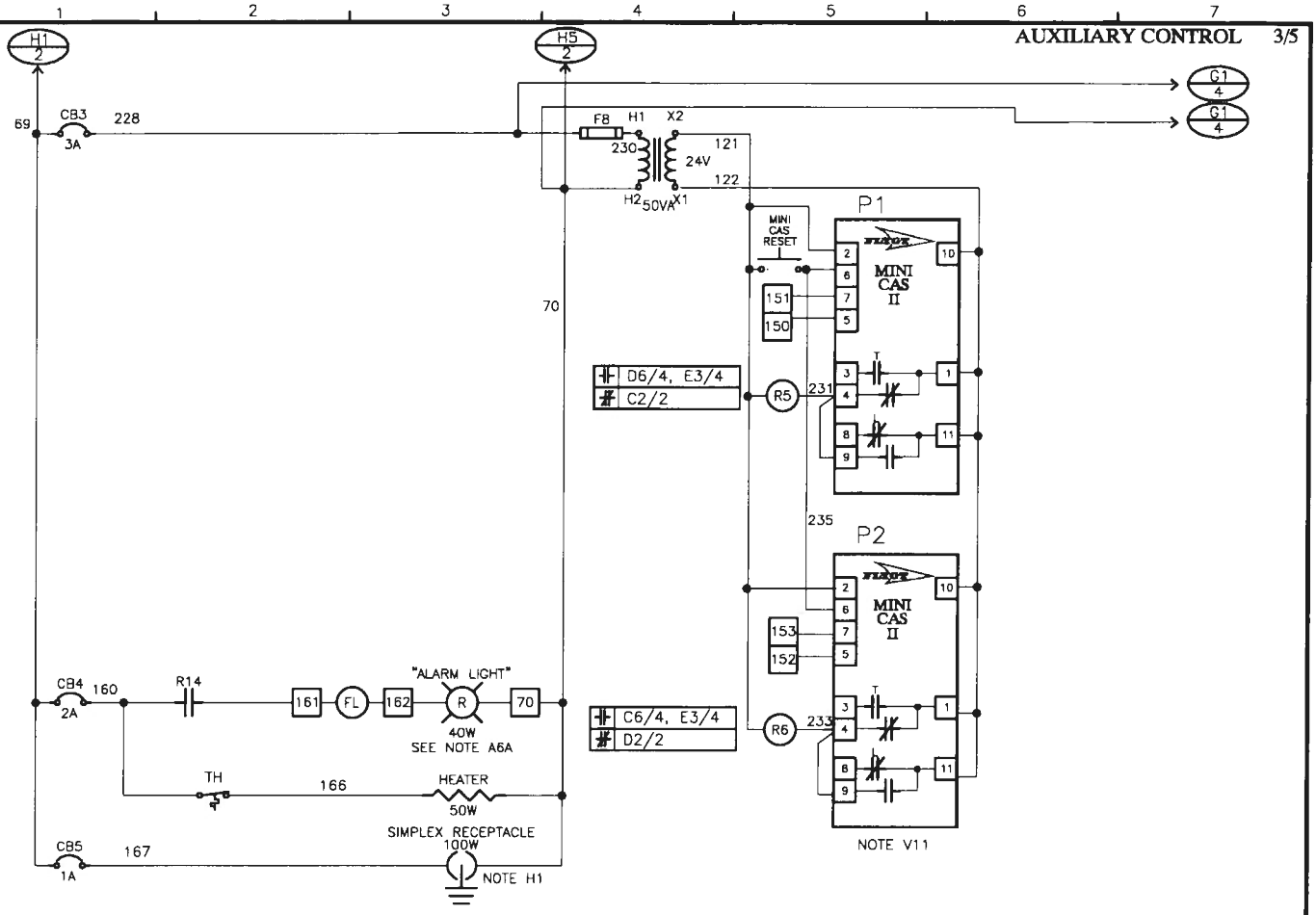
CE DESSIN ET L'INFORMATION DÉCRITE SONT LA PROPRIÉTÉ UNIQUE DE ITT WATER & WASTEWATER ET NE DOIVENT ÊTRE UTILISÉS OU COPIÉS SANS LA PERMISSION ÉCRITE DE/OU SOUS CONTRAT AVEC ITT WATER & WASTEWATER.
THIS DRAWING AND THE INFORMATION SHOWN THEREON IS THE SOLE PROPERTY OF ITT WATER & WASTEWATER AND MAY NOT BE USED OR COPIED WITHOUT THE EXPRESS PERMISSION IN WRITING OF/OR UNDER CONTRACT WITH ITT WATER & WASTEWATER.

ITT | Water & Wastewater

TITLE: Logimac 210/220 Controls Basic Schematic

CONTROLLER: LOGIMAC 210/220	PUMP MODEL: XXXX	QTY: 2	CUSTOMER:	DRAWING BY: Thomas Handfield	DATE: 7/15/1999
VOLTAGE: 600	PHASE: 3	CYCLE:	RATED BRAKE H.P.: XX	LOCATION: REFERENCE DRAWING	APPROVED BY:
OPTIONS: A6A;E7;H1;M5;V11;C2;G1;N1;U1;W3				DWG NO. E-17793	REVISION #

SCALE: FORMAT: A
DATE:
PROJECT No.: L210/220



NOTES:

A6A) ALARM LIGHT SHALL BE INSTALLED ON THE TOP OF CONTROL PANEL

H1) ONE LAMICOIDE STICKER ON TOP OF THE RECEPTACLE SHALL READ: "RECEPTACLE, 100W MAX."

V11) THE MINI-CAS II UNIT SHALL BE MOUNTED ON THE DOOR.

RECEIVED
MAY 27 2014
IBI GROUP

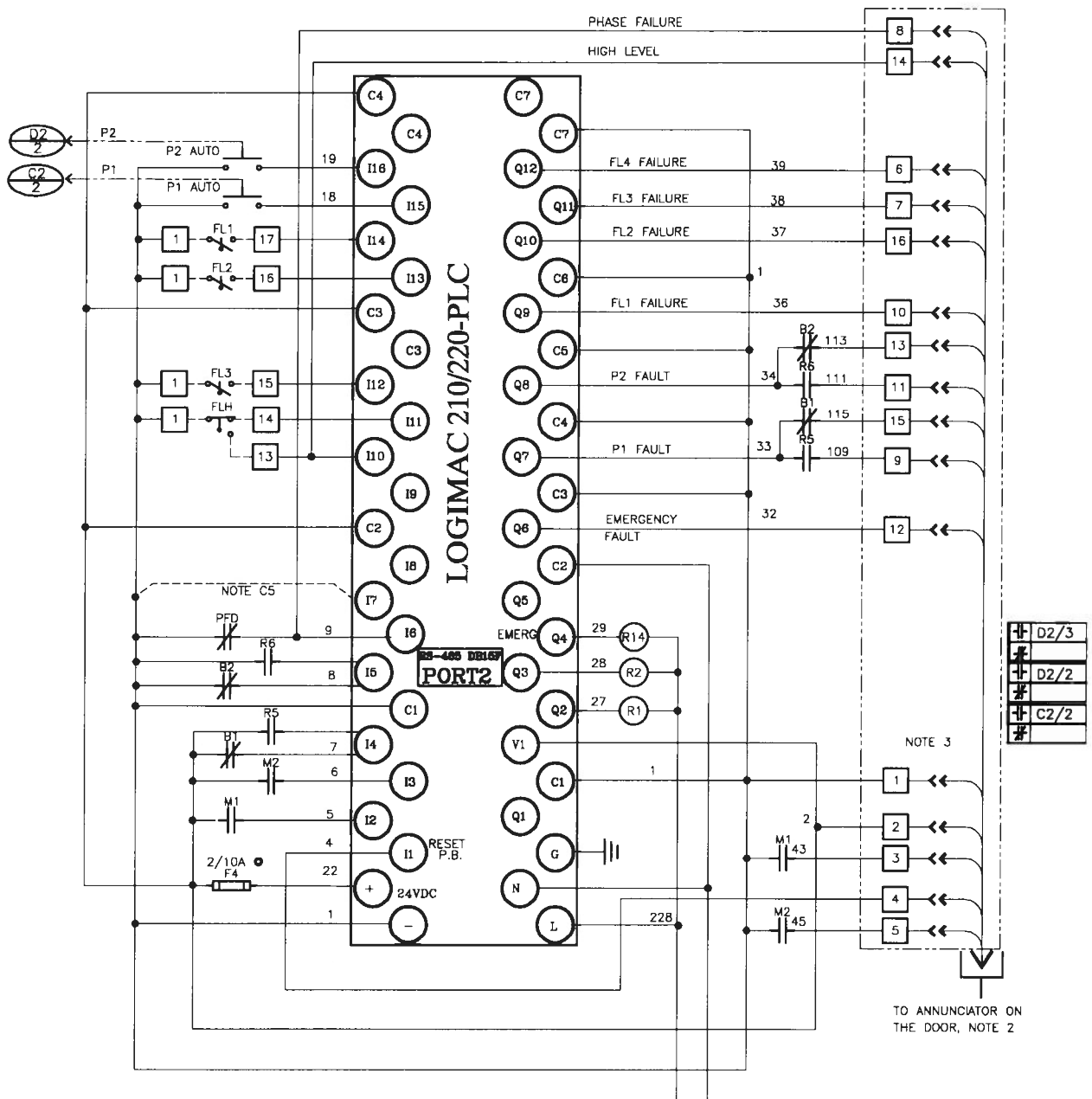
CE DESSIN ET L'INFORMATION DÉCRITE SONT LA PROPRIÉTÉ UNIQUE DE ITT WATER & WASTEWATER ET NE DOIVENT ÊTRE UTILISÉS OU COPIÉS SANS LA PERMISSION ÉCRITE DE/OU SOUS CONTRAT AVEC ITT WATER & WASTEWATER.
THIS DRAWING AND THE INFORMATION SHOWN THEREON IS THE SOLE PROPERTY OF ITT WATER & WASTEWATER AND MAY NOT BE USED OR COPIED WITHOUT THE EXPRESS PERMISSION IN WRITING OF/OR UNDER CONTRACT WITH ITT WATER & WASTEWATER.

ITT | Water & Wastewater

TITLE: Logimac 210/220 Controls Basic Schematic

CONTROLLER: LOGIMAC 210/220	PUMP MODEL: XXXX	QTY: 2	CUSTOMER:	DRAWING BY: Thomas Handfield	DATE: 7/15/1999
VOLTAGE: 600	PHASE: 3	CYCLE:	RATED BRAKE H.P.: XX	LOCATION: REFERENCE DRAWING	APPROVED BY:
OPTIONS: A6A;E7;H1;M5;V11;C2;G1;N1;U1;W3				DWG NO. E-17793	REVISION #

SCALE: FORMAT: A
DATE:
PROJECT No.: L210/220



NOTES:

1) R1, R2 AND R14 120VAC RELAYS
2) CONNECTION TO ANNUNCIATOR BY CABLE SUPPLIED WITH ANNUNCIATOR.
3) BOARD CONNECTOR WITH A RECEPTACLE FOR THE CABLE SUPPLIED WITH THE ANNUNCIATOR. (FOR INSTALLATION ON RAIL DIN)

C5) PUT THIS JUMPER TO DISABLE A PARALLEL OPERATION (FOR LOGIMAC 210 SEQUENCE)

RECEIVED
MAY 27 2014
IBI GROUP

CE DESSIN ET L'INFORMATION DÉCRITE SONT LA PROPRIÉTÉ UNIQUE DE ITT WATER & WASTEWATER ET NE DOIVENT ÊTRE UTILISÉS OU COPIÉS SANS LA PERMISSION ÉCRITE DE/OU SOUS CONTRAT AVEC ITT WATER & WASTEWATER.
THIS DRAWING AND THE INFORMATION SHOWN THEREON IS THE SOLE PROPERTY OF ITT WATER & WASTEWATER AND MAY NOT BE USED OR COPIED WITHOUT THE EXPRESS PERMISSION IN WRITING OF/OR UNDER CONTRACT WITH ITT WATER & WASTEWATER.

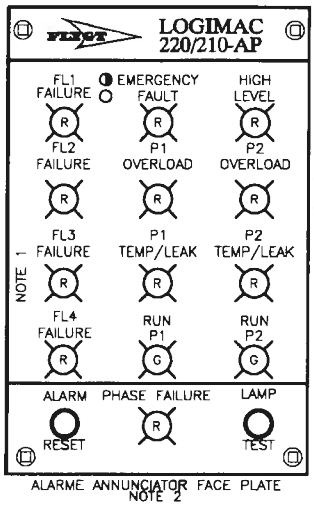
ITT | Water & Wastewater

TITLE: Logimac 210/220 Controls Basic Schematic

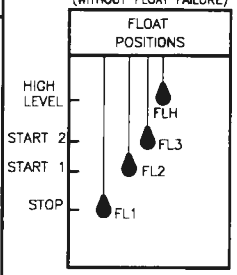
CONTROLLER:	PUMP MODEL:	QTY:	CUSTOMER:	DRAWING BY:	DATE:	SCALE:	FORMAT:
LOGIMAC 210/220	XXXX	2		Thomas Handfield	7/15/1999		A
VOLTAGE: 600	PHASE: 3	CYCLE:	RATED BRAKE H.P.: XX	LOCATION: REFERENCE DRAWING	APPROVED BY:	DATE:	PROJECT No.: L210/220

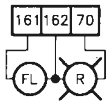
OPTIONS: A6A;E7;H1;M5;V11;C2;G1;N1;U1;W3

DWG NO. E-17793 REVISION #

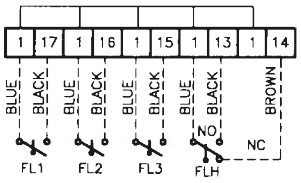


ALARME ANNUNCIATOR FACE PLATE
NOTE 2



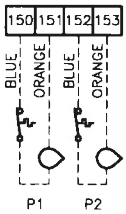


"ALARM LIGHT"



NOTES:

1) NOT USED IN LOGIMAC 210 SEQUENCE
2) ALARM LED FLASHES WHEN THERE IS AN ALARM. PUSH ONCE TO STOP THE FLASHING, TWICE TO RESET THE CIRCUIT.



THERMAL CONTACTS & LEAKAGE SENSOR (ETS)

RECEIVED
MAY 27 2014
IBI GROUP

CE DESSIN ET L'INFORMATION DÉCRITE SONT LA PROPRIÉTÉ UNIQUE DE ITT WATER & WASTEWATER ET NE DOIVENT ÊTRE UTILISÉS OU COPIÉS SANS LA PERMISSION ÉCRITE DE/OU SOUS CONTRAT AVEC ITT WATER & WASTEWATER.
THIS DRAWING AND THE INFORMATION SHOWN THEREON IS THE SOLE PROPERTY OF ITT WATER & WASTEWATER AND MAY NOT BE USED OR COPIED WITHOUT THE EXPRESS PERMISSION IN WRITING OF/OR UNDER CONTRACT WITH ITT WATER & WASTEWATER.

ITT | Water & Wastewater

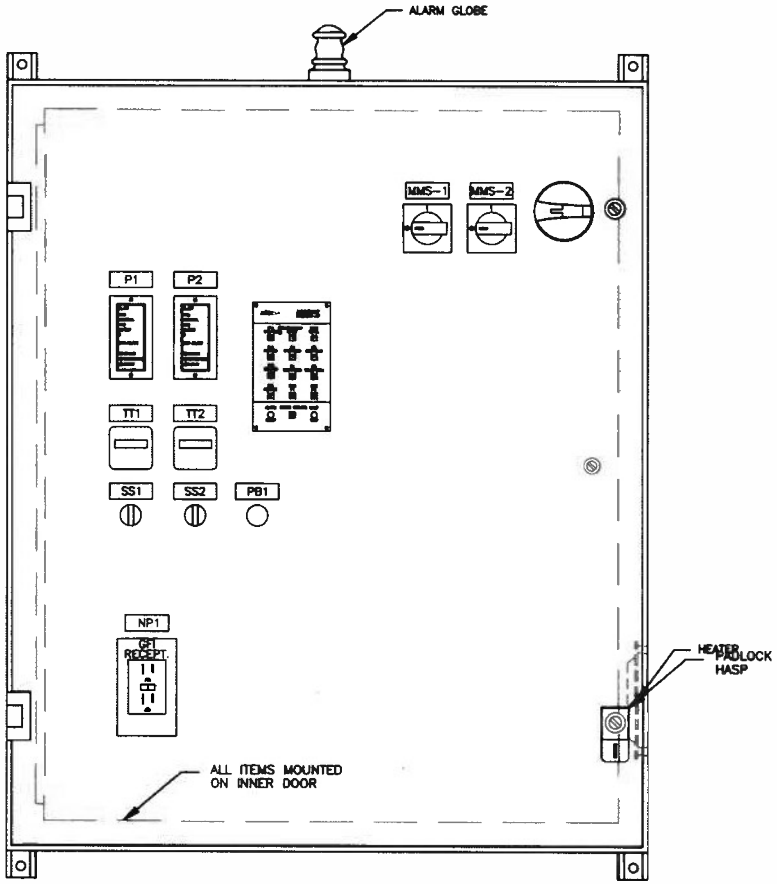
TITLE: Logimac 210/220 Controls Basic Schematic

CONTROLLER:	PUMP MODEL:	QTY:	CUSTOMER:	DRAWING BY:	DATE:	SCALE:	FORMAT:
LOGIMAC 210/220	XXXX	2		Thomas Handfield	7/15/1999		A
VOLTAGE: 600	PHASE: 3	CYCLE:	RATED BRAKE H.P.: XX	LOCATION: REFERENCE DRAWING	APPROVED BY:	DATE:	PROJECT No.: L210/220

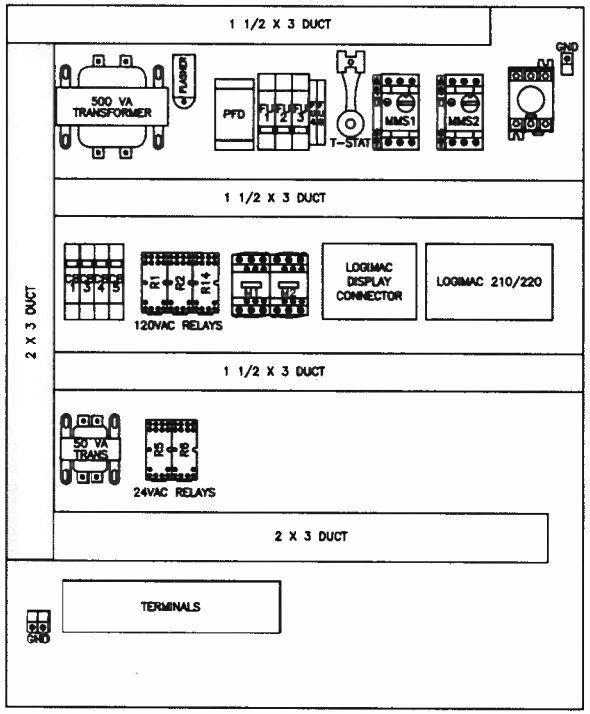
OPTIONS: A6A;E7;H1;M5;V11;C2;G1;N1;U1;W3

DWG NO. E-17793 REVISION #

doc#: 17793 v#4 10/4/2010



FEMAC 4X ENCLOSURE 36" X 30" X 12"



PANEL LAYOUT

NOTE:

ALL AC RELAYS AND CONTACTS MUST BE INSTALLED WITH RC SUPPRESSORS AND DC RELAYS WITH DIODE SUPPRESSORS.

FLYGT
a xylem brand

REV	DESCRIPTION	BY	DATE	REV	DESCRIPTION	BY	DATE

REV'D	REF NIAGARA FALLS BUS STORAGE FACILITY	TITLE	DUPLEX PUMP CONTROL SYSTEM
DESIGNED	S. ENE	SCALE	3/16" = 1"
DRAWN	S. ENE	CAD REF.	XYL33559-4
DATE	JULY 29, 2013	SHT NO.	1 OF 2
		DWG NO.	T2261B-33559
		REV	0

RECEIVED
MAY 27 2014
IRI GROUP

NAMEPLATE LEGEND	
ITEM	DESCRIPTION
MMS-1	PUMP NO.1
MMS-2	PUMP NO.2
P1	PUMP NO.1 / TEMP/LEAK FAULT
P2	PUMP NO.2 / TEMP/LEAK FAULT
TT1	PUMP NO.1 / ELAPSED TIME
TT2	PUMP NO.2 / ELAPSED TIME
SS1	PUMP NO.1 / HAND-OFF-AUTO
SS2	PUMP NO.2 / HAND-OFF-AUTO
PB1	MINICAS / RESET
NP1	RECEPTACLE / 100W MAX.

NO SPARE PARTS QUOTED			
NAMEPLATES		TULSAR NO. 5/8X2 CUSTOM	10
GFI RECEPTACLE		HUBBELL NO. GF15ILA	1
ALARM GLOBE, RED		OHIO ELECTRIC NO. ML-2RK/RL-FLASH	1
MINICAS	P1,2	XYLEM NO. 40-50 10 98	2
ELAPSED TIME	TT1,2	GRASSLIN NO. UWZ48E-120	2
SELECTOR SWITCH	SS1,2	ALLEN BRADLEY NO. 800FP-SM32/-PX20,X10	2
THERMOSTAT	T-STAT	ALL TEMP NO. 18-DTS-55	1
125 WATT HEATER		E.L. WEGAND NO. D12/5200/035001	1
TERMINALS, CONTROL		ALLEN BRADLEY NO. 1492-J4	17
TERMINALS, MOTOR		ALLEN BRADLEY NO. 1492-J6	6
LOGIMAC 210/220		XYLEM NO. LOGIMAC 210/220	1
TRANSFORMER 50VA		MARCUS NO. M050N	3
TRANSFORMER 500VA		MARCUS NO. M0500P	1
MOTOR CONTACTOR	M1,2	SCHNEIDER NO. LC1D12G7/ LADN20	2
RELAY/BASE 24VAC	R5,6	ALLEN BRADLEY NO. 700-HC24A24 / -HN103	2
RELAY/BASE 120VAC	R1,2,14	ALLEN BRADLEY NO. 700-HC24A1 / -HN103	3
CIR. BREAKER 1A	CB5	ALLEN BRADLEY NO. 1492-GH010	1
CIR. BREAKER 3A	CB3	ALLEN BRADLEY NO. 1492-GH030	1
CIR. BREAKER 2A	CB1,4	ALLEN BRADLEY NO. 1492-GH020	2
VOLTAGE MONITOR	PFD	CARLO GAVAZZI NO. DPC-01-D-M69	1
FUSE 1/2 A	FU8	BUSSMANN NO. AGC-1/2	1
FUSE 2/10 A	FU4	BUSSMANN NO. AGC-2/10	1
FUSE 5 A	FU1-3	BUSSMANN NO. KTKR-5	3
FUSEBLOCK, 1 POLE	FU8	ALLEN BRADLEY NO. 1492-H4	1
FUSEBLOCK, 1 POLE	FU4	ALLEN BRADLEY NO. 1492-H5	1
FUSEBLOCK, 3 POLE	FU1-3	ALLEN BRADLEY NO. 1492-FB3C30-L	1
HANDLE	MMS1,2	SCHNEIDER NO. GV2AP01	2
AUXILIARY CONTACTS	MMS1,2	SCHNEIDER NO. GVAD1010/GVAE1	2
MOTOR DISCONNECT	MMS1,2	SCHNEIDER NO. GV2P14	2
DISCONNECT HANDLE/SHAFT		EATON NO. SHB00N12/SF320SH5X5	1
MAIN DISCONNECT		EATON NO. R583060U	1
ENCLOSURE		RALSTON NO. V-GP-363012	1
DESCRIPTION		*MANUFACTURER AND PART NUMBER*	*QTY*

BILL OF MATERIAL

NOTE:

OVERLOAD PROTECTION IS AN INTEGRAL PART OF THE COORDINATED MOTOR STARTERS (MMS1 & MMS2). IN THE EVENT OF AN OVERLOAD CONDITION THE APPLICABLE COORDINATED MOTOR STARTER (MMS1 & MMS2) WILL TRIP. TO RESET THE FAULT TURN THE MMS TO OFF POSITION AND THEN BACK TO THE ON POSITION TO CLEAR THE FAULT.

FLYGT
a xylem brand

REV	DESCRIPTION	BY	DATE	REV	DESCRIPTION	BY	DATE

REV'D | REF NIAGARA FALLS BUS STORAGE FACILITY

DESIGNED S. ENE | SCALE N.T.S.

DRAWN S. ENE | CAD REF. XYL33559-5

DATE JULY 29, 2013 | SHT NO. 2 OF 2

TITLE: DUPLEX PUMP CONTROL SYSTEM

DWG NO. T2261B-33559 | REV 0

RECEIVED
MAY 27 2014