



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Public Works and Government Services Canada
Canada Place/Place du Canada
10th Floor/10e étage
9700 Jasper Ave/9700 ave Jasper
Edmonton
Alberta
T5J 4C3
Bid Fax: (780) 497-3510

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Public Works and Government Services Canada
Canada Place / Place du Canada
10th Floor / 10e étage
9700 Jasper Ave / 9700 ave Jasper
Edmonton
Alberta
T5J 4C3

Title - Sujet Sewer Lift Station Upgrade	
Solicitation No. - N° de l'invitation EP922-210257/A	Amendment No. - N° modif. 006
Client Reference No. - N° de référence du client AAFC EP922-210257	Date 2020-07-27
GETS Reference No. - N° de référence de SEAG PW-SPWU-004-11855	
File No. - N° de dossier PWU-0-43021 (004)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2020-08-04	Time Zone Fuseau horaire Mountain Daylight Saving Time MDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Espedido, Karielen K.	Buyer Id - Id de l'acheteur pwu004
Telephone No. - N° de téléphone (780) 231-4719 ()	FAX No. - N° de FAX (780) 497-3510
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

This amendment has been raised with the following changes:

AMENDMENT #006:

ADDENDUM #005:

The following changes to the tender documents are effective immediately and will form part of the Contract documents:

BIDDERS' QUESTIONS & ANSWERS

Q1: Can the model number that the specifications are based on for the unit heater in Lift Station Number 3 be provided ?

A1: Existing unit is a Reznor UA-50-SER-1-H. See attached document for photos of the installation and name plate.

Q2: Is it possible to get shop drawings for the existing pumps located in Lift Stations 1, 2 and 3?

A2: See attached document for shop drawings of the existing pumps in lift station 1,2, and 3.

Q3: Section 22 10 10 – Plumbing Pumps

- Item 2.1.9
 - Motor power supply for pump SP-1-1 and SP-1-2 is listed as 600V,60Hz, 3 phase
- Item 2.2
 - Motor power supply for pumps SP-1-1 and SP-1-2 is listed as 208V, 60Hz, 3 phase

Which voltage is correct?

A3: SP-1-1 & SP-1-2 are 208V/3PH

SP-2-1 & SP-2-2 are 600V/3PH

SP-3-1 & SP-3-2 are 600V/3PH

Q4: the 24 Hour Load Test and for Generators that size our factory doesn't offer this. It is certainly not typical for any Generator to have a 24 Hour load test unless it is in critical environment and over 1MW. Can you see if they are firm on this? I can get it done in Canada but it will add unnecessary costs for the 24Hr version. Please note the 23 HR Full Load and 1 HR at 110% were listed. The generator will not run over 100% . It will shut down around 103% and very quickly.

A4: The testing as shown in article 2.8.2 is not required. Specification section 26 32 13.02 will be revised in a future addendum.

Q5: Is the integration of the new unified control panel to be done by AAFC's own programmer? Or do we need to allow for this?

A5: Bidders are to carry an allowance for the BMS integration of the control panel. Note that Siemens Controls is currently installed in the building and the work should be completed by them.

Q6: First Sheet asks for Enclosed Units, I have Weather, Level I and Level II sound attenuation, the spec makes no reference, can you approve a selection here?

A6: The location of the lift stations don't necessitate sound attenuation. Weatherproof Enclosure is sufficient.

Q7: 2.6.1 Discusses modulating motors fir recirculating and Cold air intake. Recirc dampers are not installed on Generator Enclosures of this size, is this s requirement? We can provide spring open dampers on intake and exhaust but nothing for recirc. The motor closed dampers are not typical on installation involving Lift Stations and due to the mention of Recirc dampers I wanted to clarify.

A7: Spring-open dampers on the intake and exhaust is acceptable; recirculation dampers not required. Article 2.6.1 will be revised through a revision of specification 26 32 13.02

Q8: 2.8.2 Source QC Testing – Requests a 23 Hour 100% rated load test and 1 Hour at 110%. This is unusual for these KW ranges and I suspect it would have been Spec from a much larger Generator. Also the Gens have protections built in which will not allow then to run at 110%, they have shutdowns to prevent this and protect the Equipment, Please see if this is actually required.

A8: The testing as shown in article 2.8.2 is not required. This will be revised through a revision of specification 26 32 13.02

Q9: 2.4 References Circuit Breaker Type Transfer Eq, while 2.3 references Contactor type, we would supply this and not circuit breaker style. Please clarify.

A9: Both contactor-type and circuit breaker-type transfers are acceptable. Specifications for both are provided. There are circuit breakers already present within the generator package, so a contactor-based ATS is sufficient.

Q10: 2.6.8 under ATS states Manual Bypass and isolator, the ATS's can be bypass but they are much more expensive and not typical to this type of project. Just wanted to be certain that this is clarified.

A10: "manual bypass and isolator" are mentioned as an accessory. Neither of the three ATS will require a manual bypass feature (not required).

END OF AMENDMENT



Figure 1 - Unit Heater Installation



Figure 2 - Unit Heater Name Plate



PERFORMANCE CURVE

PRODUCT
CT3102.180

TYPE
MT

DATE
94-05-09

PROJECT
AG.RESEARCH - STATION #1

CURVE NO
63-433-00-4230

ISSUE
3

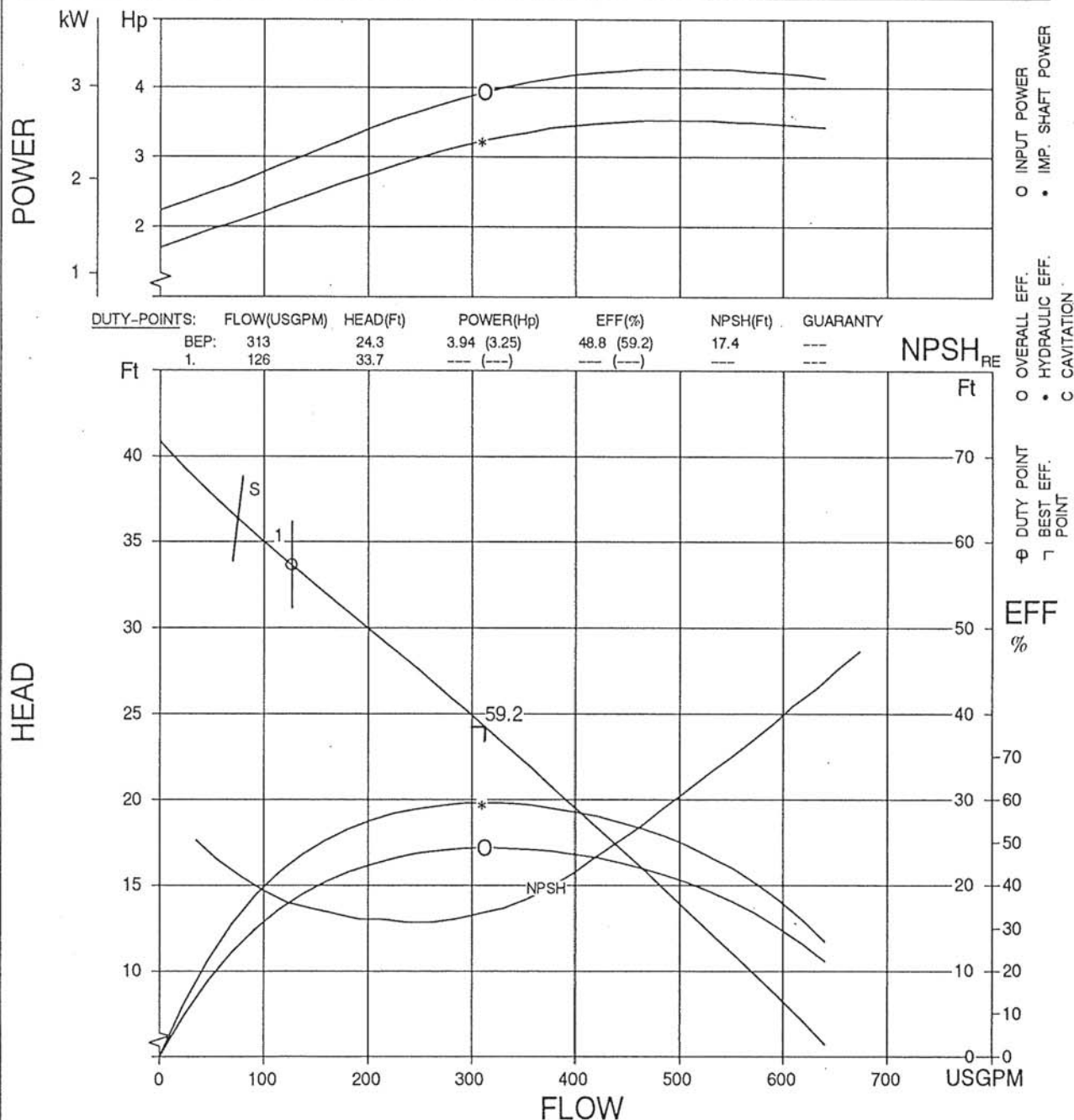
	1/1-LOAD	3/4-LOAD	1/2-LOAD
MOTOR COS FI	---	---	---
MOTOR EFFICIENCY	---	---	---
GEAR EFFICIENCY	---	---	---

MOTOR SHAFT
POWER 3.4 HP
STARTING
CURRENT ... 88.5 A
RATED
CURRENT ... 10.0 A
RATED
SPEED 1730 RPM
TOT.MOM.OF
INERTIA ... 0.997 LBF•FT²
NO. OF
BLADES 1

IMPELLER DIAMETER
--- INCH
MOTOR TYPE STATOR REV
18-11-4AL 52D 10
FREQ PHASES VOLTAGE POLES
60 HZ 3 208 V 4
GEAR TYPE RATIO
--- ---

COMMENTS
NEVA CLOG

OUTLET
4 INCH
IMP. THROUGHLET
3 INCH

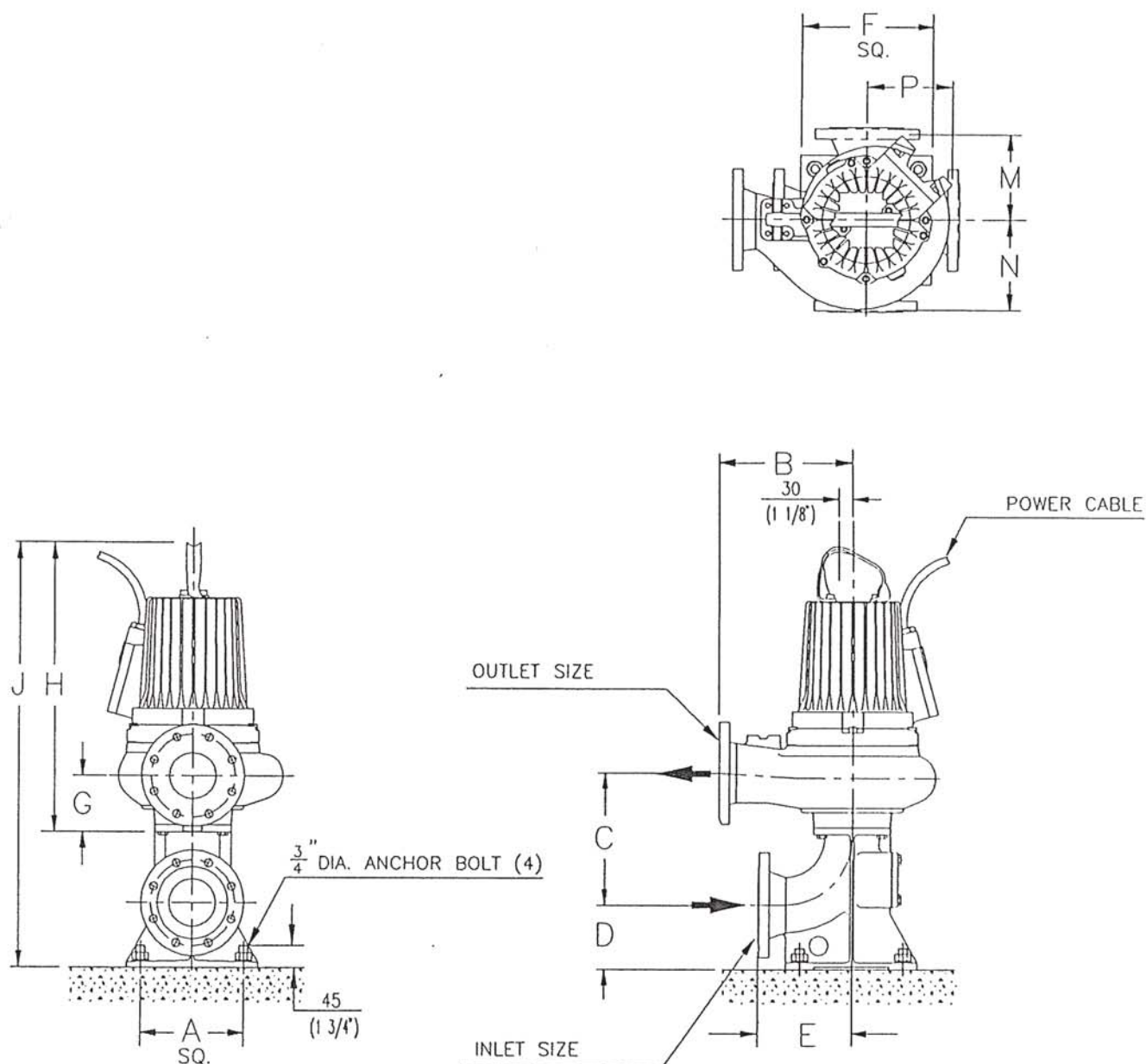


S: RISK FOR SEDIMENTATION AT VELOCITY BELOW 0.6 M/S
(STANDARD DIAM. 4 INCH)

CURVES SHOW PERFORMANCE WITH CLEAR WATER



HI- CURVE



* PUMP CAN BE ROTATED ABOUT ITS VERTICAL CENTERLINE TO (4) POSITIONS RELATIVE TO THE INLET ELBOW. INCREMENTS ARE 90°.

(ALL DIMENSIONS SHOWN IN MILLIMETERS & INCHES)

(1/92)

Version	Nom. Size		Dimensional Chart												Weight	
	Inlet	Outlet	A	B	C	D	E	F	G	H	J	M	N	P	Total W/Stand	
MT	4"	4"	220	285	280	135	200	280	117	600	900	185	195	185	154	kg
			8 5/8"	11 1/4"	11"	5 3/8"	7 7/8"	11"	4 5/8"	23 5/8"	35 3/8"	7 1/4"	7 5/8"	7 1/4"	340	lb

Motor Data

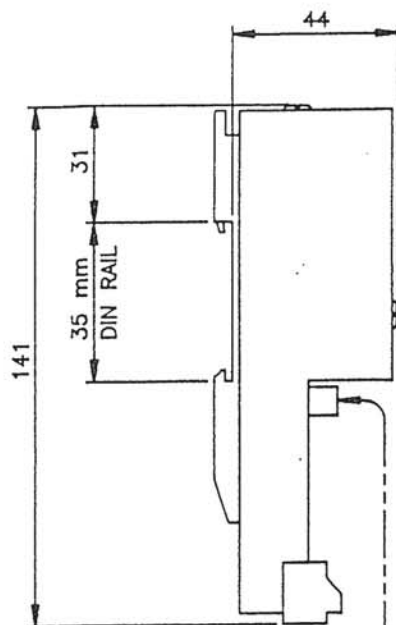
Rated Power		Voltage	Speed	Rated	No Load	Locked	Starting		FLYGT Code Letter	Efficiency %			Power Factor				FLYGT Design Letter	Motor Code
kW	hp	V	r/min	Current A	Current A	Current A	Current A	kVA		100% Load	75% Load	50% Load	100% Load	75% Load	50% Load	Start		
<u>CP/CS</u>																		
3.7	5.0	600	1730	5.0	2.1	30.7	30.7	31.9	H	82.5	82.5	80.0	85.0	81.0	72.0	60.0	B	18-11-4AL
3.7	5.0	460	1715	6.5	2.7	40.0	40.0	31.9	H	82.5	82.5	80.0	85.0	81.0	72.0	60.0	B	18-11-4AL
3.7	5.0	230	1715	13.0	5.4	80.0	80.0	31.9	H	82.5	82.5	80.0	85.0	81.0	72.0	60.0	B	18-11-4AL
3.7	5.0	208	1730	14.0	6.0	88.5	88.5	31.9	H	82.5	82.5	80.0	85.0	81.0	72.0	60.0	B	18-11-4AL
<u>CT</u>																		
2.5	3.4	600	1755	3.6	2.1	30.7	30.7	31.9	L	82.5	80.5	75.0	78.5	72.0	60.5	60.0	A	18-11-4AL
2.5	3.4	460	1745	4.5	2.7	40.0	40.0	31.9	L	82.5	80.5	75.0	78.5	72.0	60.5	60.0	A	18-11-4AL
2.5	3.4	230	1745	9.1	5.4	80.0	80.0	31.9	L	82.5	80.5	75.0	78.5	72.0	60.5	60.0	A	18-11-4AL
2.5	3.4	208	1755	10.0	6.0	88.5	88.5	31.9	L	82.5	80.5	75.0	78.5	72.0	60.5	60.0	A	18-11-4AL
<u>SINGLE PHASE CP/CS</u>																		
2.9	3.9	230	1730	16.0									98.0					18-11-4AL

Cable Selection

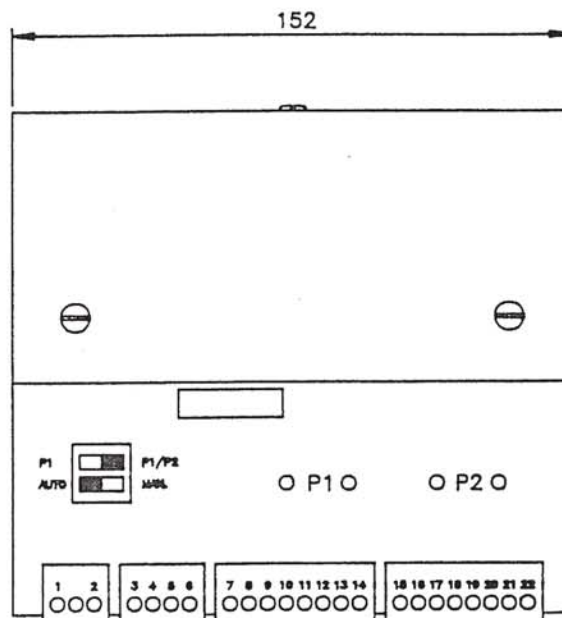
Rated Power		Voltage	Rated	Composite Cable			
kW	hp	V	Current A	Power	+ Monitoring	Dia mm	L max m
<u>CP/CS</u>							
3.7	5.0	600	5.0	14AWG/4 + 18AWG/4		16.0	266
3.7	5.0	460	6.5	14AWG/4 + 18AWG/4		16.0	157
3.7	5.0	230	13.0	14AWG/4 + 18AWG/4		16.0	39
3.7	5.0	208	14.0	14AWG/4 + 18AWG/4		16.0	33
<u>CT</u>							
2.5	3.4	600	3.6	14AWG/4 + 18AWG/4		16.0	369
2.5	3.4	460	4.5	14AWG/4 + 18AWG/4		16.0	226
2.5	3.4	230	9.1	14AWG/4 + 18AWG/4		16.0	56
2.5	3.4	208	10.0	14AWG/4 + 18AWG/4		16.0	46
<u>SINGLE PHASE CP/CS</u>							
2.9	3.9	230	16.0	10AWG/4 + 16AWG/4		21.0	138

Notes:

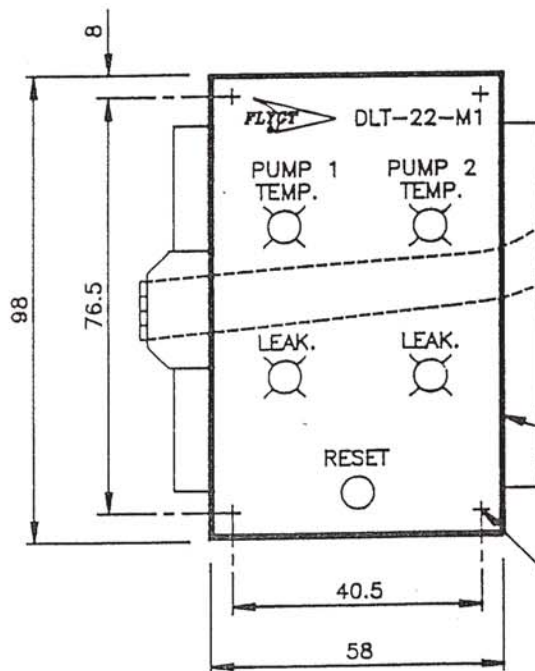
- All motors are insulated according to class F.
- L max. is calculated assuming a max. voltage drop of 3%.
- These motors should be provided with DLT-22 monitoring, which monitors the stator temperature (thermocontacts) and leakage into the stator housing (FLS).
- All motors are for 3 phase, 60 Hz service, unless otherwise stated.
- FLYGT recommends the use of a control system specifically designed for pumping stations, such as supplied by FLYGT or FLYGT-MACTEC (SCADA), to ensure a maximum degree of protection and assurance of continuity of service.



BASE MODULE DLT-22-M1
P/N 13-50 45 02



PLUG-IN CONNECTORS
WEIDMULLER
MODEL GZ8



INDICATOR MODULE
P/N 13-50 45 03

FLAT 10 CONDUCTOR CABLE
1.5m LONG

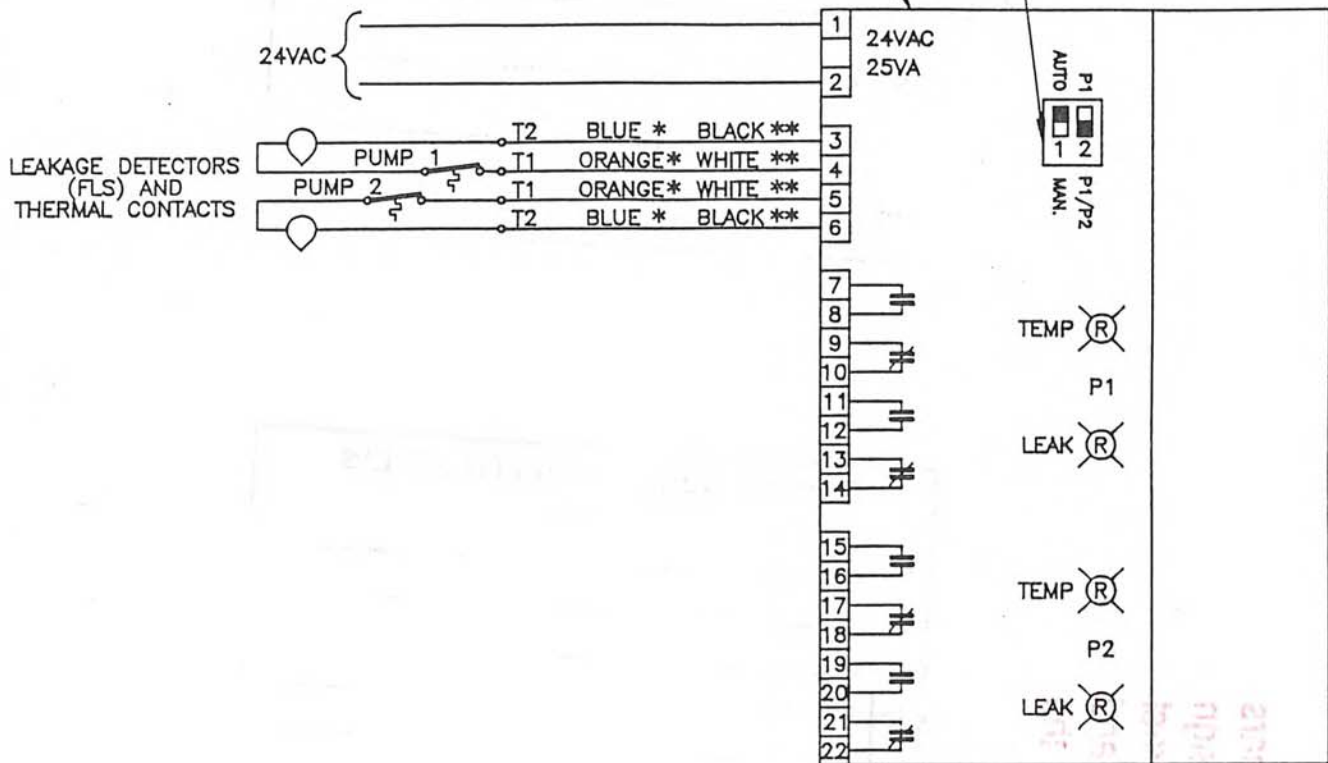
FACE PLATE
REVERSIBLE (BILINGUAL)

4 SCREWS #4-40

ITT		Flygt	
ITT Fluid Technology Corporation			
DESIGN NO.	M.C.	REVISION NO.	DATE
90-11-15		9/12/5	
TITLE		SP-MD-1.6.1	
DLT-22-M1			
DIMENSIONS			
5452-A4 0			

PART NUMBER
13-50 45 03

DIP SWITCHES



NOTES:

FOR SINGLE PUMP APPLICATIONS, CONNECT THE SENSORS TO "P1" (TERMINALS 3 AND 4) AND PLACE DIP SWITCH 2 IN THE "P1" POSITION.

* WHEN COMPOSITE OR SPC-3-2-1-GC CABLE IS USED.

** WHEN ADDITIONAL CABLE (4 OR 8 COND.) OR SPC-14-3-2-1-GC CABLE IS USED.



Flygt
ITT Fluid Technology Corporation

DATE	REV	DESCRIPTION	APPROVED
OCT/03/90	91/2/7		
DLT-22-M1 WIRING INSTRUCTIONS			
5535 44 0			



PERFORMANCE CURVE

PRODUCT
CT3152.181

TYPE
HT

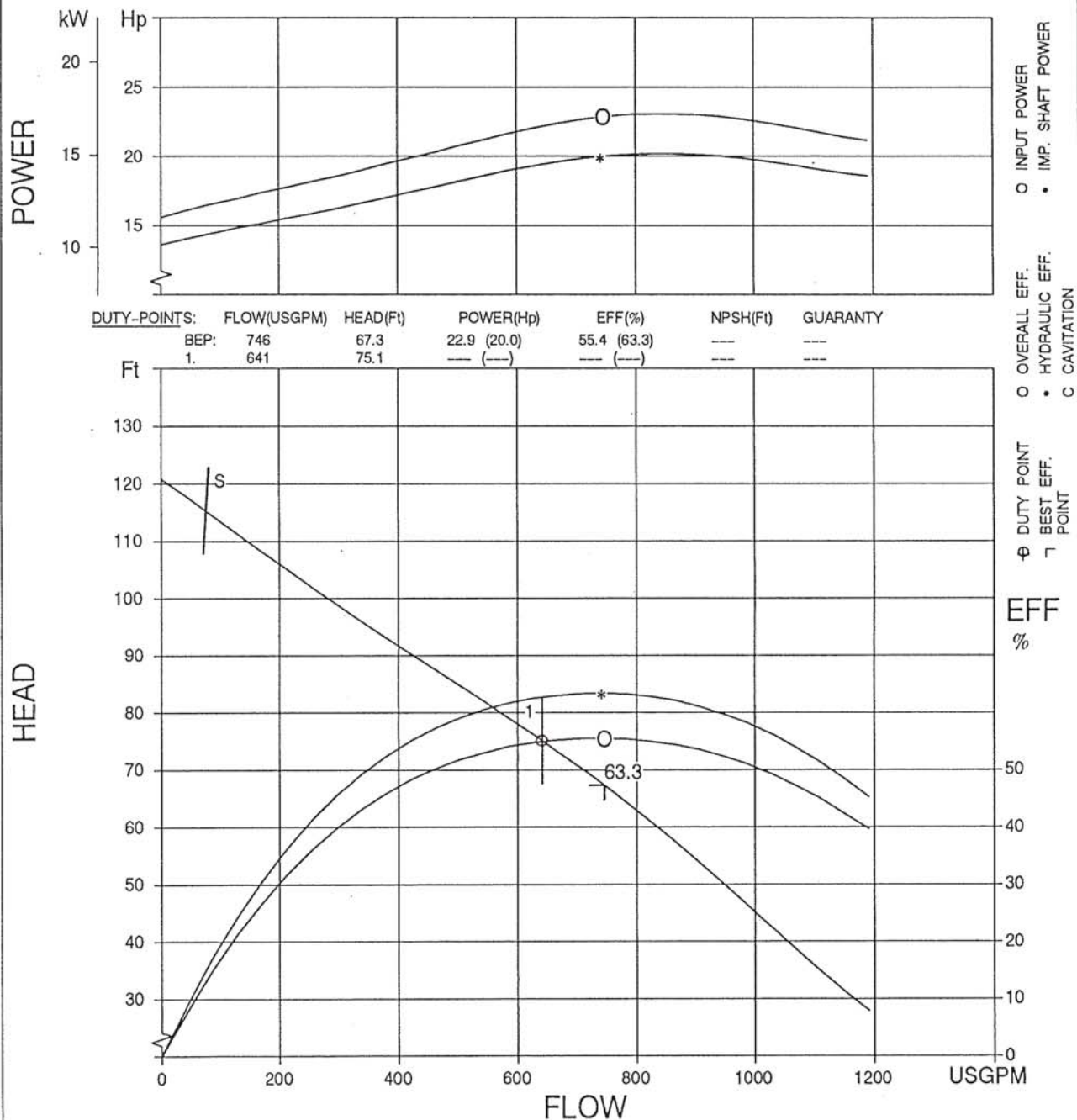
DATE
94-05-09

PROJECT
AG.RESEARCH - STATION #2

CURVE NO
63-454-00-5760

ISSUE
1

	1/1-LOAD	3/4-LOAD	1/2-LOAD	MOTOR SHAFT POWER 20.0 HP	IMPELLER DIAMETER --- INCH			
MOTOR COS FI	---	---	---	STARTING CURRENT ... 121. A	MOTORTYPE		STATOR	REV
MOTOR EFFICIENCY	---	---	---	RATED CURRENT ... 20.0 A	---		---	---
GEAR EFFICIENCY	---	---	---	RATED SPEED 1755 RPM	FREQ	PHASES	VOLTAGE	POLES
COMMENTS			INLET/OUTLET	TOT.MOM.OF	60 HZ	3	600 V	4
DISCH. CONN. DIAM 100 MM			6 / 4 INCH	INERTIA ... 5.67 LBF•FT ²	GEARTYPE			
CONVERTED FROM 3152.180			IMP. THROUGHLET	NO. OF BLADES 1	---		RATIO ---	



S: RISK FOR SEDIMENTATION AT VELOCITY BELOW 0.6 M/S
(STANDARD DIAM. 4 INCH)

CURVES SHOW PERFORMANCE WITH CLEAR WATER



HI- CURVE



PERFORMANCE CURVE

PRODUCT

CT3152.181

TYPE

HT

DATE

94-05-09

PROJECT

AG.RESEARCH - STATION #3

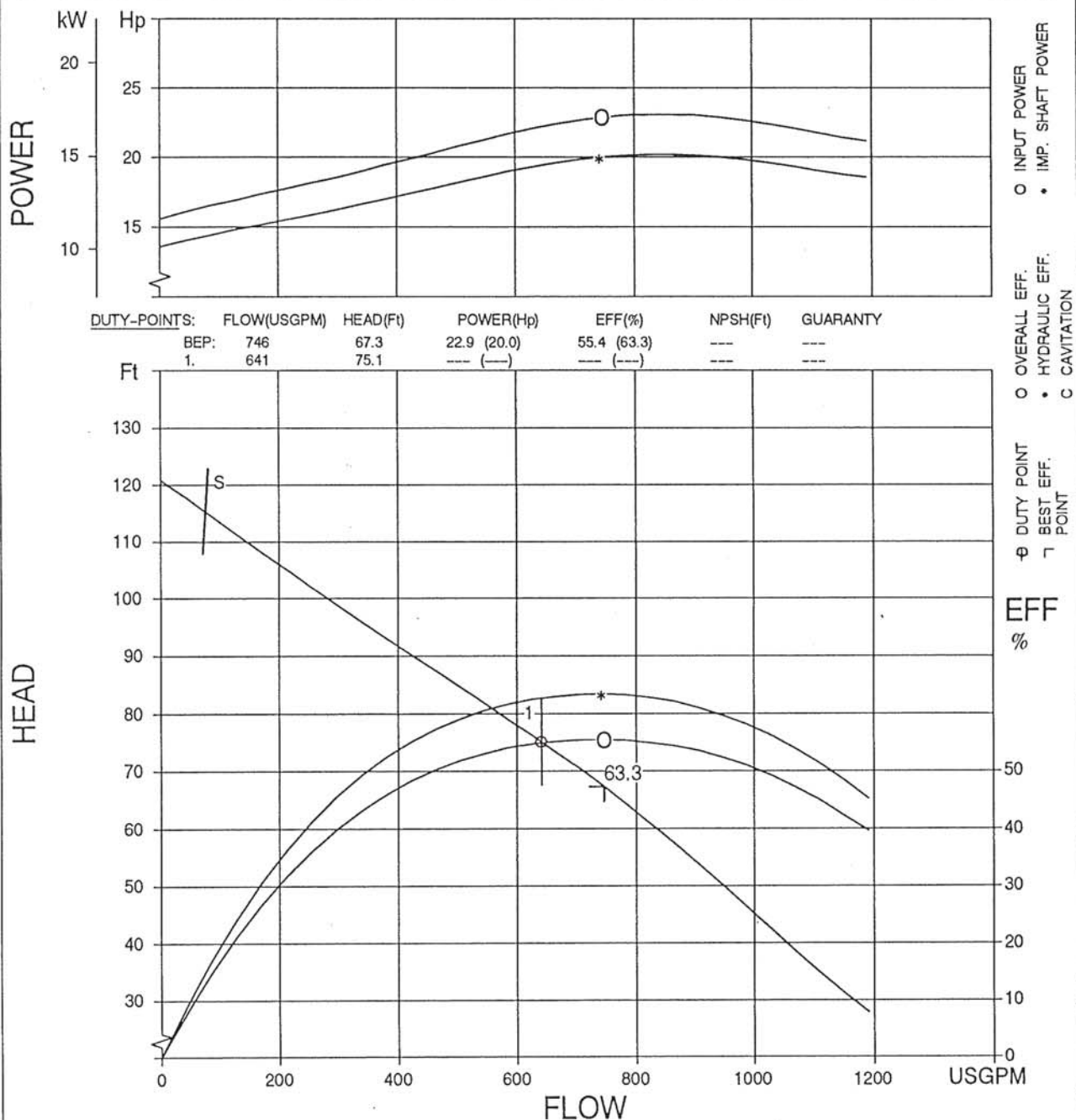
CURVE NO

63-454-00-5760

ISSUE

1

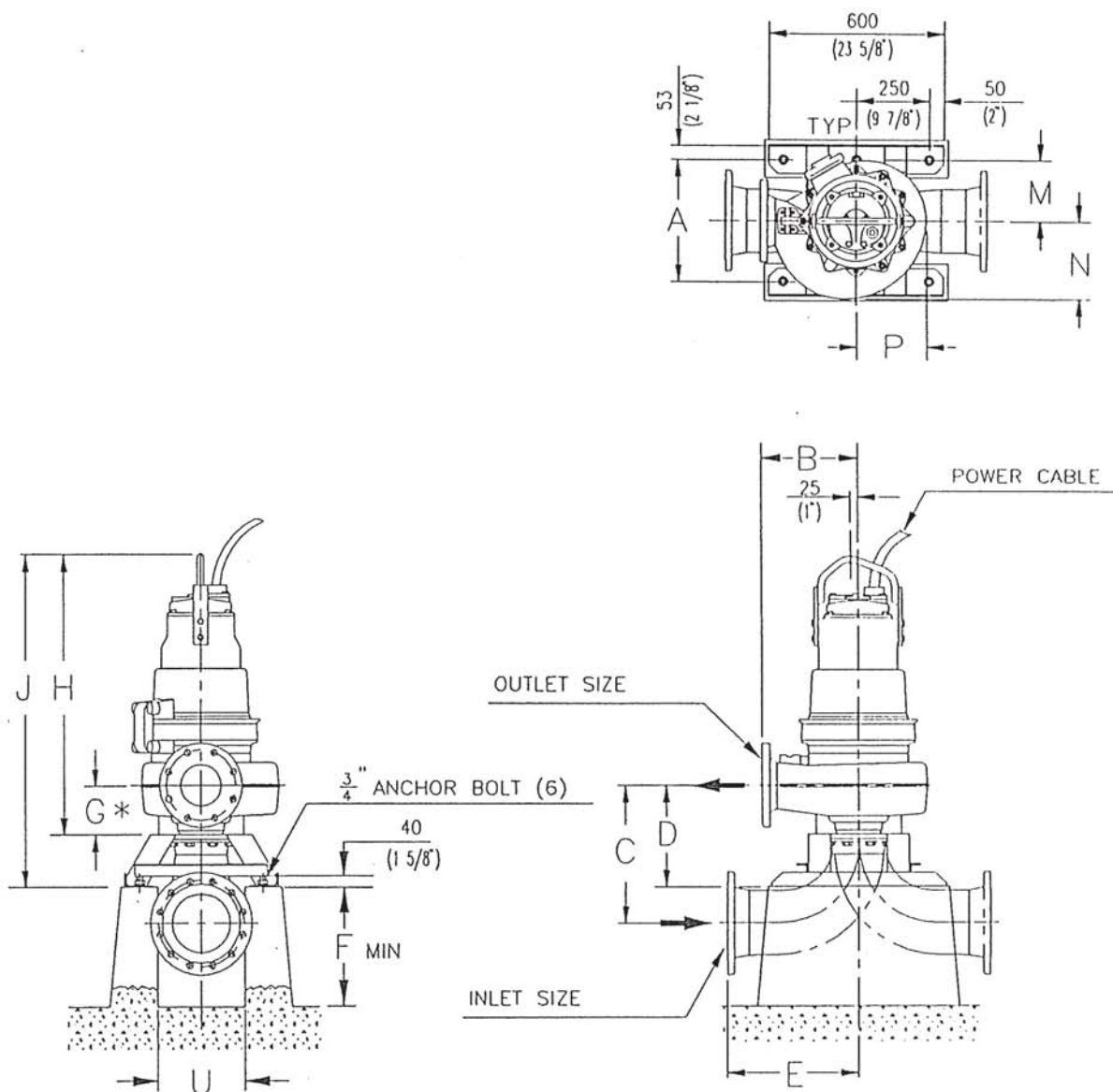
		1/1-LOAD	3/4-LOAD	1/2-LOAD	MOTOR SHAFT POWER 20.0 HP		IMPELLER DIAMETER --- INCH			
MOTOR COS FI	---	---	---	---	STARTING	121. A	MOTORTYPE		STATOR	REV
MOTOR EFFICIENCY	---	---	---	---	CURRENT ...	20.0 A	---		---	---
GEAR EFFICIENCY	---	---	---	---	RATED	1755 RPM	FREQ	PHASES	VOLTAGE	POLES
COMMENTS DISCH. CONN. DIAM 100 MM CONVERTED FROM 3152.180				INLET/OUTLET	5.67 LBF•FT ²	GEARTYPE	60 HZ	3	600 V	4
				IMP. THROUGHLET	NO. OF					
					BLADES ...					
				6 / 4 INCH	1		RATIO			
				3 INCH			---			



CURVES SHOW PERFORMANCE WITH CLEAR WATER



HI- CURVE



* TO INLET ELBOW FLANGE.

PUMP CAN BE ROTATED ABOUT ITS VERTICAL CENTERLINE TO (4) POSITIONS RELATIVE TO THE INLET ELBOW. INCREMENTS ARE 90°.

(ALL DIMENSIONS SHOWN IN MILLIMETERS & INCHES)

(1/92)

Version	Nom. Size		Dimensional Chart													Weight	
	Inlet	Outlet	A	B	C	D	E	F	G	H	J	M	N	P	U	Total W/Stand	
SH, HT	6"	4"	424	330	362	291	320	300	111	910	1090	205	230	220	300	328 kg	
			16 3/4"	13"	14 1/4"	11 1/2"	12 5/8"	11 3/4"	4 3/8"	35 7/8"	42 7/8"	8 1/8"	9"	8 5/8"	11 3/4"	721 lb	
HT	6"	6"	424	330	382	312	320	300	132	910	1090	205	240	225	300	328 kg	
			16 3/4"	13"	15"	12 1/4"	12 5/8"	11 3/4"	5 1/4"	35 7/8"	42 7/8"	8 1/8"	9 1/2"	8 7/8"	11 3/4"	721 lb	
MT	8"	6"	424	330	472	353	450	400	168	945	1130	210	270	240	300	353 kg	
			16 3/4"	13"	18 5/8"	13 7/8"	17 3/4"	15 3/4"	6 5/8"	37 1/4"	44 1/2"	8 1/4"	10 5/8"	9 1/2"	11 3/4"	778 lb	
LT	12"	10"	470	450	557	375	400	500	205	1030	1225	255	370	315	350	386 kg	
			18 1/2"	17 3/4"	21 7/8"	14 3/4"	15 3/4"	19 5/8"	8"	40 1/2"	48 1/4"	10"	14 5/8"	12 3/8"	13 3/4"	851 lb	

Motor Data

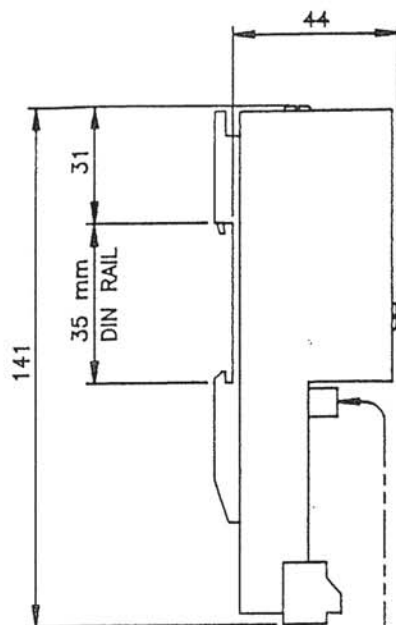
Rated Power		Voltage	Speed	Rated	No Load	Locked	Starting		IEC Code Letter	Efficiency %			Power Factor			Start	IEC Design	Motor Code
kW	hp	V	r/min	Current A	Current A	Current A	Current A	kVA		100% Load	75% Load	50% Load	100% Load	75% Load	50% Load			
<u>CP/CS/CT</u>																		
11.2	15.0	600	1745	15.0	6.7	88.9	88.9	92.4	G	85.0	85.0	83.5	83.0	78.0	67.0	55.0	B	25-11-4AA
11.2	15.0	460	1745	20.0	8.7	116.0	116.0	92.4	G	85.0	85.0	83.5	83.0	78.0	67.0	55.0	B	25-11-4AA
11.2	15.0	230	1745	39.0	17.4	232.0	232.0	92.4	G	85.0	85.0	83.5	83.0	78.0	67.0	55.0	B	25-11-4AA
11.2	15.0	208	1755	43.0	19.2	256.5	256.5	92.4	G	85.0	85.0	83.5	83.0	78.0	67.0	55.0	B	25-11-4AA
<u>CP/CS/CT</u>																		
14.9	20.0	600	1755	20.0	9.2	121.9	121.9	126.7	H	87.0	87.0	85.5	82.0	76.0	65.0	48.0	A	25-15-4AA
14.9	20.0	460	1750	26.0	12.0	159.0	159.0	126.7	H	87.0	87.0	85.5	82.0	76.0	65.0	48.0	A	25-15-4AA
14.9	20.0	230	1750	51.0	24.0	318.0	318.0	126.7	H	87.0	87.0	85.5	82.0	76.0	65.0	48.0	A	25-15-4AA
14.9	20.0	208	1750	56.0	26.5	351.6	351.6	126.7	H	87.0	87.0	85.5	82.0	76.0	65.0	48.0	A	25-15-4AA
<u>SINGLE PHASE CP/CS</u>																		
12.0	16.0	230	1750	63.0									96.0					25-15-4AA

Cable Selection

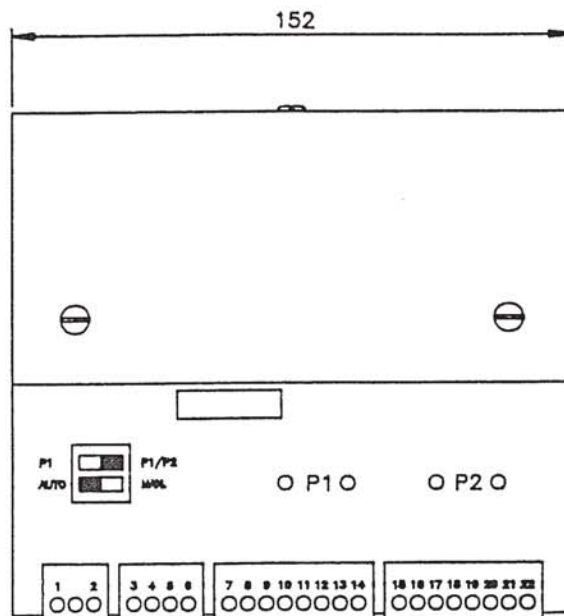
Rated Power		Voltage	Rated	Composite Cable			
kW	hp	V	Current A	Power	+ Monitoring	Dia mm	L max m
<u>CP/CS/CT</u>							
11.2	15.0	600	15.0	14AWG/4 + 18AWG/4		16.0	89
11.2	15.0	460	20.0	10AWG/4 + 16AWG/4		21.0	128
11.2	15.0	230	39.0	4AWG/4 + 14AWG/4		34.8	132
11.2	15.0	208	43.0	4AWG/4 + 14AWG/4		34.8	108
<u>CP/CS/CT</u>							
14.9	20.0	600	20.0	10AWG/4 + 16AWG/4		21.0	167
14.9	20.0	460	26.0	8AWG/4 + 16AWG/4		27.0	157
14.9	20.0	230	51.0	4AWG/4 + 14AWG/4		34.8	101
14.9	20.0	208	56.0	4AWG/4 + 14AWG/4		34.8	83
<u>SINGLE PHASE CP/CS</u>							
12.0	16.0	230	63.0	2AWG/4 + 12AWG/4		38.0	225

Notes:

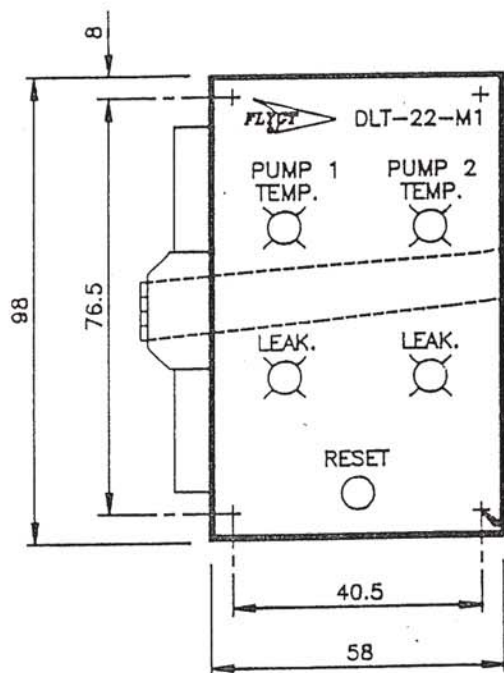
- All motors are insulated according to class F.
- L max. is calculated assuming a max. voltage drop of 3%.
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- All motors are for 3 phase, 60 Hz service, unless otherwise stated.
- FLYGT recommends the use of a control system specifically designed for pumping stations, such as supplied by FLYGT or FLYGT-MACTEC (SCADA), to ensure a maximum degree of protection and assurance of continuity of service.



BASE MODULE DLT-22-M1
P/N 13-50 45 02



PLUG-IN CONNECTORS
WEIDMULLER
MODEL GZ8



INDICATOR MODULE
P/N 13-50 45 03

FLAT 10 CONDUCTOR CABLE
1.5m LONG

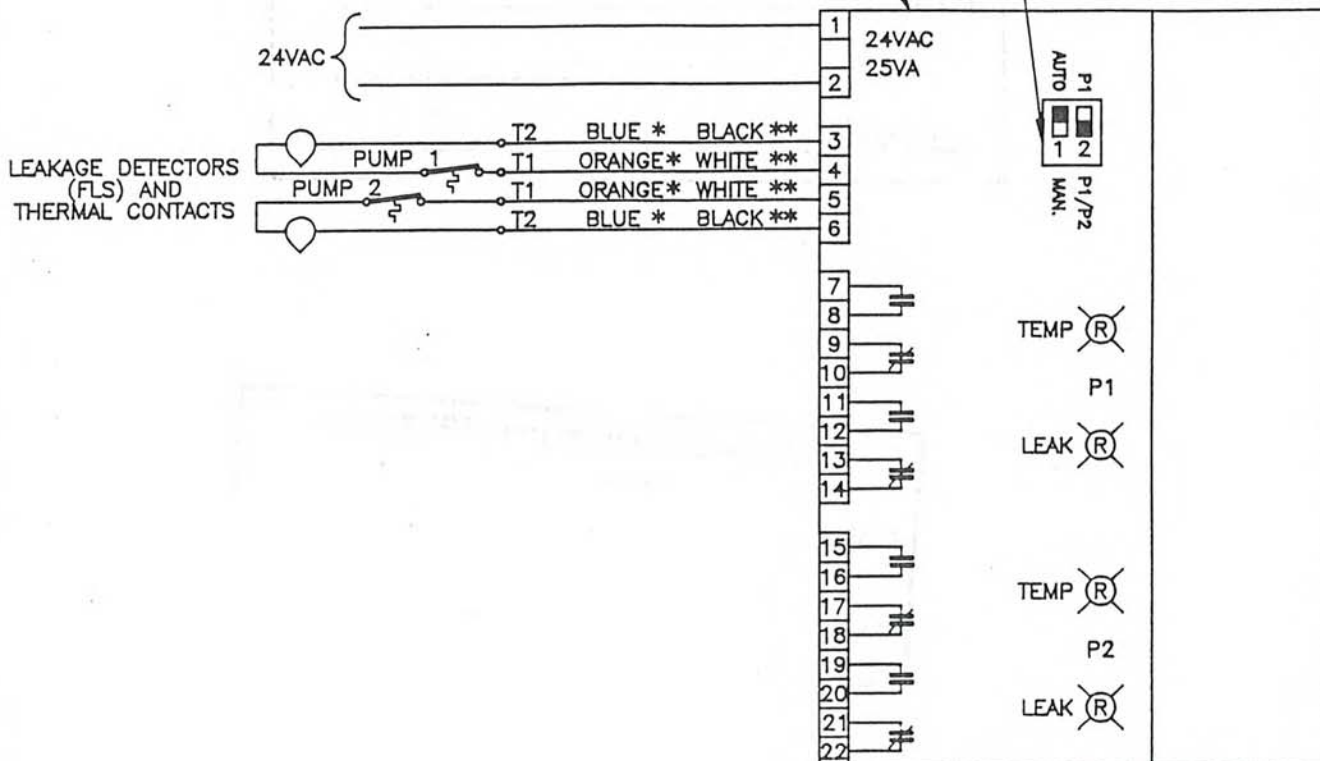
FACE PLATE
REVERSIBLE (BILINGUAL)

4 SCREWS #4-40

ITTT		Flygt	
ITT Fluid Technology Corporation			
DESIGN DATE 90-11-15	DESIGNER M.C.	APPROVED 9/12/5	REVISION SP-MD-1.6.1
DLT-22-M1 DIMENSIONS			
5452-144 0			

PART NUMBER
13-50 45 03

DIP SWITCHES



NOTES:

FOR SINGLE PUMP APPLICATIONS, CONNECT THE SENSORS TO "P1" (TERMINALS 3 AND 4) AND PLACE DIP SWITCH 2 IN THE "P1" POSITION.

* WHEN COMPOSITE OR SPC-3-2-1-GC CABLE IS USED.

** WHEN ADDITIONAL CABLE (4 OR 8 COND.) OR SPC-14-3-2-1-GC CABLE IS USED.

		Flygt ITT Fluid Technology Corporation	
DATE: OCT/03/90 BY: 911217	DATE: 911217 BY: 911217	DATE: 911217 BY: 911217	DATE: 911217 BY: 911217
DLT-22-M1 WIRING INSTRUCTIONS			
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