ADDENDUM No. 1

RFP No. 19-12

WWTP Headworks Improvement Project

Due: June 11, 2019 by 2:00 p.m. (local time)

The following questions and answers are provided for the Request for Proposal for WWTP Headworks Improvement Project, RFP No. 19-12, on which proposals will be received on/or before the date and time listed above.

The information contained herein shall take precedence over the original documents and all previous addenda (if any), and is appended thereto. **This Addendum includes 17 pages.**

The Proposer is to acknowledge receipt of this Addendum No. 1, including all attachments in its Proposal by so indicating in the proposal that the addendum has been received. Proposals submitted without acknowledgement of receipt of this addendum may be considered non-conforming.

The following forms provided within the RFP Document must be included in submitted proposal:

- **Attachment B - Non-Discrimination Declaration of Compliance**
- **Attachment C - Living Wage Declaration of Compliance**
- **Attachment D - Vendor Conflict of Interest Disclosure Form**

Proposals that fail to provide these completed forms listed above upon proposal opening will be rejected as non-responsive and will not be considered for award.

I. QUESTIONS AND ANSWERS

The following Questions have been received by the City. Responses are being provided in accordance with the terms of the RFP. Respondents are directed to take note in its review of the documents of the following questions and City responses as they affect work or details in other areas not specifically referenced here.

1. Can the City provide design drawings for the Headworks structures?
RESPONSE: PDF's of the Headworks structures for both the 1977 and 1997 design modifications for the Screen & Grit Building were provided to the Pre-Bid Meeting attendees via the City's Liquid Files FTP site. Those drawings along with all previously posted information will be made available again via the City's Liquid Files FTP site.

2. Pre-Bid Meeting Attendee List.
RESPONSE: The Pre-Bid Meeting Attendee list is attached.

3. Are odor control modifications to be included for this Headworks Project?
RESPONSE: No odor control modifications are to be included for this Headworks project. A separate WWTP Area Odor Study project is in progress to address odors.

4. Can the city provide a map showing influent sewers to the WWTP?
RESPONSE: A drawing showing WWTP influent sewers is attached.

5. Can the City provide MLSS and ML VSS data that can be used to estimate the non-volatile solids fraction?
   RESPONSE: The WWTP collects and laboratory tests mixed liquor samples from each operating treatment train daily. Example data sheets for January and February 2019 are attached. Additional data can be provided to the Successful Firm.

6. Where is ferric chloride used at the WWTP?
   RESPONSE: Ferric chloride is added to the last oxic zone (zone #3) in each treatment train for effluent polishing. We typically use approximately 1-2 gph per treatment train.

7. Will it be possible to visit the WWTP a second time before the proposal due date?
   RESPONSE: Yes, please contact me at cenglert@a2gov.org by email with available dates/times when you would like to visit the Headworks area.

8. Can the City provide information regarding the grit pumps used to convey flow to the Eutek units?

   RESPONSE: Grit pump information is attached. The WWTP uses a combination of Flygt and KSB submersible pumps. Two Flygt pumps were installed in the North Channel in 2017 after two KSB pumps failed. Two KSB submersible grit pumps are in the South Channel. Grit pump information will also be uploaded to City's Liquid Files FTP site.

9. What type of flow meter is used at the headworks, where is it location, is it reliable and what type of data is stored and available for review?
   RESPONSE: Raw influent to the WWTP is not metered at the headworks. However, wastewater flow downstream of the Influent Flow Splitter (IFS) is measured using magnetic flow meters. Flow to the East Plant is metered and individual flows to West Plant train 1 and train 2 are also metered. Flow to and from the Retention Basin is also measured by magnetic flow meters. The measured flows are used to calculate the WWTP raw influent flow.

10. How and where are the water levels used to control operations measures/recorded, and do the levels control operation conditions automatically, manually, or a combination?
    RESPONSE: We have level sensors to monitor the water surface elevation in both the north and south channels upstream of the bar screens. We have no automatic controls to change bar screen rake intervals or to start up and shut down screens. The current system is a manual operation.

11. What are the current set points for operation as they relate to screens and grit equipment and the use of a single original channel and the two newer channels?
    RESPONSE: System operation is manual and we use bar screen timers to adjust the rake frequency. The Eutec grit equipment can be operated in "heavy" or "light" modes.

12. Can you provide any information of the grit deposition patterns before the screens, covering the typical range and depth of accumulation for normal and low flow conditions?
    RESPONSE: We don't measure or record grit deposition around the bar screens. Recent operator observations suggest that when our plant flow is less than 18 MGD only one screen is needed. If we operate two bar screens at that flow rate we notice an accumulation of grit in front of the bar screens.

13. Just to be sure, other than changing the submersible grit pumps, if needed, or piping revisions to meet the needs of the new grit separation systems, or possibly minor improvements to improve the grit collection channels/sumps, there are no expectations to modify the grit collection system (i.e. change to another style like a mechanical vortex) to improve the collection performance?

RESPONSE: The City is looking for the Successful Firm to evaluate the existing system and provide recommendations needed to improve grit capture in order to minimize carryover and adverse impact to downstream wastewater treatment equipment or processes. Therefore, equipment changes, structural changes or other modifications are to be considered.

14. There is an Odor Abatement Study presently being performed for the plant. The Headworks is currently tied into odor control. To help determine our design fees, please clarify which firm will be analyzing the required number of air exchanges and designing modifications to the building heating, ventilation and odor control systems. We do understand that there will be exchanges between the successful Headworks firm and the Odor Abatement Study firm to discuss the conclusion sand recommendation for the odor abatement study.

RESPONSE: The Headworks area is currently not connected to the Solids Handling Building odor control system. The Headworks area will be evaluated for odor emissions by the Odor Study Consultant who will provide recommendations if necessary. At this time, the Headworks Consultant shall focus efforts on the WWTP's wastewater treatment needs and not odor control or ventilation needs within the Headworks area.

Offerors are responsible for any conclusions that they may draw from the information contained in the Addendum.

Question #2

Supporting Information

HEADWORKS IMPROVMENTS PROJECT
Mandatory Pre-Bid Meeting
April 9, 2019 - 10:00 am
Sign In Sheet

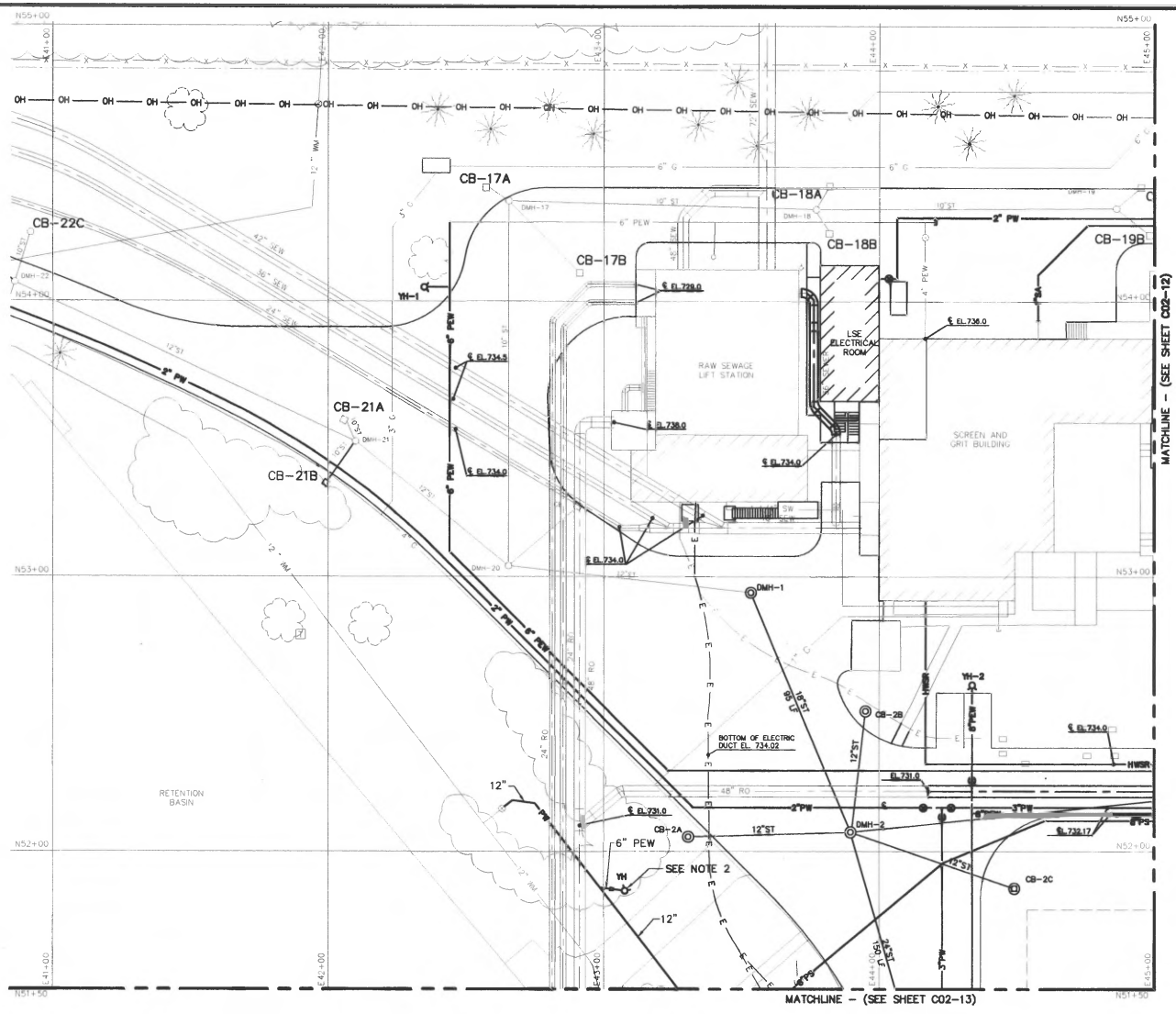
Name	Company	Phone / Email
Mike McGehee	FTCH	(248) 324-1520 mtmcgehee@ftch.com
Jack Rafter	FTCH	616 446-4585 Jcrafter@ftch.com
Joe Drozz	IMEG	517-404-5748 Joseph.P.Drozz@IMEGCorp.com
Mike Harvey	Donohue	616-201-2825 mharvey@donohue-associates.com
Mike Gerbitz	Donohue	920.889.4000 mgerbitz@donohue-associates.com
Emily Wehmeyer	Donohue	317-500-4215 ewehmeyer@donohue-associates.com
Ted Erickson	Process Results	734.657.4925 TErickson@ProcessResults.com
John Arvai	Wade Trim	734 249 2157 jarvai@wadetrim.com
Tom Porter	ARCADIS	313 468 9711 tom.Porter@ARCADIS.com
Andrew Bennett	HAZEN	248 459 6427 abennett@hazenandsawyer.com
James Scholl	HDR	734-223-4805 James.Scholl@hdrinc.com

HEADWORKS IMPROVMENTS PROJECT
Mandatory Pre-Bid Meeting
April 9, 2019 - 10:00 am
Sign In Sheet

Name	Company	Phone / Email
Benton Hanson	HRC	854-361-5983 benton.hanson@hdrinc.com
Dan Royal	HRC	248-454-6865 DRoyal@hrc-engr.com
JACOB ORSINI	KERR Pump & SUPPLY	248 961 2761 JORSINI @ KERRPUMP.com
Dan Miller	Jones & Henry Engineers	dmiller@jheng.com 419-872-8590
ERIC JENKINS	IMEG	720-930-4812 ERIC.J.JENKINS@IMEGCORP.com
Chris Frilen	FTCH	crfrilen@ftch.com
Tim Sullivan (not present)	HRC	TSullivan@HRC-engr.com
Larry Hu	Direct Path Engineering	(734) 239-1301 larry.hu@directpatheng.com
Dan Schechter	GHD	313-999-2333 Daniel.Schechter@ghd.com
EARL J. KENZIE	A2 WW TP	(734) 794-6450 ekenzie@a2gov.org
KEITH SINDERS	A2 WWTP	734-794-6450 Ksanders@a2gov.org

Question #4

Supporting Information

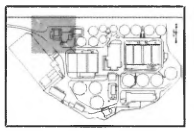


N

NOTES:

1. SEE SHEET C02-13 FOR DRAINAGE STRUCTURE TABLE.
2. RELOCATE EXISTING 12" X 6" REDUCER AND HYDRANT AS SHOWN.

10 0 10 20
SCALE: 1" = 20'



KEY PLAN

MALCOLM PIRNIE
COPYRIGHT © 2006

CONFORMED SET
JULY 2012

REVISIONS			
NO.	BY	DATE	REMARKS

DES MAP
DWN DRA
CKD TFL

CITY OF ANN ARBOR, MICHIGAN
ANN ARBOR WASTEWATER TREATMENT PLANT FACILITIES RENOVATIONS

CIVIL
SITE PIPING PARTIAL PLAN
1" = 20'-0"

ISSUED STATUS: BID SET
DATE NOVEMBER 2011
SHEET C02-11
CAD REF. NO. 3185004_066

Question #5

Supporting Information

2019	East 2				East 4				West 1				West 2			
	ML TSS	PE Flow	CRT	ML TVSS	ML TSS	PE Flow	CRT	ML TVSS	ML TSS	PE Flow	CRT	ML TVSS	ML TSS	PE Flow	CRT	ML TVSS
January	mg/L	MGD	days	mg/L	mg/L	MGD	days	mg/L	mg/L	MGD	days	mg/L	mg/L	MGD	days	mg/L
1	2900	5.65	**8.46**	2160	2880	7.40	**6.07**	2160					2860	6.32	**7.51**	2120
2	2800	5.30	**8.20**	2020	2680	6.89	**6.78**	1980					2920	5.69	**8.17**	2080
3	2620	5.30	**8.66**	1900	3000	6.87	**7.80**	2220					2880	5.69	**8.46**	2080
4	2900	4.95	**12.72**	2060	3160	6.41	**10.09**	2280					3220	5.28	**9.84**	2340
5	2840	4.94	**10.45**	2040	3020	6.37	**7.48**	2260					2980	5.25	**9.90**	2200
6	2840	4.79	**9.71**	2040	2960	6.21	**8.20**	2160					3060	5.09	**9.36**	2220
7	2880	5.14	**9.02**	2060	2880	6.47	**8.19**	2080					3060	5.43	**9.49**	2240
8	3040	5.76	**8.00**	2180	3160	6.21	**7.53**	2300					3240	5.56	**8.72**	2340
9	2780	5.68	**7.75**	1980	2960	6.16	**7.72**	2140					3060	5.48	**8.96**	2180
10	2980	5.87	**8.56**	2140	3020	6.38	**8.04**	2200					3080	5.71	**10.30**	2280
11	2840	5.58	**10.13**	2060	2980	6.07	**10.38**	2160					3020	5.41	**10.25**	2140
12	2860	5.38	**10.98**	2060	3200	5.84	**10.66**	2340					3280	5.17	**11.06**	2380
13	3040	5.65	**10.51**	2220	3020	6.20	**9.92**	2200					3280	5.45	**11.74**	2380
14	2900	5.76	**9.92**	2120	2900	6.29	**11.40**	2160					2980	5.55	**10.92**	2200
15	2920	5.63	**9.91**	2160	2960	6.67	**9.28**	2180					3000	5.79	**11.52**	2240
16	3340	5.18	**13.73**	2420	3040	6.56	**10.86**	2240					3320	5.04	**13.96**	2460
17	3120	5.96	**11.00**	2300	2860	6.16	**9.51**	2140					3320	4.86	**14.08**	2540
18	3160	6.09	**9.78**	2320	2960	5.99	**10.66**	2220					3340	4.85	**13.96**	2540
19	3280	5.63	**10.68**	2460	3160	5.51	**12.62**	2400					3500	4.58	**13.56**	2760
20	3360	5.87	**11.40**	2400	3240	5.82	**12.65**	2420					3400	4.71	**12.19**	2600
21	3240	5.97	**17.38**	2380	3100	5.85	**20.27**	2300					3200	4.99	**14.93**	2400
22	3400	6.29	**23.81**	2520	3300	6.29	**27.71**	2440					2940	5.20	**27.40**	2240
23	3600	6.25	**20.97**	2680	3360	6.28	**25.98**	2540					2840	5.08	**26.19**	2180
24	3620	6.91	**19.01**	2680	3300	7.08	**19.68**	2580					3240	5.42	**26.53**	2520
25	3440	6.28	**18.35**	2540	3320	6.26	**22.29**	2520					3120	5.33	**25.32**	2380
26	3640	5.30	**18.66**	2700	3260	5.14	**21.35**	2520		2.34			3020	4.30	**27.87**	2320
27	3420	4.65	**16.59**	2560	3320	4.36	**25.61**	2560	3080	4.01	**38.05**	2280	2960	3.89	**29.61**	2280
28	3620	4.98	**16.25**	2600	3200	4.76	**23.04**	2380	3540	4.24	**32.66**	2560	3080	4.17	**25.14**	2300
29	3920	4.54	**20.11**	2920	3380	4.70	**25.30**	2600	3380	4.06	**27.27**	2520	2920	3.95	**23.58**	2240
30	3980	4.44	**16.63**	2960	3360	4.97	**19.30**	2560	3640	4.21	**179.39**	2720	3020	4.03	**26.36**	2300
31	3860	4.86	**14.56**	2740	3220	5.52	**16.24**	2440	3340	4.51	**23.79**	2480	3240	4.33	**27.50**	2420
MIN.	2620.00			1900.00	2680.00			1980.00	3080.00			2280.00	2840.00			2080.00
MAX.	3980.00			2960.00	3380.00			2600.00	3640.00			2720.00	3500.00			2760.00
AVG.	3198.06	5.50		2334.84	3101.94	6.05		2312.26	3396.00			2512.00	3109.03	5.08		2319.35

ANN ARBOR WASTEWATER TREATMENT PLANT
MONTHLY REPORT

Oxic 3 Lab Data

(Year) FEB 2019 (Month)	East 1 Oxic 3		East 2 Oxic 3		East 3 Oxic 3		East 4 Oxic 3		West 1 Oxic 3		West 2 Oxic 3	
	ML TSS mg/L	ML TVSS mg/L	ML TSS mg/L	ML TVSS mg/L	ML TSS mg/L	ML TVSS mg/L	ML TSS mg/L	ML TVSS mg/L	ML TSS mg/L	ML TVSS mg/L	ML TSS mg/L	ML TVSS mg/L
1			4180	3060			3280	2500	3420	2560	3380	2600
2			3320	2500			3180	2460	3500	2620	3420	2560
3			3460	2600			3100	2420			3040	2320
4			3440	2620			3080	2420	3460	2560	3120	2380
5			3440	2560			3040	2340	3540	2580	3200	2440
6			3500	2560			3040	2340	3380	2520	3040	2260
7			3420	2520			3300	2480	3080	2300	3220	2400
8			3340	2460			3120	2340	3400	2500	3160	2340
9			3620	2680			3460	2580	3800	2780	3640	2700
10			3880	2860			3760	2860	3960	2920	3680	2740
11			3680	2720			3320	2500	3940	2940	3300	2460
12			3540	2640			3440	2580	3560	2660	3460	2580
13			3500	2640			3420	2580	3540	2680	3400	2540
14			3520	2620			3440	2580	3540	2660	3540	2640
15			3580	2640			3420	2580	3460	2600	3460	2580
16			3800	2800			3740	2780	3600	2660	3820	2840
17			3840	2840			3720	2760	3580	2640	3820	2820
18			3620	2660			3480	2560	3480	2620	3580	2660
19			4000	2940			3820	2820	3700	2740	3860	2880
20			4000	2960			3860	2840	3620	2700	3720	2780
21			4120	3040			4080	3000	3740	2800	3880	2880
22			4180	3040			4120	3000	3740	2800	3840	2820
23			3900	2860			3880	2820	3440	2580	3660	2720
24			3860	2860			3780	2780	3420	2620	3740	2780
25			3820	2800			3820	2800	3640	2760	3700	2740
26			3840	2840			3920	2860	3720	2740	4320	3180
27			3580	2600			3800	2740	3560	2580	4000	2940
28			3720	2620			3820	2780	3800	2780	4000	2920
29												
30												
31												
MIN.			3320.00	2460.00			3040.00	2340.00	3080.00	2300.00	3040.00	2260.00
MAX.			4180.00	3060.00			4120.00	3000.00	3960.00	2940.00	4320.00	3180.00
AVG.	#DIV/0!	#DIV/0!	3703.57	2733.57	#DIV/0!	#DIV/0!	3544.29	2646.43	3578.52	2662.96	3571.43	2660.71

Question #8

Supporting Information

Kennedy INDUSTRIES
PUMPS | VALVES | REPAIRS | CONTROLS

QUOTATION		
DATE	NUMBER	PAGE
1/20/2017	77843	1 of 1

BILL TO
ANN203
City of Ann Arbor, Wastewater Treatment Plant
49 SOUTH DIXBORO ROAD
ANN ARBOR, MI 48105

Accepted By: _____
Company: _____
Date: _____
PO#: _____

ATTENTION:
RONNEY NEELY P: 734-794-6450 RNEELY@A2GOV.ORG

WE ARE PLEASED TO PROPOSE THE FOLLOWING FOR YOUR CONSIDERATION:

CUSTOMER REF/PO #	JOB #	JOB TITLE	SLP	SHIPPING TYPE
QUOTE	77843	FLYGT PUMP TO REPLACE KSB MODEL 5-M17-70798U/2 PUMP	CKW / MJH	FRT. ALLOWED

QTY	DESCRIPTION

(1) FLYGT EXPLOSION PROOF, SUBMERSIBLE SEWAGE PUMP, MODEL NP3102.095-462 WITH HIGH CHROME IMPELLER AND INSERT RING. RATED FOR 225 GPM @ 38' TDH, 5 HP, 3 PHASE, 460 VOLT WITH 4" DISCHARGE AND 50 FT. MOTOR AND SENSOR CABLE. PUMP EQUIPPED WITH SEAL FAIL/HIGH TEMP CABLE.

(1) MINI CAS SEAL FAIL/HI TEMP RELAY - TO BE MOUNTED IN EXISTING PANEL.

(1) MODIFY PUMP TO ACCOMMODATE EXISTING KSB GUIDE RAIL SYSTEM. GUIDE RAIL BRACKET TO BE PROVIDED BY CUSTOMER.

NET PRICE INCLUDING FREIGHT, BUT NO TAXES: --- $7,331.00 TOTAL
****
PLEASE ADD FOR:
TUNGSTEN APPLICATION ON IMPELLER, VOLUTE, INSERT RING AND SEAL BOTTOM HOUSING: --- $1,772.00 TOTAL
****

PLEASE NOTE: FLYGT PUMP SUPPLIED WITH 50 FT. OF CABLE, PLEASE CONFIRM CABLE LENGTH REQUIRED.

WE DO NOT INCLUDE: INSTALLATION, CONCRETE OR SITE WORK, ANCHOR BOLTS, PIPING, VALVES, CONDUIT, WIRING, JUNCTION BOXES, PADLOCKS, KEYS OR START-UP UNLESS LISTED ABOVE.

WE APPRECIATE THIS OPPORTUNITY TO QUOTE AND LOOK FORWARD TO BEING OF FUTURE SERVICE.

SINCERELY,

MARK HEMEYER / BRYAN DAVIDSON
KENNEDY INDUSTRIES

Kennedy INDUSTRIES
PUMPS | VALVES | REPAIRS | CONTROLS

FLYGT

NP 3102 MT 3~ 463

Performance curve

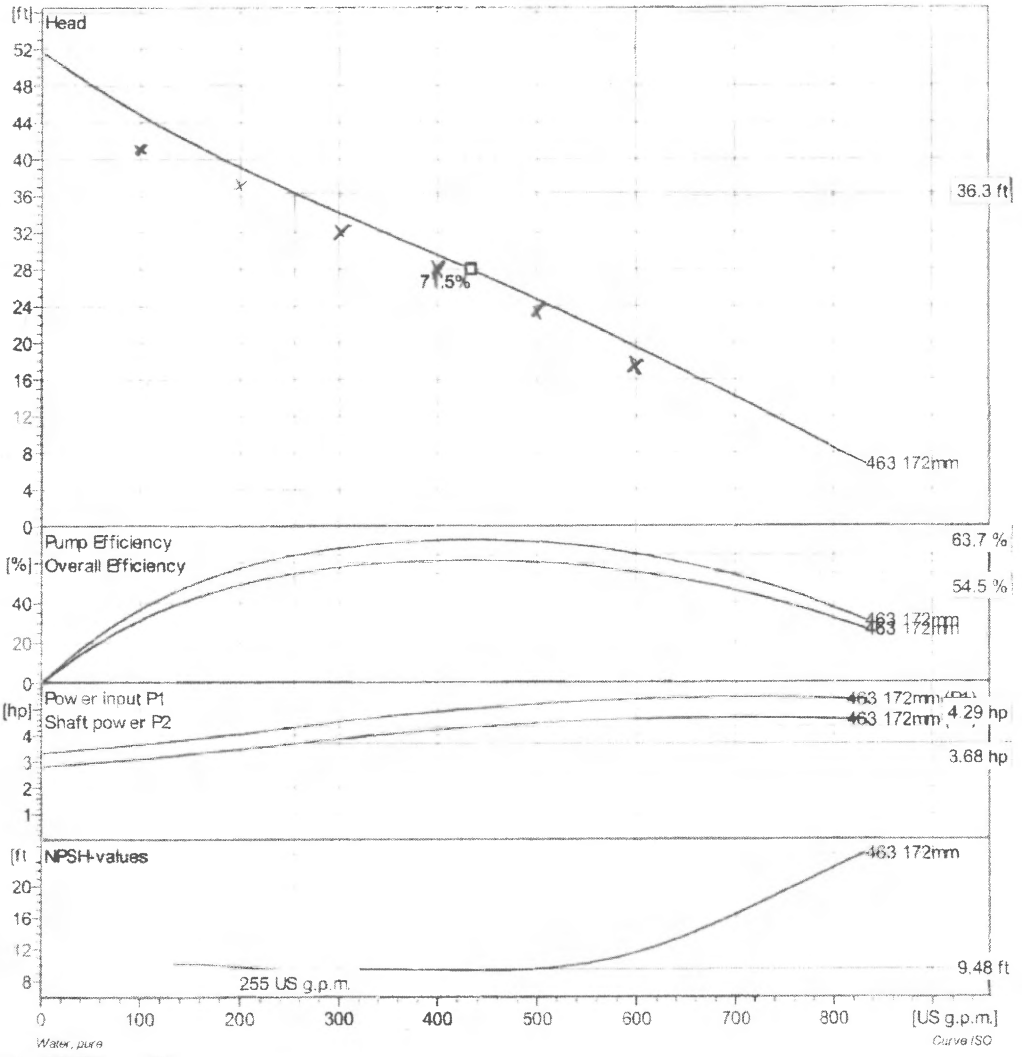
Pump

Discharge Flange Diameter	3 15/16 inch
Inlet diameter	100 mm
Impeller diameter	6¾"
Number of blades	2

Motor

Motor #	N3102.185 18-11-4AL-W 5hp
Approval	Standard
Stator variant	61
Frequency	60 Hz
Rated voltage	460 V
Number of poles	4
Phases	3~
Rated power	5 hp
Rated current	6.7 A
Starting current	41 A
Rated speed	1745 rpm

Power factor	
1/1 Load	0.81
3/4 Load	0.75
1/2 Load	0.64
Motor efficiency	
1/1 Load	85.0 %
3/4 Load	85.5 %
1/2 Load	84.0 %



Duty point		Guarantee
Flow	Head	ISO_9906_Grade
250 US g.p.m.	35 ft	No

Project	Project ID	Created by	Created on	Last update
			2017-01-19	

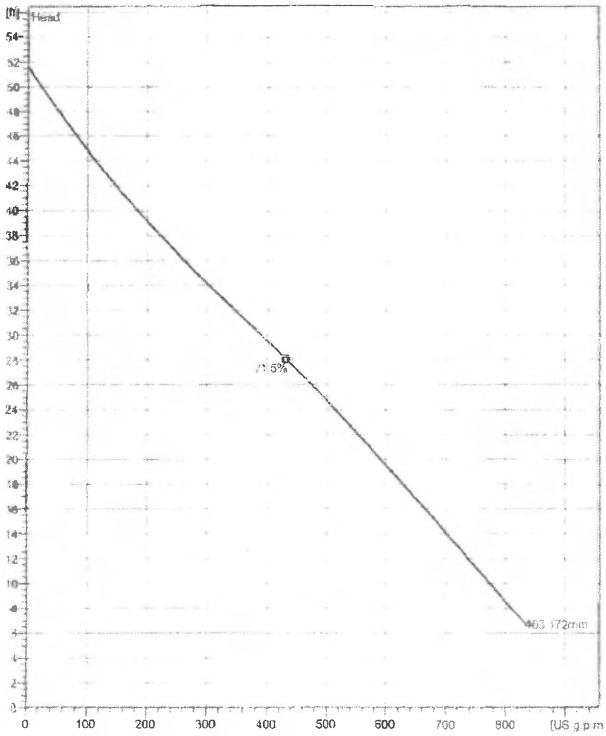
Pump Curve X - KSB KRT F 100-250

Kennedy INDUSTRIES
PUMPS | VALVES | REPAIRS | CONTROLS

NP 3102 MT 3~ 463

Technical specification

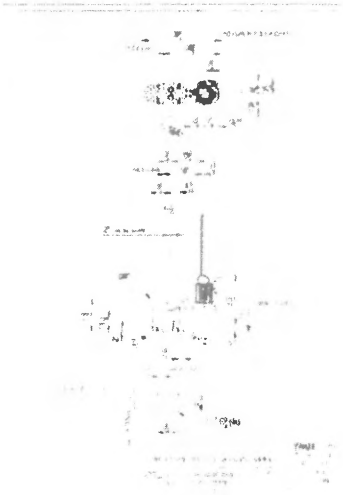
FLYGT



Water, pure *Curve ISO*

Note: Picture might not correspond to the current configuration

Installation: P - Semi permanent, Wet



General

Patented self cleaning semi-open channel impeller, ideal for pumping in waste water applications. Possible to be upgraded with Guide-pin® for even better clogging resistance. Modular based design with high adaptation grade

Impeller

Impeller material	Hard-Iron ™
Discharge Flange Diameter	3 15/16 inch
Inlet diameter	3 15/16 inch
Impeller diameter	172 mm
Number of blades	2

Motor

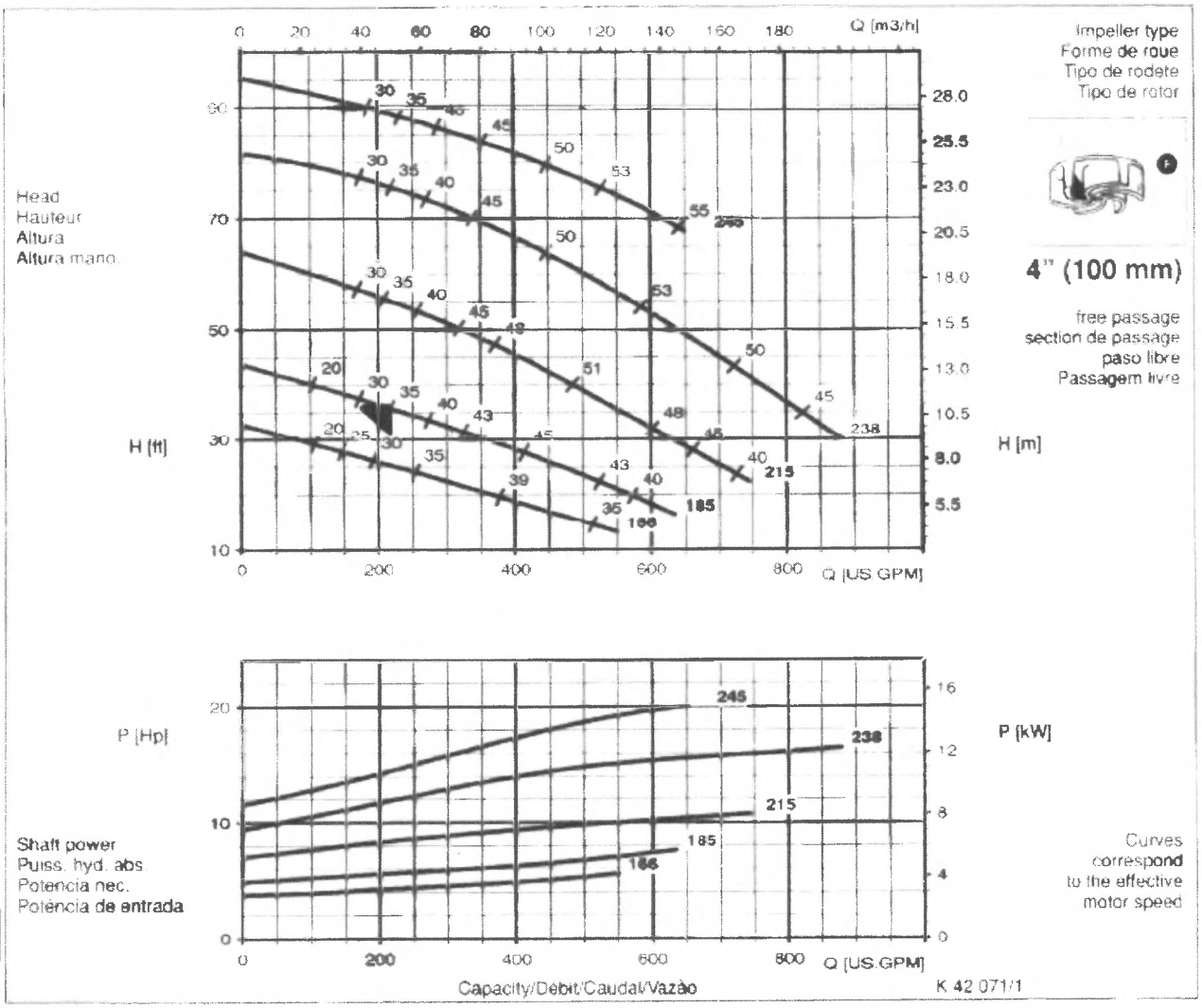
Motor #	N3102 185 18-11-4AL-W 5hp
Approval	Standard
Stator variant	81
Frequency	60 Hz
Rated voltage	460 V
Number of poles	4
Phases	3~
Rated power	5 hp
Rated current	6.7 A
Starting current	41 A
Rated speed	1745 rpm
Power factor	
1/1 Load	0.81
3/4 Load	0.75
1/2 Load	0.64
Motor efficiency	
1/1 Load	85.0 %
3/4 Load	**85.5 %**
1/2 Load	84.0 %

Configuration

Project	Project ID	Created by	Created on	Last update
			2017-01-19	

KRT F 100-250 / ...

1750 rpm



Impeller type
Forme de roue
Tipo de rodete
Tipo de rotor

4" (100 mm)

free passage
section de passage
paso libre
Passagem livre

Head
Hauteur
Altura
Altura manométrica

Shaft power
Puiss. hyd. abs.
Potencia nec.
Potência de entrada

Curves correspond to the effective motor speed

Suitable motor sizes/Définition taille moteur/Tamaños de motor aplicables/Tamanhos apropriados de motores

MOTOR RATING Material ~~G G1 G2 GH H~~ Hp	(kW)	~~C1 C2~~ Hp	(kW)	MAX. LIQUID TEMP. °F	(°C)	MOTOR CODE	
				104	(40)	5 4 U 5 4 X	(FM)
7.5	(5.5)	7.5	(5.5)	140	(60)	7 4 W 7 4 Z	(FM)
				104	(40)	7 4 U 7 4 X	(FM)
10	**(7.5)**	10	(7.5)	140	(60)	11 4 W 11 4 Z	(FM)
				104	(40)	11 4 U 11 4 X	**(FM)**
15	**(11.5)**	15	(11.5)	**140**	**(60)**	**16 4 W** 16 4 Z	(FM)
20	**(15)**	20	(15)	104	(40)	**16 4 U** **16 4 X**	**(FM)**

(FM) = Explosionproof to Class I, Division 1, Groups C & D
(Explosionproof according to IEC 79 (EEx d IIB) on request)

EQUIPMENT MAINTENANCE SUMMARY

1. Equipment Item: SLURRYCUP™ Solids Classifier
1a. Specification Section: 11320

2. Manufacturer: EUTEK® SYSTEMS™, INC.
Address: 1055 N.E. 25th Avenue, Suite N, Hillsboro, OR 97124

Toll Free Phone Number	(866) 615-8130
Business Phone Number	(503) 615-8130
Fax	(503) 615-2906

3. Equipment I.D. Number: GDU –1
Model Number: 0.57/32/50/0.57/304SS/A
Serial Number: 0113-5595-01

Equipment I.D. Number: GDU – 2
Model Number: 0.57/32/50/0.57/304SS/B
Serial Number: 0113-5595-02

4. Equipment Design Information
Size: 32" diameter
Performance: 95% removal of all grit (specific gravity 2.65) ≥ 50 microns
Design Flow/Unit: 400 ~~mgd~~ GPM with 271" headloss
Peak Flow/Unit: 400 ~~mgd~~ GPM with 271" headloss

5. Weight: 1,150 lbs (dry) 1,500 lbs (wet)

6. Maintenance Requirements: EUTEK Systems recommends that Section 5 of this manual be reviewed in its entirety by maintenance personnel to fully familiarize them with the detailed maintenance requirements which are summarized below.

Maintenance Operation	Frequency	Lubricant	Comments
Drain unit, hose down insides, inspect internal baffle. Inspect all valves for proper open/close operation.	one month after start-up	N/A	
Drain unit, hose down insides, inspect internal baffle. Inspect underflow element. Inspect all valves for proper open/close operation.	every 3 months	N/A	

7. Lubricant List: N/A