

Afton Pumps, Inc.

EQUIPMENT INFORMATION

Customer:	Gasedu S. A.	P. O. No.:	PO-GAS-2019-004	Item No.:	P-510B-1, -2, -3, & -4
Location:		Date:	11/12/2019	Pump S/N:	53592

PUMP INFORMATION		MOTOR INFORMATION	
SERVICE	Close Drain Pump	MOTOR MFG.	NIDEC
PUMP SIZE	4x8 GSV	AFTON P/N	96-536-060-53592
NO. OF STAGES	3 / 1	H. P.	60
G.P.M.	300	S. F.	1.15
T.D.H.	300	FRAME	364VP
S.W.P. OF SUCTION AT TEMP.	N/A PSIG @ 100° F.	ENCLOSURE	TEFC
S.W.P. OF DISCHARGE AT TEMP	285 PSIG @ 100° F.	R.P.M.	3570
HYDRO OF SUCTION (Req'd)	N/A PSIG	VOLTS	460
HYDRO OF DISCHARGE (Req'd)	430 PSIG	PH / CY	3 / 60
SP. GR.	1.00	TYPE	TVS4
WEIGHT	Pump = 700 #'s	WEIGHT	900 #'s

Document #: Equipment Information, 53592, Rev.0

AFTON PUMPS, Inc.
CUSTOMER BILL OF MATERIALS

11/13/2019

10:40 AM

Recommended spare parts list for assembly number: 02-812-000-53592

AFTON JOB NO: 0053592	Customer PO #: PO-GAS-2019-004	Tag/Item #: P-510B1,2,3,4
Assembly Number: 02-812-000-53592	Customer Name: GASEDU S.A.	Impeller Trim: 5,680/5,125"@3535RPM
Description: 4x8AXCH/N-4STG 150# GSV SNG		PRICES ARE VALID FOR 30 DAYS

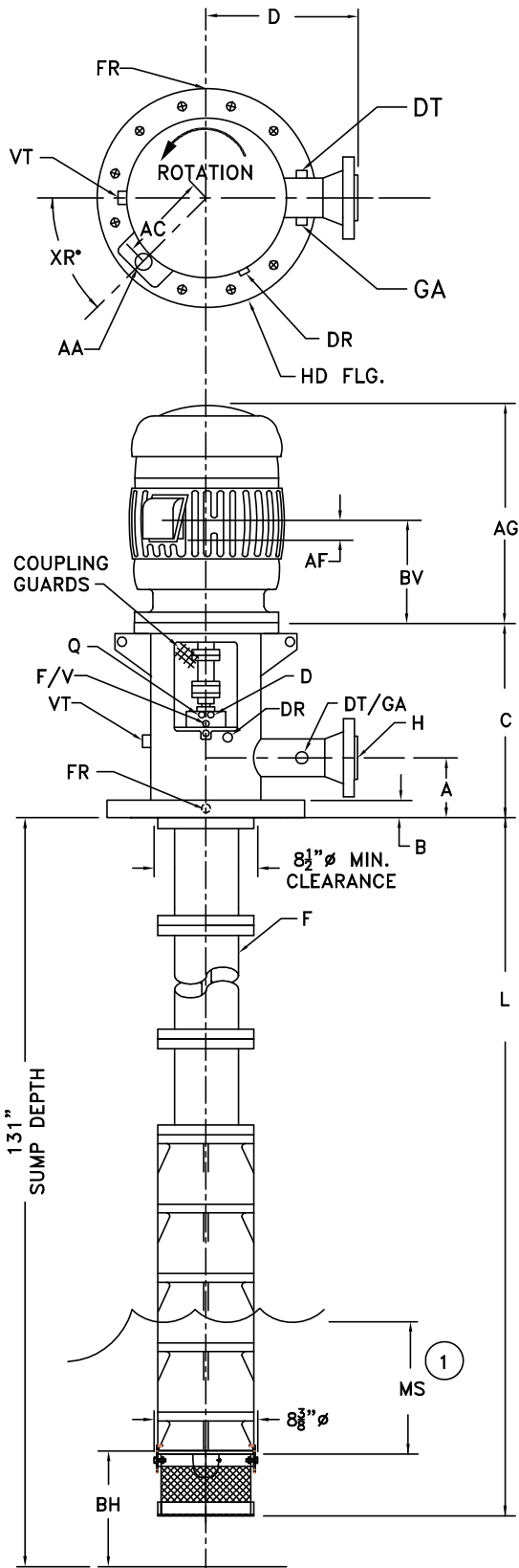
Afton Item	Part Number	Material Code	Part Description	Quantity Per Unit	U/M	Recommended Spare Parts Prices
Assembly Part Number: 02-812-000-53592						
001	25-016-026-501	FAB STL	HD,DISCH 4x8(10) 10-150# BASE	1	EA	
002	17-032-215-009	A108-C1018	HUB,MTR 1-5/8 x 4-1/2 (3-3/4)	1	EA	
003	17-026-400-009	A108-C1018	NUT,ADJ F/1 OD (2-1/2)	1	EA	
004	17-040-038-009	A108-C1018	SPCR,CPLG 8 LG (2-1/2 X 3-3/4)	1	EA	
005	17-020-850-009	A108-C1018	HUB,PUMP 1-3/16 OD (2-1/2)	1	EA	
025	03-051-119-027	ALUMINUM	GUARD,CPLG F/10" SHELL-19 LG	2	EA	
026	49-001-026-466	A479-316	CAPSCRW,FH 1/4-20UNC-2Ax1/2	4	EA	
077	17-101-304-294	AC-40(B-CBN)	BRG,STFG BX 1-3/16 SFT	1	EA	
078	17-076-307-053	A216-WCB	BOX,STF SM,150-600# 3-5/8 BORE	1	EA	
078-1	49-020-038-461	A194-8M	NUT,HH 5/8-11UNC-2B	6	EA	
078-1	49-010-312-464	A193 B8M SH	STUD,5/8-11UNC-2A x 5 LG	6	EA	
079	98-471-DD28-222-222	BSTFM	SEAL,ASSM JC 1-3/4 S48	1	EA	
087	48-017-244-333	VITON	O RING,4-1/2x4-1/4x.139	1	EA	
151	17-301-51658-575	A106/516	COL,5x32.5LG 8AXC W/BRG & OR	3	EA	
203	PD-1.19-143.25-182	A276-316	SFT,PUMP DKY 8AXC 4 STGS	1	EA	
216	32-100-201-294	AC-40(B-CBN)	BRG,SUCT 8AXC,AJCN,ALC	1	EA	
217	32-058-462-089	A351-CF8M	SUCT BELL,8AXCN F/B&I WR	1	EA	
222	48-017-163-333	VITON	O RING,6-3/16"x6"x.103TH.	4	EA	
225	32-208-183-089H	A351-CF8M	BOWL,8AXC BOWLf/B&IWR&OR675swp	3	EA	
225	32-208-180-089H	A351-CF8M	BOWL,8AXC TOP BOWL 675swp F/OR	1	EA	
226	32-308-101-294	AC-40 B. CAR	BRG,BOWL/COL 8PJO,PJC,PLC,PXC	4	EA	
227	32-408-016-089	A351-CF8M	IMP,8APXCN F/DKY W/WR	1	EA	
227	32-408-143-089	A351-CF8M	IMP,8AXCH DB KY F/ OR WO IWR	3	EA	
230	32-258-271-294	AC-40(B-CBN)	WR,BELL 8AXCN W/ IWR (B.CARB)	1	EA	
230	32-258-263-294	AC-40(B-CBN)	WR,BOWL 8AXC W/IWR (B.CARB)	3	EA	
231	32-258-270-089	A351-CF8M	WR,8AXCN IMP F/BWR	1	EA	
231	32-258-260-089	A351-CF8M	WR,8AXC IMP F/ BWR	3	EA	
241	32-095-041-089	A351-CF8M	STRNR,BSKT 8PJC/8AXC	1	EA	
265	27-210-094-076	A240-316	CLIP,BSKT STRNR	3	EA	
265	49-002-028-459	A193 B8(304)	CAPSCRW,HH 1/4-20UNC-2Ax3/4	3	EA	
267	27-233-061-184	A276-410	LOCKWASHER, 1/4"EXT.Tooth	3	EA	
268	49-003-026-466	A276-316	CAPSCRW,SH 1/4-20UNC-2Ax1/2	36	EA	
270	32-475-107-182	A276-316	THRUST RING, F/8 IMP	4	EA	
285	48-010-158-182	A276-316	KEY,STRT 1/4 SQ x 1 LG	9	EA	
294	49-010-152-460	A193 B8M	STUD,7/16-14UNC-2A x 1-3/4 LG	36	EA	
294	49-020-023-461	A194 8M	NUT,HH 7/16-14UNC-2B	36	EA	

Page 1 of 2

Prices indicate recommended spare parts

Afton Item	Part Number	Material Code	Part Description	Quantity Per Unit	U/M	Recommended Spare Parts Prices
Assembly Part Number: 02-812-000-53592						
238	32-308-101-294	AC-40 B. CAR	BRG,BOWL/COL 8PJO,PJC,PLC,PXC	3	EA	
280	49-002-177-450	A193 B7	CAPSCRW,HH 5/8-11UNC-2Ax1-1/2	4	EA	
283	49-020-026-455	GRADE 8	NUT,FH 1/2-13UNC-2B	10	EA	
283	49-001-132-455	GRADE 8	CAPSCRW,FH 1/2-13UNC-2Ax2-1/4	6	EA	
283	49-001-137-455	GRADE 8	CAPSCRW,FH 1/2-13UNC-2Ax3-1/2	4	EA	
285	48-010-294-182	A276-316	KEY,STRT 3/8 SQ x 3-1/4 LG	1	EA	
285	48-009-174-182	A276-316	KEY,STRT 1/4 SQ x 2 LG	1	EA	
288	03-012-030-187	A582-416CF	KEY,CIR F/1-5/8 OD SFT	1	EA	
290	49-002-110-450	A193-B7	CAPSCRW,HH 7/16-14UNC-2Ax2-3/4	16	EA	
290	49-020-023-452	A194 2H	NUT,HH 7/16-14UNC-2B	16	EA	
291	49-002-108-450	A193-B7	CAPSCRW,HH 7/16-14UNC-2Ax2-1/4	8	EA	
291	49-020-023-452	A194 2H	NUT,HH 7/16-14UNC-2B	8	EA	
292	49-010-155-450	A193 B7	STUD,7/16-14 UNC-2A x 2-1/2 LG	8	EA	
292	49-020-023-452	A194 2H	NUT,HH 7/16-14UNC-2B	8	EA	
304	48-017-163-333	VITON	O RING,6-3/16"x6"x.103TH.	4	EA	
341	49-025-017-032	A105	PLUG,PIPE RH 1/2 NPT	3	EA	
391	96-536-060-53592		NI,60HP,3600RPM,TEFC	1	EA	
413	49-025-017-042	A182-F316	PLUG,PIPE RH 1/2 NPT	3	EA	
413	49-030-322-182	A276-316	CONN,TBG 90EL 1/2TBG x 3/8NPT	1	EA	
413	49-033-572-182	A276-316	CONN,TBG 90L ORFC 1/2TGx1/2NPT	1	EA	
413	49-035-110-135	A269-316	TBG,1/2 OD x .065 WALL	20.5	IN	
413	49-040-198-023	A312-TP316	NPL,PIPE 1/2NPT SCH160 x 6 LG	1	EA	
413	49-060-017-042	A182-F316	TEE,1/2 3000# NPT	1	EA	

Prices indicate recommended spare parts



CERTIFIED		
BY:	PHILLIP CR	
DATE:	05/16/2019	
REV. A	BY: P. CR	DATE: 05/28/2019
REV.	BY:	DATE:

CUSTOMER DATA	
CUSTOMER	GASEDU S.A.
P.O. NO.	PO-GAS-2019-004
ITEM NO.	P-510B-1,-2,-3,-4
SERVICE:	CLOSE DRAIN PUMP
DESIGN CONDITIONS	
GPM	300
TDH	300 FT
TEMP	140°F
SP. GR.	1.00
VISC.	200 cp
SUCT. PR.	1 PSIG
DISCH. PR.	130 PSIG
SWP:	285 PSIG @ 100°F


MOTOR DATA	
MFG.	NIDEC
H.P.	60
FRM.	364VP
ENCL.	TEFC
S.F.	1.15
AA	3" NPT
AC	12.13"
AF	3.38"
SPACE HEATER:	115V, 144W
RPM	3570
VOLTS	460
PH/CY	3/60
WT.	900 LBS.
AG	32.25"
BV	13.00"
XR °	45°

PUMP DATA	
SERIAL NO:	53592-1,-2,-3,-4
NO. OF STGS:	4
A	7-1/2"
B	1-1/8"
C	~33"
D	11"
SIZE:	4 x 8
PUMP WT:	700#
F	5-5/8" O.D.
L	125-11/16" (10'-5-3/4")
BH	7"
MS	9"
H	4-150# RF WN ANSI DISCH. FLANGE *
HD	10-150# FF BLIND ANSI BASE FLANGE *

* BOLT HOLES TO STRADDLE C

TAPPED CONNECTIONS		NPTF	SIDE
F/V	SEAL FLUSH/VENT	1/2"	FAR
FR	SEAL FLUSH RETURN	1/2"	FAR
Q	SEAL QUENCH	1/2"	FAR
D	SEAL DRAIN	1/2"	NEAR
DT	DISCHARGE TAP	1/2"	FAR
GA	GAUGE TAP	1/2"	NEAR
** DR	DRAIN	1/2"	NEAR
VT	VENT, HEAD	1"	C

** REMOVE PLUG BEFORE START-UP
SEE FPG-53592 FOR PLAN 13 FLUSH PLAN.



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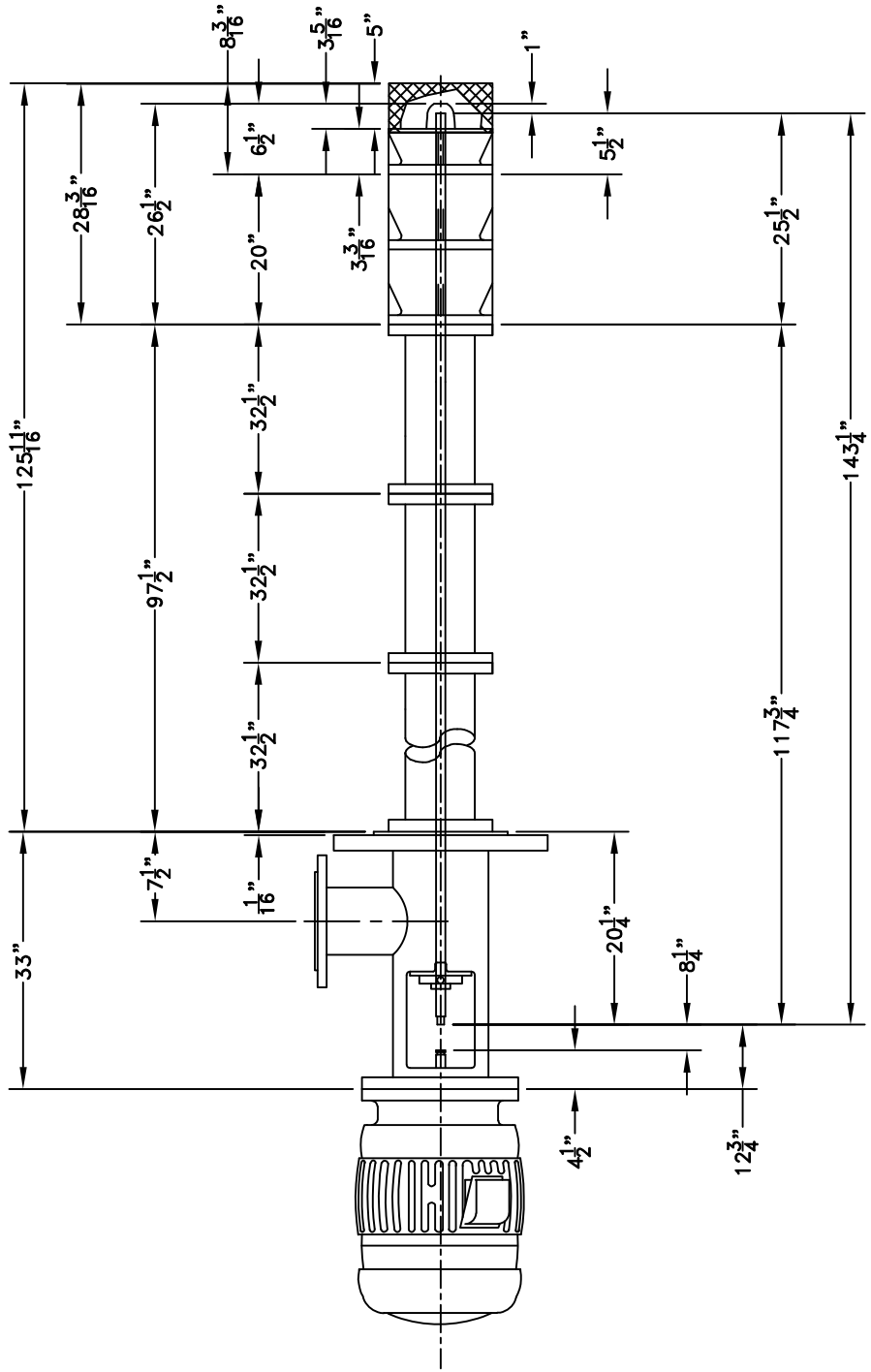
TYPICAL GSV OUTLINE

DATE:	BY:	DWG NO:
05/28/19	CR	OLG-53592

ALL DIMENSIONS ± 1/8" NOT TO SCALE

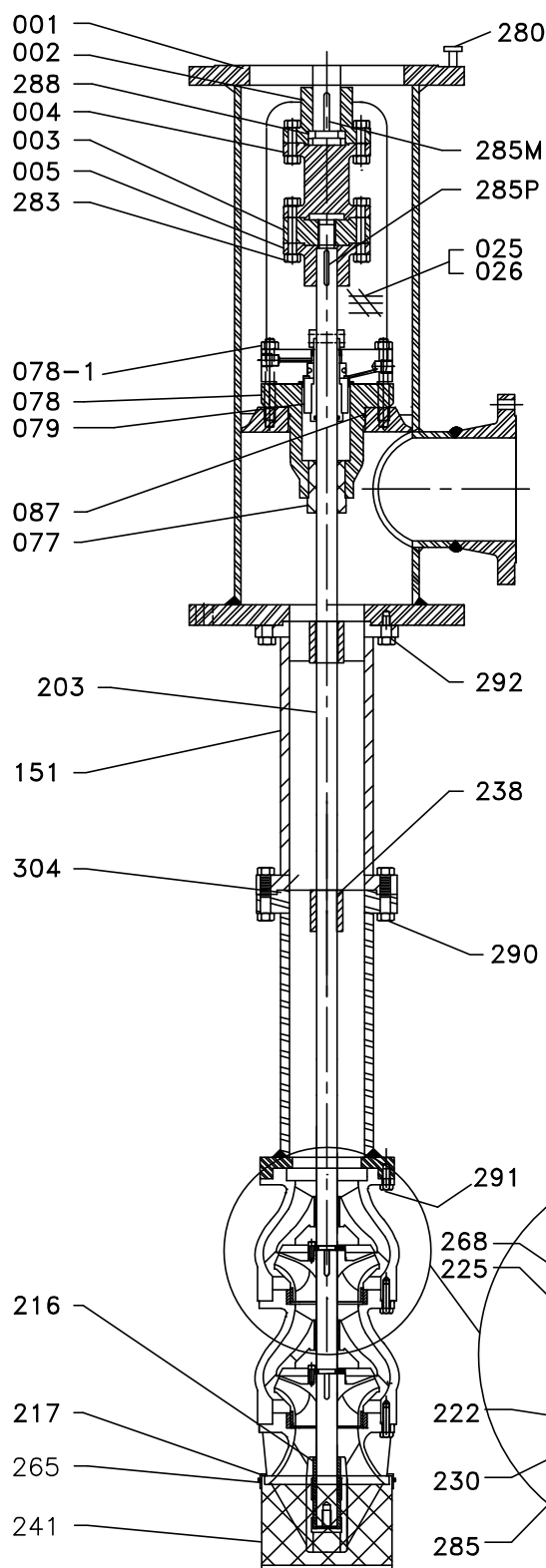
1 MS REPRESENTS THE MINIMUM DISTANCE OVER LIP OF BELL TO PREVENT VORTEXING

Document #: Pump Outline Drawing, OLG-53592 Rev.A



Document #: Pump Schematic Drawing, SCG-53592

F		C	REVISION	PROPERTY OF	aftern pumps. Inc.		HOUSTON, TEXAS	DATE	05/15/19	CHKD BY:
G		D	A	JOB NO. 53592 BOWL 8AXC NO. STGS 4 SUCTION 8AXCN				DRWN BY:	OKR	APPRVD BY:
H		E	B					FILE	PART NO.	
NOTE: ALL FRACTIONAL DIMENSIONS TO HAVE 1/64 TOL. IN THE DIRECTION OF MACHINING UNLESS SPECIFIED OTHERWISE - THE USE OF THIS DWG. BY OTHERS PROHIBITED UNLESS BY WRITTEN PERMISSION				A SCG-53592						




ITEM NO.	DESCRIPTION	MATERIAL
001	HEAD, DISCHARGE	SEE TABLE 1
002	COUPLING, MOTOR HUB	A108-C1018
003	COUPLING, ADJUSTING NUT	A108-C1018
004	COUPLING, SPACER	A108-C1018
005	COUPLING, PUMP HUB	A108-C1018
025	COUPLING GUARD	ALUMINUM
026	COUPLING GUARD CAPSCREWS	316
* 077	BEARING, STUFFING BOX	AC-40 (B.CARBON)
078	STUFFING BOX	A216-WCB
078-1	STUFFING BOX/GLAND STUDS/NUTS	A193-B8M/A194-8M
* 079	SEAL, MECHANICAL	SEE J.C. MECH SEAL DWG
* 087	'O' RING, STUFFING BOX	VITON
151	COLUMN	SEE TABLE 1
* 203	SHAFT, PUMP	A276-316
* 216	BEARING, SUCTION BELL	AC-40 (B.CARBON)
217	BELL, SUCTION	A351-CF8M
* 222	'O' RING, BOWL	VITON
225	BOWL	A351-CF8M
* 226	BEARING, BOWL	AC-40 (B.CARBON)
* 227	IMPELLER (CLOSED)	A351-CF8M
* 230	BOWL WEAR RING	AC-40 (B.CARBON)
* 231	IMPELLER WEAR RING	A351-CF8M
* 238	COLUMN BEARING	AC-40 (B.CARBON)
241	STRAINER, CLIP-ON TYPE	316 S.S.
265	STRAINER CLIPS, CAPSCREWS	316 S.S.
268	THRUST RING CAPSCREWS	A276-316
270	THRUST RING	A276-316
280	DRIVER CAPSCREWS	GRADE 8
283	COUPLING CAPSCREWS/NUTS	GRADE 8
285	STRAIGHT KEY	A276-316
285M	STRAIGHT KEY (MOTOR)	A276-316
285P	STRAIGHT KEY (PUMP)	A276-316
288	CIRCULAR KEY	A582-416
290	COL TO COL CAPSCREWS/NUTS	A193-B7/A194-2H
291	BOWL TO COL CAPSCREWS/NUTS	A193-B7/A194-2H
292	COL TO HD CAPSCREWS	A193-B7
294	BOWL CAPSCREWS	A193-B8M
* 304	'O' RING, COLUMN	VITON

* RECOMMENDED SPARE PARTS

TABLE 1 FABRICATED FROM	
PIPE	A53/A106 GR. B
PLATE	A516-GR. 70
FLANGES	A105
MTR PLT	A-36
FITTINGS	A105

NOTE: DWG NOT REPRESENTATIVE OF
ACTUAL NUMBER OF COLUMNS AND/OR BOWLS

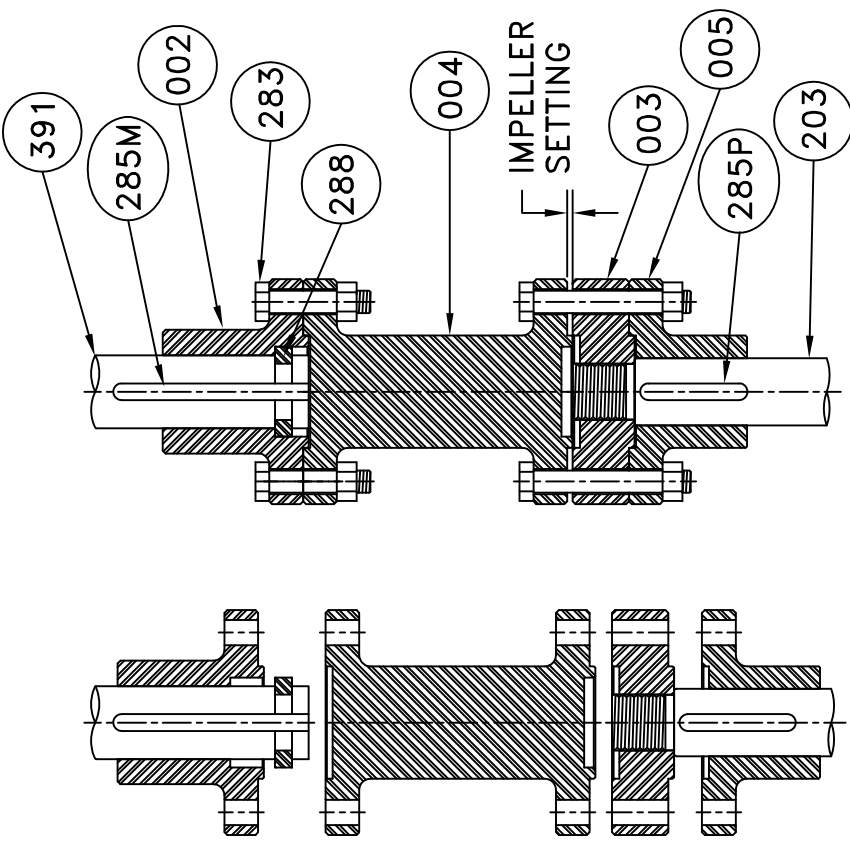

afton pumps. inc.
 GSV CROSS-SECTIONAL

DRAWN BY: <i>CVR</i>	DATE: 05/16/19	DRAWING NO.: CSG-53592
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afton pumps, inc.			
P.O. NO.	PO-GAS-2019-004		
ITEM NO.	P-510B, -1, -2, -3, & -4		
PUMP SIZE & MODEL	4 X 8 GSV		
SERIAL NO.	53592	NO. STG=S	3 / 1
G.P.M.	300	T.D.H.	300 FT.
R.P.M.	3570	SP. GR.	1.00
S.W.P. SUCT. @ 100 DEG. F.	N/A PSIG	S.W.P. DISCH @ 100 DEG. F.	285 PSIG
HYDRO SUCT.	N/A PSIG	DISCH.	430 PSIG
MAX. TEMP.	100 DEG F.	IMP. SETT.	1/8"
RADIAL BRG.			
THRUST BRG.			

Document #: Pump Nameplate 53592 Rev.0

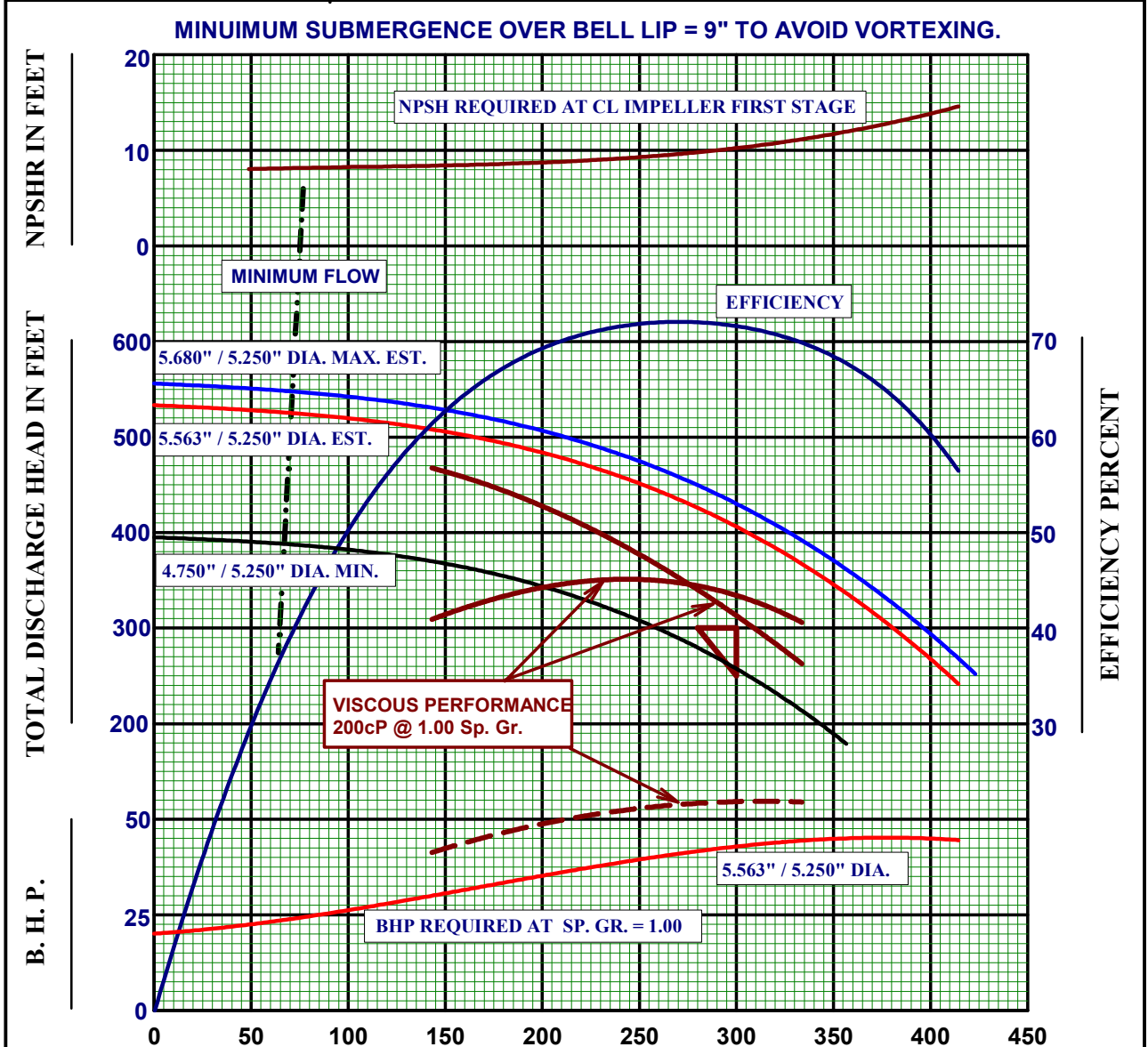
53592-Pump Name Plate.doc



ITEM	DESCRIPTION
002	MOTOR HUB COUPLING
003	PUMP SHAFT ADJUSTING NUT
004	SPACER COUPLING
005	PUMP SHAFT COUPLING HUB
203	PUMP SHAFT
283	COUPLING CAP SCREWS & NUTS
285M	STRAIGHT KEY, MOTOR
285P	STRAIGHT KEY, PUMP
288	MOTOR CIRCULAR KEY
391	MOTOR

F	C	REVISION	PROPERTY OF	HOUSTON	DATE	CHKD BY:
G	D	A	AFTON 4 PIECE ADJUSTABLE SPACER COUPLING		08/01/14	08/01/14
H	E	B			DRWN BY: <i>CR</i>	APPRVD BY:
NOTE: ALL FRACTIONAL DIMENSIONS TO HAVE 1/64 TOL. IN THE DIRECTION OF MACHINING UNLESS SPECIFIED OTHERWISE - THE USE OF THIS DWG. BY OTHERS PROHIBITED UNLESS BY WRITTEN PERMISSION			FILE	PART NO.	E-67	

TYPE: GSV	W.R. CLR.: API	CURVE NO.: 53592TR
IMP(S): 316 SS BAL. HOLES	SEAL SIZE: 1.750"	SIZE: 4x6 - 3 / 1 Stage
WR MAT'L: TOP: N / A	IMP. TYPE: CLOSED 8AXCH / 8AXCN - 3 / 1 Stg.	R.P.M.: 3535
BTM: 316 SS	IMP. PATT. NO: 07-457-334-089 (Series Stages)	EYE AREA: 5.1 / 10.50 IN ²
CSE/BWL(S): 316 SS	07-457-332-089 (1 st . Stage)	N _s : 1660 / 1958 N _{ss} : 7739 / 10854
WR MAT'L: TOP: N / A	CS/BWL.PAT. NO: 07-435-578-089	WR ² : 0.60 / 0.133 LB.FT ² /STG.
BTM: B. Carbon		SHAFT O.D.: 1.188"



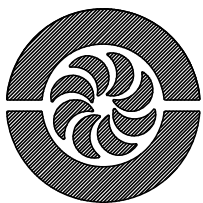
Q ₁	Q ₂	0.6 CH	0.8 CH	1.0 CH	1.2 CH
FACTOR	FACTOR	FACTOR	FACTOR	FACTOR	FACTOR
0.879	0.603	0.918	0.898	0.879	0.862

CERTIFIED DATA
AFTON PUMPS
By: Ernie Rodriguez Date: 05/20/2019

CUSTOMER DATA: **NOTE: Trim is selected to have 300 Feet is at the Discharge Flange**
 ITEM NO: P-510 B
1/2/3/4 G.P.M.: 300 T.D.H.: 300 Ft. SP. GR.: 1.00 NPSHa: Ample Ft. @ CL of Suct. Nozzle

DOC NO: 53592TR .JNB Drawn by: Ernie Rodriguez

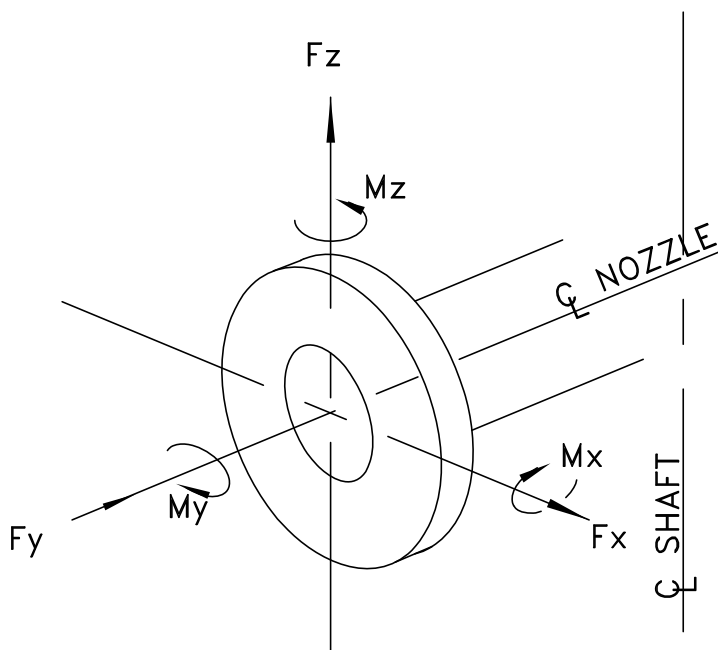
Document #: Performance Curve, 53592TR, Rev. #0



afton pumps. inc.

7335 AVENUE N, HOUSTON, TEXAS 77011
P.O. BOX 9426, HOUSTON, TEXAS 77261

PHONE: (713) 923-9731
FAX: (713) 923-3902



ALLOWABLE FORCES AND MOMENTS
(API 610 11TH EDITION)

DISCHARGE NOZZLE SIZE 4"

Fx	<u>640</u>	LB.
Fy	<u>800</u>	LB.
Fz	<u>520</u>	LB.
FR	<u>1140</u>	LB.
Mx	<u>1960</u>	FT.-LB.
My	<u>1000</u>	FT.-LB.
Mz	<u>1480</u>	FT.-LB.
MR	<u>2660</u>	FT.-LB.

FORCES & MOMENTS
FOR
VERTICAL TURBINE PUMPS
GSV

BY *CVR*

DATE
05/16/19

FM-53592

DOCUMENT #: Forces & Moments, FM-53592 REV.0