**VERTICAL TURBINE** 

Section **914** Page **201**Date **April 2006** 

Supersedes Section 914 Page 201 Dated May 2004

Use the following table to determine which discharge head should be used on vertical turbine fire pumps. Both style discharge heads are shown on the setting plans where applicable.

Rated		Discharg	e Head Design	
Capacity	Bowl	100-175 PSI	Working Pressure	176-300 PSI Working Pressure
(GPM)	Design	U.L. Listed	FM Approved	U.L. Listed or FM Approved
250	10 FEM	16-1/2 x 6 SDC	16-1/2 x 6 SDC	16-1/2 x 6 LAD
300	10 FEM	16-1/2 x 6 SDC	16-1/2 x 6 SDC	16-1/2 x 6 LAD
400	10 FEM	16-1/2 x 6 SDC	16-1/2 x 6 SDC	16-1/2 x 6 LAD
500	11 FGM	16-1/2 x 6 LAD	16-1/2 x 6 LAD	16-1/2 x 6 LAD
750	12 FCM	16-1/2 x 6 LAD	16-1/2 x 6 LAD	16-1/2 x 6 LAD
750	14 FGM	16-1/2 x 8 SDC	16-1/2 x 8 SDC	16-1/2 x 8 LAD
1000	12 FCM	16-1/2 x 6 LAD	16-1/2 x 6 LAD	16-1/2 x 6 LAD
1000	14 FGM	16-1/2 x 8 SDC	16-1/2 x 8 SDC	16-1/2 x 8 LAD
1250	13 FGH	16-1/2 x 8 SDC	16-1/2 x 8 SDC	16-1/2 x 8 LAD
1500	13 FGH	16-1/2 x 8 SDC	16-1/2 x 8 SDC	16-1/2 x 8 LAD
1500	15 FGH	20 x 10 LAD	20 x 10 LAD	20 x 10 LAD
2000	15 FGH	20 x 10 LAD	20 x 10 LAD	20 x 10 LAD
2000	17 FGM	20 x 10 LAD	20 x 10 LAD	20 x 10 LAD
2500	15 FGH	20 x 10 LAD	20 x 10 LAD	20 x 10 LAD
3000	19 FGM	24-1/2 x 12 SDH	24-1/2 x 12 SDH	24-1/2 x 12 SDH
3500	19 FGM	24-1/2 x 12 SDH	24-1/2 x 12 SDH	24-1/2 x 12 SDH
4000	19 FGH	24-1/2 x 12 SDH	24-1/2 x 12 SDH	24-1/2 x 12 SDH
4500	19 FGH	24-1/2 x 12 SDH	24-1/2 x 12 SDH	24-1/2 x 12 SDH



# Section **914** Page **202**

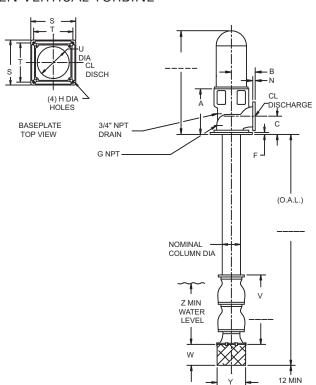
#### Date April 2006

NOTES

Supersedes Section 914 Page 202 Dated May 2004

# **AURORA FIRE PUMPS**

#### ELECTRIC DRIVEN VERTICAL TURBINE



### BOTTOM OF PIT

. Flange ratings are either 125# or 250# and will be designated in the certification block
below for each order submittal.

- 2. Not for construction, installation, or application purposes unless certified. Dimensions shown are typical and may vary due to various tolerances.
- 3. All bases are designed to have full contact with either grout or a soleplate grouted in place.
- 4. Limited to maximum working pressure of 175 PSI.
- 5. For 250 GPM Z = 21''. For 300 GPM and 400 GPM Z = 24''.

	BOWL ASSEMBLY, COLUMN & SHAFTING												
		Nominal Colu	mn Dia.	V									
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Υ	Z					
10 FEM	4	6	6	41	41	6	10	(5)					
		Total Stages		Add 8.25 for (	each additional stage	over 4 stage	is .						
11 FGM	4	6	8	44-13/16	47-9/16	9	11-1/2	34					
ľ		Total Stages		Add 9-1/2 for	r each additional stag	ige over 4 stages							
12 FCM	3	8	8	40	42-3/4	7	13	34					
		Total Stages		Add 10-3/4 for each additional stage over 3 stages									

		DISCHARGE HEADS & BASEPLATES												
Si	ze											1		
BD	DISCH	A	В	C	F	G	Н	N	S	T	U	1		
12	6 SDH	20	11-1/2	7	1	3/4	1	1-3/8	21-1/2	17-5/32	14-1/2	1		
16-1/2	6 SDC	23	11-3/8	10	1-1/2	1	7/8	1-1/16	24	21	17-1/8	(4)		
16-1/2	6 LAD	23	10-1/4	10	1-1/2	1	7/8	1-1/16	24	21	17-1/8	1		
16-1/2	6 SDH	20	11-1/2	7	1	3/4	1	1-3/8	21-1/2	17-5/32	14-1/2	1		

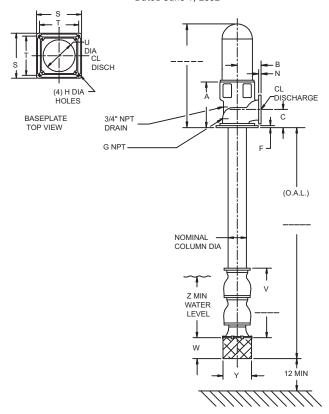
Customer:			P.O.#:			Dwg.#	
Costolliot.			1.0.// .			D "'9."	
Job Name:				□ UL □ FM	☐ CUL	Flange	Rating: 125# 250#
Job Hullio.				🗆 % 🗀 ''''		I mange	numing 125# 250#
							_
Model:	# Stages:		GPM:		PSI:		Max. Lift:
model.	" Jiugos.		011111.		1 31.		mux. Em.
Motor Mfg.:	HP:	Frame:		Ph:	Hz:	V:	Encl.:
motor mig	''' .	l Tullio.		1 11.	112.	٧.	Liid
Certified By:		•	Date:	•	•		
Certified by.			Duic.				



#### ELECTRIC DRIVEN VERTICAL TURBINE

# Section **914** Page **203**Date **May 1, 2004**

Supersedes Section 914 Page 203 Dated June 1, 2002



#### NOTE

- Flange ratings are either 125# or 250# and will be designated in the certification block below for each order submittal.
- Not for construction, installation, or application purposes unless certified. Dimensions shown are typical and may vary due to various tolerances.
- 3. All bases are designed to have full contact with either grout or a soleplate grouted in place.
- 4. Limited to maximum working pressure of 175 PSI.

		I	BOWL ASSEMB	LY, COLUMN & SHA	AFTING				
		Nominal C	olumn Dia.						
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Y	Z	
13 FGH	4	8	10	61-13/16	65-1/4	- 11	13	34	
		Total Stages		Add 13-1/	16 for each additi	over 4 stage	over 4 stages		
14 FGM	3	8	10	44-15/16	49-1/4	13	14-3/4	30	
		Total Stages		Add 12-3/	16 for each additi	onal stage	over 3 stage	es	
15 FGH	3	10	12	54-1/16	57-7/16	13	14-3/4	34 - 2000 GPM	
							46 - 2500 GPM		
		Total Stages Add 14-1/2 for each additional stage over 3 stages							

	DISCHARGE HEADS & BASEPLATES													
Siz	Size													
BD	DISCH	Α	В	C	F	G	Н	N	S	T	U	7		
16-1/2	8 SDH	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	(		
16-1/2	8 LAD	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	7		
20	10 LAD	23	13-7/8	10-1/2	1-1/2	1	7/8	1-1/4	24	21	17-1/8			

Customer:			P.O.#:			Dwg.#	
costonioi.			1.0.,,			Jg	
						- 1	
Job Name:		•		UL FM		Flange	Rating: 125# 250#
Job Mullic.						liunge	nulling 125// 250//
						- 1	
Model:	# Stages:		I GPM:	•	PSI:		Max. Lift:
mouci.	" Jiugos.		OT M.		131.		mux. Liii.
Motor Mfg.:	HP:	Frame:	•	Ph:	Hz:	V:	End.:
motor mig	III.	Truille.		1111.	114.	٧.	Liid
Certified By:			Date:	•			•
Cermieu by.			Dule.				
			1				



BOTTOM OF PIT

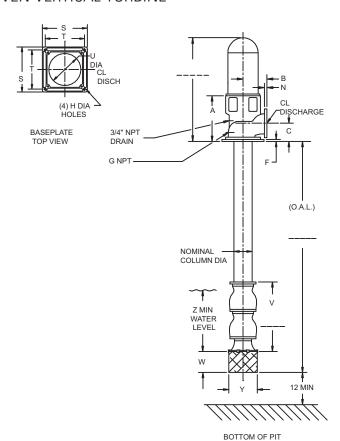
# Section **914** Page **204**

Date May 1, 2004

Supersedes Section 914 Page 204 Dated June 1, 2002

# **AURORA FIRE PUMPS**

#### ELECTRIC DRIVEN VERTICAL TURBINE



#### NOTES

- 1. Flange ratings are either 125# or 250# and will be designated in the certification block below for each order submittal.
- Not for construction, installation, or application purposes unless certified. Dimensions shown are typical and may vary due to various tolerances.
- 3. All bases are designed to have full contact with either grout or a soleplate grouted in place.

		BOWL A	SSEMBLY, COL	UMN & SHAFTING				
		Nominal Column Dia.						
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Y	Z
17 FGM	3	12	N/A	49-7/8	N/A	9	18	28
		Total Stages		Add 13-1/2	for each addition	nal stage over 3 stages		
19 FGM	2	12	N/A	47-5/8	N/A	12	23-1/2	32
		Total Stages		Add 17-5/8	for each addition	nal stage over 2 stages		
19 FGH	2	12	N/A	47-5/8	N/A	12	23-1/2	32
		Total Stages		Add 17-5/8	for each addition	nal stage o	ver 2 stage:	S

	DISCHARGE HEADS & BASEPLATES											
Siz	Size											
BD	DISCH	A	В	C	F	G	Н	N	S	T	U	
20	10 LAD	23	13-7/8	10-1/2	1-1/2	1	7/8	1-1/4	24	21	19	
24-1/2	12 SDH	28	17	13-1/2	2	3/4	1-1/8	1-7/8	32-1/2	26-5/32	24-1/2	

Customer:			P.O.#:			Dwg.#	
costolliot.			1.0.// .			D "'9."	
Job Name:				□ UL □ FM	☐ CUL	Flange	Rating: 125# 250#
						190 .	g
Model:	# Stages:		I GPM:		PSI:		Max. Lift:
moudi.	" Siugos.		"		1 3		mux. Em.
			1				
Motor Mfg.:	HP:	Frame:	•	Ph:	Hz:	V:	Encl.:
motor mig	'''' ·	Trume.		' '''	112.	٧.	Liid
Certified By:		•	Date:	•			
Certified by.			Dule.				
			- 1				

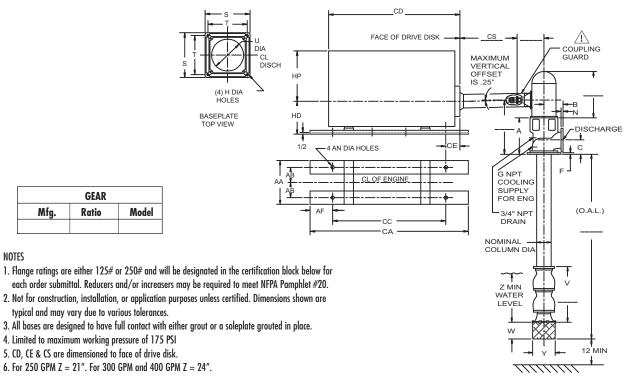


#### DIESEL DRIVEN VERTICAL TURBINE

#### Section **914** Page **205** Date September 2011

Supersedes Section 914 Page 205 Dated May 2004

BOTTOM OF PIT



	BOWL ASSEMBLY, COLUMN & SHAFTING											
		Nominal Colu	mn Dia.	V								
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Y	Z				
10 FEM	4	6	6	41	41	6	10	(6)				
		Total Stages		Add 8-1/4 for	each additional staç	je over 4 staj	jes					
11 FGM	4	6	8	44-13/16	47-9/16	9	11-1/2	34				
		Total Stages	•	Add 9-1/2 for	each additional stag	ge over 4 sta	ges					

DISCHARGE HEADS & BASEPLATES												
Si	ze											1
BD	DISCH	Α	В	C	F	G	Н	N	S	T	U	1
16-1/2	6 SDC	23	11-3/8	10	1-1/2	1	7/8	1-1/16	24	21	17-1/8	(4
16-1/2	6 LAD	23	10-1/4	10	1-1/2	1	7/8	1-1/16	24	21	17-1/8	1

	CLARKE JU4H DIESEL ENGINES												
MODEL	AA	AB	AF	AN	CA	СВ	cc	CD	Œ	CS	HD	HP	
JU4HUF10	32	15	5	1 x 2	40	N/A	30	35.75	2.26	10	20.25	40.5	
JU4HUF20	32	15	5	1 x 2	40	N/A	30	35.75	2.26	10	20.25	40.5	
JU4HUF30	32	15	5	1 x 2	40	N/A	30	35.75	2.26	10.5	20.25	45	
JU4HUF40	32	15	5	1 x 2	40	N/A	30	35.75	2.26	10.5	20.25	45	

Customer:		P.O.#:			Dwg.#	
Job Name:			│	□ CUL	Flange R	Rating: 125# 250#
				Ш	1 "	• 🗀 🗀
Model:	# Stages:	GPM:		PSI:		Max. Lift:
		1				
Engine Mfg.:	Engine Model:		RPM:		HP:	
Certified By:		Date:				
·						
		- 1				



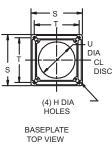
Mfg.

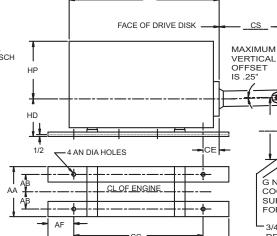
#### Section **914** Page **206** Date September 2011

Supersedes Section 914 Page 206 Dated April 2006

### **AURORA FIRE PUMPS**

#### DIESEL DRIVEN VERTICAL TURBINE



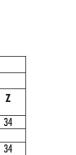


#### **GEAR** Mfg. Ratio Model

- fication block below for each order submittal. Reducers and/or increasers grouted in place. may be required to meet NFPA Pamphlet #20.
- 2. Not for construction, installation, or application purposes unless certified. Dimensions shown are typical and may vary due to various tolerances.
- 1. Flange ratings are either 125# or 250# and will be designated in the certi- 3. All bases are designed to have full contact with either grout or a soleplate

CA

- 4. Limited to maximum working pressure of 175 PSI
- 5. CD, CE & CS are dimensioned to face of drive disk.



	BOWL ASSEMBLY, COLUMN & SHAFTING												
	Nominal Column Dia.												
Size & Model	Size & Model # of Stages UL & FM Water All Others UL & FM Water Lube Only Lube Only												
12 FCM	3	8	8	40	42-3/4	7	13	34					
		Total Stages		Add 10-3/4	4 for each additi	onal stage	over 3 stag	jes					
13 FGH	4	8	10	61-13/16	65-1/4	11	13	34					
	Total Stages Add 13-1/16 for each additional stage over 4 stages							iges					

	DISCHARGE HEADS & BASEPLATES												
Size													
BD	DISCH	Α	В	C	F	G	Н	N	S	T	U	1	
12	6 SDH	23	11-1/2	8-1/2	1-1/2	3/4	1	1-3/8	21-1/4	17-5/32	14-1/2	7	
16-1/2	8 SDC	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	(4	
16-1/2	8 LAD	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8		
16-1/2	6 LAD	23	10-1/4	10	1-1/2	1	7/8	1-1/16	24	21	17-1/8		
16-1/2	6 SDH	21-1/2	11-1/2	8-1/2	1-1/2	3/4	1	1-3/8	21-1/4	17-5/32	14-1/2	7	

	CLARKE JU4H DIESEL ENGINES												
MODEL	AA	AB	AF	AN	CA	CB	cc	CD	CE	CS	HD	HP	
JU4HUF10	32	15	5	1 x 2	40	N/A	30	35.75	2.26	10	20.25	40.5	
JU4HUF20	32	15	5	1 x 2	40	N/A	30	35.75	2.26	10	20.25	40.5	
JU4HUF30	32	15	5	1 x 2	40	N/A	30	35.75	2.26	10.5	20.25	45	
JU4HUF40	32	15	5	1 x 2	40	N/A	30	35.75	2.26	10.5	20.25	45	
JU4HUF50	32	15	5	1 x 2	40	N/A	30	35.75	2.26	15.2	20.25	45	

Customer:		P.O.#:			Dwg.#	
Job Name:	I		UL FM	COL	Flange	Rating: 125# 250#
Model:	# Stages:	GPM:		PSI:		Max. Lift:
Engine Mfg.:	Engine Model:	•	RPM:		HP:	
Certified By:		Date:				



COUPLING

-DISCHARGE

(O.A.L.)

12 MIN

GUARD

₿ C

**G** NPT

COOLING

SUPPLY

FOR ENG

3/4" NPT DRAIN

NOMINAL — COLUMN DIA

Z MIN

WATER LEVEL

BOTTOM OF PIT

DIESEL DRIVEN VERTICAL TURBINE

#### Section **914** Page **207** Date September 2011

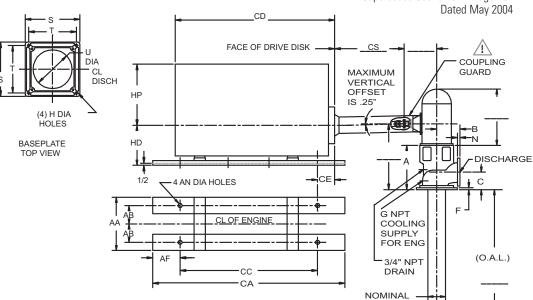
Supersedes Section 914 Page 207 Dated May 2004

COLUMN DIA

Z MIN

WATER LEVEL

12 MIN



	GEAR	
Mfg.	Ratio	Model

#### NOTES

- 1. Flange ratings are either 125# or 250# and will be designated in the certification block below for each order submittal. Reducers and/or increasers may be required to meet NFPA Pamphlet #20.
- 2. Not for construction, installation, or application purposes unless certified. 5. CD, CE & CS are dimensioned to face of drive disk. Dimensions shown are typical and may vary due to various tolerances.
- 3. All bases are designed to have full contact with either grout or a soleplate grouted in place.
- 4. Limited to maximum working pressure of 175 PSI

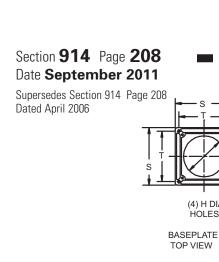
BOWL ASSEMBLY, COLUMN & SHAFTING											
		Nominal C	olumn Dia.		V				Y F		
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Y	Z	777777		
14 FGM	3	8	10	44-15/16	49-1/4	13	14-3/4	36	воттом с		
		Total Stages		Add 12-3/	6 for each additi	onal stage	over 3 stage	es	1		
15 FGH	3	10	12	54-1/16	57-7/16	13	14-3/4	34 - 2000 GPM 46 - 2500 GPM	1		
Total Stages Add 14-1/2 for each additional stage over 3 stages							1				

	DISCHARGE HEADS & BASEPLATES												
Si	Size												
BD	DISCH	A	В	C	F	G	Н	N	S	T	U	1	
16-1/2	8 SDC	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	(4	
16-1/2	8 LAD	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	1	
20	10 LAD	23	13-7/8	10-1/2	1-1/2	1	7/8	1-1/4	24	21	17-1/8	7	

	CLARKE JU4H DIESEL ENGINES											
MODEL	AA	AB	AF	AN	CA	СВ	CC	CD	CE	CS	HD	HP
JU4HUF40	32	15	5	1 x 2	40	N/A	30	35.75	2.26	10.5	20.25	45
JU4HUF50	32	15	5	1 x 2	40	N/A	30	35.75	2.26	15.2	20.25	45

Customer:		P.O.#:			Dwg.#	
					5	
Job Name:			UL FM	□ CUL	Flanae	Rating: 125# 250#
				□		a.
Model:	# Stages:	GPM:		PSI:		I Max. Lift:
	g					
Engine Mfg.:	Engine Model:		RPM:		HP:	
Certified By:		Date:				
common by.		Duite.				
		- 1				





	GEAR	
Mfg.	Ratio	Model

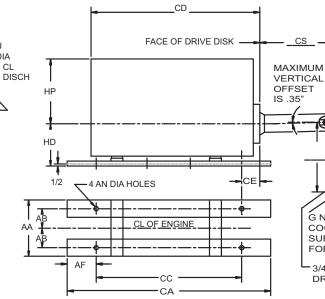
#### NOTES

1. Flange ratings are either 125# or 250# and will be designated in the certification block below for each order submittal. Reducers and/or increasers may be required to meet NFPA Pamphlet #20.

(4) H DIA HOLES

2. Not for construction, installation, or application purposes unless certified. Dimensions shown are typical and may vary due to various tolerances.

AUF	RORA	<b>FIRE</b>	PU	<b>MPS</b>	•
DIESEL	DRIVEN	I V/FRTI(	`ΔΙΤ	IIRRIN	ΙF



- 3. All bases are designed to have full contact with either grout or a soleplate grouted in place.
- 4. CD,CD & CS are dimensioned to face of drive disk.

	BOWL ASSEMBLY, COLUMN & SHAFTING												
Nominal Column Dia.													
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Y	Z					
11 FGM	4	6	8	44-13/16	47-9/16	9	11-1/2	34					
		Total Stages		Add 9-1/2	for each additio	nal stage o	ver 4 stage	S					
12 FCM	3	8	8	40	42-3/4	7	13	34					
		Total Stages Add 10-3/4 for each additional stage over 3 stages											

	DISCHARGE HEADS & BASEPLATES												
Si	Size												
BD	DISCH	A	A B C F G H N S T U										
12	6 SDH	23	11-1/2	8-1/2	1-1/2	3/4	1	1-3/8	21-1/4	17-5/32	14-1/2		
16-1/2	6 LAD	23	10-1/4	10	1-1/2	1	7/8	1-1/16	24	21	17-1/8		

	CLARKE JU6H DIESEL ENGINES											
MODEL	AA	AB	AF	AN	CA	CB	cc	CD	CE	CS	HD	HP
JU6HUF30	32	15	5	1 x 2	46	N/A	36	45.9	.88	15.2	20.35	45.8
JU6HUF50	32	15	5	1 x 2	46	N/A	36	45.9	.88	15.2	20.35	45.8
JU6HUF60	32	15	5	1 x 2	46	N/A	36	48	.88	15.2	20.35	45.8

Customer:		P.O.#:			Dwg.#	
					1 9	
Job Name:			□ UL □ FM	CUL	Flange	Rating: 125# 250#
Job Hullio.			L or L :		I manage	Rulling.   125#   250#
Model:	# Stages:	GPM:		PSI:		Max. Lift:
modol.	" Siagos.	I *****		1 '5".		mux. Em.
		1				
Engine Mfg.:	Engine Model:	•	RPM:		HP:	
Liigilie Mig	Lilyille Model.		I KI M.			
Certified By:		Date:		•		
Corinica by.		I build.				
		- 1				
•						



COUPLING

-DISCHARGE

С

(O.A.L.)

12 MIN

**G** NPT

COOLING SUPPLY FOR ENG

3/4" NPT DRAIN

NOMINAL COLUMN DIA

> Z MIN WATER LEVEL

> > W

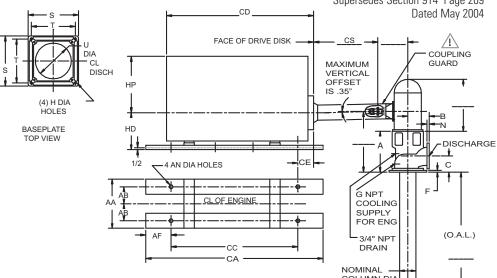
BOTTOM OF PIT

GUARD

#### DIESEL DRIVEN VERTICAL TURBINE

#### Section **914** Page **209** Date September 2011





	GEAR	
Mfg.	Ratio	Model

#### NOTES

- 1. Flange ratings are either 125# or 250# and will be designated in the certification block below for each order submittal. Reducers and/or increasers may be required to meet NFPA Pamphlet #20.
- 2. Not for construction, installation, or application purposes unless certified. 5. CD, CE & CS are dimensioned to face of drive disk. Dimensions shown are typical and may vary due to various tolerances.
- 3. All bases are designed to have full contact with either grout or a soleplate grouted in place.
- 4. Limited to maximum working pressure of 175 PSI

COLUMN DIA	
₩	
~~ )   ( !	
z MIN	
WATER )	
LEVEL (   )	
<del>*************************************</del>	
w 🔀	
<del>                                      </del>	
→ Y ← 12 MIN	
BOTTOM OF PIT	

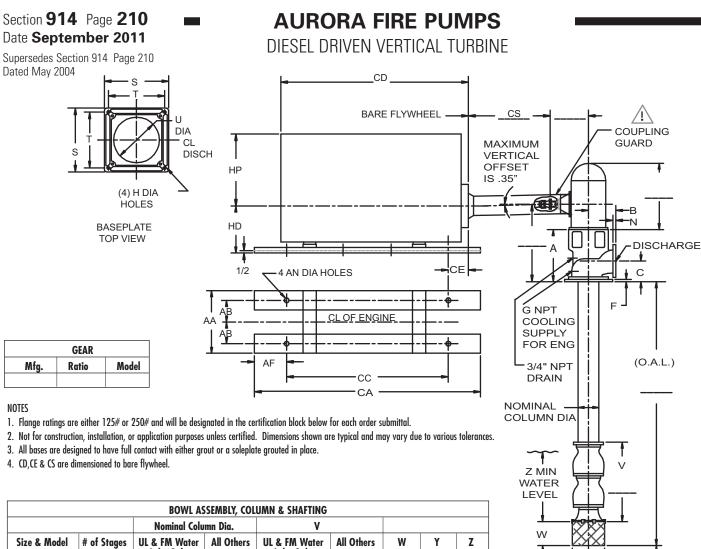
	BOWL ASSEMBLY, COLUMN & SHAFTING												
		Nominal C	olumn Dia.		٧								
Size & Model	Model # of Stages UL & FM Water Lube Only UL & FM Water Lube Only Lube Only					W	Y	Z					
13 FGH	4	8	10	61-13/16	65-1/4	11	13	34					
		Total Stages		Add 13-1/	16 for each additi	onal stage	over 4 stag	es					
15 FGH	<b>15 FGH</b> 3 10 12				57-7/16	13	14-3/4	34 - 2000 GPM 46 - 2500 GPM					
	Total Stages Add 14-1/2 for each additional stage over 3 stages												

	DISCHARGE HEADS & BASEPLATES												
Siz	ze											1	
BD	DISCH	Α	В	C	F	G	Н	N	S	T	U	1	
16-1/2	8 SDC	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	(4	
16-1/2	8 LAD	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	]	
20	10 LAD	23	13-7/8	10-1/2	1-1/2	1	7/8	1-1/4	24	21	17-1/8	1	

	CLARKE JU6H DIESEL ENGINES												
MODEL	AA	AB	AF	AN	CA	СВ	CC	CD	CE	CS	HD	HP	
JU6HUF30	32	15	5	1 x 2	46	N/A	36	45.9	.88	15.2	20.35	45.8	
JU6HUF50	32	15	5	1 x 2	46	N/A	36	45.9	.88	15.2	20.35	45.8	
JU6HUF60	32	15	5	1 x 2	46	N/A	36	48	.88	15.2	20.35	45.8	

Customer:		P.O.#:	:			Dwg.#	
Job Name:				UL FM	CUL	Flange	Rating: 125# 250#
Model:	# Stages:	GPM:			PSI:	•	Max. Lift:
Engine Mfg.:	Engine Model:			RPM:		HP:	
Certified By:		Do	ate:				





		Nominal Colu	mn Dia.	V				
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Y	Z
11 FGM	4	6	8	44-13/16	47-9/16	9	11-1/2	34
		Total Stages		Add 9-1/2	ional stage over 4 stages			
12 FCM	3	8	8	40	42-3/4	7	13	34
		Total Stages		Add 10-3/-	onal stage	over 3 stag	es	

	DISCHARGE HEADS & BASEPLATES											
Size												
BD DISCH A B C F G H N						S	T	U				
16-1/2	6 LAD	23	10-1/4	10	1-1/2	1	7/8	1-1/16	24	21	17-1/8	

	CLARKE JW6H DIESEL ENGINES												
MODEL	MODEL AA AB AF AN CA CB CC CD CE CS HD HP												
JW6HUF30	36	17	5	1 x 2	46	N/A	36	47.52	2.9	14.1	24	50.11	
JW6HUF50	36	17	5	1 x 2	46	N/A	36	47.52	2.9	14.1	24	50.11	
JW6HUF60	36	17	5	1 x 2	46	N/A	36	47.52	2.9	14.1	24	50.11	

Customer:		P.O.#:			Dwg.#	
					1 *	
I I M				(III	- FI	D :: 105// 050//
Job Name:			UL FM	COT	Flange	Rating: 125# 250#
				_		
Model:	# Stages:	GPM:		PSI:		Max. Lift:
	··g					l
			1			
Engine Mfg.:	Engine Model:		RPM:		HP:	
Certified By:		Date:				
Cerinieu by.		Dule.				



12 MIN

**BOTTOM OF PIT** 

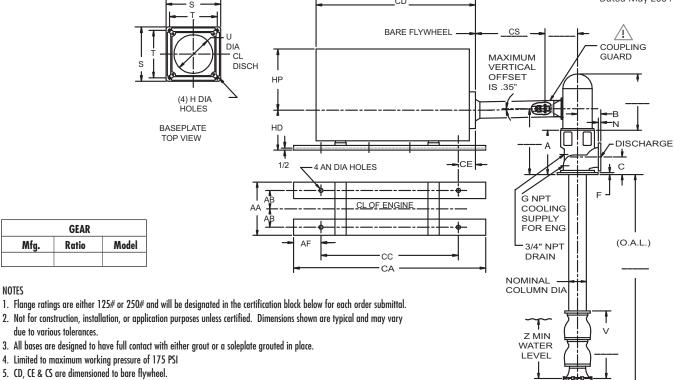
DIESEL DRIVEN VERTICAL TURBINE

#### Section **914** Page **211** Date September 2011

Supersedes Section 914 Page 211 Dated May 2004

12 MIN

**BOTTOM OF PIT** 



		BOWI	L ASSEMBLY, C	OLUMN & SHAFTIN	G			
		Nominal Column Dia.						
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Y	Z
13 FGH	4	8	10	61-13/16	65-1/4	11	13	34
		Total Stages		Add 13-1/	ditional stage over 4 stages			
14 FGM	3	8	10	44-15/16	49-1/4	13	14-3/4	36
		Total Stages		Add 12-3/16 for each additional stage over 3 stag				jes

												_
	DISCHARGE HEADS & BASEPLATES											
Siz	ze											1
BD	DISCH	Α	В	C	F	G	Н	N	S	T	U	1
16-1/2	8 SDC	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	(4)
16-1/2	8 LAD	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	1
20	10 IAD	23	13-7/8	10-1/2	1-1/2	1	7/8	1-1/4	24	21	17-1/8	1

	CLARKE JW6H DIESEL ENGINES												
MODEL	AA	AB	AF	AN	CA	СВ	CC	CD	CE	CS	HD	HP	
JW6HUF30	36	17	5	1 x 2	46	N/A	36	49.4	4.6	19.7	24	50.1	
JW6HUF40	36	17	5	1 x 2	46	N/A	36	49.4	4.6	19.7	24	50.1	
JW6HUF50	36	17	5	1 x 2	46	N/A	36	49.4	4.6	19.7	24	50.1	
JW6HUF60	36	17	5	1 x 2	46	N/A	36	49.4	4.6	19.7	24	50.1	

Customer:		P.O.#:			Dwg.#	
Job Name:	'		UL FM	COL	Flange I	Rating: 125# 250#
Model:	# Stages:	GPM:		PSI:		Max. Lift:
Engine Mfg.:	Engine Model:	•	RPM:		HP:	
Certified By:		Date:		·		



**GEAR** 

Ratio

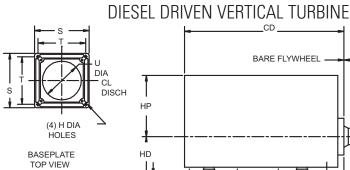
due to various tolerances.

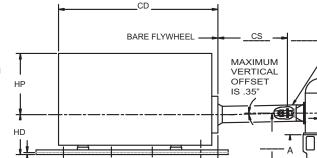
Mfg.



Supersedes Section 914 Page 212 Dated May 2004

# **AURORA FIRE PUMPS**





	GEAR									
Mfg.	Ratio	Model								

#### NOTES

- 1. Flange ratings are either 125# or 250# and will be designated in the certification block below for each order submittal.
- 2. Not for construction, installation, or application purposes unless certified. Dimensions shown are typical and may vary due to various tolerances.
- 3. All bases are designed to have full contact with either grout or a soleplate  $\frac{1}{2}$ grouted in place.
- 4. CD, CE & CS are dimensioned to bare flywheel.

	FFSET 5.35"	——B
HD  1/2 4 AN DIA HOLES  -CE		DISCHARGE
AB CLOF ENGINE	G NPT COOLING SUPPLY FOR ENG	F
AFCCCA	3/4" NPT DRAIN	(O.A.L.)
	NOMINAL COLUMN DIA	_
	Z MIN WATER LEVEL	₹ <b>†</b> ∨ }

		I	BOWL ASSEMB	LY, COLUMN & SHA	FTING			
		Nominal C	olumn Dia.		٧			
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Y	Z
15 FGH	3	10	12	54-1/16	57-7/16	13	14-3/4	34 - 2000 GPM 46 - 2500 GPM
		Total Stages		Add 14-1/2 fo	r each additional	stage over	3 stages	
19 FGM	2	12	N/A	47-5/8	N/A	12	23-1/2	32
		Total Stages			Add 17-5/8	for each o	additional sta	age over 2 stages

DISCHARGE HEADS & BASEPLATES											
Si	ze										
BD	DISCH	Α	В	C	F	G	Н	N	S	T	U
20	10 LAD	23	13-7/8	10-1/2	1-1/2	1	7/8	1-1/4	24	21	17-1/8
24-1/2	12 SDH	28	17	13-1/2	2	3/4	1-1/8	1-7/8	32-1/4	26-5/32	24-1/2

	CLARKE JW6H DIESEL ENGINES														
MODEL	AA	AB	AF	AN	CA	CB	CC	CD	CE	CS	HD	HP			
JW6HUF30	36	17	5	1 x 2	46	N/A	36	49.4	4.6	19.7	24	50.1			
JW6HUF40	36	17	5	1 x 2	46	N/A	36	49.4	4.6	19.7	24	50.1			
JW6HUF50	36	17	5	1 x 2	46	N/A	36	49.4	4.6	19.7	24	50.1			
JW6HUF60	36	17	5	1 x 2	46	N/A	36	49.4	4.6	19.7	24	50.1			

Customer:		P.O.#:			Dwg.#	
Job Name:			UL FM	COL	Flange	Rating: 125# 250#
Model:	# Stages:	GPM:		PSI:	•	Max. Lift:
Engine Mfg.:	Engine Model:		RPM:		HP:	
Certified By:		Date:		•		



BOTTOM OF PIT

COUPLING

GUARD

Section **914** Page **213** Date **April 2006** 

Supersedes Section 914 Page 213 Dated May 2004



Section **914** Page **214**Date **April 2006**Supersedes Section 914 Page 214
Dated May 2004



# Section **914** Page **215** Date **April 2006**

Supersedes Section 914 Page 215 Dated May 1, 2004



Section **914** Page **216** Date **April 2006** 

Supersedes Section 914 Page 216 Dated May 1, 2004



# Section **914** Page **217** Date **April 2006**

Supersedes Section 914 Page 217 Dated May 1, 2004



Section **914** Page **218** Date **April 2006** 

Supersedes Section 914 Page 218 Dated May 1, 2004



Section **914** Page **219** Date **April 2006** 

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Section **914** Page **220**Date **April 2006**Supersedes Section 914 Page 220
Dated May 2004



Section **914** Page **221** Date **April 2006** 

Supersedes Section 914 Page 221 Dated May 2004

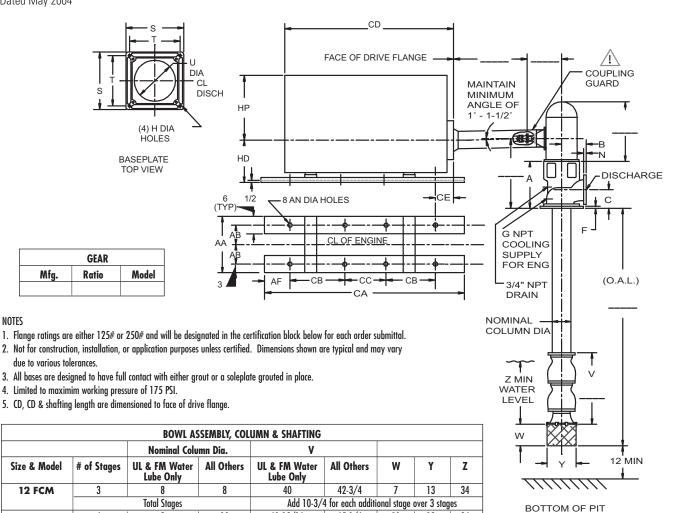


# Section **914** Page **222** Date **February 2008**

Supersedes Section 914 Page 222 Dated May 2004

#### **AURORA FIRE PUMPS**

DIESEL DRIVEN VERTICAL TURBINE



65-1/4 11

Add 13-1/16 for each additional stage over 4 stages

13

	DISCHARGE HEADS & BASEPLATES													
Siz	Size													
BD	DISCH	Α	В	C	F	G	Н	N	S	T	U			
16-1/2	6 LAD	23	10-1/4	10	1-1/2	1	7/8	1-1/16	24	21	17-1/8			
16-1/2	8 SDC	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8			
16-1/2	8 LAD	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8			

61-13/16

10

Total Stages

	CATERPILLAR DIESEL ENGINES												
MODEL	AA	AB	AF	AN	CA	CB	CC	CD	CE	HD	HP		
3406DIT	28-1/2	10-1/4	10-3/4	13/16	76	16-3/4	16-3/4	78-5/8	15-1/8	19-1/2	34-3/4		

Customer:			P.O.#:			Dwg.#	
						"	
Job Name:				□ UL □ FM	CUL	Flange I	Rating: 125# 250#
Model:	# Stages:		GPM:		PSI:		Max. Lift:
	, ,						
Motor Mfg.:	HP:	Frame:		Ph:	Hz:	V:	End.:
•							
Certified By:			Date:	•			



13 FGH

4

#### DIESEL DRIVEN VERTICAL TURBINE

#### Section **914** Page **223** Date February 2008

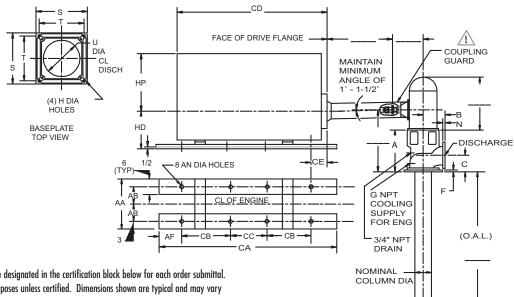
Supersedes Section 914 Page 223 Dated May 2004

Z MIN WATER

LEVEL

BOTTOM OF PIT

12 MIN



Mfg.

- 1. Flange ratings are either 125# or 250# and will be designated in the certification block below for each order submittal.
- 2. Not for construction, installation, or application purposes unless certified. Dimensions shown are typical and may vary due to various tolerances.
- 3. All bases are designed to have full contact with either grout or a soleplate grouted in place.

Model

4. Limited to maximum working pressure of 175 PSI.

**GEAR** 

Ratio

- 5. CD, CE & shafting length are dimensioned to face of drive flange.
- 6. When used with a 17FGM, U=19 (483).

	BOWL ASSEMBLY, COLUMN & SHAFTING											
		Nominal C	olumn Dia.		٧							
Size & Model # of Stages		UL & FM Water Lube Only	All Others	UL & FM Water Lube Only			Y	Z				
14 FGM	3	8	10	44-15/16	49-1/4	13	14-3/4	30				
		Total Stages		Add 12-3/	16 for each additi	onal stage	over 3 stag	es				
15 FGH	3	10	12	54-1/16	57-7/16	13	14-3/4	34 - 2000 GPM 46 - 2500 GPM				
		Total Stages		Add 14-1/2 fo	r each additional	stage over	3 stages					
17 FGM	3	12 N/A		49-7/8 N/A		9	18	28				
		Total Stages		Add 13-1/5	5							

	DISCHARGE HEADS & BASEPLATES													
Si	Size													
BD	DISCH	Α	В	C	F	G	Н	N	S	T	U	٦		
16-1/2	8 SDC	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8			
16-1/2	8 LAD	23	11-3/8	10	1-1/2	1	7/8	1-3/16	24	21	17-1/8	٦		
20	10 LAD	23	13-7/8	10-1/2	1-1/2	1	7/8	1-1/4	24	21	17-1/8			

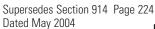
	CATERPILLAR DIESEL ENGINES													
MODEL	AA	AB	AF	AN	CA	CB	CC	CD	CE	HD	HP			
3406DIT	28-1/2	10-1/4	10-3/4	13/16	76	16-3/4	16-3/4	78-5/8	15-1/8	19-1/2	32-3/4			
3406DITA	28-1/2	10-1/4	10-3/4	13/16	76	16-3/4	16-3/4	78-5/8	15-1/8	19-1/2	35-1/8			

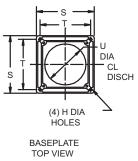
Customer:		P.O.#:			Dwg.#	Dwg.#			
Job Name:				UL FM	COL	Flange	Rating: 125# 250#		
Model:	# Stages:		GPM:		PSI:		Max. Lift:		
Motor Mfg.:	HP:	Frame:		Ph:	Hz:	V:	Encl.:		
Certified By:			Date:		•				

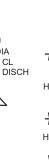


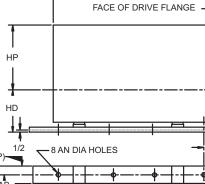


DIESEL DRIVEN VERTICAL TURBINE









	GEAR	
Mfg.	Ratio	Model

#### NOTES

Size DISCH

12 SDH

BD

24-1/2

- 1. Flange ratings are either 125# or 250# and will be designated in the certification block below for each order submittal.
- 2. Not for construction, installation, or application purposes unless certified. Dimensions shown are typical and may vary due to various tolerances.
- 3. All bases are designed to have full contact with either grout or a soleplate grouted in place.

B

17

A

28

4. CD, CD & shafting length are dimensioned to face of drive flange.

	BOWL ASSEMBLY, COLUMN & SHAFTING												
		Nominal Colu	ımn Dia.	V									
Size & Model	# of Stages	UL & FM Water Lube Only	All Others	UL & FM Water Lube Only	All Others	W	Y	Z					
19 FGM	2	12	N/A	47-5/8	N/A	12	23-1/2	32					
		Total Stages		Add 17-5/	8 for each additi	ional stage	over 2 stag	es					
19 FGH	2	12	N/A	47-5/8	N/A	12	23-1/2	32					
		Total Stages		Add 17-5/	ional stage	over 2 stag	es						

Add 17-5/8 for each additional stage over 2 stages												
	N/A	47-5/	8	N/A	12 2	3-1/2 32	!	ВО				
		Ad	d 17-5/8 fo	r each additio	nal stage ove	r 2 stages						
									1			
	DISCHAF	RGE HEADS	& BASEPL	ATES								
	C	F	G	Н	N	S	T	U				
	13-1/2	2	3/4	1-1/8	1-7/8	32-1/2	26-5/32	24-1/2				

CATERPILLAR DIESEL ENGINES											
MODEL	AA	AB	AF	AN	CA	CB	CC	CD	CE	HD	HP
3406DITA	28-1/2	10-1/4	10-3/4	13/16	76	16-3/4	16-3/4	78-5/8	15-1/8	19-1/2	35-1/8
3408DITA	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF
3412DIT	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF
3412DITA	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF	RTF

Customer:			P.O.#:			Dwg.#		
costonior.			1.0.,,			5 "g."		
Job Name:				□ UL □ FM	☐ CUL	Flange	Rating: 125# 250#	
Job Hamo.				_ 0		lago	namig 123# 236#	
					_			
Model:	# Stages:			GPM:			Max. Lift:	
moudi.	" Stugos.		] or m.		PSI:		max. Elli.	
Motor Mfg.:	HP:	Frame:	•	Ph:	Hz:	V:	Encl.:	
motor mig	'''' '	Trume.		' '''	112.	٧.	Liid	
Certified By:		•	Date:	•			-	
Certified by.			Duic.					
			- 1					



COUPLING

-DISCHARGE

С

(O.A.L.)

12 MIN

GUARD

MAINTAIN

MINIMUM ANGLE OF

1° - 1-1/2°

**G** NPT COOLING SUPPLY FOR ENG

3/4" NPT DRAIN

NOMINAL

COLUMN DIA

Z MIN WATER LEVEL