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 ☎ 267-486-1037

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[www.TeikokuPumps.com](http://www.TeikokuPumps.com)  
 ☎ 713-983-9901  
 ☎ 713-983-9919

St. Rt. 2 North  
 Belmont, WV 26134  
[www.TeikokuPumps.com](http://www.TeikokuPumps.com)  
 ☎ 304-684-2459  
 ☎ 304-684-7593

## Proposal

Date	Quote No.	Inquiry No.	Project Name	Terms (in US Currency)	
7-28-2014	2014-18338			Net 30	
To:		Representative for Teikoku USA, Inc.			
Rick Vondra Patriot Renewable Fuels, LLC		Travis Munn Superior Industrial Equipment			
Address:		1609 Afton Road Sycamore, Illinois 60178			
P.O. Box 560 Annawan, Illinois 61234					
Country:		United States			
Phone:		815-899-8900			
Fax:		815-899-8898			
Email:		tmunn@superiorpumps.com			
rvondra@patriotethanol.com					
We promise to furnish the equipment listed below at the price shown subject to Teikoku USA's Conditions of Sale. FOB Factory					
Item No.	Equip No.	Quantity	Pump Model	Unit Price	Total Price
5	P-705	1	F41-417U4L-0608T1-AV	\$16,154.00	\$16,154.00
Application Data:		Materials of Construction:		Motor Data:	
Fluid:	Methanol	Pump Case:	304SS	Insulation:	Class 300
TDH (feet):	138.0	Impeller:	304SS	Frame:	417
Capacity (GPM):	264.0	Gaskets/O-rings:	PTFE	Stator Fill:	None
Specific Gravity:	1.0	Rotor Liner:	304L SS	Voltage:	460
Viscosity (cps):	1.0	Stator Liner:	Hast C	Phase:	3
Op. Temp. (F):	212.0	Brg. Hsg./Adapter:	304 SS	Hertz:	60
Vapor Press. (psia):		Shaft:	304SS	RPM:	3450
Sp. Ht. (BTU/lbmF):		Bearings:	Carbon Graphite 10F	Design Power (HP):	17.2
Suct. Press. (psig):		Shaft Sleeves/TC's:	316 SS + Stellite	Runout Power (HP):	18.0
Dsch. Press. (psig):		Suct. Conn:	3 inch / 150# RF	Motor Rating (HP):	22.8
Diff. Press. (psi):	59.7	Dsch. Conn.:	2-1/2 inch / 150# RF	F.L. Amp:	31.0
NPSHAvail. (feet):	***	Case Drain:	1/2" NPT	F.L. KW:	
NPSHReq. (feet):	15.7	Adapter:	No	Start KVA:	
Eff. @ Diam. (%):	55.6	Circulation Path:	Standard	Motor Rating:	TELC
Imp. Diam. (in):	6.97	Net Wgt. (lbs):	440.0	Area Class:	Class 1, Group C & D, Div 2
Design Pressure	150 PSI				
Options:			Thermal TCO (F): None		
Hydraulic Test: Non-Witnessed			Perf. Curve No.: Attached		
NPSH Test: Non-Witnessed			Bulletin Number: Teikoku Standard		
Hydrostatic Test: Non-Witnessed			Outline Dwg.: Attached		
Shipment can be improved by 3 weeks by adding \$1,408.00 per pump for air freight.			Shipment: 17		
Standard TRG bearing wear monitor included.			(wks) after drwg. approval or mfg. release.		
			Comments:		

*Thank you for your inquiry.*  
 Please feel free to visit our website at: [www.TeikokuPumps.com](http://www.TeikokuPumps.com)  
 Abhilash Abraham/AE x 2847



# ESTIMATED PERFORMANCE CURVE

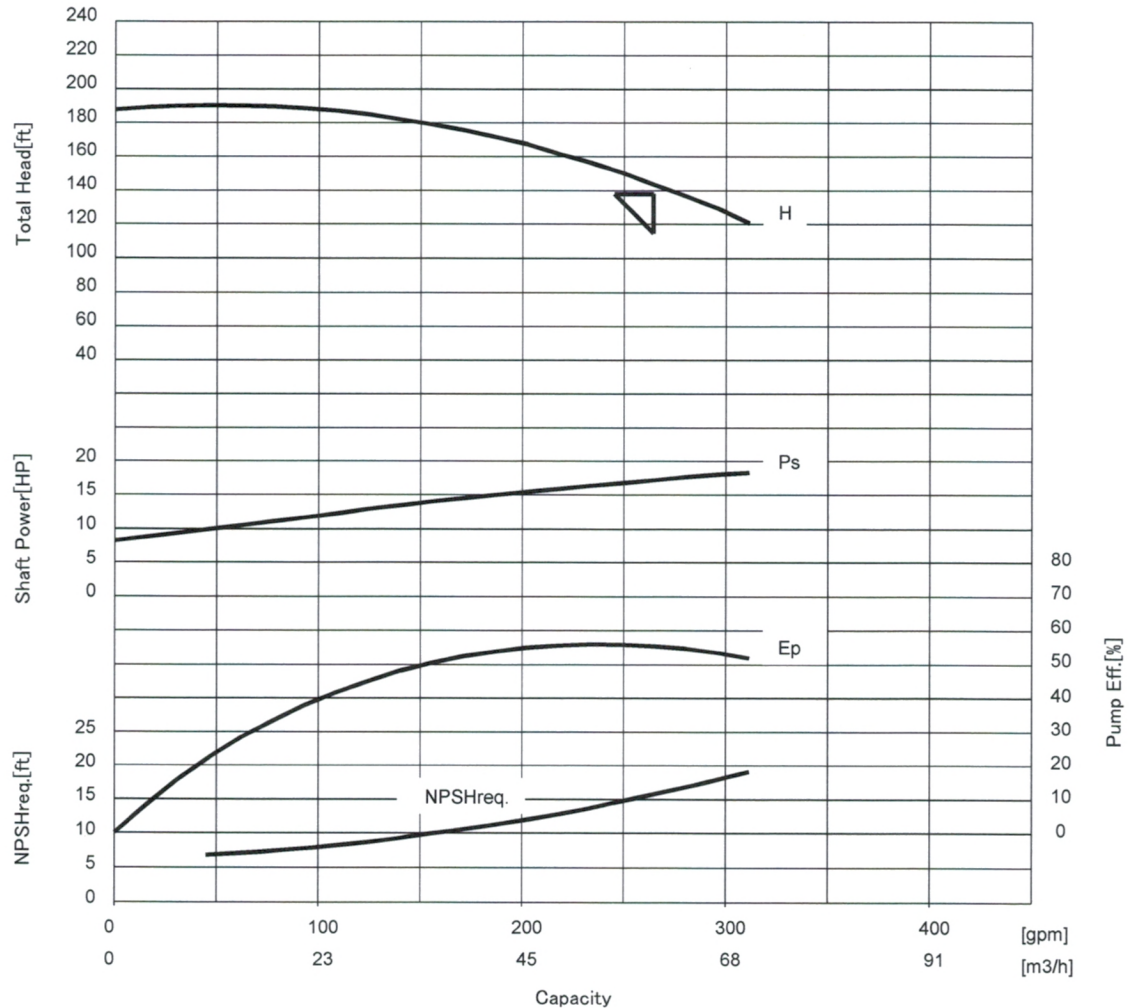
Date : 2014/7/25  
No :  
Dwg. No. :

SP

Item No. P-705 Item Name Reboiler Pump  
Model F41-417U4L-0608T1-AV

Frequency	60	Hz	Total Head	138	ft			
Voltage	460	V	Capacity	264	gpm	60.0	m <sup>3</sup> /h	
Phase	3		Min.Flow	44.9	gpm	10.2	m <sup>3</sup> /h	
Pole	2		Liquid	Methanol				
Output	22.8	HP	Temp.	212	degF			
Current	31.0	A	S.G.	1		Vis.	1	mPas
Ex-proof	d2G2		NPSHavail.	***	ft	NPSHreq.	15.7	ft

417U-0608T1	
F-TYPE	
Judgement	
good	
d2G2	
Date	2014/7/25
CQ	1.00
CH	1.00
CE	1.00
H	137.8
Q	264.2
SG	1
VIS	1
P	22.80
I	31
HL	143.9
IL	24.45
PsL	17.23
EpL	55.6
NL	3444.0
QH	276.5
IH	24.8
Dia/STG	Dia=177
P/PsL	1.32
1 HW/HX	
2 (Dmn/Dmx)^2	
3 Dia ave.	
4 MAX Dia	208
5 MIN Dia	166
6 M8/M10	
HW	143.8
IW	24.46
PsW	17.24
EpW	55.6
NW	3443.9
NPSHstd	15.73
1>2	
3*0.97>5	
1>6*0.95	
4*0.98>3	
INS.CLASS	Class 300
MAX.TEMP	311



Remarks :

REV.	Date	Description

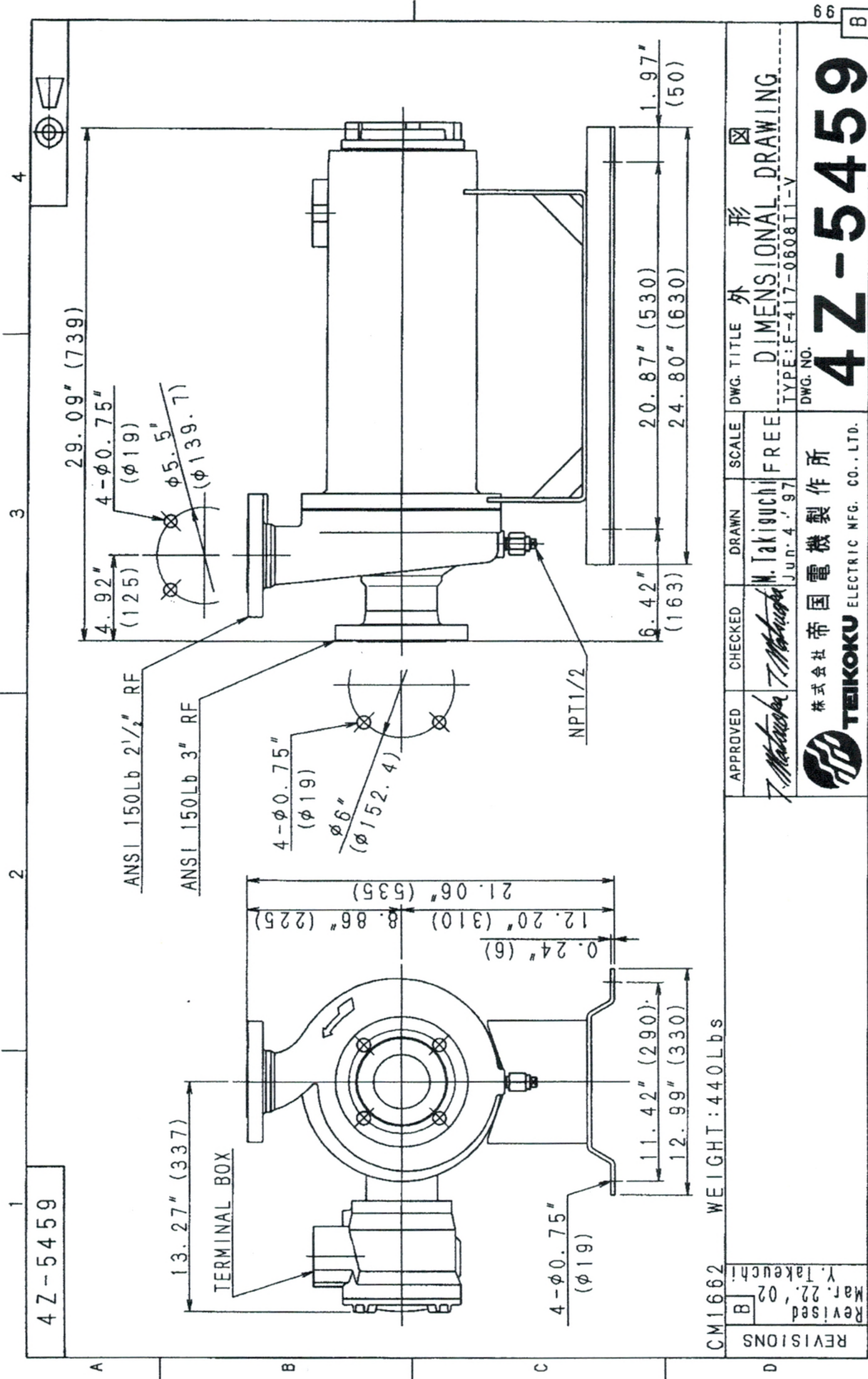
APPROVED BY	CHECKED BY	DRAWN BY

C

TEIKOKU ELECTRIC MFG. CO., LTD.

Version NTP11.15EN2.1





REVISIONS				REVISED Mar. 22, '02 Y. Takeuchi			
B				Y. Takeuchi			
APPROVED <i>T. Matsumoto</i>				CHECKED <i>T. Matsumoto</i>			
DRAWN W. Takiguchi Jun. 4, '97				SCALE FREE			
DWG. NO. F-417-0608T1-V				DWG. TITLE 形 外 DIMENSIONAL DRAWING			
株式会社 帝国電機製作所  <b>TEKOKU</b> ELECTRIC MFG. CO., LTD.				4 Z-5459			