













INTRODUCTION

FlowPak Pump Industries started its journey on road to the success in year 2000. The core business of FlowPak is manufacturing, designing, inspection, testing & installation of various types of pumps like Turbine, Submersible, Centrifugal, Sewage Submersible, High pressure and Non Clogging pumps etc.

FlowPak pumps are the end product of many years of specialized engineering and production experience in the pump industry. We are manufacturing quality pumps according to international standards. The factory is equipped with latest machinery like imported CNC Machines, Shaft Straightening Machines and fully computerized test bed equipped with Mag Flow meters, Pressure Transmitter, Energy analyzer etc in-compliance with ISO-9906 duly certified by SGS Pakistan. Quality and reliability is built in each process from design to end product.

A quality management system according to the requirements of ISO 9001:2008 is a key part of the total quality management philosophy of the company. We believe that products are as good as quality of its components. The quality system is extensively implemented in each functional area of the company, material procurement to sales and services.

We are registered as approved manufacturer of pumping Machinery in almost all the major Government & semi Government Departments of Pakistan, such as HUD/PHE Department Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan, Irrigation & Power Department Punjab, Sindh, Khyber Pakhtunkhwa, Building Department, Standardization Committee of Khyber Pakhtunkhwa, MES and so many other Departments. FlowPak is also registered with USAID Tubewell Efficiency Improvement Program, through this program almost 11,000 pumps will be supplied to farmers on 50% subsidized prices. FlowPak have supplied thousands of pumps all over Pakistan which are giving satisfactory performance to their users.



APPLICATIONS

- Public water supply schemes.
- Large scale irrigation schemes.
- Industrial applications.
- De- watering of mines & construction sites.
- High rise buildings, hospitals & shopping centers.
- Ground water lowering.
- Pressure boosting.
- Agricultural irrigation.

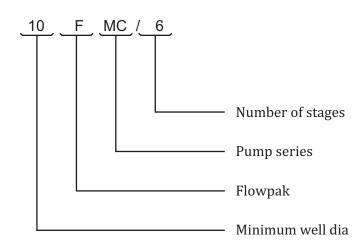
PUMPING LIQUIDS

Clean, thin, non-aggresive, non-explosive, clear, cold, fresh water without abrasives, solid particles or fiber.

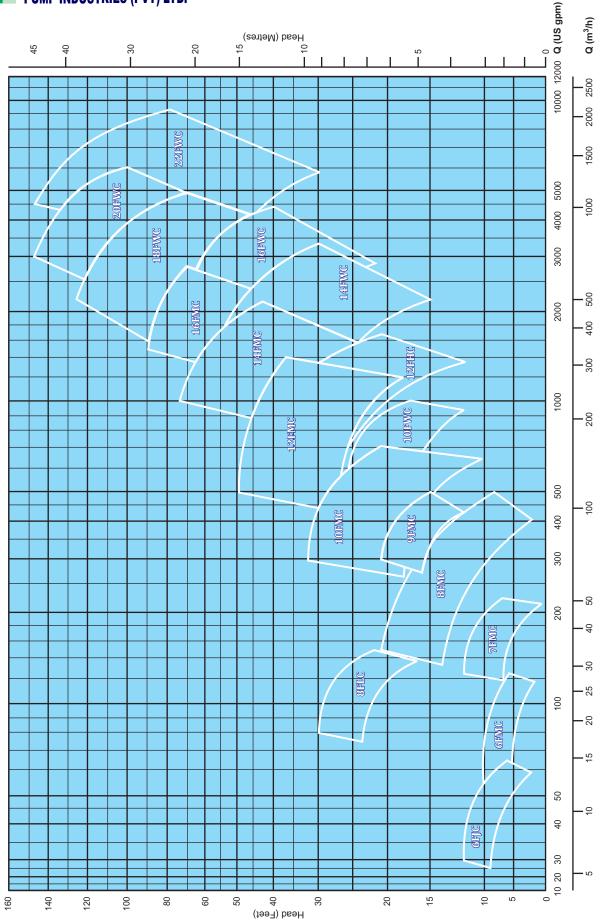
OPERATING DATA

Capacity	upto	9200 USGPM
 Total head 	upto	2000 Feet
• Speed	upto	2900 RPM
• Temp.	upto	$105^{\circ}\mathrm{C}$
 Suspended depth 	upto	350 Feet

MODEL IDENTIFICATION CODE







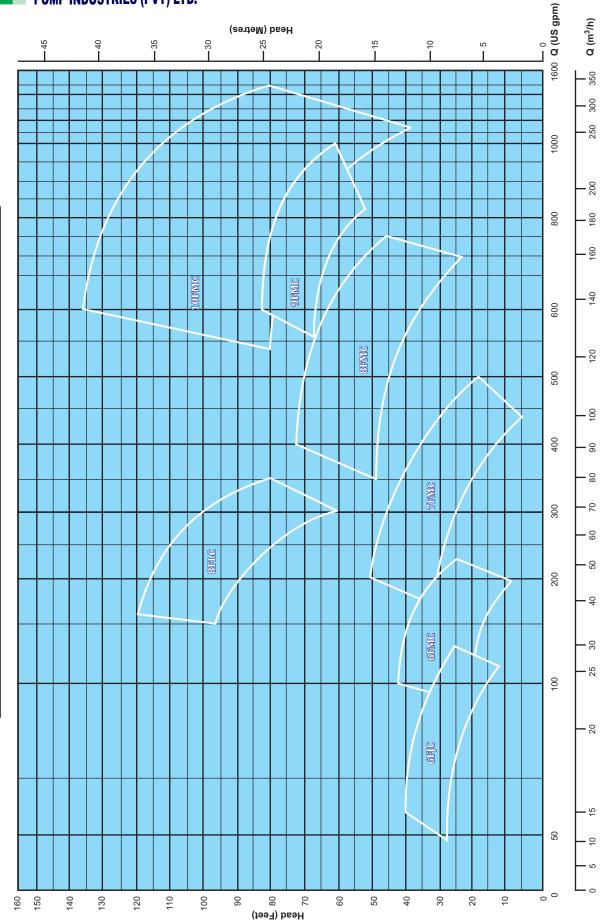
PERFORMANCE CURVE OF SINGLE STAGE DEEP WELL TURBINE PUMPS AT 1450 RPM



TECHNICAL SPECIFICATION OF DEEPWELL TURBINE PUMPS AT 1450 RPM

Pump Model	Minimum Well Size (inch)	Column Pipe Size (inch)	Flow Range (US gpm)	Head/Stage (ft)	1st/Add Stage Length (inch)
6FJC	8	3,4	30-65	12-6	15.00/4.50
6FMC	8	3, 4	50-125	10-6	15.00/4.00
7FMC	8	3, 4	125-225	12-7	16.00/5.00
8FLC	10	3, 4	80-150	30-22	17.50/6.10
8FMC	10	4, 5	150-500	21-8	17.50/5.50
9FMC	10	5, 6	300-200	21-15	19.00/6.62
10FMC	12	5, 6	300-700	32-21	20.00/6.50
10FWC	12	6, 7	500-1000	26-17.5	20.50/6.50
12FMC	14	6, 7, 8	500-1400	49-37	24.50/8.00
12FHC	14	8, 10	675-1675	50-21	24.50/8.00
14FMC	16	10	1000-2200	74-42	27.10/10.00
14FWC	16	10,12	1500-3400	57-30	27.10/10.00
16FMC	18	10,12	1500-2800	02-06	30.00/10.70
16FWC	18	10,12	2200-4400	70-40	30.00/10.70
18FWC	20	12, 14	2200-4900	125-72	35.00/11.90
20FWC	22	14,16	3000-6200	148-100	37.60/13.20
22FWC	24	16, 18	4500-9200	148-80	41.40/15.80





PERFORMANCE CURVE OF SINGLE STAGE DEEP WELL TURBINE PUMPS AT 2900 RPM



TECHNICAL SPECIFICATION OF DEEPWELL TURBINE PUMPS AT 2900 RPM

Pump Model	Minimum Well Size (inch)	Column Pipe Size (inch)	Flow Range (US gpm)	Head/Stage (ft)	1st/Add Stage Length (inch)
6FJC	8	3, 4	60-130	40-26	15.00/4.50
6FMC	8	3, 4	100-225	42-25	15.00/4.00
7FMC	8	4, 5	200-200	50-18	16.00/5.00
8FLC	10	4,5	160-350	120-84	17.50/6.10
8FMC	10	4, 5	400-750	72-46	17.50/5.50
9FMC	10	5, 6	600-1000	82-60	19.00/6.62
10FMC	12	8'9	600-1500	136-80	20.00/6.50



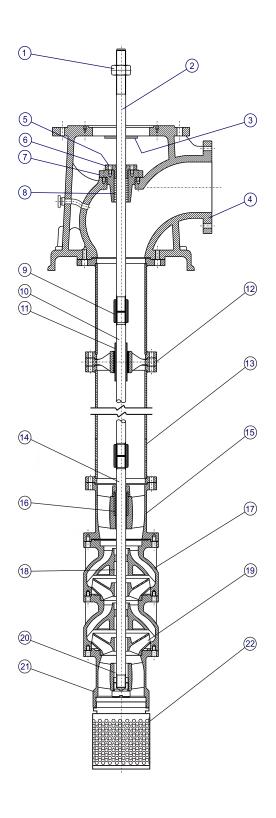
PARTS LIST OF DEEP WELL TURBINE PUMP

Sr.	Description	Standard	Engineered
1	Top Shaft Adjusting Nut	Steel	Stainless Steel
2	Top Shaft	Stainless Steel	Steel
3	Rubber Flinger	Rubber	
4	Discharge Head	Cast Iron	Ni. Cast Iron
5	Stuffing Box Studs/Nuts	Stainless Steel	Steel
6	Stuffing Box Gland	Bronze	Zincless Bronze
7	Stuffing Box	Cast Iron	Ni. Cast Iron
8	Gland Packing	Rubber	
9	Line Shaft Coupling	Steel	Stainless Steel
10	Column Shaft	Carbon Steel	Stainless Steel
11	Sleeve	Stainless Steel	Steel
12	Column Spider	Cast Iron	Ni. Cast Iron, Bronze
13	Column Pipe	Steel	Stainless Steel
14	Pump Shaft	Stainless Steel	Steel
15	Discharge Stage Housing	Cast Iron	Ni. Cast Iron
16	Discharge Stage Bearing	Bronze	Zincless Bronze
17	Bowl	Cast Iron	Ni. Cast Iron
18	Bowl Bearing	Bronze	Zincless Bronze
19	Impeller	Bronze	Zincless Bronze
20	Bearing Stage Bearing	Bronze	Zincless Bronze
21	Bearing Stage Housing	Cast Iron	Ni. Cast Iron
22	Strainer	Galvanized Steel	Stainless Steel

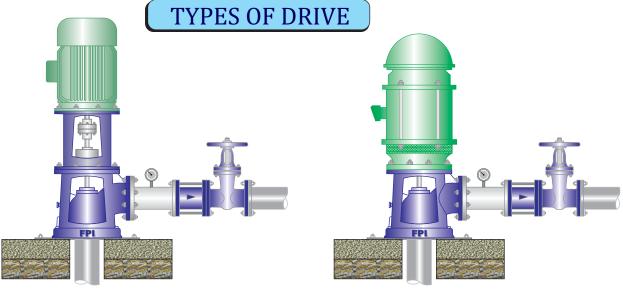
 $\underline{\underline{\textbf{Note:}}}$ Pumps can also be supplied with stainless steel execution (Fabricated/Casted Steel)



SECTIONAL VIEW OF DEEP WELL TURBINE PUMP

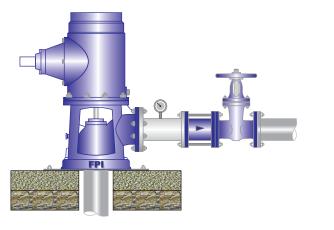




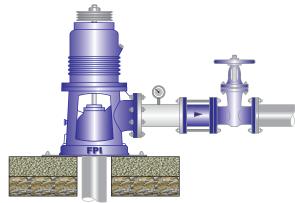


Drive by vertical solid shaft motors

Drive by vertical hollow shaft motors

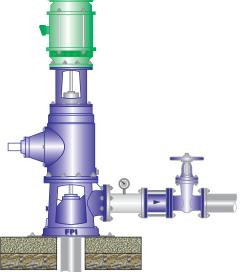


Drive by diesel engine/ tractor through right angle gear.



Drive by diesel engine through flat belt.

Combined drive either by vertical hollow shaft motor or by diesel engine/ tractor through right angle gear.





COLUMN FRICTION LOSS

Loss in Feet per 100 ft. of Column 0-3600 USGPM

		211			411			-11		<u>U-3</u>	3600		<u> </u>		OII			4	011			4.	211	
Column Size		3"			4"			5"			_	;"			8"				0"				2"	
Shaft Size	3/4	1	1-3/16	3/4	1	1-3/16	3/4	1	1-3/16	1	1-3/16	1-1/2	1-15/16	1-3/16	1-1/2	1-15/16	1-3/16	1-1/2	1-15/16	2-3/16	1-3/16	1-1/2	1-15/16	
USGPM												1-11/16			1-11/16					2-7/16		1-11/16		2-7/16
36	1.9	2.6	5.2			0.7																		
48	3.1	4.2	8.4			1.1																		
60	4.4	6.1	12.1			1.6																		
72	6.0	8.3	16.2		1.2	2.2																		
84	7.8	11	20.8	1.2	1.6	2.9																		
96	9.8	14.2	25.9	1.5	1.9	3.6																		
			_																					\vdash
108	11.5	17	31.6	1.8	2.4	4.4					-		-		-									_
120	20	20	37.5	2.2	2.9	5.3																		-
150	28	29	54.2	3.3	4.3	7.6		1.0	1.4				0.9											
180				4.4	5.7	10.4	1.1	1.3	1.9				1.3											
210				5.9	7.6	13.5	1.5	1.8	2.5			1.2	1.7											
240				7.3	9.5	16.8	1.9	2.2	3.2		1.0	1.4	2.2											
270				9.0	11.8	20.2	2.3	2.7	3.8		1.2	1.7	2.7											
300				10.7	13.9	24.3	2.7	3.3	4.7	1.1	1.4	2	3.3											
330				12.8	16.3	29	3.2	3.9	5.5	1.3	1.7	2.4	3.9											
360				14.8	18.8	32.5	3.8	4.5	6.4	1.5	2.0	2.8	4.5											
390			\vdash	17.3	21.4	37	4.3	5.2	7.4	1.7	2.2	3.1	5.2	\vdash	\vdash	\vdash			\vdash	 	\vdash	\vdash		
			\vdash						-	-	_		_	 	\vdash	\vdash			-	-	 	\vdash		
420				19.5	24.1	42	4.9	5.9	8.4	2.0	2.6	3.7	6											-
450				21.8	27.7	47.2	5.5	6.6	9.3	2.2	3.0	4.2	6.7			_			<u> </u>			_		<u> </u>
480				24	30.4	52.5	6.2	7.5	10.6	2.5	3.3	4.6	7.5			1.0								
510							7.0	8.4	13	2.8	3.7	5.2	8.3			1.1								
540							7.7	9.3	13	3.1	4.1	5.8	9.2			1.3								
570							8.5	10.2	14.3	3.4	4.5	6.3	10.3		1.0	1.4								
600							9.3	11.1	15.6	3.8	5.0	6.9	11.3		1.1	1.5								
660							11	13.3	18.4	4.5	5.9	8.2	13	1.1	1.3	1.8								
720							12.8	15.5	21.1	5.2	6.9	9.5	15	1.3	1.5	2.1								
780										6.0	8.0	11.0	17.6	1.4	1.8	2.4								
840										6.9	9.1	12.5	20.3	1.7	2.1	2.8								
										-	-				_	-								
900										7.8	10	14	22.8	1.9	2.3	3.2				0.0				
960										8.7	11.3	15.5	25	2.2	2.6	3.6				0.9				
1020										9.8	12.5	17.6	28	2.3	2.8	4.0				1.1				
1080										10.6	14	19.1	31	2.7	3.2	4.5			1.0	1.2				
1140										11.8	15.7	21.3	34	2.8	3.4	4.8			1.1	1.3				
1200										12.8	17.1	22.9	37.4	3.3	3.9	5.4		1.0	1.2	1.4				
1320										15.2	20.5	27.4		4.0	4.8	5.8	1.0	1.2	1.4	1.7				
1440										18	24	32		4.5	5.4	7.5	1.2	1.4	1.6	2.0				
1560														5.3	6.3	8.7	1.3	1.6	1.9	2.3				
1680														6.0	7.2	10.1	1.6	1.8	2.2	2.6				1.0
1800														6.8	8.1	11.3	1.8	2.0	2.4	3.0				1.1
1920			\vdash	 	\vdash			\vdash	\vdash	\vdash	\vdash		\vdash	7.6	9.1	12.7	2.0	2.3	2.8	3.4	 	\vdash		1.2
					\vdash			—	—	—					-				_			1.0	1 1	-
2040					_			\vdash	\vdash	\vdash				8.4	10	14.3	2.2	2.5	3.1	3.8	1.0	1.0	1.1	1.4
2160			<u> </u>	<u> </u>	<u> </u>			\vdash	\vdash	\vdash	<u> </u>		<u> </u>	9.4	11.2	15.9	2.5	2.9	3.5	4.2	1.0	1.1	1.3	1.5
2280								lacksquare	lacksquare	lacksquare				10.2	12.4	17.5	2.8	3.1	3.7	4.6	1.1	1.2	1.4	1.6
2400														11.3	13.6	19.1	3.1	3.5	4.2	5.1	1.2	1.4	1.6	1.8
2520																	3.3	3.8	4.6	5.6	1.3	1.5	1.7	2.0
2640																	3.6	4.2	5.0	6.0	1.5	1.7	1.9	2.2
2760																	3.8	4.5	5.4	6.6	1.8	1.8	2.0	2.4
2880																	4.3	4.9	5.8	7.1	1.7	1.9	2.2	2.5
3000					\vdash												4.7	5.2	6.2	7.7	1.9	2.1	2.4	2.8
3120			\vdash	\vdash	\vdash			\vdash	\vdash	\vdash	\vdash		\vdash	\vdash	\vdash	\vdash	4.9	5.6	6.8	8.3	2.0	2.2	2.7	3.0
					\vdash														_			-		
3240			_	_	\vdash			\vdash	\vdash	\vdash	_		_	_	_	\vdash	5.2	6.0	7.2	9.0	2.1	2.4	2.8	3.2
3360					<u> </u>			_	_	_						_			<u> </u>		2.3	2.5	3.0	3.4
3480								lacksquare	lacksquare	lacksquare					L						2.4	2.7	3.2	3.6
3600					I															l	2.6	2.9	3.4	3.9

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