

THERMOPLASTIC PUMPS

22000 Series



Models

- 5 GPM - J Series
- 7 GPM - V Series
- 10 GPM - K Series
- 18 GPM - P Series

Features

- Sizes - 1/2, 3/4, 1, 1 1/2 HP
- Reinforced Thermoplastic motor bracket and discharge with built-in guide bearing
- 300 series stainless steel top bearing and motor coupling
- Stainless steel pump shell
- Reinforced Thermoplastic diffusers with stainless steel flanged sleeve bearings
- Reinforced Thermoplastic impellers
- Stainless steel pump shaft
- Internal, anti-spin check valve standard
- Thermoplastic intake screen and cable guard
- Powered by NEMA approved stainless steel motors with built-in lightning protection
- 2 & 3 wire models with ground
- 1 1/4" FNPT Discharge

All four inch submersibles are supplied with grounded leads meeting the National Electrical Code (N.E.C.) specifications.

3 Wire single phase models include pump, motor, 48" leads, control box and check valve.

2 Wire single phase models include pump, motor, 48" leads and check valve.

3 Wire three phase models include pump, motor 48" leads, magnetic starter, heaters and check valve.

The performance curves on the following page will assist you in choosing the pump that meets your needs.

Discharge Head

Incorporates built-in hex fluted guide bearing design for alignment and sandhandling capabilities. Left hand threaded with large wrenching surfaces 1 1/4" NPT female outlet threads standard.

Rope Hook Attachments

Check Valve

Internal anti-spin check valve with o-ring seal. Molded from engineered polymer.

Top Journal Bearing

Hex driven hard-sintered Stainless Steel

Stage Assemblies (Floating Stack Design):

Diffusers - are precision molded from abrasion resistant reinforced polymer and fitted with stainless steel flanged sleeve bearings to provide radial alignment and protection from upthrusting in every stage.

Impellers - are molded from reinforced polymer and ultra-sonic welded. Each impeller can float within the diffuser to allow sand or debris to flow through the pump without lock-up or binding. Each impeller incorporates uniquely engineered thrust pads running on stainless steel to prevent failure when pumps are operated in up thrust conditions.

Stage Plate - is molded from abrasion resistant engineered polymer.

Pump Shaft

Large stainless steel 7/16" hex for strength and positive impeller drive.

Coupling

Hard-sintered stainless steel press fitted to pump shaft for improved alignment.

Pump Shell

High grade, heavy wall stainless steel for excellent corrosion resistance. Left hand threaded at both ends to prevent loosening. Easily repairable in the field.

Motor Bracket

Rigid and accurate alignment to Nema standard fitted motors.

Intake Screen

Cable Guard

Cable guard fits into motor bracket to assure smooth entry into well casing.

Hardware

All screws, washers and assembly nuts are corrosion resistant stainless steel.

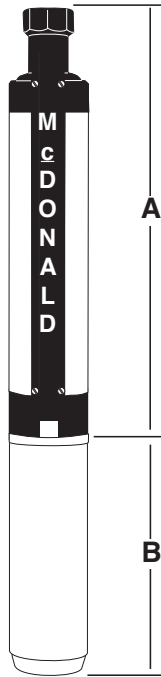


Motors

All A.Y. McDonald pumps are powered by corrosion resistant stainless steel Franklin Electric 2 or 3 wire water-lubricated motors. Thermal overload and built-in lightning protection. UL778 recognized with Nema standard mounting dimensions. All motors are rated for continuous duty.

5 GPM • J Series

22000 4" THERMOPLASTIC SUBMERSIBLES



MODELS AVAILABLE

2 Wire Single Phase

MODEL NO.	HP	STAGES	VOLT	PHASE	A	B	WT.
22050J2	1/2	13	230	1	16	9.5	25
22075J2	3/4	18	230	1	19.7	10.7	30
22100J2	1	21	230	1	21.9	11.75	35
22150J2	1 1/2	29	230	1	27.7	15.12	47

3 Wire Single Phase

MODEL NO.	HP	STAGES	VOLT	PHASE	A	B	WT.
22050J3	1/2	13	230	1	16	9.5	26
22075J3	3/4	18	230	1	19.7	10.7	30
22100J3	1	21	230	1	21.9	11.75	35
22150J3	1 1/2	29	230	1	27.7	13.28	44

DEPTH TO WATER

1/2 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	
	0				9.8	9.4	9.0	8.5	8.1	7.7	7.2	6.7	6.2	5.5	4.8	3.9	
	30	9.6	9.2	8.8	8.3	7.9	7.5	7.0	6.5	5.9	5.2	4.5	3.4	2.4	1.4		
50	8.6	8.2	7.8	7.3	6.8	6.3	5.7	5.0	4.1	3.1	2.1	1.1					

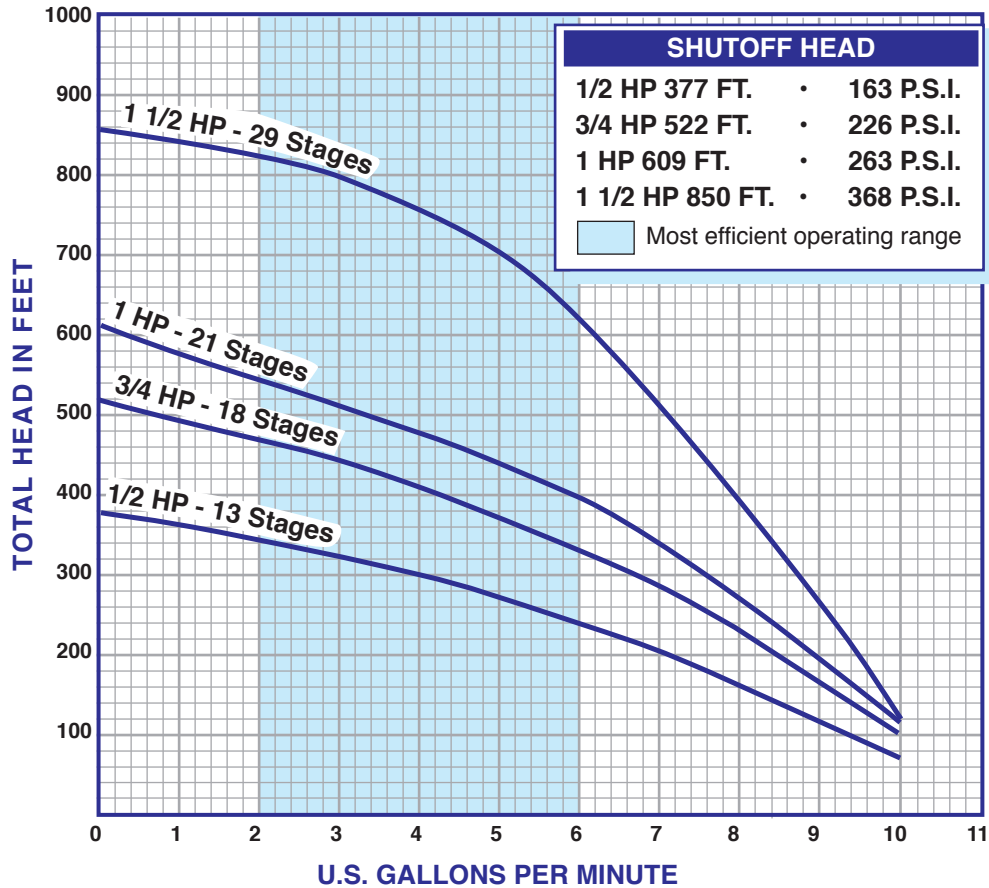
3/4 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	340'	380'	420'
	0					9.9	9.7	9.4	9.1	8.7	8.4	8.1	7.9	7.5	7.2	6.8	6.0	5.0	3.8
	30	10.1	9.8	9.5	9.2	8.9	8.6	8.3	8.0	7.7	7.4	7.0	6.6	6.3	5.8	5.3	4.1	2.7	1.2
50	9.4	9.1	8.8	8.5	8.2	7.9	7.6	7.2	6.9	6.5	6.1	5.6	5.1	4.6	3.9	2.4	1.0		

1 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	340'	380'	420'	500'	540'
	0					10.1	9.9	9.7	9.4	9.2	8.9	8.6	8.3	8.1	7.9	7.6	7.0	6.3	5.5	3.4	2.2
	30		10.0	9.8	9.6	9.3	9.0	8.8	8.5	8.2	8.0	7.7	7.4	7.1	6.8	6.5	5.7	4.9	3.8	1.3	
50	9.7	9.5	9.2	8.9	8.7	8.4	8.1	7.9	7.6	7.3	7.0	6.7	6.4	6.0	5.6	4.7	3.6	2.3			

1 1/2 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	340'	380'	420'	500'	540'	620'	700'	800'
	0						9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.0	8.8	8.7	8.4	8.1	7.8	7.2	6.8	6.0	5.0	3.0
	30				9.9	9.7	9.6	9.5	9.4	9.3	9.1	8.9	8.8	8.7	8.5	8.4	8.2	7.9	7.6	7.3	6.5	6.1	5.1	3.8
50	9.8	9.6	9.5	9.4	9.3	9.2	9.0	8.8	8.7	8.6	8.4	8.3	8.1	8.0	7.8	7.5	7.2	6.8	6.0	5.5	4.4	2.0		

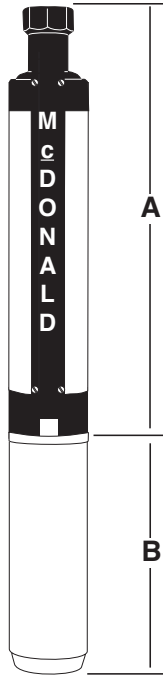
5 GPM • J Series

22000 4" THERMOPLASTIC SUBMERSIBLES



7 GPM • V Series

22000 4" THERMOPLASTIC SUBMERSIBLES



MODELS AVAILABLE

2 Wire Single Phase

MODEL NO.	HP	STAGES	VOLT	PHASE	A	B	WT.
22050V2	1/2	10	230	1	14.3	9.5	25
22075V2	3/4	13	230	1	16.6	10.7	28
22100V2	1	16	230	1	18.8	11.8	32
22150V2	1 1/2	23	230	1	24	15.12	40

3 Wire Single Phase

MODEL NO.	HP	STAGES	VOLT	PHASE	A	B	WT.
22050V3	1/2	10	230	1	14.3	9.5	25
22075V3	3/4	13	230	1	16.6	10.7	28
22100V3	1	16	230	1	18.8	11.8	32
22150V3	1 1/2	23	230	1	24	13.3	40

DEPTH TO WATER

1/2 HP	PSI	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'
	0	11.30	10.90	10.45	10.00	9.55	9.05	8.45	7.90	7.25	6.60	5.95	5.05	4.85
	30	9.90	9.25	8.75	8.20	7.60	6.90	6.25	5.50	4.55	2.40			
	50	8.60	8.00	7.35	6.75	6.00	5.20	4.05	1.40					

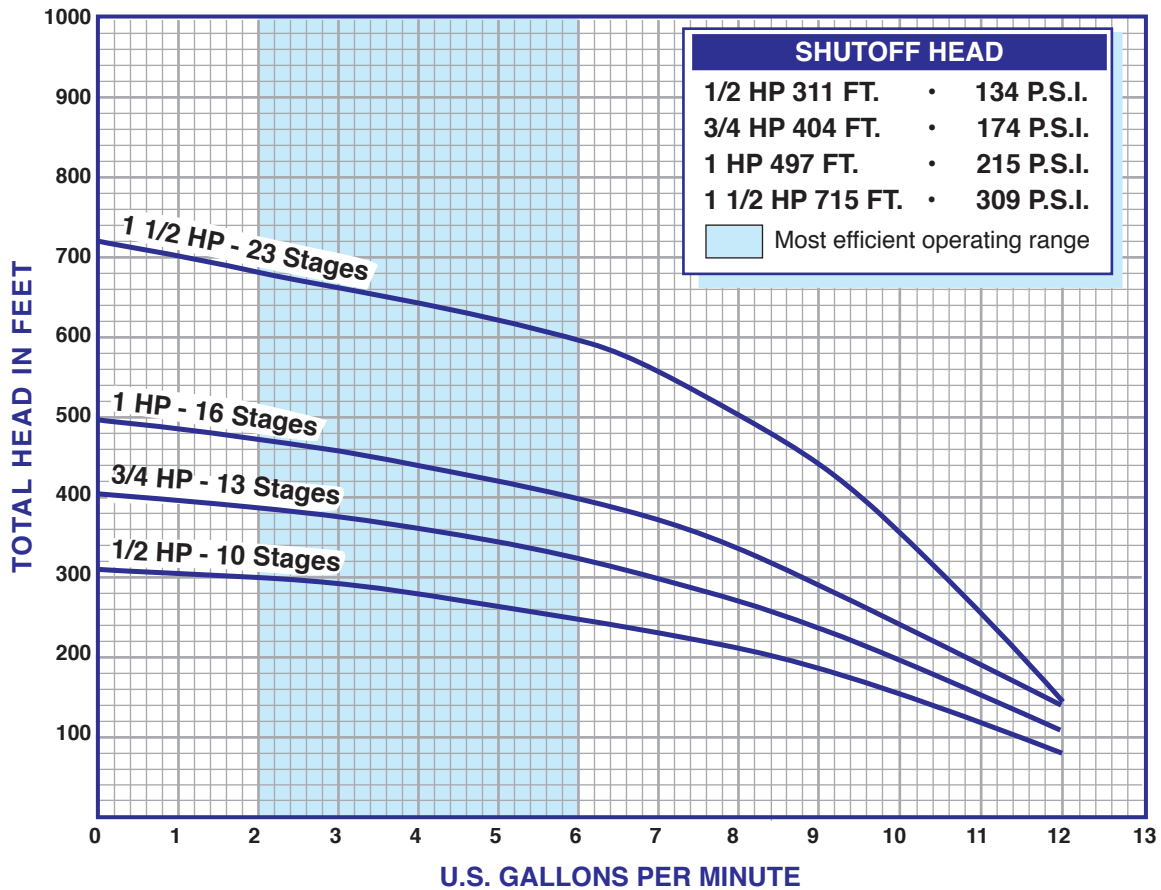
3/4 HP	PSI	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	280'	320'	360'
	0		12.05	11.70	11.35	11.00	10.65	10.25	9.85	9.45	8.95	8.40	7.20	6.00	4.00
	30	11.20	10.85	10.45	9.70	9.65	9.20	8.70	8.10	7.50	6.90	6.30	4.65		
	50	10.35	10.00	9.55	9.05	8.50	7.95	7.30	6.70	6.10	5.20	4.15			

1 HP	PSI	40'	60'	80'	100'	120'	160'	200'	240'	280'	320'	360'	400'	440'	480'
	0			12.20	11.95	11.65	11.00	10.35	9.65	8.85	7.90	6.80	5.65	4.00	1.40
	30	11.75	11.50	11.15	10.90	10.50	9.85	9.10	8.15	7.05	5.95	4.50	2.35		
	50	11.10	10.80	10.45	10.10	9.80	9.00	8.00	9.95	5.75	4.25	1.80			

1 1/2 HP	PSI	40'	60'	80'	100'	120'	180'	240'	300'	360'	420'	480'	540'	600'	660'	720'
	0				12.40	12.15	11.50	10.85	10.10	9.45	9.80	8.05	7.20	6.20	4.30	1.20
	30	12.30	12.10	11.90	11.65	11.45	10.70	10.05	9.35	8.65	7.90	7.05	5.95	3.90	0.65	
	50	11.80	11.60	11.35	11.10	10.90	10.20	9.55	9.85	8.10	7.25	6.30	4.60	1.50		

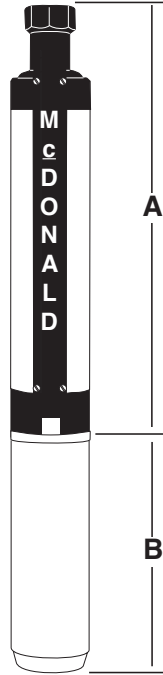
7 GPM • V Series

22000 4" THERMOPLASTIC SUBMERSIBLES



10 GPM • K Series

22000 4" THERMOPLASTIC SUBMERSIBLES



MODELS AVAILABLE

2 Wire Single Phase

MODEL NO.	HP	STAGES	VOLT	PHASE	A	B	WT.
22050K2A	1/2	8	115	1	12.3	9.5	23
22050K2	1/2	8	230	1	12.3	9.5	23
22075K2	3/4	10	230	1	13.7	10.7	27
22100K2	1	13	230	1	16.0	11.75	31
22150K2	1 1/2	18	230	1	19.7	15.12	40

3 Wire Single Phase

MODEL NO.	HP	STAGES	VOLT	PHASE	A	B	WT.
22050K3A	1/2	8	115	1	12.3	9.5	24
22050K3	1/2	8	230	1	12.3	9.5	24
22075K3	3/4	10	230	1	13.7	10.7	27
22100K3	1	13	230	1	16.0	11.75	31
22150K3	1 1/2	18	230	1	19.7	13.28	37

DEPTH TO WATER

1/2 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'
	0			14.9	14.3	13.6	12.7	11.8	10.9	9.9	8.6	7.2	5.3
	30	14.0	13.2	12.3	11.3	10.4	9.3	8.0	6.4	3.5			
	50	12.0	11.1	10.1	8.9	7.6	5.8						

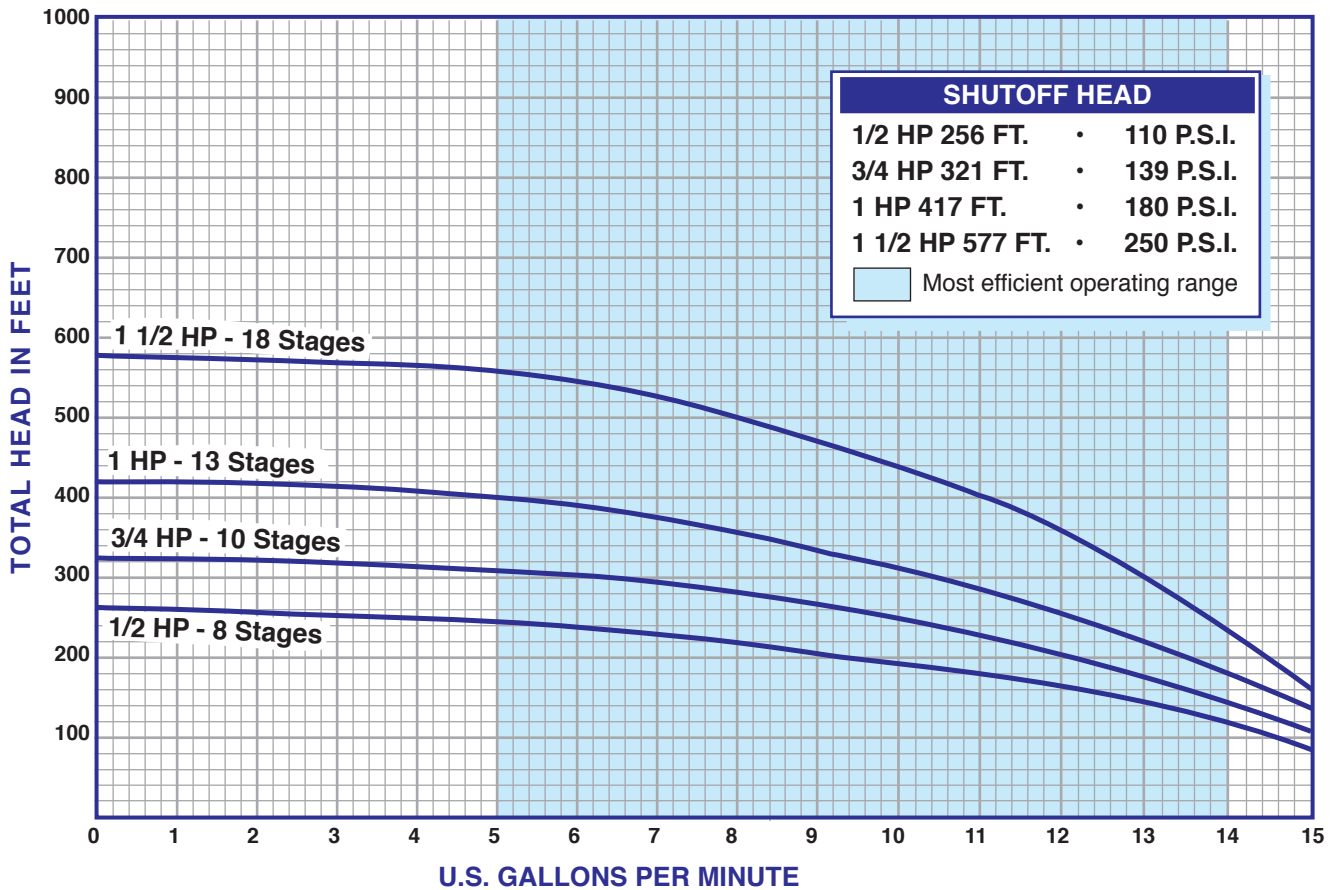
3/4 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'
	0				14.8	14.3	13.8	13.1	12.3	11.6	10.9	10.1	9.1	8.1	6.9	5.3
	30	14.6	14.1	13.4	12.7	12.0	11.2	10.5	9.7	8.6	7.6	6.2	4.4			
	50	13.2	12.5	11.7	11.0	10.3	9.4	8.3	7.2	5.7	2.1					

1 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	340'	380'
	0					14.9	14.5	14.1	13.6	13.1	12.6	12.0	11.4	10.9	10.3	9.6	8.0	5.9
	30	15.1	14.7	14.3	13.9	13.4	12.9	12.3	11.7	11.2	10.6	10.0	9.2	8.4	7.6	6.5	2.3	
	50	14.2	13.8	13.2	12.7	12.1	11.5	11.0	10.4	9.8	9.0	8.1	7.4	6.2	4.9			

1 1/2 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	340'	380'	420'	500'	540'
	0						15.1	14.9	14.6	14.3	14.0	13.7	13.3	12.9	12.5	12.1	11.3	10.4	9.5	7.0	5.3
	30			15.0	14.8	14.5	14.2	13.9	13.5	13.1	12.7	12.3	11.9	11.5	11.1	10.7	9.8	8.6	7.5	1.8	
	50	14.9	14.7	14.4	14.1	13.8	13.4	13.0	12.6	12.2	11.8	11.4	10.9	10.5	10.1	9.6	8.4	7.3	5.5		

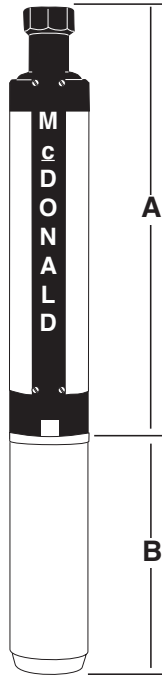
10 GPM • K Series

22000 4" THERMOPLASTIC SUBMERSIBLES



18 GPM • P Series

22000 4" THERMOPLASTIC SUBMERSIBLES



MODELS AVAILABLE

2 Wire Single Phase

MODEL NO.	HP	STAGES	VOLT	PHASE	A	B	WT.
22075P2	3/4	6	230	1	13.5	10.7	26
22100P2	1	8	230	1	15.8	11.75	30
22150P2	1 1/2	10	230	1	17.9	15.12	39

3 Wire Single Phase

MODEL NO.	HP	STAGES	VOLT	PHASE	A	B	WT.
22075P3	3/4	6	230	1	13.5	10.7	26
22100P3	1	8	230	1	15.8	11.75	30
22150P3	1 1/2	10	230	1	17.9	13.28	36

DEPTH TO WATER

3/4 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'
	0			28.8	26.9	24.8	22.5	20.0	17.3	13.1	6.6
	30	26.0	23.6	21.1	18.9	15.0	11.0				
	50	20.6	18.4	14.2	9.0						

1 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'
	0			30.0	28.5	27.0	25.2	23.7	22.1	20.0	18.2	15.8	12.4	7.0
	30	27.8	26.0	24.5	23.0	21.2	19.3	17.1	14.2	10.0	1.0			
	50	24.0	22.4	20.4	18.6	16.2	13.0	8.8						

1 1/2 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'
	0				29.8	28.7	27.6	26.3	24.8	23.3	22.0	20.5	19.0	17.3	15.5	12.4
	30	29.5	28.3	27.0	25.4	24.1	22.5	21.2	19.8	18.0	16.5	14.0	10.0	1.0		
	50	27.8	26.5	25.1	23.6	22.3	20.8	19.3	17.6	13.6						

18 GPM • P Series

22000 4" THERMOPLASTIC SUBMERSIBLES

