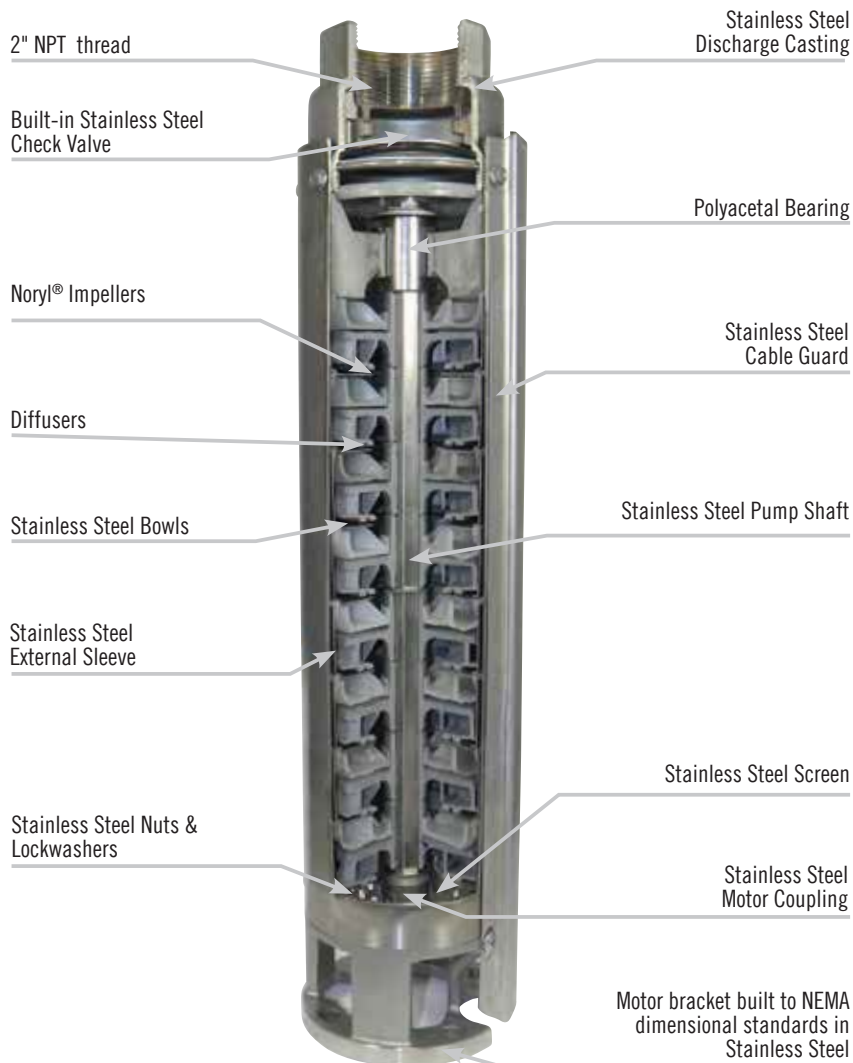


## 24000 Series High Flow

A.Y. McDonald offers a full line of 4" submersibles ranging from 1 through 10 horsepower, with flow rates ranging from 35 through 80 GPM. Our 24000 high flow submersibles offer peak capacity performance in 35, 40, 55, 60, and 80 GPM models.

- Powered by NEMA approved A.Y. McDonald stainless steel motors
- Delivery: up to 124 GPM at 3450 rpm
- Head: up to 1300' at 3450 rpm
- The charts on the following page will assist you in choosing the pump that meets your needs.



# How to Order 4" Submersible Pumps

Order by Model Number - Example: 24200R3

<b>24</b>	<b>200</b>	<b>R</b>	<b>3</b>		
<b>Pump Model</b> Stainless Steel	<b>Horsepower</b> 100 - 1 HP 150 - 1 1/2 HP 200 - 2 HP 300 - 3 HP 500 - 5 HP 750 - 7 1/2 HP 1000 - 10 HP	<b>Series</b> R Series - 35 GPM G Series - 40 GPM S Series - 55 GPM Q Series - 60 GPM T Series - 80 GPM	<b>Wires</b> Two wire or Three wire	<b>Other</b> Leave blank for 230V 60 HZ, Single Phase (Standard) A - 115V Single Phase <b>Other Options - Contact Factory</b> Z - 230V Three Phase Y - 460V Three Phase	<b>Controls</b> Leave blank for Control (Standard) LB - Less box (Single Phase Option) LS - Less starter (Three Phase Option)


Model 24200R3 is a 2 HP, three wire, 230 volt, single phase stainless steel 4" high flow submersible pump, designed to pump in the 35 GPM range.

## NOTES

- Standard is 230V, Single Phase, 60 HZ (no suffix letter required)
- **Two-Wire Single phase** models include; pump, motor, leads.
- **Three-Wire Single phase** models include; pump, motor, leads, and control box.
- **Three-Wire Three phase** models include; pump, motor, leads, and starter kit.
- All submersible pumps include **internal check valves and grounded lead on motor.**



## Locating the code number on the pump



**A.Y. McDonald Mfg. Co.**  
aymcdonald.com

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**MODEL:** 24150Q      **HP:** 1 1/2

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**GPM:** 60

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**S/N:** T1107010010-0065

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**DATE CODE:** D C 12C

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**MADE IN TAIWAN**

A code appears on each A.Y. McDonald submersible pump. Contained in this code is the following information:

- Pump Model
- Date of manufacture
- Motor HP
- Pump Series

### MATERIALS OF CONSTRUCTION

<b>Discharge Head</b>	Stainless Steel 304, discharge 2" NPT from 35 GPM to 80 GPM series
<b>Motor Adapter</b>	Stainless Steel 304, NEMA standard
<b>Check Valve</b>	Stainless Steel 304
<b>External Sleeve</b>	Stainless Steel 304 polished
<b>Impellers</b>	Noryl
<b>Diffusers</b>	Polycarbonate
<b>Bearing</b>	Polyacetal
<b>Shaft Coupling</b>	Stainless Steel 304
<b>Strainer</b>	Stainless Steel 304
<b>Shaft</b>	Stainless Steel 304
<b>Cable Guard</b>	Stainless Steel 304

Submersible Pumps

## R Series - 35 GPM

All R Series Stainless Steel Submersible Pumps are designed to pump within the 35 GPM range. Sizes are available from 1 to 10 HP. All models are standard with 2" NPT discharge.

### Two Wire Single Phase

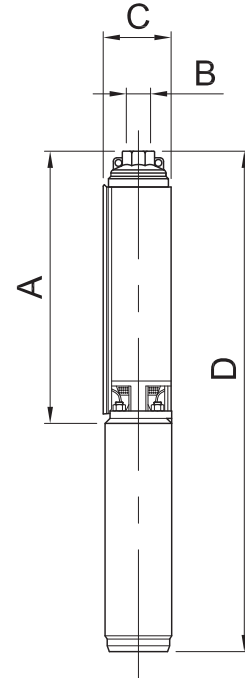
Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24100R2	1	6	230	14.1"	2"	3.9"	29.1"	38
24150R2	1 1/2	8	230	16.6"	2"	3.9"	32.5"	40

### Three Wire Single Phase

Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24100R3	1	6	230	14.1"	2"	3.9"	29.1"	38
24150R3	1 1/2	8	230	16.6"	2"	3.9"	32.5"	48
24200R3	2	10	230	19.0"	2"	3.9"	36.3"	52
24300R3	3	14	230	23.9"	2"	3.9"	43.4"	75
24500R3	5	22	230	35.2"	2"	3.9"	62.0"	103

### Three Wire Three Phase

Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150R3Z	1 1/2	6	230	16.6"	2"	3.9"	31.5"	42
24150R3Y	1 1/2	6	460	16.6"	2"	3.9"	31.5"	37
24200R3Z	2	8	230	19.0"	2"	3.9"	35.0"	62
24200R3Y	2	8	460	19.0"	2"	3.9"	35.0"	48
24300R3Z	3	14	230	23.9"	2"	3.9"	41.2"	60
24300R3Y	3	14	460	23.9"	2"	3.9"	41.2"	54
24500R3Z	5	22	230	35.2"	2"	3.9"	62.0"	79
24500R3Y	5	22	460	35.2"	2"	3.9"	62.0"	74
24750R3Z	7 1/2	34	230	49.5"	2"	3.9"	76.4"	98
24750R3Y	7 1/2	34	460	49.5"	2"	3.9"	76.4"	97
241000R3Y	10	43	460	51.9"	2"	3.9"	82.7"	159



### 4" Stainless Steel Pump Ends

Model No.	HP	Wt.
24100R	1	8
24150R	1 1/2	9
24200R	2	11
24300R	3	13
24500R	5	18
24750R	7 1/2	26
241000R	10	31

### Output - in Gallons Per Minute (Depth to Water)

1 HP	PSI	20'	40'	60'	80'	100'	120'	140'
	0			43	39	34	27.5	17.5
	30	38	32	24	15	19		
	50	24	14					

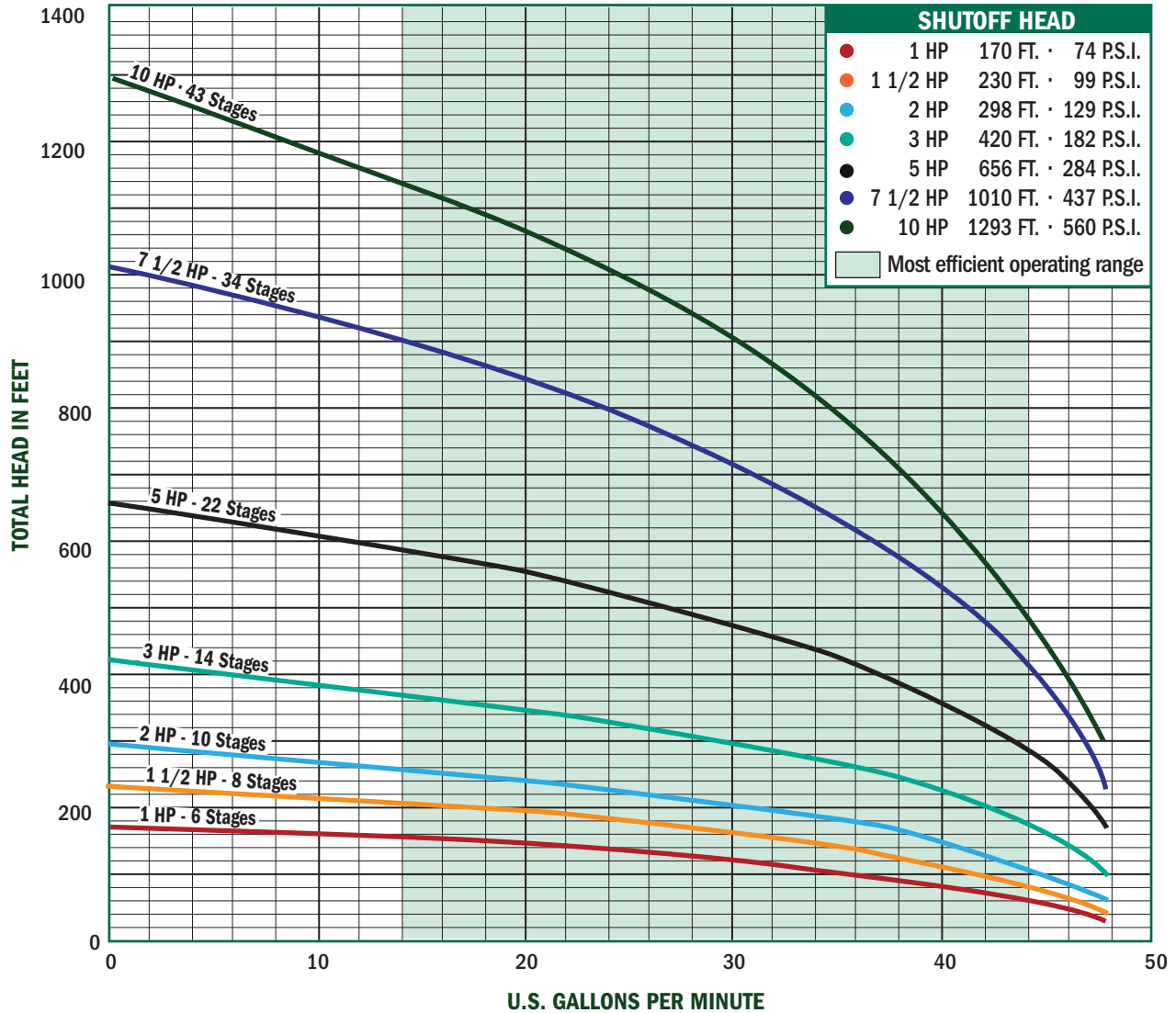
1 1/2 HP	PSI	20'	40'	60'	80'	100'	120'	140'	160'	180'	200'
	0				44	42	38	34	30	24	16
	30		40	37	28	25	22	10			
	50	37	28	25	20	8					

2 HP	PSI	40'	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'
	0				44.3	42.3	41	39	35	30	24	18	12
	30		42	41	39	35	30	21	16	9			
	50	41	39	35	30	21	16	8					

3 HP	PSI	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	340'	380'
	0						44.5	43.5	42	40	38	35.8	32.2	28	20	10
	30			44	42.5	41	40	38	35	32	26	24	20	14		
	50	42.5	41	40.5	39	36	34	31	27	22	18	13				

FRICITION LOSSES IN RISER PIPE  
HAVE NOT BEEN CALCULATED

# R Series - 35 GPM



Submersible Pumps

5 HP	PSI	150'	200'	250'	300'	350'	400'	450'	500'	550'	600'
	0			45	43	40	36.5	32	26.8	20	11.8
	30		44.5	42	39	32	30	24	16.8		
	50	44.5	42.5	39.8	35.8	29.	25				

7 1/2 HP	PSI	300'	350'	400'	450'	500'	550'	600'	650'	700'	750'	800'	850'	900'
	0				41	39	36.5	34	31	27	23.5	19	12	
	30			41	40	38	35	32.3	29	25	22	17	12	
	50	43	42	40	37.8	5	31.3	29	26	21	16	12		

10 HP	PSI	450'	500'	550'	600'	650'	700'	750'	800'	850'	900'	950'	1000'	1050'	1100'	1150'	1200'
	0				43	41	40	38	36	34	31.5	28.5	26	22.3	18.2	14.2	10
	30		43.2	41.2	40.3	38.3	37	35	33	30	27.3	24	21	17	13		
	50	43.5	42.2	40.5	39.5	37	35.8	33	31	28	25	21	18				

FRICION LOSSES IN RISER PIPE HAVE NOT BEEN CALCULATED

## G Series - 40 GPM

All G Series Stainless Steel Submersible Pumps are designed to pump within the 40 GPM range. Sizes are available from 1 1/2 to 7 1/2 HP. All models are standard with 2" NPT discharge.

### Two Wire Single Phase

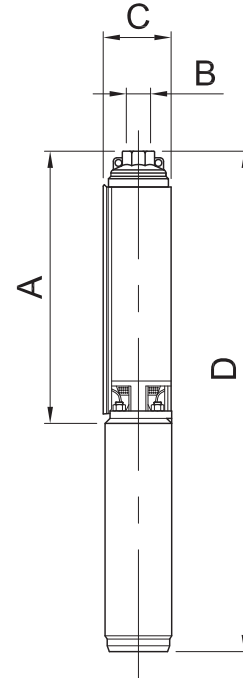
Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150G2	1 1/2	5	230	12.8"	2"	3.9"	28.7"	37

### Three Wire Single Phase

Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150G3	1 1/2	5	230	12.8"	2"	3.9"	28.7"	48
24200G3	2	6	230	14.0"	2"	3.9"	31.3"	51
24300G3	3	8	230	16.5"	2"	3.9"	35.9"	73
24500G3	5	14	230	23.8"	2"	3.9"	50.7"	99

### Three Wire Three Phase

Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150G3Z	1 1/2	5	230	12.8"	2"	3.9"	27.8"	47
24150G3Y	1 1/2	5	460	12.8"	2"	3.9"	27.8"	40
24200G3Z	2	6	230	14.0"	2"	3.9"	30.0"	47
24200G3Y	2	6	460	14.0"	2"	3.9"	30.0"	46
24300G3Z	3	8	230	16.5"	2"	3.9"	33.8"	60
24300G3Y	3	8	460	16.5"	2"	3.9"	33.8"	51
24500G3Z	5	14	230	23.8"	2"	3.9"	50.7"	75
24500G3Y	5	14	460	23.8"	2"	3.9"	50.7"	71
24750G3Z	7 1/2	21	230	33.8"	2"	3.9"	60.7"	93
24750G3Y	7 1/2	21	460	33.8"	2"	3.9"	60.7"	93



### 4" Stainless Steel Pump Ends

Model No.	HP	Wt.
24150G	1 1/2	7
24200G	2	8
24300G	3	9
24500G	5	13
24750G	7 1/2	18

### Output - in Gallons Per Minute (Depth to Water)

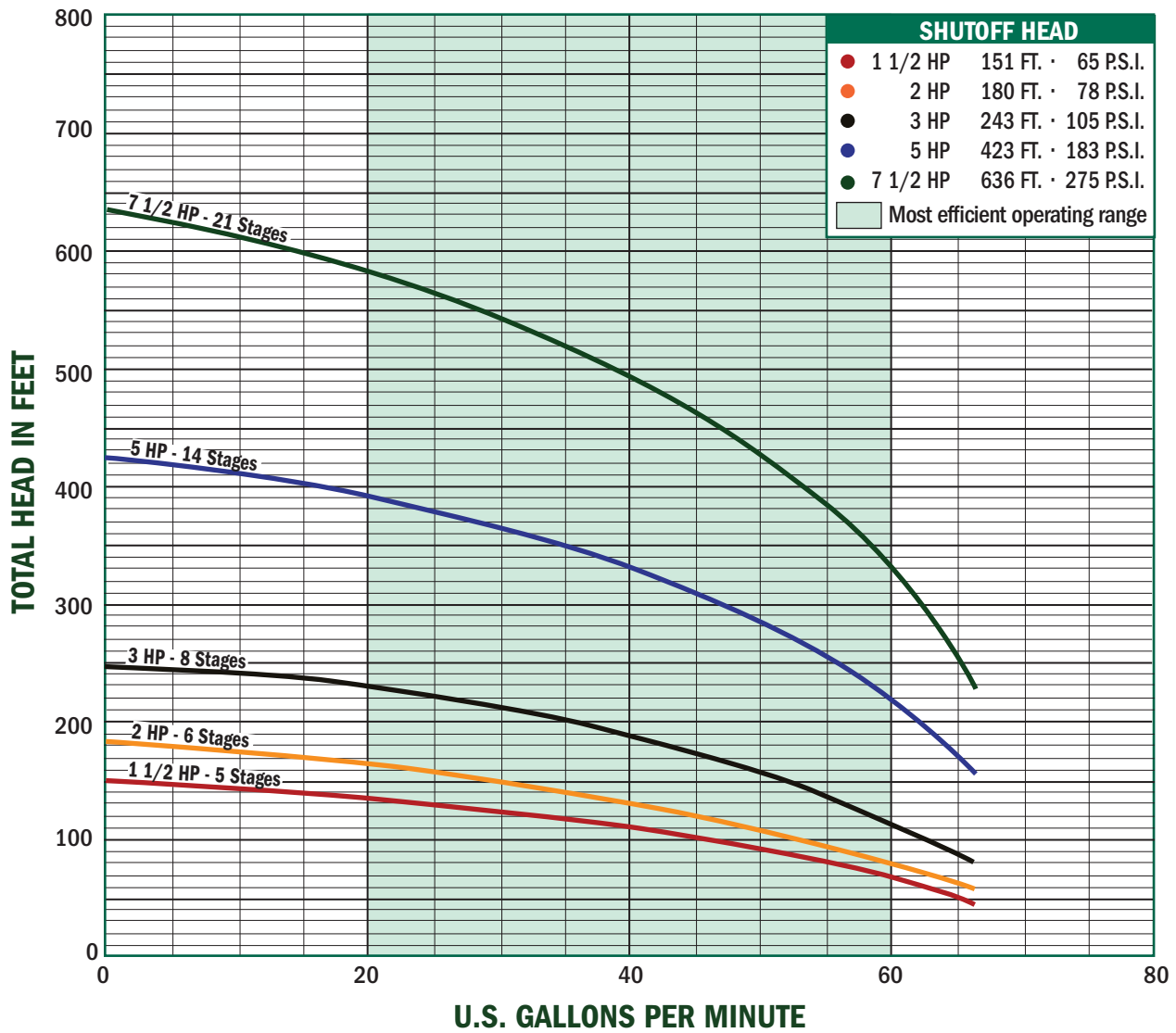
1 1/2 HP	PSI	20'	30'	40'	50'	60'	70'	80'	90'	100'	120'	140'
	0				65	63	57	54	50	45	32	15
	30			40	31	22	12					
	50	17	12									

2 HP	PSI	20'	30'	40'	50'	60'	70'	80'	90'	100'	120'	140'	160'
	0					66	63	58	56	53	43	34	22
	30	55	52.5	47.5	44	38	34	28	22	12			
	50	37.5	32	27	17.5	12							

3 HP	PSI	20'	30'	40'	50'	60'	70'	80'	90'	100'	120'	140'	160'	180'	200'	240'
	0							66	64	62.5	57	53	43	42	35	10
	30	66	62.5	60	58	57	55	53	43	42	38	31	20	5		
	50	55	52.5	50	47.5	44	41	38	33	27	20					

FRICITION LOSSES IN RISER PIPE  
HAVE NOT BEEN CALCULATED

# G Series - 40 GPM



Submersible Pumps

5 HP	PSI	100'	120'	160'	180'	200'	220'	240'	260'	280'	300'	320'	340'	360'	380'	400'
	0					63	58	56	53	50	46	42	37	32	23	16
	30			57	56	52	48	44	40	34	27	18				
50	60	57	51	47	43	38	33	26	22							

7 1/2 HP	PSI	220'	240'	260'	280'	300'	320'	340'	360'	380'	400'	420'	440'	460'	500'	540'
	0					63	61	58	57	55	53	51	48	45	38	30
	30			59	58	57	53	52	48	46	43	40	37	32	22	
50	61	57	56	53	52	48	44	42	38	35	31	23				

FRICITION LOSSES IN RISER PIPE HAVE NOT BEEN CALCULATED

## S Series - 55 GPM

All S Series Stainless Steel Submersible Pumps are designed to pump within the 55 GPM range. Sizes are available from 1 1/2 to 10 HP. All models are standard with 2" NPT discharge.

### Two Wire Single Phase

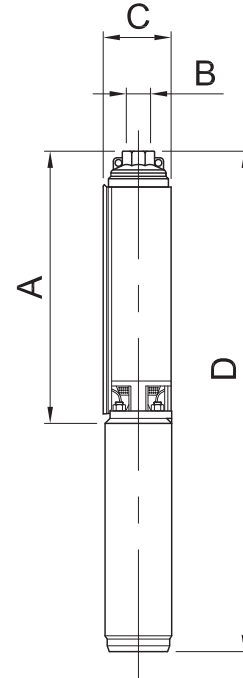
Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150S2	1 1/2	5	230	17.0"	2"	3.9"	33.0"	40

### Three Wire Single Phase

Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150S3	1 1/2	5	230	17.0"	2"	3.9"	33.0"	44
24200S3	2	7	230	21.1"	2"	3.9"	38.5"	48
24300S3	3	9	230	25.2"	2"	3.9"	44.7"	60
24500S3	5	15	230	37.5"	2"	3.9"	64.4"	95

### Three Wire Three Phase

Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150S3Z	1 1/2	5	230	17.0"	2"	3.9"	32.0"	38
24150S3Y	1 1/2	5	460	17.0"	2"	3.9"	32.0"	38
24200S3Z	2	7	230	21.1"	2"	3.9"	37.1"	44
24200S3Y	2	7	460	21.1"	2"	3.9"	37.1"	44
24300S3Z	3	9	230	25.2"	2"	3.9"	42.6"	51
24300S3Y	3	9	460	25.2"	2"	3.9"	42.6"	51
24500S3Z	5	15	230	37.5"	2"	3.9"	64.4"	74
24500S3Y	5	15	460	37.5"	2"	3.9"	64.4"	73
24750S3Z	7 1/2	22	230	53.0"	2"	3.9"	79.8"	97
24750S3Y	7 1/2	22	460	53.0"	2"	3.9"	79.8"	95
241000S3Y	10	29	460	67.2"	2"	3.9"	98.1"	106



### 4" Stainless Steel Pump Ends

Model No.	HP	Wt.
24150S	1 1/2	10
24200S	2	12
24300S	3	14
24500S	5	20
24750S	7 1/2	28
241000S	10	35

### Output - in Gallons Per Minute (Depth to Water)

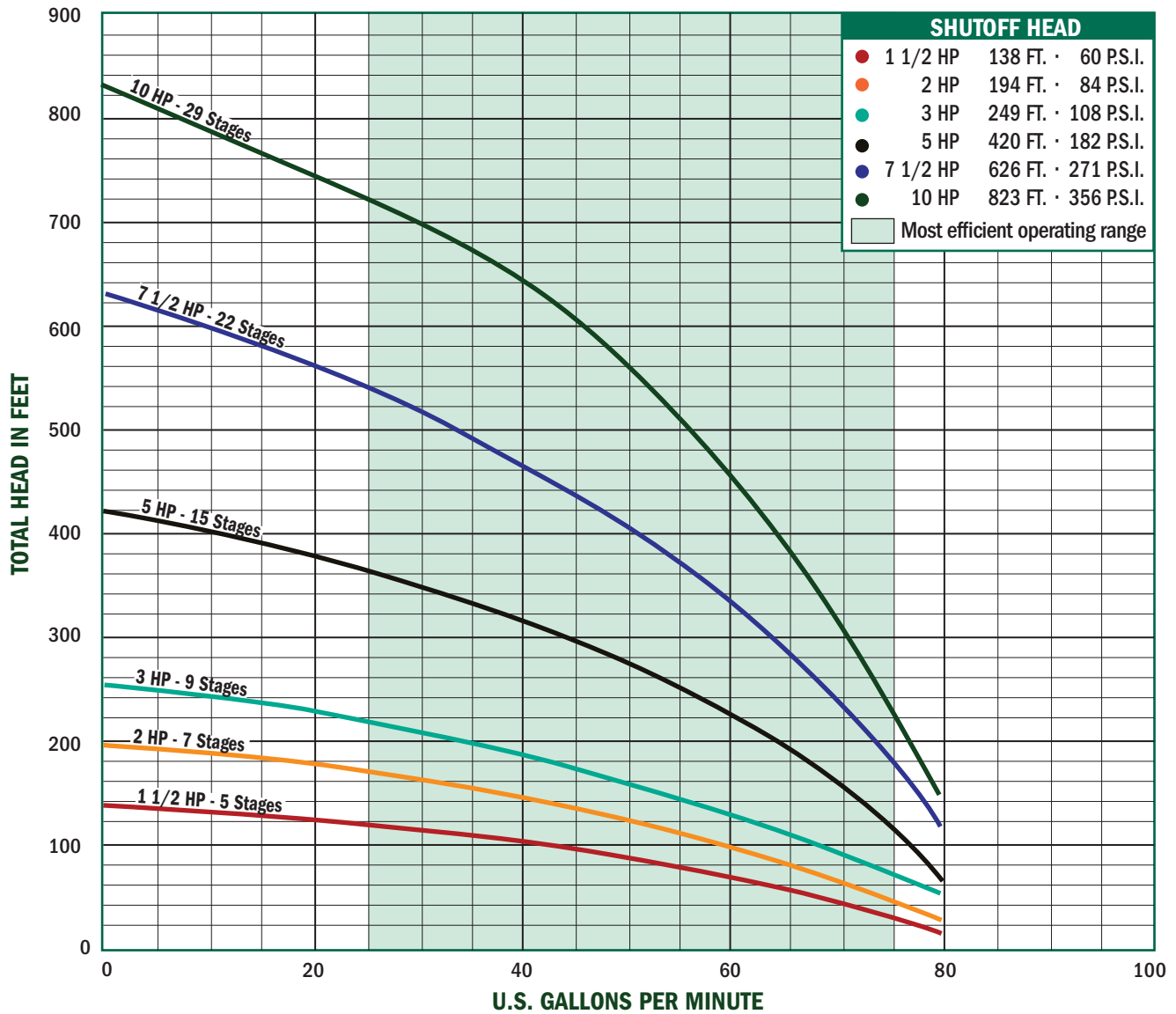
1 1/2 HP	PSI	20'	30'	40'	50'	60'	70'	80'	90'	100'	120'
	0			72.5	67.5	65	60	52.5	45	42.5	20
	30	47.5	42.5	32.5	20						

2 HP	PSI	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	120'	140'	160'	180'
	0				77.5	75	72.5	68	67	62.5	60	52	42.5	32	19
	30		62	60	55	52	47	43	37	32	25				

3 HP	PSI	20'	30'	40'	50'	60'	70'	80'	90'	100'	120'	140'	160'	180'	200'	240'
	0					79	76	73	70	68	62.5	57	50	42	34	24
	30			66	62.5	60	57	53	50	46	38	24	17			

FRICITION LOSSES IN RISER PIPE HAVE NOT BEEN CALCULATED

# S Series - 55 GPM



Submersible Pumps

5 HP	PSI	40'	60'	80'	100'	120'	160'	180'	200'	220'	240'	260'	280'	300'	320'	340'	360'	380'
	0				77	75	70	67	65	61	58	53	49	44	38	33	26	18
	30		74	72	68	66	58	55	51	47	41	36	29	22				
	50	71	68	65	62	58	51	46	41	35	30	22						

7 1/2 HP	PSI	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	340'	380'	420'	460'	500'	540'
	0					77	75	74	72	70	68	66	64	58	54	47.5	40	33	25
	30			74	72.5	71	69	67	65	63	60	57	55	47	42	35	27		
	50	74	72	71	68	67	65	62	60	57	55	52	48	42	35				

10 HP	PSI	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	340'	380'	420'	460'	500'	540'	580'	620'	660'	700'	740'
	0					78	77	76	75	74	73	72	69	67	63	59	55	52	47	41	35	30	20
	30				77	76	75	74	72	71	70	67	66	62	60	57	53	47	43	37	31	23	
	50	77	76	75	74	72	71	70	67	66	62	60	57	56	53	50	42	40	33				

FRICITION LOSSES IN RISER PIPE HAVE NOT BEEN CALCULATED



## Q Series - 60 GPM

All Q Series Stainless Steel Submersible Pumps are designed to pump within the 60 GPM range. Sizes are available from 1 1/2 to 7 1/2 HP. All models are standard with 2" NPT discharge.

### Two Wire Single Phase

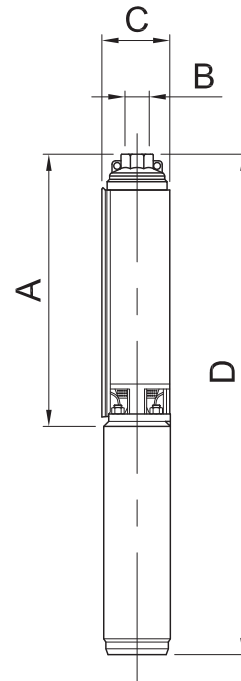
Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150Q2	1 1/2	4	230	14.9"	2"	3.9"	30.8"	40

### Three Wire Single Phase

Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150Q3	1 1/2	4	230	14.9"	2"	3.9"	30.8"	44
24200Q3	2	5	230	16.9"	2"	3.9"	34.3"	48
24300Q3	3	7	230	21.0"	2"	3.9"	40.5"	60
24500Q3	5	11	230	29.2"	2"	3.9"	56.1"	95

### Three Wire Three Phase

Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24150Q3Z	1 1/2	4	230	14.9"	2"	3.9"	29.8"	38
24150Q3Y	1 1/2	4	460	14.9"	2"	3.9"	29.8"	38
24200Q3Z	2	5	230	16.9"	2"	3.9"	32.9"	44
24200Q3Y	2	5	460	16.9"	2"	3.9"	32.9"	44
24300Q3Z	3	7	230	21.0"	2"	3.9"	38.3"	51
24300Q3Y	3	7	460	21.0"	2"	3.9"	38.3"	51
24500Q3Z	5	11	230	29.2"	2"	3.9"	56.1"	74
24500Q3Y	5	11	460	29.2"	2"	3.9"	56.1"	73
24750Q3Z	7 1/2	17	230	43.0"	2"	3.9"	69.9"	97
24750Q3Y	7 1/2	17	460	43.0"	2"	3.9"	69.9"	95



### 4" Stainless Steel Pump Ends

Model No.	HP	Wt.
24150Q	1 1/2	9
24200Q	2	10
24300Q	3	12
24500Q	5	16
24750Q	7 1/2	23

### Output - in Gallons Per Minute (Depth to Water)

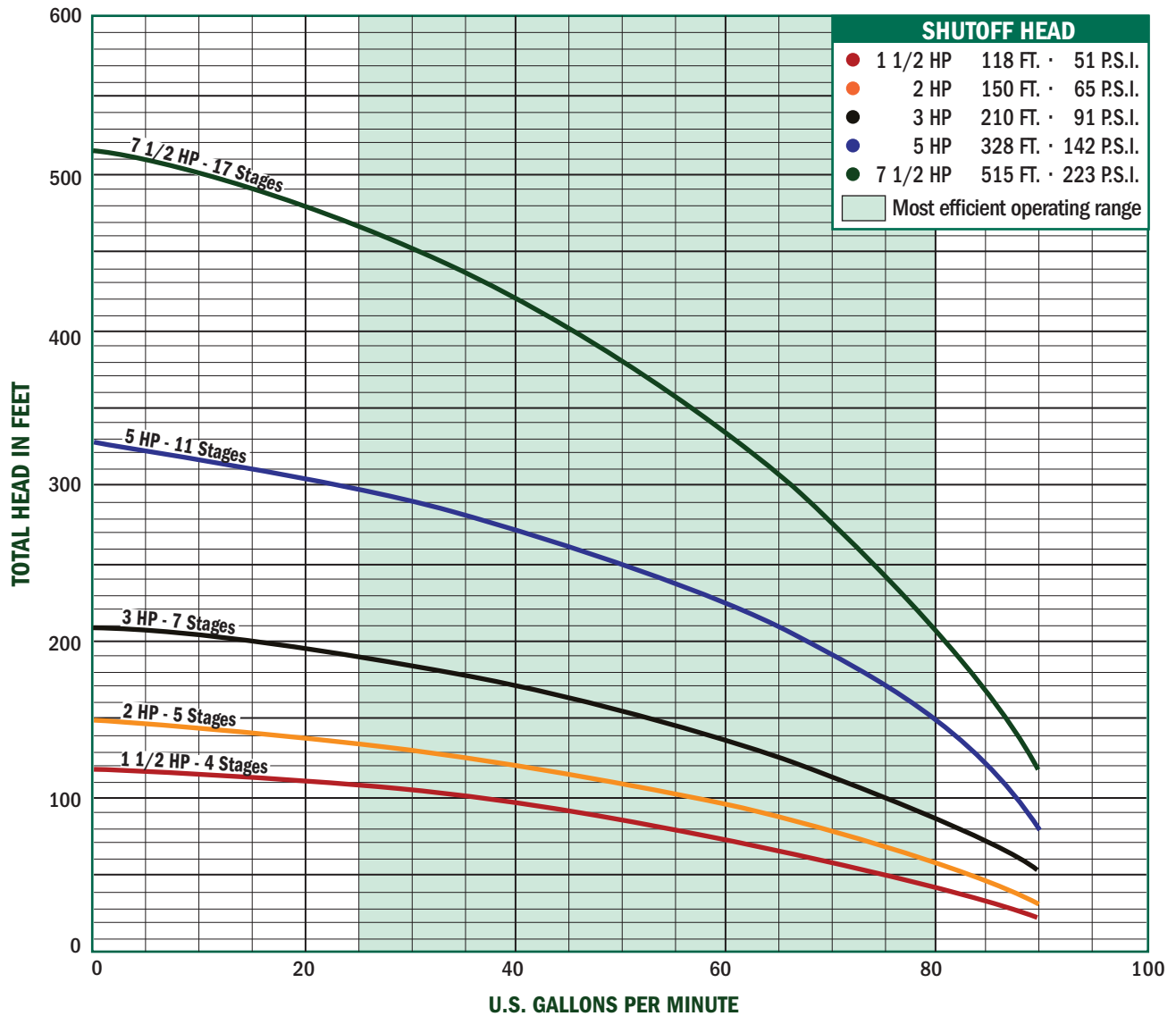
1 1/2 HP	PSI	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'
	0			85	79	74	67	61	53	44	35
	30	53	44	35	18						

2 HP	PSI	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	120'
	0				84	82	78	73	67	62	55	39
	30		62	55	47.5	39	28	15				

3 HP	PSI	30'	40'	50'	60'	70'	80'	90'	100'	120'	140'	160'	180'
	0					84	81	77	73	66	57	46	33
	30			66	62	57	52	46	40				

FRICTION LOSSES IN RISER PIPE  
HAVE NOT BEEN CALCULATED

# Q Series - 60 GPM



Submersible Pumps

5 HP	PSI	80'	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'
	0					77	72.5	67	60	53	44	28.5
30			69	66	62.5	50	40	28	16			
50	69	62	55	47	38	26	15					

7 1/2 HP	PSI	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	340'	380'	420'
	0					80	78	75	72	69	66	62	50	39
30			75	73	70.5	67.5	64	60	56	52.5	42			
50	76	73	69	67	63	57	55	50	46					

FRICITION LOSSES IN RISER PIPE  
HAVE NOT BEEN CALCULATED

## T Series - 80 GPM

All T Series Stainless Steel Submersible Pumps are designed to pump within the 80 GPM range. Sizes are available from 3 to 7 1/2 HP. All models are standard with 2" NPT discharge.

### Three Wire Single Phase

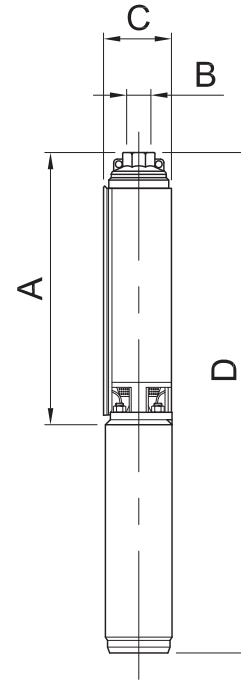
Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24300T3	3	5	230	18.6"	2"	3.9"	38.1"	58
24500T3	5	9	230	29.3"	2"	3.9"	56.1"	92

### Three Wire Three Phase

Model No.	HP	Stages	Volt	A	B	C	D	Wt.
24300T3Z	3	5	230	18.6"	2"	3.9"	35.9"	49
24300T3Y	3	5	460	18.6"	2"	3.9"	35.9"	49
24500T3Z	5	9	230	29.3"	2"	3.9"	56.1"	71
24500T3Y	5	9	460	29.3"	2"	3.9"	56.1"	69
24750T3Z	7 1/2	14	230	42.6"	2"	3.9"	69.4"	93
24750T3Y	7 1/2	14	460	42.6"	2"	3.9"	69.4"	91

### 4" Stainless Steel Pump Ends

Model No.	HP	Wt.
24300T	3	10
24500T	5	16
24750T	7 1/2	22



### Output - in Gallons Per Minute (Depth to Water)

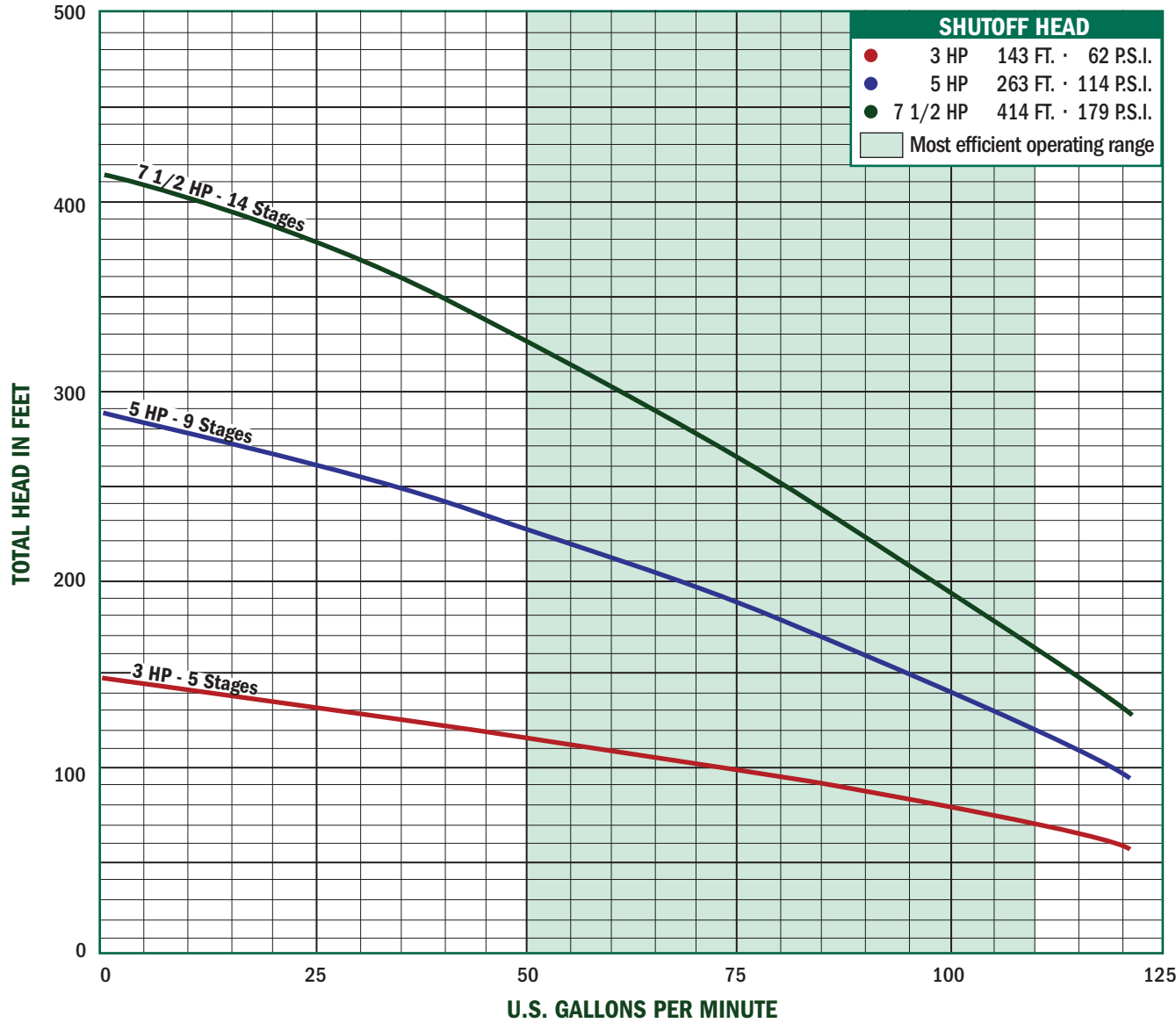
3 HP	PSI	60'	70'	80'	90'	100'	120'
	0			100	85	73	43
	30	100	58				
	50						

5 HP	PSI	60'	80'	100'	120'	140'	160'	180'	200'	220'	240'
	0					95	83	72	59	45	27
	30			76	65	51	35	20			
	50	75	62	50	32	15					

7 1/2 HP	PSI	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'	320'	340'	360'	380'
	0					96	90	83	75	68	60	52	43	34	25
	30			86	80	72.5	65	56	47	39	27				
	50	80	77	70	63	55	45	36	25						

FRICITION LOSSES IN RISER PIPE  
HAVE NOT BEEN CALCULATED

# T Series - 80 GPM



Submersible Pumps