

4" Submersible Pumps

E. J. Schaefer

 **Schaefer
Legend**



High Capacity

35, 45, 60 and 90 gpm Models

Features:

- 4 performance ranges - 35, 45, 60 and 90 gpm.
 - Stainless steel discharge head and motor bracket.
 - High flow impellers and stages are glass-filled Noryl®* for maximum efficiency.
 - Ceramic shaft sleeve and rubber discharge bearing eliminates sand wear.
 - Intermediate bearing for increased shaft stability.
 - Floating eye and hub seals for improved performance and efficiency.
 - Stainless steel hex pump shaft, shell and shaft coupling.
 - High capacity upthrust assembly for protection during start-up and operation (45, 60 and 90 gpm models).
 - Powered by Franklin's corrosion-resistant 4" submersible motors.
 - 2" NPT discharge
 - Check valve must be ordered separately. See page 48.
(See pages 2 and 3 for model number explanation.)
- * Noryl® is a registered trademark of G.E.

4" Submersible Pumps



Stainless Steel Units Ordering Information

Legend 35-90 GPM

1 - 10 HORSEPOWER 4" PUMP ENDS								
GPM	HP	Stages	Ordering Info.			Dimensions		Weight
			Old Model No.	New Model No.	Order No.	Shell	PEA	
35	1	6	L4D35X6	35LD1S4-PE	93443506	11.10	15.00	9
	1.5	8	L4D35X8	35LD15S4-PE	93443508	13.60	17.50	10
	2	10	L4D35X10	35LD2S4-PE	93443510	16.10	20.00	11
	3	14	L4D35X14	35LD3S4-PE	93443514	21.10	25.00	13
	5	22	L4D35X22	35LD5S4-PE	93443522	31.10	35.00	17
45	1.5	6	L4D45X6	45LD15S4-PE	93444506	17.10	21.00	15
	2	8	L4D45X8	45LD2S4-PE	93444508	21.60	25.50	16
	3	11	L4D45X11	45LD3S4-PE	93444511	28.35	32.25	19
	5	18	L4D45X18	45LD5S4-PE	93444518	43.85	47.75	25
	7.5	26	L4D45X26	45LD7S4-PE	93444526	61.35	65.25	33
60	2	6	L4D60X6	60LD2S4-PE	93446006	17.10	21.00	15
	3	8	L4D60X8	60LD3S4-PE	93446008	21.60	25.50	17
	5	13	L4D60X13	60LD5S4-PE	93446013	32.85	36.75	21
	7.5	17	L4D60X17	60LD7S4-PE	93446017	41.35	45.25	25
	10	24	L4D60X24	60LD10S4-PE	93446024	57.10	61.00	31
90	2	5	L4D90X5	90LD2S4-PE	93449005	18.66	22.56	15
	3	7	L4D90X7	90LD3S4-PE	93449007	24.66	28.56	17
	5	12	L4D90X12	90LD5S4-PE	93449012	39.66	43.56	21
	7.5	19	L4D90X19	90LD7S4-PE	93449019	60.60	64.50	27

Note: All dimensions are in inches. Discharge is 2" NPT. Maximum diameter across cable guard is 3.90" on all models. Weight in pounds.

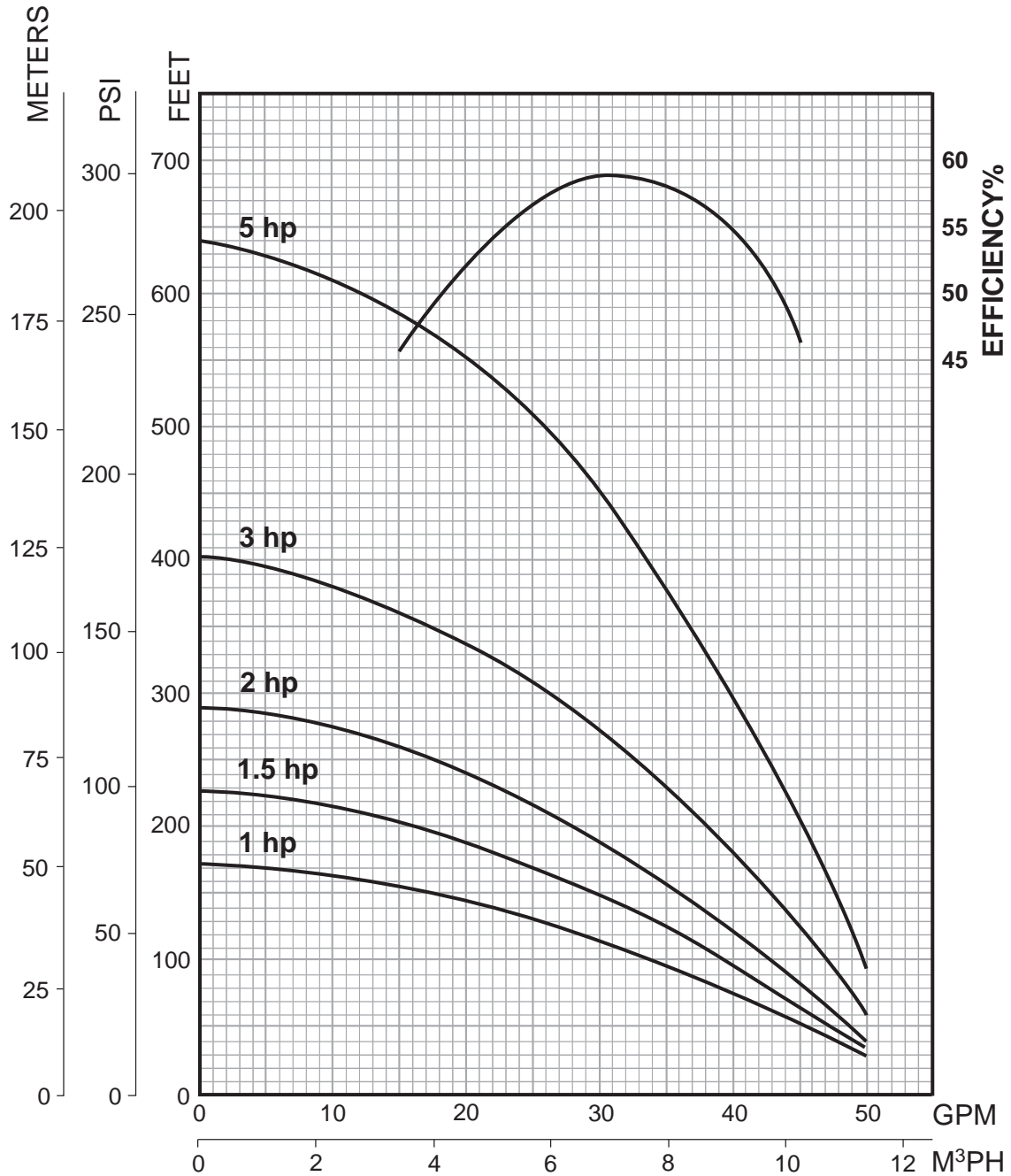
1 - 1.5 HORSEPOWER SINGLE-PHASE UNITS											
GPM	HP	Stages	Volts	2 WIRE				3 WIRE			
				Old Model No.	Model No.	Order No.	Weight	Old Model No.	Model No.	Order No.	Weight
35	1	6	230	T1L4D35X6-S2	35LD1S4-2W230	93443606	33	1L4D35X6-S2	35LD1S4-3W230	93443706	33
	1.5	8	230	T15L4D35X8-S2	35LD15S4-2W230	93443608	41	15L4D35X8-S2	35LD15S4-3W230	93443708	39
45	1.5	6	230	T15F4P45X6-S2	45LD15S4-2W230	93444606	46	20L4D35X10-S2	45LD15S4-3W230	93444706	44
45	1.5	6	230	T15F4P45X6-S2	45LD15S4-2W230	93444606	46	15L4D45X6-S2	45LD15S4-3W230	93444706	44

Notes: All listed above have 2" NPT discharge. Order check valve separately. Pump and motor will be individually cartoned and require assembly.

4" Submersible Pumps

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Legend High Capacity 35 GPM Performance Curves



Notes: 1. Performance shown does not include friction loss in the drop pipe.
 2. All performance data is based on rated motor nameplate voltage.

4" Submersible Pumps



Capacities in U.S. Gallons per Minute

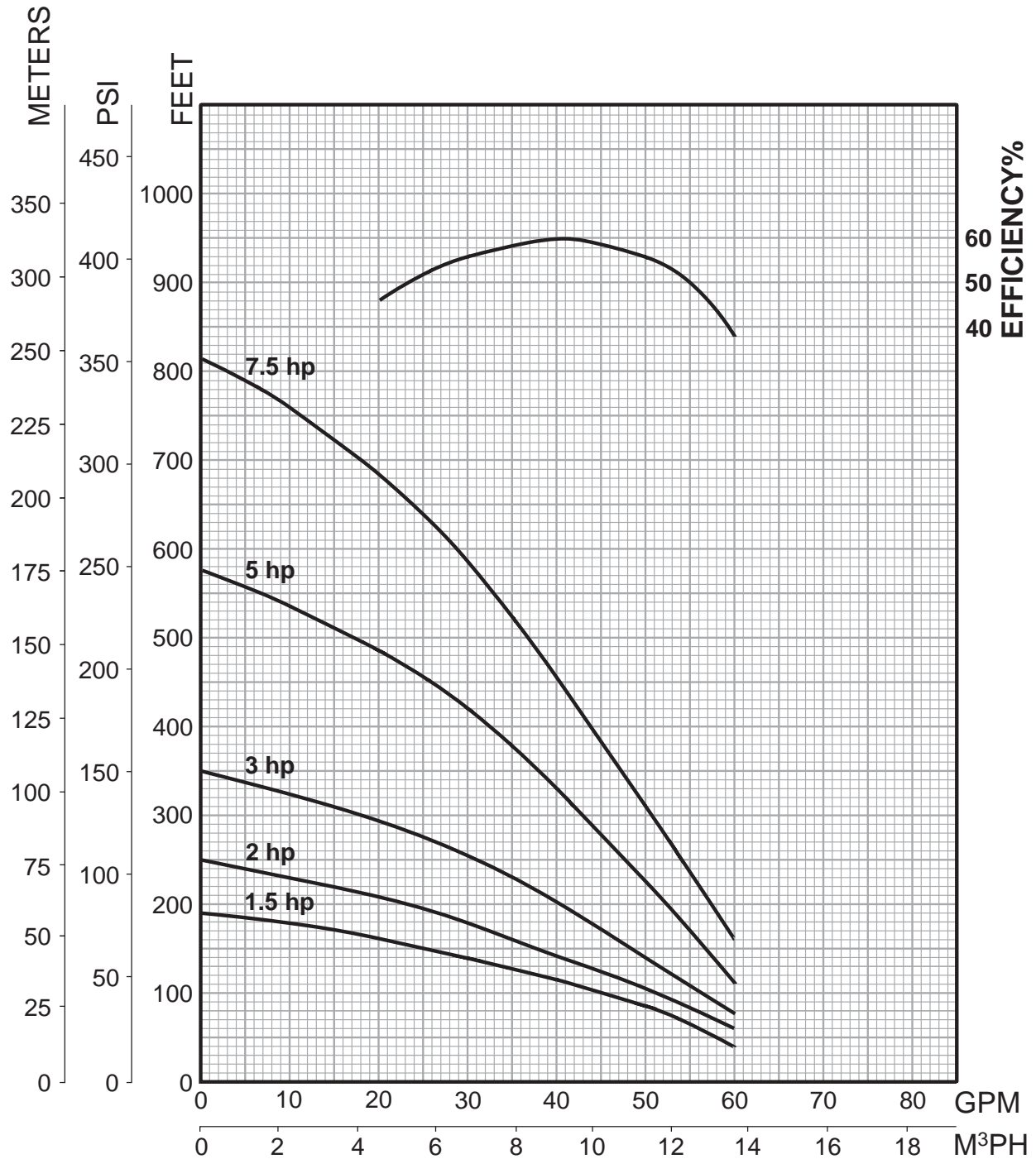
Legend High Capacity 35 GPM Performance Charts

HP	PSI	DEPTH TO PUMPING WATER LEVEL, OR LIFT, IN FEET																							
		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	450	500	550	600
1	0	-	48	44	39	34	28	21	11																
	20	42	37	32	26	18	7																		
	30	36	31	25																					
	40	30	24	15																					
	50	23	14																						
	60	12																							
	70																								
	80																								
Shut-off PSI		65	57	48	39	31	22	13	5																
1.5	0	-	49	46	43	40	36	32	27	22	16	8													
	20	45	42	39	35	31	26	20	14																
	30	41	38	34	30	25	20	13																	
	40	37	33	29	24	18	11																		
	50	33	29	24	18	10																			
	60	28	23	17	9																				
	70	22	16	7																					
	80	14	3																						
Shut-off PSI		89	81	72	63	54	46	37	28	20	11	2													
2	0	-	50	48	45	43	40	37	34	31	28	24	19	14	7										
	20	47	45	42	39	36	33	30	27	22	18	13	3												
	30	44	41	39	36	33	30	26	22	17	12														
	40	41	38	35	32	29	25	21	16	10															
	50	38	35	32	29	25	20	16	9																
	60	35	31	28	24	20	15	8																	
	70	31	27	23	19	14	6																		
	80	27	23	18	13	4																			
Shut-off PSI		116	107	99	90	81	73	64	55	47	38	29	21	12	3										
3	0	-	-	50	48	47	46	44	42	39	37	35	33	31	28	26	23	19	15	10					
	20	49	48	47	45	43	41	39	37	35	33	30	28	25	22	18	14	8							
	30	48	46	45	43	41	39	37	35	32	30	27	25	21	17	13	7								
	40	46	44	42	40	38	36	34	32	29	27	24	20	17	12	5									
	50	44	42	40	38	36	34	31	29	26	24	20	16	12	4										
	60	42	40	38	36	33	31	29	26	23	19	15	11	2											
	70	39	37	35	33	31	28	26	22	19	15	10													
	80	37	35	33	30	28	25	22	18	14	9														
Shut-off PSI		165	156	148	139	130	122	113	104	96	87	78	70	61	52	44	35	26	18	9					
5	0	-	-	-	-	50	49	48	47	46	45	44	43	42	40	39	38	37	36	34	33	30	25	20	12
	20	-	-	49	48	48	47	46	45	44	42	41	40	39	38	36	35	34	33	32	30	26	20	13	
	30	-	49	48	47	46	45	44	43	42	41	40	39	38	36	35	34	33	31	30	28	23	17	8	
	40	49	48	47	46	45	44	43	42	41	40	39	37	36	35	34	32	31	30	28	26	21	13		
	50	48	47	46	45	44	43	42	41	40	38	37	36	35	33	32	31	30	28	26	24	18	9		
	60	47	46	45	44	43	42	41	39	38	37	36	34	33	32	31	29	28	26	24	21	14			
	70	46	45	44	43	42	40	39	38	37	35	34	33	32	31	29	27	25	23	21	18	10			
	80	45	44	42	41	40	39	38	36	35	34	33	32	30	29	27	25	23	20	18	15	3			
Shut-off PSI		268	259	251	242	233	225	216	207	199	190	181	173	164	155	147	138	129	121	112	103	82	60	38	17

4" Submersible Pumps

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Legend High Capacity 45 GPM Performance Curves



- Notes:**
1. Performance shown does not include friction loss in the drop pipe.
 2. All performance data is based on rated motor nameplate voltage.
 3. Performance for former XP models are the same as 45 gpm models.

4" Submersible Pumps



Capacities in U.S. Gallons per Minute

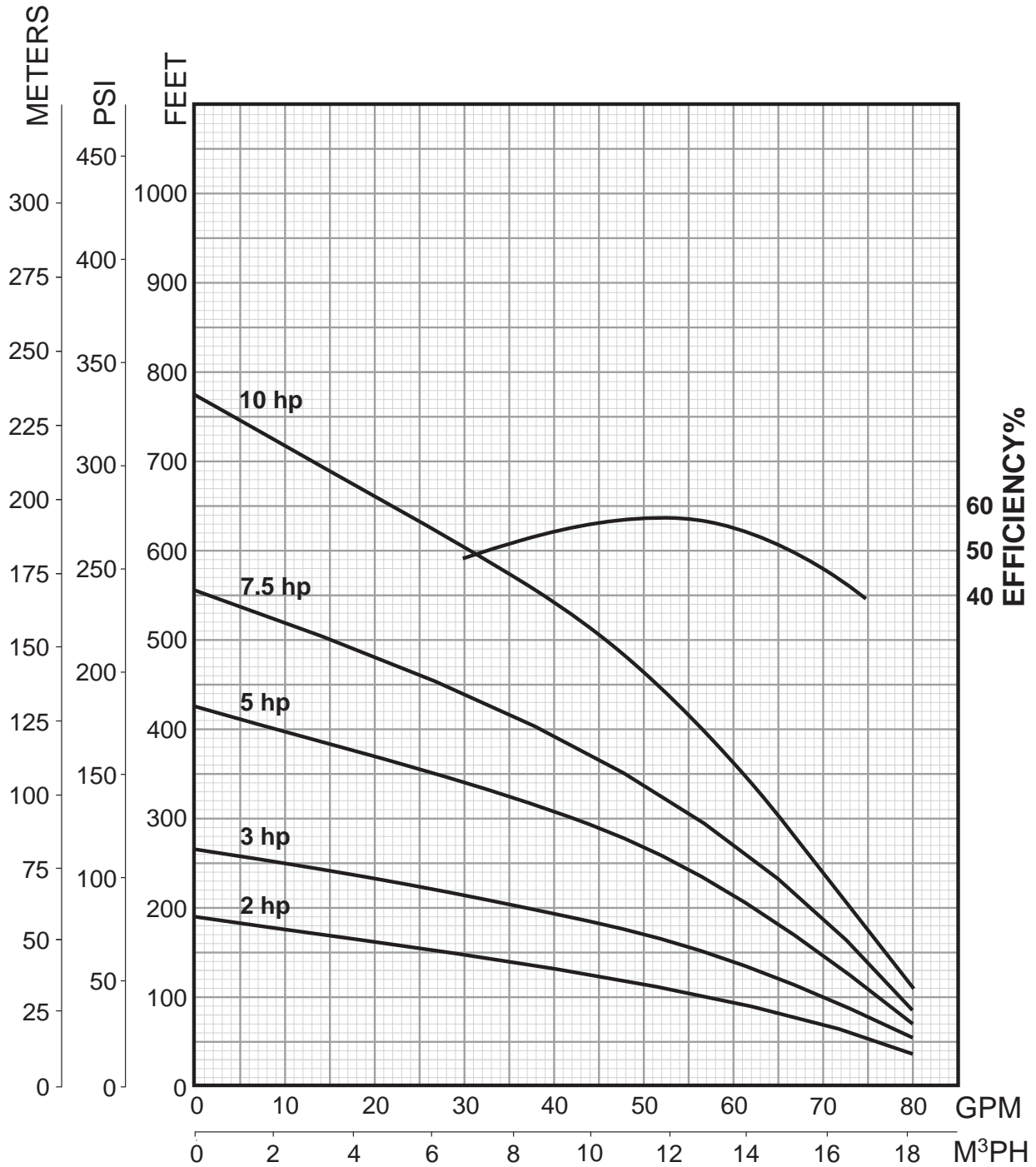
Legend High Capacity 45 GPM Performance Charts

HP	PSI	DEPTH TO PUMPING WATER LEVEL, OR LIFT, IN FEET																		
		SHADED AREAS INDICATE MOST EFFICIENT PERFORMANCE																		
		20	40	60	80	100	120	140	160	180	200	240	260	280	300	320	340	360	380	400
1.5	0	68	62	57	52	46	39	31												
	10	62	56	51	45	38	29	19												
	20	55	50	44	36	28	17	5												
	30	49	42	35	26	16	3													
	40	41	34	25	14															
	50	33	23	12																
	60	22	10																	
Shut-off PSI		74	65	56	48	39	30	22	13	4										
2	0	71	65	60	56	52	48	44	40	35	29									
	10	64	59	55	51	48	44	40	34	28	20									
	20	58	54	51	47	43	39	33	27	19	9									
	30	54	50	47	43	38	32	26	17	7										
	40	50	46	42	37	32	24	16	5											
	50	45	41	36	31	23	14	3												
	60	41	36	29	22	13	1.5													
Shut-off PSI		104	95	87	78	69	61	52	43	35	26	9								
3	0	72	68	65	62	59	56	53	50	47	43	36	31	26	20					
	10	68	64	61	58	55	52	49	46	43	39	30	25	19	12					
	20	64	61	58	55	52	49	46	42	38	34	24								
	30	60	57	54	52	48	45	42	38	34	29	17								
	40	57	54	51	48	45	41	37	33	28	22	16								
	50	54	51	47	44	41	37	32	27	21	15									
	60	50	47	44	40	36	31	26	20	14										
	70	46	43	39	35	31	25	19	13											
	80	43	39	35	30	24	18	12												
	90	38	34	29	24	18	11													
100	33	28	23	16	9															
Shut-off PSI		143	134	126	117	108	100	91	82	74	65	48	39	30	22	13	4			
5	0	-	-	69	66	63	61	59	57	55	53	50	48	46	44	42	40	38	36	33
	20	68	65	63	60	57	56	54	52	51	49	46	44	42	40	38	35	32	29	26
	40	62	60	57	56	54	52	50	48	48	47	45	39	37	34	32	28	25	21	
	60	57	55	51	51	50	48	46	44	43	41	36	33	31	27	24	20	16		
	80	53	51	49	47	46	44	42	40	38	35	30	26	23	19					
	100	49	47	45	43	41	39	37	34	32	29	25	18							
	120	45	43	41	39	36	34	31	28	24	20	16								
	140	40	38	35	33	30	27	23	19											
	160	35	32	29	26	22	18													
	170	31	28	25	21	17														
Shut-off PSI		236	227	219	210	201	193	184	175	167	158	141	132	123	115	106	97	89	80	71
HP	PSI	DEPTH TO PUMPING WATER LEVEL, OR LIFT, IN FEET																		
		SHADED AREAS INDICATE MOST EFFICIENT PERFORMANCE																		
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
7.5	0	-	-	-	57	54	50	47	44	40	36	32	28	24	18	11	3			
	20	-	-	57	54	50	47	44	40	36	32	28	24	18	11	3				
	40	-	58	54	51	48	45	41	37	33	29	24	18	12	5					
	60	58	55	52	48	45	41	37	33	29	25	19	12	5						
	80	55	52	48	45	41	37	33	29	25	19	12	5							
	100	52	48	45	42	38	34	30	25	20	14	6								
	120	49	45	42	38	34	30	25	21	14	7									
	140	45	42	38	35	30	26	21	15	7										
	160	42	39	35	31	26	21	15	8											
	180	39	35	31	27	22	16	8												
	200	35	31	27	22	16	9													
	220	32	27	22	17	10														
Shut-off PSI		331	310	288	266	245	223	201	180	158	136	115	93	71	50	28	6			

4" Submersible Pumps

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Legend High Capacity 60 GPM Performance Curves



- Notes:**
1. Performance shown does not include friction loss in the drop pipe.
 2. All performance data is based on rated motor nameplate voltage.
 3. Performance for former YP models are the same as 60 gpm models.

4" Submersible Pumps



Capacities in U.S. Gallons per Minute

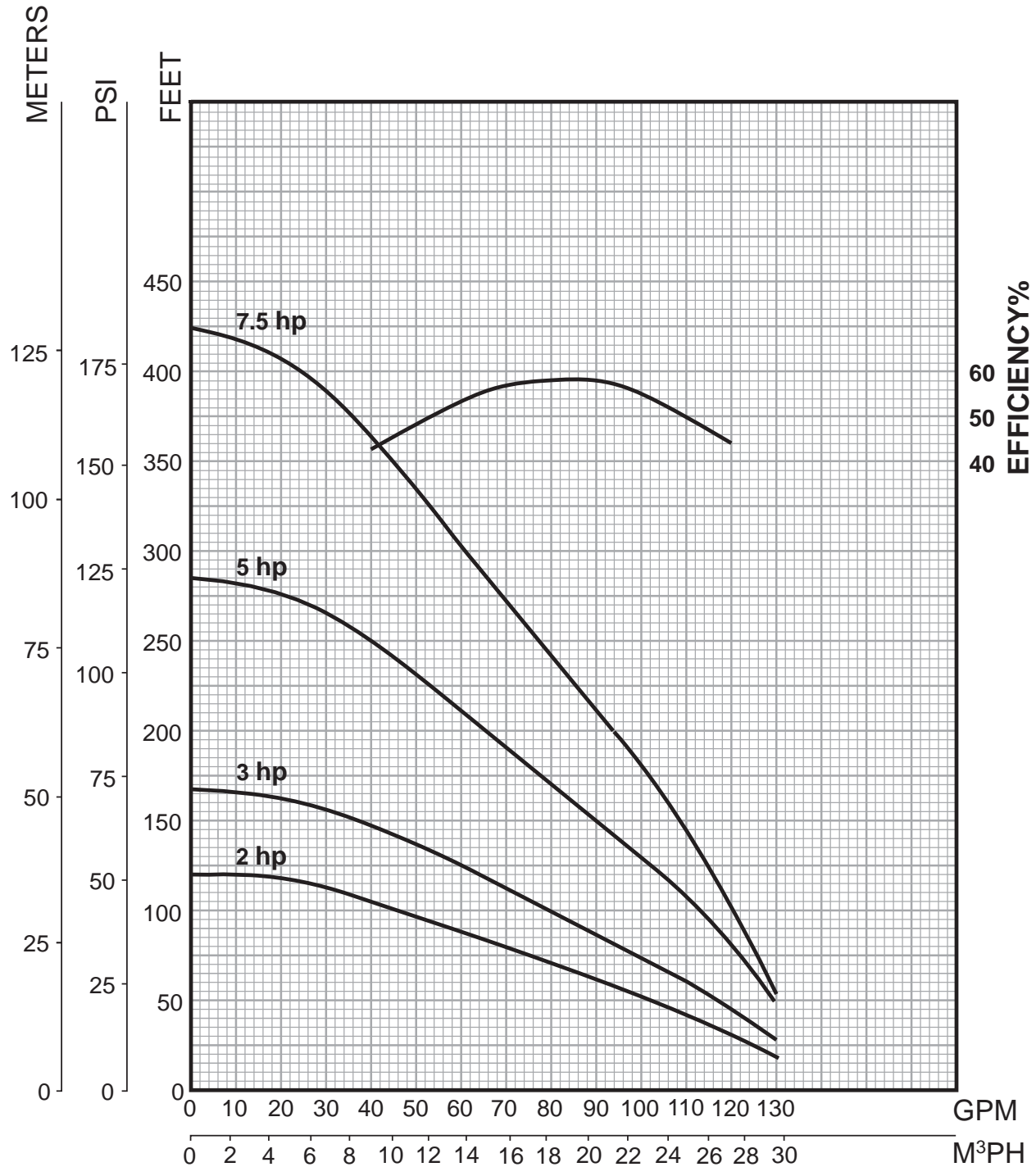
Legend High Capacity 60 GPM Performance Charts

HP	PSI	DEPTH TO PUMPING WATER LEVEL, OR LIFT, IN FEET																
		SHADED AREAS INDICATE MOST EFFICIENT PERFORMANCE																
		20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
2	0	87	84	81	78	75	72	69	66	62	58	54	49					
	10	80	77	74	71	68	65	61	57	52	47	42	36					
	20	74	70	67	64	60	56	51	46	40	34	26	18					
	30	66	63	59	54	49	44	38	31	24	16							
	40	57	53	48	42	36	29	21	13									
	50	46	40	34	27	19												
	60	32	24	16														
Shut-off PSI		74	69	65	61	56	52	48	43	39	30	26	22	17	13	9	4	
3	0	90	87	85	83	81	79	76	74	72	70	67	65	62	59	56	53	49
	10	84	82	80	78	76	74	71	69	67	64	61	58	55	51	47	43	38
	20	79	77	75	73	71	68	66	63	60	57	54	50	46	42	37	32	26
	30	74	72	70	68	65	59	56	53	49	45	40	35	30	24			
	40	69	67	64	62	58	55	52	48	43	39	34	28	22				
	50	63	61	58	54	50	46	42	37	32	26							
	60	56	63	49	45	41	36	30	24									
Shut-off PSI		108	104	100	95	91	87	82	78	74	69	65	61	56	52	48	43	39
HP	PSI	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340
5	0	85	85	80	80	75	75	70	70	65	65	60	55	50	45	45	35	30
	10	85	80	80	75	75	70	70	65	60	60	55	50	45	40	35	30	25
	20	80	80	75	75	70	70	65	60	60	55	50	45	40	35	30	25	15
	30	80	75	75	70	65	65	60	60	55	50	45	40	35	30	20	15	5
	40	75	70	70	65	65	60	55	55	50	45	40	35	30	25	10	5	
	50	70	70	65	65	60	55	55	50	45	40	35	25	25	10	5		
	60	70	65	65	60	55	50	50	45	40	30	25	20	10	5			
	70	65	60	60	55	50	45	40	35	30	25	15	10					
	80	60	60	55	50	45	40	35	30	25	15	10						
	90	60	55	50	45	40	35	30	20	15	5							
100	55	50	45	40	35	30	20	15	5									
Shut-off PSI		173	165	156	147	139	130	121	113	104	95	87	78	69	61	52	43	35
HP	PSI	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
7.5	0	-	78	73	68	63	56	49	40	28	15	2						
	20	78	73	68	63	56	49	40	28	15	2							
	40	75	69	64	58	50	41	30	18	3								
	60	70	64	58	50	42	31	18	4									
	80	65	59	51	43	32	19	5										
	100	59	52	43	32	20	6											
	120	52	44	33	21	8												
	140	44	34	21	8													
160	35	22	9															
Shut-off PSI		221	199	177	156	134	113	91	69	48	26	4						
10	0	-	-	75	72	69	65	61	56	51	45	38	30	21	13	4		
	20	-	75	72	69	65	61	56	51	46	38	31	22	14	5			
	40	75	72	69	65	61	56	51	45	39	31	22	14	5				
	60	73	69	66	62	57	52	47	40	32	24	15	6					
	80	70	66	62	57	52	47	40	32	24	15	6						
	100	66	62	58	53	48	41	34	25	16	7							
	120	63	58	53	48	41	34	25	16	8								
	140	58	53	48	42	34	26	17	8									
160	54	49	43	35	27	18	9											
Shut-off PSI		312	290	269	247	225	204	182	161	139	117	96	74	52	31	9		

4" Submersible Pumps

E. J. Schaefer

Legend High Capacity 90 GPM Performance Curves



Notes: 1. Performance shown does not include friction loss in the drop pipe.
2. All performance data is based on rated motor nameplate voltage.

4" Submersible Pumps



Capacities in U.S. Gallons per Minute

Legend 90 GPM Performance Charts

HP	PSI	DEPTH TO PUMPING WATER LEVEL, OR LIFT, IN FEET SHADED AREAS INDICATE MOST EFFICIENT PERFORMANCE																	
		20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	
2	0	130	120	110	100	90	80	70	60	45	30	10							
	10	105	100	90	80	70	55	40	20										
	20	85	75	65	50	35	15												
	30	60	45	30	10														
	40	25	5																
Shut-off PSI		43	39	35	30	26	22	17	13	9	4								
3	0	140	130	120	115	105	100	95	90	80	75	65	55	45	30	15			
	10	120	110	105	100	95	85	80	70	65	55	40	25	10					
	20	105	95	90	85	80	70	60	50	35	20	54							
	30	90	80	75	65	55	45	35	15										
	40	75	65	55	40	30	10												
	50	50	40	25	5														
60	20																		
Shut-off PSI		64	59	55	51	46	42	38	33	29	25	20	16	12	7	3			
HP	PSI	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	
5	0	145	135	125	120	110	105	95	85	80	70	55	45	30	10				
	10	135	125	115	110	100	95	85	75	65	55	40	25	10					
	20	125	115	110	100	95	85	75	65	55	40	25	5						
	30	115	105	100	90	85	75	65	50	40	20	5							
	40	105	100	90	80	70	60	50	35	20									
	50	95	90	80	70	60	45	35	15										
	60	90	80	70	60	45	30	15											
	70	80	70	55	45	30	10												
	80	65	55	40	25	5													
	90	50	40	25	5														
100	35	20																	
Shut-off PSI		115	106	97	89	80	71	63	54	45	37	28	19	11	2				
HP	PSI	20	50	80	110	140	170	200	230	260	290	320	350	380	410	440	470	500	
7.5	0	140	135	125	115	110	100	95	85	75	65	55	45	30	15				
	20	130	120	110	105	95	90	80	70	60	50	35	20	5					
	30	120	115	105	100	90	85	75	65	55	40	25	10						
	40	115	110	100	95	85	75	65	55	45	30	10							
	50	110	105	95	85	80	70	60	45	30	15								
	60	105	95	90	80	70	60	50	35	20	5								
	80	95	85	75	65	55	40	25	10										
	100	80	70	60	50	35	20												
	120	65	55	40	25	10													
	140	45	35	20															
160	25	10																	
Shut-off PSI		175	162	149	136	123	110	97	84	71	58	45	32	19	6				