

4" HIGH CAPACITY PUMPS

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 modified PPO 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



UL 778
 CSA 108
 NSF/ANSI 372
 NSF/ANSI 61 (Pump end only)

4" HIGH CAPACITY PUMPS - ORDERING INFORMATION

ORDERING INFORMATION

1 - 10 HP 4" Pump Ends							
GPM	HP	Stages	Model	Order No.		Dimensions (in) Pump End Only	Wt. (lbs)
				With Check Valve	Without Check Valve		
35	1	6	35JS1S4-PE	90635807	92525807	15.00	9
	1.5	8	35JS1S4-PE	90635815	92525815	17.50	10
	2	10	35JS2S4-PE	90635823	92525823	20.00	11
	3	14	35JS3S4-PE	90635831	92525831	25.00	13
	5	22	35JS5S4-PE	90635849	92525849	35.00	17
	7.5	34	35JS7S4-PE	90635851	92525851	52.17	25
45	10	42	35JS10S4-PE	90635853	92525853	62.23	31
	1.5	6	45JS1S4-PE	90635856	92525856	21.00	15
	2	8	45JS2S4-PE	90635872	92525872	25.50	16
	3	11	45JS3S4-PE	90635898	92525898	32.25	19
	5	18	45JS5S4-PE	90635914	92525914	47.75	25
	7.5	26	45JS7S4-PE	90635922	92525922	65.25	33
60	10	31	45JS10S4-PE	90635925	92525925	78.30	38
	2	6	60JS2S4-PE	90635930	92525930	21.00	15
	3	8	60JS3S4-PE	90635948	92525948	25.50	17
	5	13	60JS5S4-PE	90635963	92525963	36.75	21
	7.5	17	60JS7S4-PE	90635971	92525971	45.25	25
	10	24	60JS10S4-PE	90635989	92525989	61.00	31
90	2	5	90JS2S4-PE	90636003	92526003	22.56	15
	3	7	90JS3S4-PE	90636011	92526011	28.56	17
	5	12	90JS5S4-PE	90636037	92526037	43.56	21
	7.5	19	90JS7S4-PE	90636045	92526045	64.50	27
	10	24	90JS10S4-PE	90636050	92526050	79.25	31

NOTES: Discharge is 2" NPT. Maximum diameter across cable guard is 3.90" on all models.

1 - 1.5 HP Single-Phase Units (2-Wire)							
GPM	HP	Stages	Volts	Model	Order No.		Wt. (lbs)
					With Check Valve	Without Check Valve	
35	1	6	230	35JS1S4-2W230	90636128	92526128	33
	1.5	8		35JS1S4-2W230	90636136	92526136	41
45	1.5	6		45JS1S4-2W230	90636144	92526144	46

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

1 - 1.5 HP Single-Phase Units (3-Wire)							
GPM	HP	Stages	Volts	Model	Order No.		Wt. (lbs)
					With Check Valve	Without Check Valve	
35	1	6	230	35JS1S4-3W230	90636052	92526052	33
	1.5	8		35JS1S4-3W230	90636060	92526060	39
45	1.5	6		45JS1S4-3W230	90636086	92526086	44

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

4" HIGH CAPACITY PUMPS - 35 GPM

PERFORMANCE

The chart displays the performance of six different pump models. The y-axis represents head in meters and feet, and the x-axis represents flow rate in GPM and M³/H. A shaded region indicates the 'BEST EFFICIENCY RANGE' between approximately 20 and 40 GPM. A larger shaded region indicates the 'PUMP OPERATING RANGE' from approximately 10 to 50 GPM. A callout box shows a 50 FT head at 2.5 GPM.

Head (Feet)	10 hp (GPM)	7.5 hp (GPM)	5 hp (GPM)	3 hp (GPM)	2 hp (GPM)	1.5 hp (GPM)	1 hp (GPM)
1200	10	10	10	10	10	10	10
1100	15	15	15	15	15	15	15
1000	20	20	20	20	20	20	20
900	25	25	25	25	25	25	25
800	30	30	30	30	30	30	30
700	35	35	35	35	35	35	35
600	40	40	40	40	40	40	40
500	45	45	45	45	45	45	45
400	50	50	50	50	50	50	50
300	50	50	50	50	50	50	50
200	50	50	50	50	50	50	50
100	50	50	50	50	50	50	50
50	50	50	50	50	50	50	50
0	50	50	50	50	50	50	50

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4" HIGH CAPACITY PUMPS - 35 GPM

PERFORMANCE

HP	PSI	Depth to Pumping Water Level (Lift) in Feet. Shaded Areas Indicate Most Efficient Performance																			Shut-Off (ft)
		20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550	600		
1	0			44	40	34	28	22	13												
	10		43	39	33	27	21	11													
	20	43	38	32	26	20															
	30	37	31	26	19																
	40	30	25	18																	
	50	24	16																		
	60	14																			
	70																				
80																					
Shut-off PSI		65	57	48	39	31	22	13	5												
1.5	0			45	43	40	36	31	27	23	18										
	10		45	42	39	35	31	27	23	16											
	20	45	42	38	34	30	26	22	15												
	30	41	38	34	30	26	21	14													
	40	37	33	29	25	20	12														
	50	32	29	24	19	10															
	60	28	24	18																	
	70	23	17																		
80	16																				
Shut-off PSI		89	81	72	63	55	46	37	29	20	11										
2	0			45	43	40	37	34	31	28	19										
	10			45	43	40	37	34	31	27	24	11									
	20		45	43	40	37	33	30	27	24	20										
	30	44	42	39	36	33	30	26	23	19	12										
	40	42	39	36	32	29	26	22	18	11											
	50	39	35	32	29	25	22	17	10												
	60	35	31	28	25	21	16														
	70	31	28	24	21	15															
80	27	24	20	14																	
Shut-off PSI		116	107	99	90	81	73	64	55	47	38	16									
3	0					45	44	42	40	38	36	29	23	18							
	10					45	44	42	40	38	36	29	23	12							
	20				45	44	42	40	37	35	32	30	24	13							
	30			45	43	42	40	37	35	32	30	24	13								
	40		44	43	41	39	37	34	32	29	27	20									
	50	44	43	41	39	37	34	32	29	27	24	14									
	60	43	41	39	36	34	31	29	26	24	21										
	70	40	38	36	33	31	28	26	23	20	15										
80	38	35	33	30	28	25	23	19	15												
Shut-off PSI		163	154	145	137	128	120	111	102	94	85	63	42	20							
5	0									45	44	42	39	35	32	28	24	18			
	10									45	44	42	39	35	32	28	24	18			
	20									45	44	42	39	35	32	28	24	13			
	30							45	45	44	43	42	39	35	32	28	24	18			
	40					45	44	44	43	42	41	37	34	30	27	22	14				
	50				45	44	44	43	42	40	39	36	32	29	25	19					
	60			45	44	43	42	41	40	39	38	34	31	27	22	15					
	70		45	44	43	42	41	40	39	37	36	32	29	25	19						
80	45	44	43	42	41	40	38	37	36	34	31	27	23	15							
Shut-off PSI		268	259	250	242	233	224	216	207	198	190	168	146	125	103	81	60	38			

HP	PSI	120	140	160	180	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
7.5	0								44	42	40	38	36	34	32	30	27	24	19	13
	10								45	43	41	39	38	36	33	31	29	26	22	17
	20								44	42	40	39	37	35	32	30	27	24	20	14
	30							45	43	41	40	38	36	34	31	29	26	22	17	11
	40							44	42	41	39	37	35	33	30	27	24	20	14	
	50						45	43	42	40	38	36	34	32	29	25	22	18	11	
	60				45	44	43	41	39	37	35	33	30	28	24	20	15			
	70		45	45	44	43	42	40	38	36	34	32	29	26	23	18	12			
80	45	45	44	43	43	41	39	37	35	33	31	28	25	21	15					
Shut-off PSI		373	364	355	347	338	316	295	274	251	230	208	186	165	143	121	100	78	56	35

HP	PSI	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
10	0					45	44	43	41	40	38	36	35	33	31	30	28	25	22	17	11
	10					45	43	42	41	39	37	36	34	32	31	29	26	24	20	15	
	20				45	44	43	41	40	38	37	35	33	32	30	28	25	22	18	12	
	30				45	43	42	41	39	38	36	34	32	31	29	27	24	20	15		
	40			45	44	43	41	40	38	37	35	33	32	30	28	25	22	18	12		
	50			45	44	42	41	39	38	36	34	33	31	29	27	24	20	16			
	60		45	44	43	42	40	39	37	35	34	32	30	28	26	23	18	13			
	70		45	44	42	41	39	38	36	34	33	31	29	27	24	21	16				
80	45	44	43	42	40	38	37	35	34	32	30	28	26	23	19	13					
Shut-off PSI		439	418	396	374	353	331	309	288	266	245	223	201	180	158	136	115	93	71	50	28

NOTES: Performance shown does not include friction loss in the drop pipe. All performance data is based on rated motor nameplate voltage. Performance shown is based on a pump without check valve.

4" HIGH CAPACITY PUMPS - 45 GPM

PERFORMANCE

The graph plots head (Meters and Feet) against flow rate (GPM and M³/H) for pumps ranging from 1.5 HP to 10 HP. A shaded region indicates the 'BEST EFFICIENCY RANGE' between approximately 30 and 50 GPM. A callout shows a 50 FT lift at 2.5 GPM.

HP	PSI	Depth to Pumping Water Level (Lift) in Feet. Shaded Areas Indicate Most Efficient Performance																			
		20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550	600	650	Shut-Off (ft)
1.5	0				52	46	38	30	21												
	10		55	51	45	37	26	20													
	20	54	50	43	35	27	18														
	30	49	42	34	26	16															
	40	41	33	24	15																
	50	32	23																		
	60	22																			
Shut-off PSI		74	65	56	48	39	30	22	13												
2	0				55	51	46	41	36	30	23										
	10			55	50	45	40	35	29	22											
	20		54	49	44	39	34	28	21												
	30	53	49	44	38	33	27	19													
	40	48	43	38	32	26	18														
	50	42	37	31	24	17															
	60	36	30	23	16																
Shut-off PSI		99	91	82	74	65	56	48	39	30	22										

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4" HIGH CAPACITY PUMPS - 45 GPM

PERFORMANCE

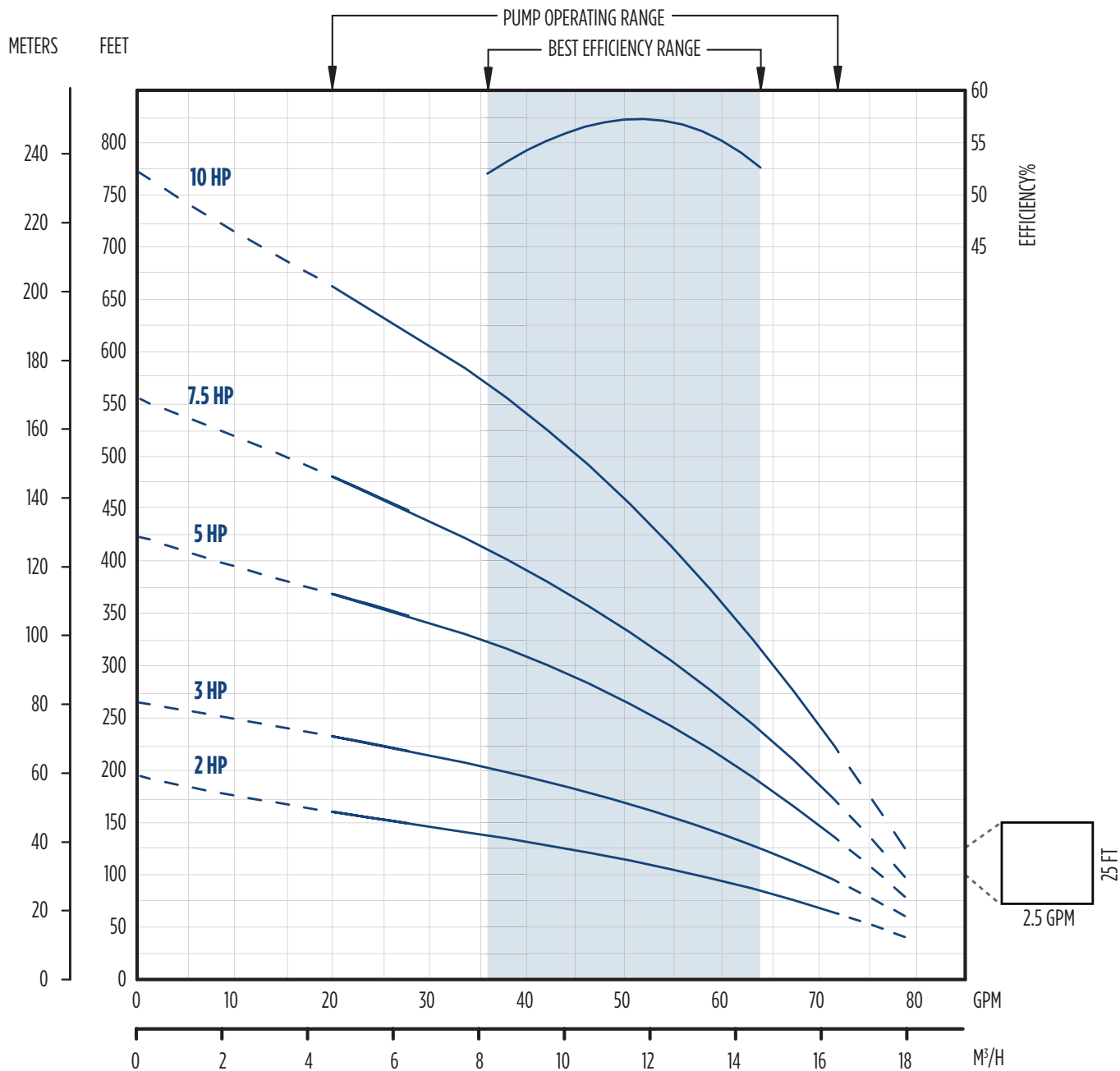
HP	PSI	Depth to Pumping Water Level (Lift) in Feet. Shaded Areas Indicate Most Efficient Performance																			Shut-Off (ft)	
		20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550	600	650		
3	0						53	49	46	42	38	27										337
	10				55	52	49	45	41	37	33	21										
	20			55	52	48	45	41	37	32	26											
	30		54	51	47	44	40	35	31	26	21	15										
	40	54	51	47	44	40	35	31	26	21	15											
	50	50	47	43	39	35	30	25	20													
	60	46	42	38	34	30	25	19														
	70	42	38	33	29	24	18															
	80	37	33	28	23	17																
	90	32	27	22	16																	
	100	27	21	16																		
Shut-off PSI		137	129	120	111	103	94	85	77	68	60	38										
5	0									54	52	48	43	38	32	26	17					575
	10								55	54	52	50	46	41	36	30	22					
	20							55	53	52	50	48	43	38	33	26	18					
	30						55	53	51	50	48	46	41	36	30	23						
	40				55	53	51	49	47	46	44	39	33	27	19							
	50			54	53	51	49	47	45	43	42	36	31	23								
	60		54	52	51	49	47	45	43	41	39	34	27	19								
	70	54	52	50	48	47	45	43	41	39	37	31	24	15								
	80	52	50	48	46	44	43	41	39	36	34	28	20									
	90	50	48	46	44	42	40	38	36	34	31	25	16									
	100	48	46	44	42	40	38	36	34	31	28	21										
	110	45	44	42	40	38	35	33	31	28	25	17										
	120	43	41	39	37	35	33	30	28	25	21											
	130	41	39	37	35	32	30	27	24	21	17											
	140	39	37	34	32	29	27	24	20	17												
	150	36	34	32	29	26	23	20	16													
	160	28	25	22	18																	
Shut-off PSI		240	232	223	214	206	197	188	180	171	162	141	119	97	76	54	32					
7.5	0										55	52	49	45	41	37	33	28	23	17		786
	10										55	54	51	47	44	39	35	30	26	20		
	20										55	54	53	49	46	42	37	33	28	23	17	
	30									55	54	52	51	48	44	40	35	31	26	21	15	
	40								55	54	52	51	49	46	44	40	35	31	26	21	15	
	50						55	53	52	51	49	46	42	38	33	29	24	18				
	60					54	53	52	51	49	48	44	40	36	31	26	21	15				
	70			55	54	53	52	50	49	48	46	42	38	34	29	24	18					
	80		55	54	53	52	50	49	47	46	44	40	36	32	27	21	16					
	90	55	54	53	51	50	49	47	46	44	43	38	34	29	24	19						
	100	54	52	51	50	48	47	45	44	42	41	36	32	27	22	16						
	110	52	51	50	48	47	45	44	42	40	39	34	30	25	19							
	120	51	49	48	47	45	43	42	40	39	37	32	27	22	17							
	130	49	48	46	45	43	42	40	38	37	35	30	25	20								
	140	48	46	45	43	41	40	38	36	34	33	28	23	17								
	150	46	44	43	41	39	38	38	34	32	30	26	20									
	160	40	39	37	35	33	31	30	28	26	24	18										
Shut-off PSI		331	323	314	305	297	288	279	271	262	254	232	210	189	167	145	124	102	80	59		

HP	PSI	Depth to Pumping Water Level (Lift) in Feet. Shaded Areas Indicate Most Efficient Performance																			Shut-Off (ft)			
		20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550	600	650		700	750	800
10	0										55	53	50	48	45	42	39	35	31	27	22	16		965
	10										54	52	49	47	44	41	37	33	29	24	19			
	20										53	51	48	45	42	39	36	32	27	22	16			
	30										54	52	49	47	44	41	37	34	30	25	19			
	40										53	51	48	45	43	39	36	32	27	22	17			
	50										55	52	50	47	44	41	38	34	30	25	20			
	60									55	55	54	51	48	46	43	40	36	32	28	23	17		
	70						55	54	53	52	50	47	44	41	38	34	30	26	20	14				
	80					55	54	53	52	51	49	46	43	40	36	32	28	23	18					
	90					55	54	53	52	51	50	47	45	42	38	35	31	26	21	15				
	100					55	54	53	52	51	50	49	46	43	40	37	33	28	24	18				
	110				55	54	53	52	51	50	49	48	45	42	39	35	31	26	21	15				
	120		55	54	53	52	51	50	49	47	46	43	40	37	33	29	24	19						
	130	54	53	52	51	50	49	48	47	46	45	42	39	35	31	27	22	16						
	140	53	52	51	50	49	48	47	46	45	44	41	37	33	29	24	19							
	150	52	51	50	49	48	47	46	45	44	42	39	36	32	27	22	16							
	160	49	48	46	45	44	43	42	40	39	38	34	30	25	20									
Shut-off PSI		410	402	393	385	376	367	359	350	341	333	311	289	268	246	224	201	179	158	136	115	93	71	50

NOTES: Performance shown does not include friction loss in the drop pipe. All performance data is based on rated motor nameplate voltage. Performances for former XP models are the same as 45 gpm models. Performance shown is based on a pump without check valve.

4" HIGH CAPACITY PUMPS - 60 GPM

PERFORMANCE



4" HIGH CAPACITY PUMPS - 60 GPM

PERFORMANCE

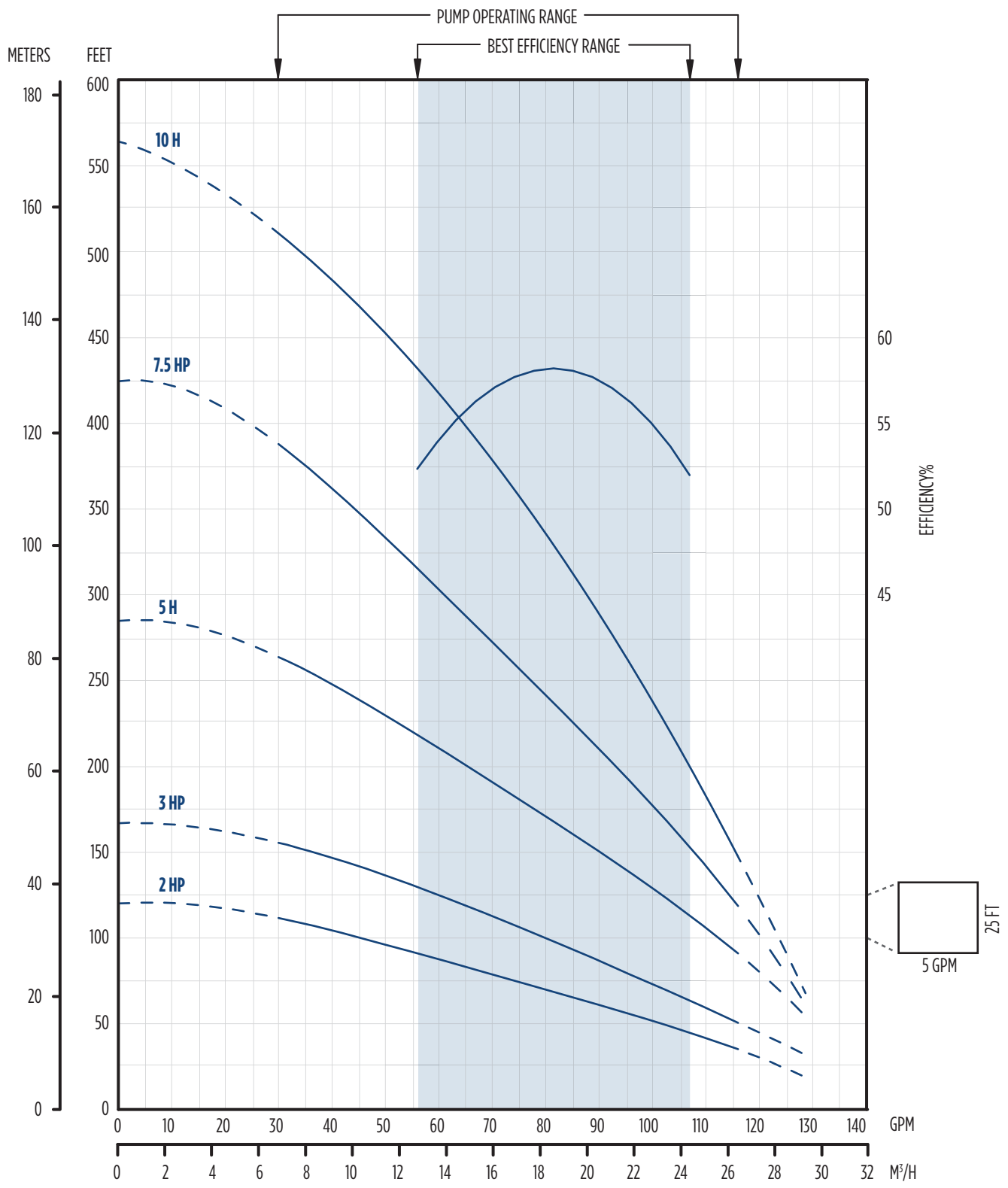
HP	PSI	Depth to Pumping Water Level (Lift) in Feet. Shaded Areas Indicate Most Efficient Performance																	Shut-Off (ft)
		20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550	
2	0				66	57	47	35	21										
	10			65	56	45	33	18											
	20	71	63	54	43	30													
	30	62	52	41	28														
	40	51	40	26															
	50	38	24																
	60	22																	
Shut-off PSI		76	67	58	50	41	32	24	15										
3	0				69	65	59	62	44	35	25								
	10			73	69	64	56	51	43	34	24								
	20	72	68	63	57	50	42	32	22										
	30	67	62	56	49	40	31	20											
	40	61	55	48	39	29													
	50	61	55	48	39	29													
	60	54	46	37	28														
Shut-off PSI		106	97	89	80	71	63	54	45	37	28								
5	0						70	68	65	62	54	42	27						
	10						70	68	65	62	59	49	36						
	20					70	67	64	61	58	54	43	28						
	30			72	69	67	64	61	57	54	50	37	20						
	40		72	69	68	63	60	57	53	49	44	29							
	50	71	69	66	63	60	56	53	48	43	38	21							
	60	68	65	62	59	56	52	48	43	37	31								
	70	65	62	59	55	51	47	42	36	30	23								
	80	61	58	55	51	46	41	35	28	21									
	90	58	54	50	45	40	34	27	20										
	100	54	49	45	39	33	26												
Shut-off PSI		175	167	158	149	141	132	123	115	106	97	76	54	32					

HP	PSI	20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550	600	650	Shut-Off (ft)
		20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550	600	650	
7.5	0									71	68	63	56	48	38	27					
	10							72	70	68	66	59	52	43	33	22					
	20						72	70	67	65	63	60	53	44	34	23					
	30																				
	40				71	69	67	65	62	60	57	49	40	29							
	50			71	69	67	64	62	59	56	53	45	35	24							
	60		71	69	66	64	61	59	56	53	49	40	30								
	70	70	68	66	64	61	58	55	52	48	45	36	25								
	80	68	66	63	61	58	55	52	48	45	41	31									
	90	65	63	60	57	54	51	48	44	41	37	26									
	100	62	60	57	54	51	47	44	40	36	32	20									
	110	59	57	53	50	47	43	39	35	31	26										
	120	56	53	50	46	43	39	35	30	26	21										
	130	52	49	46	42	38	34	30	25	20											
	140	49	45	41	37	33	29	24	19												
	150	45	41	37	33	28	24														
	160	31	26	21																	
Shut-off PSI		232	223	214	206	197	188	180	171	162	154	132	110	89	67	45					
10	0										71	69	65	61	57	51	45	39	31	22	
	10										71	69	65	61	57	54	49	42	35	27	
	20										72	71	69	66	63	57	52	46	39	31	23
	30								72	71	69	68	64	59	55	49	43	36	28		
	40						72	70	69	67	66	62	57	52	46	40	32	24			
	50					72	70	69	67	66	64	60	55	50	43	36	28				
	60				72	70	68	67	65	64	62	58	53	47	40	33	24				
	70			71	70	68	67	65	64	62	60	55	50	44	37	29	20				
	80		71	70	68	66	65	63	62	60	58	53	47	41	33	25					
	90	71	69	68	66	65	63	61	60	58	56	51	44	37	29	21					
	100	69	68	66	64	63	61	59	57	56	53	48	41	34	26						
	110	67	66	64	62	61	59	57	55	53	51	45	38	30	22						
	120	65	64	62	61	59	57	55	53	51	48	42	34	26							
	130	64	62	60	58	57	55	52	51	48	45	39	31	22							
	140	62	60	58	56	54	52	50	48	45	42	35	27								
	150	60	58	56	54	52	50	47	45	42	39	31	23								
	160	53	51	48	46	43	41	38	35	31	28										
Shut-off PSI		326	317	308	300	291	282	274	265	256	248	226	204	183	161	139	118	96	74	53	

NOTES: Performance shown does not include friction loss in the drop pipe. All performance data is based on rated motor nameplate voltage. Performances for former XP models are the same as 45 gpm models. Performance shown is based on a pump without check valve.

4" HIGH CAPACITY PUMPS - 90 GPM

PERFORMANCE



4" HIGH CAPACITY PUMPS - 90 GPM

PERFORMANCE

HP	PSI	Depth to Pumping Water Level (Lift) in Feet. Shaded Areas Indicate Most Efficient Performance																	Shut-Off (ft)		
		20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550			
2	0																				120
	10																				
	20																				
	30																				
	40																				
	50																				
60																					
Shut-off PSI		43	35	26	17	9															
3	0																				167
	10																				
	20																				
	30																				
	40																				
	50																				
60																					
Shut-off PSI		64	55	46	38	29	20	12													
5	0																				285
	10																				
	20																				
	30																				
	40																				
	50																				
	60																				
	70																				
	80																				
	90																				
100																					
Shut-off PSI		115	106	97	89	80	71	63	54	45	37	15									
7.5	0																				425
	10																				
	20																				
	30																				
	40																				
	50																				
	60																				
	70																				
	80																				
	90																				
	100																				
	110																				
	120																				
	130																				
	140																				
	150																				
160																					
Shut-off PSI		175	167	158	149	141	132	123	115	106	97	76	54	32							

HP	PSI	20	40	60	80	100	120	140	160	180	200	240	280	320	360	400	440	480	500	550	600	Shut-Off (ft)	
10	0																						565
	10																						
	20																						
	30																						
	40																						
	50																						
	60																						
	70																						
	80																						
Shut-off PSI		236	227	219	210	201	193	184	175	167	158	141	123	106	89	71	54	37	28	6			

NOTES: Performance shown does not include friction loss in the drop pipe. All performance data is based on rated motor nameplate voltage. Performance shown is based on a pump without check valve.