

**FLINT & WALLING**

Zoeller Family of Water Solutions™

Products for the Irrigation Market

CENTRIFUGAL BOOSTER PUMPS

SELF-PRIMING LAWN SPRINKLER PUMPS - CAPACITIES TO 120 GPM, PRESSURES TO 50 PSI


MODEL SP SPECIFICATIONS

Model #	HP	Suction Lift (Ft.)	Capacity - U.S. Gallons per Minute Discharge Pressure (PSI)						Shut Off Pressure @ 0 Lift (PSI)	Suction Pipe Tap	Discharge Pipe Tap
			15	20	25	30	35	40			
SP10P1	1	10	66	58	53	42	32	10	41	2 in.	1-1/2 in.
		15	62	57	47	38	25	7			
		25	40	38	36	23	12				
SP15P1	1-1/2	10	67	62	56	49	39	27	43	2 in.	1-1/2 in.
		15	63	59	52	44	34	22			
		25	37	36	35	31	18				
SP20P1	2	10	68	66	62	55	44	35	46	2 in.	1-1/2 in.
		15	64	63	57	51	41	29			
		25	46	44	41	39	29				

- Compare – when customer's want high volume at high pressures, there is no better performer.
- Brass or plastic impeller options on selected models
- Large cast iron pump body to ensure rapid priming
- Designed for lawn and turf sprinkling, irrigation and water transfer

MODEL SPJ SPECIFICATIONS

Model Number		HP	Suction Lift Ft.	Capacity - U.S. Gallons per Minute Discharge Pressure PSI								Shut-Off Pressure PSI	Suction Pipe Tap	Disch. Pipe Tap
1 Phase	3 Phase			10	15	20	25	30	35	40	45			
SPJ07P1	SPJ07P3	3/4	5	56	48	42	37	29	21			41	2"	1-1/2"
			15	47	42	37	29	22	12			37		
			25	43	37	31	22	10				33		
SPJ10P1	SPJ10P3	1	5	58	53	48	43	38	32	23	11	48	2"	1-1/2"
			15	53	48	45	37	31	24	12		43		
			25	48	44	38	33	25	14			39		
SPJ15P1 SPJ15B1	SPJ15B3	1-1/2	5	78	77	74	70	62	53	43	30	47	2"	1-1/2"
			15	70	68	66	62	53	43	30		41		
			25	47	46	45	44	42	34			36		
SPJ20B1	SPJ20B3	2	5	86	84	81	77	71	62	52	40	50	2"	1-1/2"
			15	76	74	72	69	64	55	43	25	45		
			25	52	51	50	47	45	42	30		40		
SPJ30B1	SPJ30B3	3	5	88	86	85	84	80	73	64	53	54	2"	1-1/2"
			15	77	76	75	74	72	65	55	43	50		
			25	54	53	52	51	50	49	45	10	45		

Open Drip Proof (ODP) motor voltage

Single Phase: 3/4 thru 2 HP - 115/230V; 3 HP - 230V, 60Hz - Three Phase: 3/4 thru 2 HP - 208-230V/460V, 50/60Hz; 3 HP - 208-230/460V, 60Hz

Maximum Case Pressure: 100 PSI

MODEL SPM SPECIFICATIONS

MODEL NUMBER		HP	SUCTION LIFT FT.	CAPACITY-U.S. GALLONS PER MINUTE DISCHARGE PRESSURE -PSI						SHUT-OFF PRESSURE PSI	SUCTION PORT NPT.	DISCHARGE PORT NPT.
1 PH.	3 PH.			10	20	30	40	50	60			
SPM30A1	SPM30A3	3	5	120	118	91	72	47		57.3	2"	2"
			10	103	100	88	68	40		55.2		
			15	91	90	83	66	31		53.0		
			20	76	75	74	59	19		50.8		
			25	54	54	54	49			48.7		
SPM50A1	SPM50A3	5	5		158	141	123	104	81	72.5	2 1/2"	2"
			10		138	127	115	99	67	70.3		
			15		124	117	107	92	64	68.2		
			20		104	102	96	82	48	66.0		

Motor Voltage: Single Phase: 3 HP, 115/230V 60Hz
5 HP 230V, 60Hz

Three Phase: 3-5 HP, 208-230/460, 60Hz

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Zoeller Family of Water Solutions™

Products for the Irrigation Market

CENTRIFUGAL BOOSTER PUMPS

MULTI STAGE HIGHER PRESSURE CJ101 SERIES

CAPACITIES TO 60 GPM, PRESSURES TO 95 PSI

- Brass Impellers dynamically balanced for high efficiencies and long life.
- More water at higher pressures -engineered for high head applications.
- Cast iron volute with brass insert bearing and closed top bearing for rugged durability and long life.
- Available in 2-stage or 3 stage models up to 3 HP.
- Maximum case pressure of 160 PSI.



CJ101 SERIES CENTRIFUGAL PUMPS, BRASS IMPELLERS

MODEL NO.		HP	STAGES	SUCTION LIFT FT.	CAPACITY U.S. GPM										MAX. PRESS. PSI	▲MAX. CASE PRESS.	▲MAX. LIQUID TEMP.
1 PHASE	3 PHASE				DISCHARGE PRESSURE PSI												
					10	20	30	40	50	60	70	80	90				
CJ101B071 † CJ101B071T †	CJ101B073 † CJ101B073T †	3/4	2	5	39	34	29	21	5					54	160psig	200° F	
				15	38	33	26	18									
				25	31	29	23	12									
CJ101B101 † CJ101B101T †	CJ101B103 † CJ101B103T †	1	2	5	42	38	33	26	18					62	160psig	200° F	
				15	40	36	31	24	14								
				25	32	31	28	21									
CJ101B151 † CJ101B151T †	CJ101B153 † CJ101B153T †	1 1/2	2	5	48	44	39	34	27	17				69	160psig	200° F	
				15	44	42	37	31	24	10							
				25	34	33	32	29	20								
CJ101B201 † CJ101B201T †	CJ101B203 † CJ101B203T †	2	2	5	56	52	47	41	34	24				70	160psig	200° F	
				15	50	49	45	39	31	19							
				25	37	36	35	34	27								
CJ101C201 † CJ101C201T †	CJ101B203 † CJ101B203T †	2	3	5	49	47	43	40	36	32	28	22	12	98	160psig	200° F	
				15	45	44	42	39	35	31	26	19					
				25	35	34	33	32	31	29	23	15					
CJ101C301 † CJ101C301T †	CJ101C303 † CJ101C303T †	3	3	5	56	54	51	48	44	39	33	27	18	95	160psig	200° F	
				15	50	49	48	46	42	37	31	24					
				25	37	36	36	35	34	33	29	20					

†Not for sale in states following Proposition 65 and AB1953. Alternates are available.

CJ101 SERIES CENTRIFUGAL PUMPS, PLASTIC IMPELLERS

MODEL NO.		HP	STAGES	SUCTION LIFT FT.	CAPACITY U.S. GPM										MAX. PRESS. PSI	▲MAX. CASE PRESS.	▲MAX. LIQ. UID TEMP.
1 PHASE	3 PHASE				DISCHARGE PRESSURE PSI												
					10	20	30	40	50	60	70	80	90				
CJ101P071	CJ101P073	3/4	2	5	41	35	28	20						49	160psig	160° F	
				15	38	32	26	13									
				25	32	29	22										
CJ101P101	CJ101P103	1	2	5	45	40	35	28	20					60	160psig	160° F	
				15	42	39	33	26	15								
				25	35	33	30	22									
CJ101P151	CJ101P153	1 1/2	2	5	54	50	44	38	28					61	160psig	160° F	
				15	48	46	42	35	23								
				25	37	35	33	28	17								
CJ101P201	CJ101P203	2	2	5	55	52	47	41	34	23				67	160psig	160° F	
				15	49	47	45	39	30	17							
				25	37	36	33	32	26								
CJ101D201	CJ101D203	2	3	5	48	46	43	39	35	31	25	19		91	160psig	160° F	
				15	44	43	41	37	33	29	23	15					
				25	36	35	34	33	31	27	20	9					
CJ101D301	CJ101D303	3	3	5	54	52	50	47	44	39	33	25	15	95	160psig	160° F	
				15	48	47	46	45	42	37	30	22	11				
				25	36	36	36	35	33	31	27	19					

▲Do not exceed the maximum case pressure and maximum liquid temperature rating of the pump

Performance shown for 60Hz models. 50 Hz models also available.

Models with suffix T denotes TEFC motor. All other models utilize ODP motors.

Suction and Discharge Tappings 1-1/2" X 1-1/4"

Products for the Irrigation Market



FLINT & WALLING

Zoeller Family of Water Solutions™

CENTRIFUGAL BOOSTER PUMPS

BOOSTER PUMPS CJ103 SERIES

CAPACITIES TO 80 GPM, PRESSURES TO 45 PSI

- Available in 1/3 HP thru 2 HP models.
- Rugged cast iron volute
- Brass impellers electronically balanced.
- Discharge can be rotated for either horizontal or vertical installations.
- Designed for easy service without disrupting suction or discharge piping.



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Autophoretic coated models available for use in heavily chemically treated or aggressive pH municipal water applications. Add "PC" suffix ie: CJ103051PC; CJ103071PC; and CJ103101PC.

CJ103 SERIES CENTRIFUGAL PUMPS, BRASS IMPELLERS

MODEL NO.		HP	STAGES	SUCTION LIFT FT.	CAPACITY U.S. GPM										MAX. PRESS. PSI	▲MAX. CASE PRESS.	▲MAX. LIQUID TEMP.
1 PHASE	3 PHASE				DISCHARGE PRESSURE PSI												
					10	15	20	25	30	35	40	45	50				
CJ103031 †		1/3	1	5	42	34	21							27	100psig	200° F	
				15	36	26											
				25	28												
CJ103051** † CJ103051T †	CJ103053 † CJ103053T †	1/2	1	5	50	47	37	25						32	100psig	200° F	
				15	43	40	29	9									
				25	33	30	15										
CJ103071** CJ103071T	CJ103073 CJ103073T	3/4	1	5	71	62	51	36	11					32	100psig	200° F	
				15	66	54	40	19									
				25	57	43	25										
CJ103101** CJ103101T	CJ103103 CJ103103T	1	1	5	76	69	61	50	36	16				39	100psig	200° F	
				15	73	65	54	41	24								
				25	66	57	45	29									
CJ103151 CJ103051T	CJ103153 CJ103053T	1 1/2	1	5	94	88	80	70	59	44	18			43	100psig	200° F	
				15	92	85	75	63	49	27							
				25	74	72	66	52	34								
CJ103201 CJ103201T	CJ103203 CJ103203T	2	1	5	109	103	96	86	75	61	39			44	100psig	200° F	
				15	109	103	94	82	67	45							
				25	90	89	85	71	51								

†Not for sale in states following Proposition 65 and AB1953. Alternates are available.

CJ103 SERIES CENTRIFUGAL PUMPS, PLASTIC IMPELLERS

MODEL NO.		HP	STAGES	SUCTION LIFT FT.	CAPACITY U.S. GPM										MAX. PRESS. PSI	▲MAX. CASE PRESS.	▲MAX. LIQUID TEMP.
1 PHASE	3 PHASE				DISCHARGE PRESSURE PSI												
					10	15	20	25	30	35	40	45	50				
CJ103P031	CJ103P033	1/3	1	5	43	35	21							26	100psig	160° F	
				15	35	24											
				25	26												
CJ103P051	CJ103P053	1/2	1	5	45	45	44	36	19					32	100psig	160° F	
				15	41	41	38	24									
				25	31	29	27										
CJ103P071	CJ103P073	3/4	1	5	69	68	64	57	42	20				38	100psig	160° F	
				15	64	62	57	46	28								
				25	49	48	45	31									
CJ103P101	CJ103P103	1	1	5	67	65	64	62	51	35				40	100psig	160° F	
				15	61	59	58	55	41								
				25	47	46	45	43	23								
CJ103P151	CJ103P153	1 1/2	1	5	68	67	66	65	63	52	31			44	100psig	160° F	
				15	62	61	60	59	55	39							
				25	48	47	46	45	41								

▲Do not exceed the maximum case pressure and maximum liquid temperature rating of the pump. Performance shown for 60Hz models. 50 Hz models also available. Models with suffix T denotes TEFC motor. All other models utilize ODP motors. Suction and Discharge Tappings 1-1/2" X 1-1/4"

**FLINT & WALLING***Zoeller Family of Water Solutions™*

Products for the Irrigation Market

CENTRIFUGAL PUMPS

SINGLE AND TWO STAGE C22000 SERIES

CAPACITIES TO 150 GPM, PRESSURE TO 85 PSI

- Uses nationally recognized NEMA JM motors.
- Engineered for high head applications.
- Uses brass impellers electronically balanced.
- Designed for easy service without disrupting suction or discharge piping.



MODELS AVAILABLE

Model Number		HP	Stages
1 Phase	3 Phase		
C22131	C22133	3	1
C22151	C22153	5	1
C22231	C22233	3	2
C22251	C22253	5	2
	C22273	7-1/2	2

Model Number		HP	Stages	Suction Lift Feet	Capacity - U.S. Gallons per Minute Discharge Pressures							Suction Pipe Tap	Discharge Pipe Tap
1 Phase	3 Phase				20	30	40	50	60	70	80		
C22131	C22133	3	1	15	120	96						2-1/2"	2"
C22151	C22153	5	1	15	146	140	86					2-1/2"	2"
C22231	C22233	3	2	15	82	76	68	56	40			2-1/2"	2"
C22251	C22253	5	2	15	140	130	114	96	70			2-1/2"	2"
	C22273	7-1/2	2	15	140	138	136	134	116	95	56	2-1/2"	2"

MOTOR VOLTAGE: 3HP 1 Phase 115/208-230V 60Hz., 5HP 1 Phase 208-230V 60Hz., 3-7 1/2HP 3 Phase 208-230/460V 60Hz.
120 PSI Maximum Case Pressure.

Products for the Irrigation Market



FLINT & WALLING

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HIGH PERFORMANCE CITY PRESSURE BOOSTER SYSTEMS

- Boost pressure 50 lbs.
- Built-in protection from excessive pressures

FCP100 City-Mate System



Some assembly required

FCP3420S* 4 Stage Commercial-Pro System



Pre-assembled for easy installation

Stainless steel tank shown. For painted tank option, order model FCP3420

TANK MATERIAL TYPE		HP	INCOMING GALLONS PER MINUTE	INCOMING WATER PRESSURE-PSI					MAX. CUT OUT PSI
2.1 GAL PAINTED STEEL	LESS TANK			10	20	30	40	50	
MODEL NO.				TOTAL SYSTEM PRESSURE (PSI) DELIVERED					
FCP100	FCP100LT†	.6	0	76	83	90	90	90	90 PSI
			1	65	74	82	90	90	
			3	50	60	70	82	90	
			6	38	46	54	67	77	
			10		39	48	58	64	
SYSTEM DISCHARGE			12		33	42	52	62	
1"									

†Less tank and tank tee

TANK MATERIAL TYPE		HP	INCOMING GALLONS PER MINUTE	INCOMING WATER PRESSURE-PSI					
6.0 GAL PAINTED STEEL	4.8 GAL STAINLESS STEEL			10	20	30	40	50	MAX. CUT OUT PSI
MODEL NO.	MODEL NO.			TOTAL SYSTEM PRESSURE (PSI) DELIVERED					
FCP3420	FCP3420S	3/4	0	67	77	87	90	90	90
			1	66	75	83	90	90	
			3	61	74	82	90	90	
			6	59	71	81	90	90	
			10	57	69	78	87	90	
System Discharge			12	56	67	76	86	90	
			15	53	65	73	82	89	
			18	50	64	71	78	86	
1"	1"		20	48	59	67	75	85	
			25	44	50	58	68	73	
		30	33	43	48	55	47		

If incoming pressure is 30 PSI or greater, a pressure regulating valve adjusted to 70-75 PSI should be used on the discharge of the pump to eliminate pressure fluctuations and excessive pressure cycling of the motor/pump.

CITY-MATE	
DIMENSIONS:	As shown*
LENGTH	21"
WIDTH	9"
HEIGHT	20"
PUMP INLET	1"
PUMP OUTLET	1"
TANK PRECHARGE	38 PSIG
MIN. INLET REQUIRED	3/4" PIPE
MIN. INLET PRESSURE	10 PSIG
MOTOR VOLTAGE	115

*As shown in illustrations

4 Stage	
DIMENSIONS:	
LENGTH	25"
WIDTH	12"
HEIGHT	20"
PUMP INLET	1-1/4"
PUMP OUTLET	1"
TANK PRECHARGE	46 PSIG
MIN. INLET REQUIRED	1-1/4" Pipe
MIN. INLET PRESSURE	10 PSIG
MOTOR VOLTAGE	115
ALL PRESS SW. SETTINGS ADJUSTABLE TO A MIN. 20-40 & MAX 60-90	



FLINT & WALLING

Zoeller Family of Water Solutions™

Products for the Irrigation Market

4" AND 6" SUBMERSIBLE PUMPS 10 THRU 85 GPM

POWERED BY FRANKLIN ELECTRIC 1/2 HP TO 50 HP MOTORS

STAINLESS "S" SERIES 4" SUBMERSIBLES CAST IRON "A" SERIES 4" SUBMERSIBLES



For model number identification information, see page 10.



5 thru 85 GPM "S" Commander® Series

With 304 S.S. Suction & Discharge Housings

5 thru 85 GPM "A" Captain® Series

With Cast Iron Suction & Discharge Housings

- The ultimate in efficiencies and hydraulic design.
- Stainless hex shaft features an integral one-piece coupling to ensure positive alignment.
- Noryl impellers with dissimilar Delrin diffuser plates – more resistant to dry run conditions and sand abrasion than stainless steel impellers.
- Heavy gauge, S.S. pump shell prevents internal damage to hydraulic components.



- * Pumps marked with asterisks not to be operated at GPM flows indicated by dotted line.
- Best efficiency point.

10 GPM • 1/2-3 HP

HP Size and Model No.	Stg.	Weight		Disch. Press. PSI	DEPTH TO WATER LEVEL IN FEET - CAPACITIES IN GALLONS PER MINUTE																								Maximum Pressure					
		Motor Type	Ship Wt.		20	40	60	80	100	120	140	160	180	200	225	250	275	300	325	350	400	450	500	550	600	650	700	800	900	Ft.	PSI			
1/2 HP 4F10A05 4F10S05 4F10G05	8	1 PH 3 Wire	27	0 20 40	14.6 12.8 10.9	14.1 12.0 9.9	14.7 13.3 11.0	14.2 12.5 10.0	13.4 11.6 8.7	12.6 10.5 6.9	11.7 9.5 4.8	10.8 7.8 6.0	9.7 6.0 3.4	8.3 6.3 3.4	6.3 2.1															250	108			
		1 PH 2 Wire	27	60 80	10.9 8.0	9.9 7.8	8.6 3.6	6.7	4.5																									
		1 PH 3 Wire	32	0 20 40		14.9 13.8 12.6	14.5 13.3 12.1	15.0 13.9 12.8	14.6 13.4 12.4	14.1 13.0 11.4	13.6 12.4 11.0	13.1 11.9 10.5	12.5 11.4 9.6	12.0 10.7 8.9	11.3 9.8 7.9	10.4 8.9 6.1	9.7 7.4 3.5	8.5 6.1	7.4 5.7												375	162		
		1 PH 2 Wire	32	60 80	13.2 11.9	13.8 11.4	13.3 10.6	12.8 10.0	12.4 9.3	11.4 8.4	11.0 7.4	10.5 6.2	9.6 3.8	8.9 6.6	7.9 3.8	6.1																		
1 HP 4F10A10 4F10S10 4F10G10	15	1 PH 3 Wire	36	0 20 40			15.0 14.1	14.7 14.5	14.3 13.7	13.8 13.3	13.4 12.9	13.0 12.4	12.6 11.9	12.1 11.4	11.6 10.9	10.9 10.3	10.2 9.5	9.6 8.6	8.5 7.9	7.6 5.0	7.4 4.6	3.8									470	203		
		1 PH 2 Wire	36	60 80	13.9 13.1	13.5 12.6	12.7 12.1	12.7 11.7	12.3 11.2	11.8 10.7	11.2 10.1	10.9 9.7	10.3 8.2	9.7 6.8	8.9 6.6	7.8 2.6	6.6 5.0	5.0																
		1 PH 3 Wire	47	0 20 40						14.9 13.8	14.6 13.6	15.0 14.7	14.8 14.4	14.4 14.1	14.1 13.8	13.8 13.4	13.4 13.0	12.6 12.2	12.2 11.8	11.8 11.4	10.8 10.9	9.8 8.6	8.5 7.0	4.8 4.1	3.9							630	272	
		1 PH 2 Wire	47	60 80	14.7 14.1	15.0 13.8	14.8 14.1	14.5 13.9	14.2 13.6	13.9 12.9	13.6 12.6	13.4 12.2	13.0 11.8	12.7 11.4	12.4 11.0	11.9 10.5	11.5 10.1	11.0 9.6	10.5 9.0	10.0 8.2	9.6 7.4	8.6 4.9	7.1 4.8	4.4										
1-1/2 HP 4F10A15 4F10S15	20	1 PH 3 Wire	47	0 20 40							15.0 14.6	14.7 14.1	14.4 13.8	14.1 13.4	13.8 13.0	13.4 12.7	12.6 12.4	12.2 11.9	11.8 11.5	11.4 11.0	10.8 10.5	9.8 9.0	8.5 7.4	4.8 4.1	3.9									
		1 PH 2 Wire	47	60 80	14.7 14.1	15.0 13.8	14.8 14.1	14.5 13.9	14.2 13.6	13.9 12.9	13.6 12.6	13.4 12.2	13.0 11.8	12.7 11.4	12.4 11.0	11.9 10.5	11.5 10.1	11.0 9.6	10.5 8.2	10.0 7.4	8.6 4.9	7.1 4.8	4.4											
		3 PH 3 Wire	41																															
		3 PH 3 Wire	41																															
2 HP 4F10A20 4F10S20	26	1 PH 3 Wire	62	0 20 40							15.0 14.6	14.7 14.4	14.5 14.2	14.3 14.0	13.9 13.8	13.7 13.4	13.3 13.1	12.9 12.8	12.6 12.6	12.3 11.9	12.0 11.6	11.7 11.3	11.4 10.5	11.0 9.7										
		3 PH 3 Wire	53	60 80	14.7 14.1	15.0 14.5	14.8 14.3	14.6 14.1	14.4 13.8	14.2 13.6	13.9 13.4	13.6 13.2	13.4 13.0	13.2 12.6	12.9 12.3	12.6 12.0	12.3 11.7	12.0 11.4	11.6 11.0	11.3 10.5	10.5 9.7											815	352	
		1 PH 3 Wire	79	0 20 40								15.5 15.0	15.3 14.8	15.1 14.6	14.8 14.4	14.6 14.1	14.3 14.0	14.1 13.8	13.9 13.6	13.7 13.4	13.4 13.1	13.1 12.8	12.8 12.5	12.5 12.1	12.2 11.8	11.9 11.3	11.7 10.5	11.1 10.0	10.7 9.6	10.1 7.6	9.5 6.8			
		3 PH 3 Wire	70	60 80	15.3 15.0	15.4 14.8	15.2 14.6	15.0 14.5	14.8 14.2	14.6 14.1	14.4 13.9	14.2 13.7	14.1 13.6	14.0 13.4	13.9 13.3	13.7 13.1	13.6 12.8	13.4 12.5	13.1 12.2	12.8 11.9	12.5 11.4	12.2 11.0	11.9 10.8	11.4 10.2	11.1 9.5	10.8 8.6	10.2 7.5	9.5 6.8	8.5 6.8	7.5 6.8				
3 HP 4F10A30 4F10S30	34	1 PH 3 Wire	79	0 20 40							15.5 15.0	15.3 14.8	15.1 14.6	14.8 14.4	14.6 14.1	14.3 14.0	14.1 13.8	13.9 13.6	13.7 13.4	13.4 13.1	13.1 12.8	12.8 12.5	12.5 12.1	12.2 11.8	11.9 11.3	11.7 10.5	11.1 10.0	10.7 9.6	10.1 7.6	9.5 6.8				
		3 PH 3 Wire	70	60 80	15.3 15.0	15.4 14.8	15.2 14.6	15.0 14.5	14.8 14.2	14.6 14.1	14.4 13.9	14.2 13.7	14.1 13.6	14.0 13.4	13.9 13.3	13.7 13.1	13.6 12.8	13.4 12.5	13.1 12.2	12.8 11.9	12.5 11.4	12.2 11.0	11.9 10.8	11.4 10.2	11.1 9.5	10.8 8.6	10.2 7.5	9.5 6.8	8.5 6.8	7.5 6.8				
		1 PH 3 Wire	79	0 20 40								15.5 15.0	15.3 14.8	15.1 14.6	14.8 14.4	14.6 14.1	14.3 14.0	14.1 13.8	13.9 13.6	13.7 13.4	13.4 13.1	13.1 12.8	12.8 12.5	12.5 12.1	12.2 11.8	11.9 11.3	11.7 10.5	11.1 10.0	10.7 9.6	10.1 7.6	9.5 6.8			
		3 PH 3 Wire	70	60 80	15.3 15.0	15.4 14.8	15.2 14.6	15.0 14.5	14.8 14.2	14.6 14.1	14.4 13.9	14.2 13.7	14.1 13.6	14.0 13.4	13.9 13.3	13.7 13.1	13.6 12.8	13.4 12.5	13.1 12.2	12.8 11.9	12.5 11.4	12.2 11.0	11.9 10.8	11.4 10.2	11.1 9.5	10.8 8.6	10.2 7.5	9.5 6.8	8.5 6.8	7.5 6.8				

NOTE: Pipe friction loss in drop pipe is not included in chart above.

Products for the Irrigation Market



FLINT & WALLING

Zoeller Family of Water Solutions™

4" AND 6" SUBMERSIBLE PUMPS 10 THRU 85 GPM

19 GPM • 1/2-5 HP

HP Size and Model No.	Stg.	Weight		Disch. Press. PSI	DEPTH TO WATER LEVEL IN FEET - CAPACITIES IN GALLONS PER MINUTE																								Maximum Pressure		
		Motor Type	Ship Wt.		20	40	60	80	100	120	140	160	180	200	225	250	275	300	325	350	400	450	500	550	600	650	700	800	Ft.	PSI	
1/2 HP 4F19A05 4F19S05	5	1 PH 3 Wire	28	0		24.6	22.7	20.5	17.9	15.0	10.4																				
		1 PH 2 Wire	28	20	22.0	19.8	17.1	14.0	5.9																				155	67	
3/4 HP 4F19A07 4F19S07	7	1 PH 3 Wire	33	0		24.4	22.9	21.4	19.5	17.5	15.3	12.4	8.6																		
		1 PH 2 Wire	33	20	24.2	20.6	18.7	16.6	14.3	11.0	5.5																		215	93	
1 HP 4F19A10 4F19S10 4F19G10	9	1 PH 3 Wire	36	0		25.2	24.0	22.9	21.7	20.4	19.0	17.4	15.6	13.7	11.4	10.7	5.0														
		1 PH 2 Wire	36	20	25.5	21.2	19.8	18.4	16.8	15.2	12.8	10.4	5.6																283	122	
1-1/2 HP 4F19A15 4F19S15	12	1 PH 3 Wire	43	0				25.5	24.4	23.5	22.7	21.7	20.7	19.9	18.9	17.7	16.3	14.3	12.2	11.3	9.2	8.7									
		1 PH 2 Wire	43	20	24.2	23.3	22.4	21.4	20.5	19.5	18.5	17.4	16.3	14.9	12.7	9.7	5.7												375	163	
				40	22.1	21.1	20.2	19.2	18.2	17.1	15.8	14.4	12.7	10.4	6.3																
		3 PH 3 Wire	39	60	19.9	18.8	17.8	16.7	15.4	13.7	11.9	9.2	5.9																		
2 HP 4F19A20 4F19S20	16	1 PH 3 Wire	59	0			25.5	24.9	24.3	23.7	23.0	22.4	21.8	21.0	20.2	19.2	18.2	17.0	15.9	14.4	10.8	5.3									
		3 PH 3 Wire	49	20	25.3	23.9	23.3	22.7	22.0	21.3	20.6	19.8	19.1	18.3	17.4	16.3	14.8	13.2	11.3	9.2	6.2								500	217	
3 HP 4F19A30 4F19S30	22	1 PH 3 Wire	75	0				26.0	25.6	25.2	24.7	24.3	23.8	23.3	22.8	22.2	21.5	20.9	20.3	19.6	18.2	16.6	14.7	12.2	9.2	8.3					
		3 PH 3 Wire	75	20	25.8	24.8	24.3	23.9	23.5	23.0	22.5	22.1	21.5	21.0	20.5	19.8	19.2	18.3	17.6	16.8	14.8	12.5	9.3						685	298	
5 HP 4F19A50 4F19S50	32	1 PH 3 Wire	117	0													25.8	25.4	25.0	24.6	24.3	23.8	23.5	22.7	21.8	21.0	20.2	19.3	18.2	17.0	14.2
		3 PH 3 Wire	80	20	26.0	25.8	25.5	25.2	24.8	24.5	24.2	23.9	23.7	23.3	22.8	22.2	21.7	21.3	20.8	20.4	19.4	18.4	17.3	16.2	14.7	12.9	11.2			1000	435

NOTE: Pipe friction loss in drop pipe is not included in chart above.

27 GPM • 3/4-5 HP

HP Size And Model No.	Stages	WEIGHT		Disch. Press. PSI	DEPTH TO WATER LEVEL IN FEET - CAPACITIES IN GALLONS PER MINUTE																												Maximum Pressure	
		Motor Type	Shp. Weight		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	350	400	450	500	550	600	650	700	750	800	Ft.	PSI			
3/4 HP 4F27A07 4F27S07	6	1 PH 3 Wire	33	0 20 40 60		32 25 17	29 22 9	32 26 18	30 23 12	27 20	24 15	21	16	5																180	78			
		1 PH 2 Wire	33																															
1 HP 4F27A10 4F27S10 4F27G10	7	1 PH 3 Wire	35	0 20 40 60		33 28 22	31 25 18	34 26 23	32 30 19	27 24 15	24 20 5	22 17	18 10	13																215	93			
		1 PH 2 Wire	35																															
1-1/2 HP 4F27A15 4F27S15	10	1 PH 3 Wire	43	0 20 40 60			33 30 26	34 30 24	33 29 22	31 27 20	29 25 18	28 24 15	26 22 8	24 19 11	22 17	20 13	17	14	6											305	132			
		1 PH 2 Wire	43		31	32	30	28	27	25	23	21	19	16																				
		3 PH 3 Wire	38		28	26	24	22	20	18	15	8																						
2 HP 4F27A20 4F27S20	12	1 PH 3 Wire	44	0 20 40 60			34 31 28	33 30 26	32 30 25	33 29 23	32 27 21	31 27 19	30 26 16	28 24 12	27 22 5	25 20 13	23 18 8	21 15	18 10	9										360	156			
		3 PH 3 Wire	46																															
3 HP* 4F27A30 4F27S30	17	1 PH 3 Wire	73	0 20 40 60					34 32 30	33 31 29	34 32 28	33 30 27	33 30 26	32 29 25	31 28 22	30 27 22	29 25 21	28 24 19	27 23 17	24 21 12	21 17 11	16 10	9							515	223			
		3 PH 3 Wire	73																															
5 HP* 4F27A50 4F27S50	29	1 PH 3 Wire	116	0 20 40 60									34 34 32	34 33 32	33 33 31	33 32 30	33 31 29	32 30 28	32 30 26	31 29 24	30 27 22	29 26 22	27 24 22	26 22 21	24 20 18	22 18 16	20 18 12	15 12	880	380				
		3 PH 3 Wire	80																															

NOTE: Pipe friction loss in drop pipe is not included in chart above.

*For 3 HP and above, refer to Franklin handbook for proper flow rates to cool motor.

* Pumps marked with asterisks not to be operated at GPM flows indicated by dotted lines.

• Best efficiency point.

Three wire models require control box

**FLINT & WALLING***Zoeller Family of Water Solutions™*

Products for the Irrigation Market

4" AND 6" SUBMERSIBLE PUMPS 10 THRU 85 GPM

35 GPM± • 1-7 1/2 HP

HP Size And Model No.	Stages	Phase	WEIGHT		Disch. Press. PSI	DEPTH TO WATER LEVEL IN FEET - CAPACITIES IN GALLONS PER MINUTE																										Maximum Pressure	
			Pump End	Motor End		20	40	60	80	100	120	140	160	180	200	220	240	260	300	350	400	450	500	550	600	650	700	Ft.	PSI				
1 HP 4F35A10 4F35S10	4	1	11	23	0 20 40 60	42 30	47 37 22	43 32	38 25	33	27																140	67					
1-1/2 HP 4F35A15 4F35S15	5	1	12	28	0 20 40 60	46 38 26	43 33 15	47 39 28	43 35	40 30	36 23	31	25	10													180	78					
		3	12	25																													
2 HP 4F35A20 4F35S20	7	1	14	30	0 20 40 60		47 41 34	50 45 38 31	48 42 35 26	45 39 32 19	43 36 28	40 33 22	37 29	34 24	30	26	19										245	106					
		3	14	28																													
3 HP* 4F35A30 4F35S30	10	1	17	52	0 20 40 60			48 45 40	47 43 38	49 45 36	47 43 34	45 41 31	44 39 28	42 37 25	40 35 20	38 33 26	36 30 22	33 27 17	28 18	17							355	154					
		3	17	43																													
5 HP* 4F35A50 4F35S50	16	1	23	69	0 20 40 60					50 49 47	49 48 44	48 46 43	47 45 42	46 44 41	45 42 40	44 41 38	43 39 36	42 39 36	41 39 36	39 36 32	35 32 27	31 27 21	26 21	20			560	245					
		3	23	53																													
7-1/2 HP* 4F35A75 4F35S75	23	3	31	69	0 20 40 60						49 48 47	50 49 48	49 48 47	48 46 45	47 46 44	46 45 43	45 44 43	44 43 42	43 41 39	42 41 39	41 39 36	40 38 34	38 36 31	36 33 28	33 31 25	31 28 20	28 24 19	810	350				

NOTE: Pipe friction loss in drop pipe is not included in chart above.

*For 3 HP and above, refer to Franklin handbook for proper flow rates to cool motor.

‡Sold as pump end only. Order motor & control box separately.

55 GPM± • 1 1/2-7 1/2 HP

HP Size and Model No.	Stages	Phase	Weight		Discharge Pressure PSI	DEPTH TO WATER LEVEL IN FEET - CAPACITIES IN GALLONS PER MINUTE																				Maximum Pressure	
			Pump End	Motor End		20	40	60	80	100	120	140	160	180	200	220	240	260	300	350	400	450	500	550	Ft.	PSI	
1-1/2 HP 4F55A15 4F55S15	4	1	12	28	0 20 40 60	70 42	60 23	71 47	62 33	50	36														135	58	
		3	12	25																							
2 HP 4F55A20 4F55S20	5	1	14	30	0 20 40 60	74 56 30	68 45	75 59 34	69 50	61 38	51 15	42	29												165	71	
		3	14	28																							
3 HP* 4F55A30 4F55S30	7	1	16	52	0 20 40 60		75 63 48	70 57 40	75 65 50 32	71 59 43	66 53 34	61 46 15	55 38	47 28	39	31									235	101	
		3	16	43																							
5 HP* 4F55A50 4F55S50	11	1	19	69	0 20 40 60			72 65	69 62	73 66 58	70 63 53	74 67 59 49	71 64 55 44	68 60 50 39	64 56 45 33	61 52 40 25	57 47 35	53 42 30	44 31	30						365	158
		3	19	53																							
7-1/2 HP* 4F55A75 4F55S75	18	3	28	69	0 20 40 60					72 71	75 71	73 70	75 72 68	74 70 66	72 68 63	71 66 61	73 69 64	71 67 62	66 62 57	62 56 50	56 50 42	49 42 35	41 34 24	33 20	600	259	

NOTE: Pipe friction loss in drop pipe is not included in chart above.

*For 3 HP and above, refer to Franklin handbook for proper flow rates to cool motor.

‡Sold as pump end only. Order motor & control box separately.

Products for the Irrigation Market



FLINT & WALLING

Zoeller Family of Water Solutions™

4" AND 6" SUBMERSIBLE PUMPS 10 THRU 85 GPM

85 GPM± • 2-7 1/2 HP

HP Size and Model No.	Stages	Phase	Weight		Discharge Pressure PSI	DEPTH TO WATER LEVEL IN FEET - CAPACITIES IN GALLONS PER MINUTE																				Maximum Pressure	
			Pump End	Motor End		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	Ft.	PSI
2 HP 4F85A20 4F85S20	4	1	13	30	0 20 40 60	80 35	105 60	85 40	64	45																120	52
		3	13	28																							
3 HP* 4F85A30 4F85S30	6	1	15	52	0 20 40 60	101 70 40	88 56 25	103 75 43	91 61 30	77 48	63 34	51	38													185	80
		3	15	43																							
5 HP* 4F85A50 4F85S50	10	1	20	69	0 20 40 60	100 81	108 91 73	102 83 65	110 94 75 57	103 86 67 49	95 78 59 41	87 70 51 33	79 62 43 20	71 54 36	63 46 25	55 38	48 30	40	32							300	130
		3	20	53																							
7-1/2 HP* 4F85A75 4F85S75	15	3	27	69	0 20 40 60	103	109 97	104 92	110 99 87	106 94 81	101 88 76	106 95 83 70	102 90 77 65	97 85 72 59	91 79 66 54	85 74 61 49	80 68 56 43	74 63 50 38	69 57 45 32	64 52 40 25	59 47 34	53 41 27	48 36 30	43 30	38	450	195

NOTE: Pipe friction loss in drop pipe is not included in chart above.

*For 3 HP and above, refer to Franklin handbook for proper flow rates to cool motor.

‡Sold as pump end only. Order motor & control box separately.

4" FRANKLIN SUBMERSIBLE MOTORS, CONTROL BOXES & MAGNETIC STARTERS

HP Rating	Voltage & Phase	Motor Type	Motor Thrust Rating	Motor Ordering Number	Control Box & Magnetic Starters*	Heaters Order 3
					Ordering Number	Ordering Number
1/2	115V/1PH	3-Wire	300#	137426	127185	
	230V/1PH	3-Wire	300#	137428	127189	
	115V/1PH	2-Wire	300#	137412		
	230V/1PH	2-Wire	300#	137414		
3/4	230V/1PH	3-Wire	300#	137430	127197	
	230V/1PH	2-Wire	300#	137416		
1	230V/1PH	3-Wire	650#	137432	126319	
	230V/1PH	2-Wire	650#	137418		
1-1/2	230V/1PH	3-Wire	650#	137434	133589	
	230V/1PH	2-Wire	650#	137420		
	200V/3PH	3-Wire	650#	137457	139324	130274
	230V/3PH	3-Wire	650#	137458	139324	130272
	460V/3PH	3-Wire	650#	137460	139325	134872

*Class 16 Magntic Starters. Motors include lead wire.

HP Rating	Voltage & Phase	Motor Type	Motor Thrust Rating	Motor Ordering Number	Control Box & Magnetic Starters*	Heaters Order 3
					Ordering Number	Ordering Number
2	230V/1PH	3-Wire	650#	137435	137224+ 126321++	
	200V/3PH	3-Wire	650#	137461	139324	133010
	230V/3PH	3-Wire	650#	137462	139324	130274
	460V/3PH	3-Wire	650#	137464	139325	130275
3	230V/1PH	3-Wire	900#	139422	136800+ 126322++	
	200V/3PH	3-Wire	900#	139423	139324	130282
	230V/3PH	3-Wire	900#	139424	139324	130276
	460V/3PH	3-Wire	900#	139425	139325	130277
5	230V/1PH	3-Wire	1500#	137456	135269+ 137225++	
	200V/3PH	3-Wire	1500#	137469	139324	133016
	230V/3PH	3-Wire	1500#	137470	139324	133016
	460V/3PH	3-Wire	1500#	137472	139325	130280
7-1/2	200V/3PH	3-Wire	1500#	137473	139324	130288
	230V/3PH	3-Wire	1500#	137474	139324	133020
	460V/3PH	3-Wire	1500#	137476	139325	133013

*Class 16 Magntic Starters. Motors include lead wire. +Deluxe control box -- includes magnetic contactor. Recommended for water systems which utilize pressure switch.

++Standard control box.



FLINT & WALLING

Zoeller Family of Water Solutions™

Products for the Irrigation Market

4" AND 6" SUBMERSIBLE PUMPS 5 THRU 325 GPM

Model No. Code 5 thru 27 GPM

4 F 10 A 05 - 30 1

4-inch minimum well diameter _____

Series _____

GPM _____

Material Construction _____

S - 304 S.S. Castings, S.S. Shell

A - Cast Iron Castings, S.S. Shell

Motor H.P. Size _____

Motor Mfg. and Lead Type

1 – 3-wire, Franklin

5 – 2-wire, Franklin

Motor Voltage and

Phase

00 – 115 V 1 Ph

30 – 230 V 1 Ph

1/2 - 1-1/2 HP Single phase pump and motor assembly includes pump/motor unit with motor leads.

Order control box for 3-wire units separately.

On 2 - 7-1/2 HP and all 3 phase units, order pump, motor and control box or magnetic starter separately. Lead wire assembly included with motor.

Model No. Code 35, 55 & 85 GPM

4 F 35 A 20

4-inch minimum well diameter _____

Series _____

GPM _____

Material Construction _____

S - 304 S.S. Castings, S.S. Shell

A - Cast Iron Castings, S.S. Shell

Motor H.P. Size _____

On 35, 55 & 85 GPM units order pump, motor and control box or magnetic starter and heaters separately. Lead wire assembly included with motor.

Products for the Irrigation Market



FLINT & WALLING

Zoeller Family of Water Solutions™

JET PUMPS AND PORTABLE LAWN SPRINKLING PUMPS

JET PUMPS



EKO5S, EK07S, EK10S SHALLOW WELL JET PUMPS

- Designed with high quality at an economy price range.
- Feature F&W's exclusive 56 frame **Power Plus** 115/230V motors.
- Dual voltage motors.
- Pressure switch factory preset to 30 - 50 PSI.
- Available with 5 year Gold Star Pump protection plan.

MODELS AVAILABLE:

EKO5S 1/2 HP
EK07S 3/4 HP
EK10S 1 HP
CPJ15S 1-1/2 HP



MODELS AVAILABLE:

EK05SAT25H 1/2 HP w/AT25H Tank
EK07SAT44H 3/4 HP w/AT44H Tank

EK TANK SYSTEMS

- Heavy cast iron CSA approved jet pump complete with shallow well ejector.
- Capacitor start, copper wound motor with thermal overload protection. Dual voltage motor is factory connected for 115 volts. Spade connectors enable quick voltage change to 230 volt service.
- Horizontal Air-E-Tainer® pre-charged pressure tank with plumbing fitting between pump and tank.
- Pressure switch factory preset to 20-40 PSI.

AIR-E-TAINER TANKS

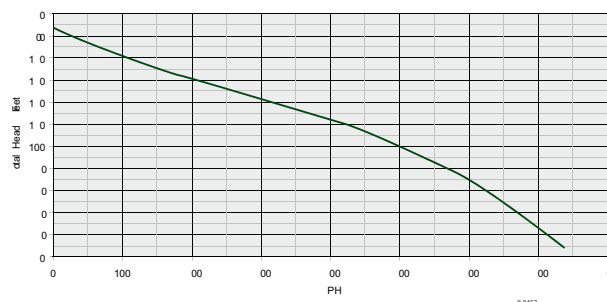


PORTABLE LAWN SPRINKLING PUMP



- Stainless steel pump body
- Includes garden hose adapter
- 3-Prong grounded plug
- One year limited warranty.

MODEL SPJ100





FLINT & WALLING

Zoeller Family of Water Solutions™

Products for the Irrigation Market

FLOATING POND PUMP SYSTEMS

APPLICATIONS

- Private residential ponds
- Golf courses
- Apartment complexes
- Waterscapes
- Industrial centers
- City parks

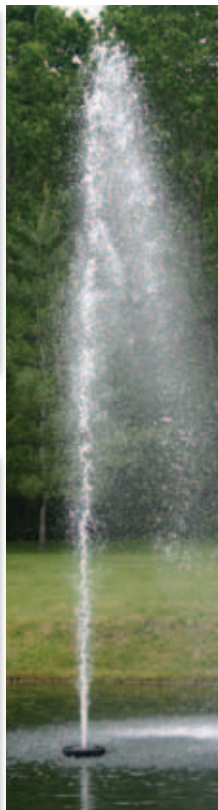
THREE EASILY INTERCHANGEABLE PATTERNS INCLUDED



Water Lily - An eye-catching combination spray



Water Trumpet - A symmetrical inverted bell shape



Sky Cannon - A dramatic single plume of water



230V model shown

115V Model: FPS0501

230V Models: FPS05021, FPS07021, FPS10021

**LIGHT UP THE NIGHT
WITH THE OPTIONAL
"NightBright" SYSTEM**

Now available for all models



Products for the Irrigation Market



FLINT & WALLING

Zoeller Family of Water Solutions™

FLOATING POND PUMP SYSTEMS

SYSTEM SPECIFICATIONS

MODEL NO.	HP	PHASE	VOLTS	RUNNING AMPS	SYSTEM CABLE LENGTH	MAX. CABLE LENGTH
FPS0501	1/2	1	115V	12	100 FT.	100 FT.
FPS05021	1/2	1	230V	6	100 FT. ‡	250 FT. †
FPS07021	3/4	1	230V	8	100 FT. ‡	250 FT. †
FPS10021	1	1	230V	9.8	100 FT. ‡	250 FT. †

‡ Optional cable available in 50 ft. increments up to 150 ft additional.

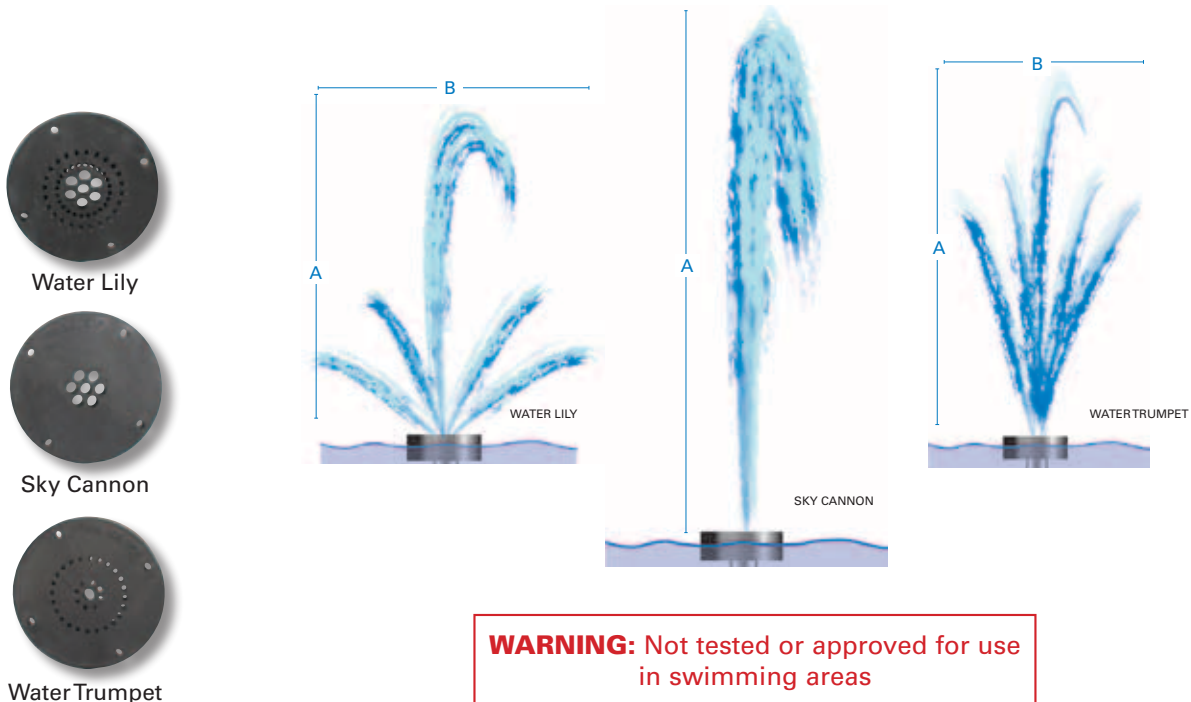
† Maximum cable length from fountain to control. For wire specifications and size from the control panel to the fuse disconnect box, consult a licensed electrician. A licensed electrician should perform electrical installation in accordance with national and local electrical codes.

FOUNTAIN NOZZLE SPECIFICATIONS

MODEL NO.	HP	WATER LILY			SKY CANNON		WATERTRUMPET		
		"A"	"B"	Flow	"A"	Flow	"A"	"B"	Flow
		HT.	DIA.	GPH*	HT.	GPH*	HT.	DIA.	GPH*
FPS0501 / FPS05021	1/2	15	30	4900	15	3300	13	15	2700
FPS07021	3/4	22	32	5825	35	4100	20	25	3400
FPS10021	1	24	46	6150	41	4200	22	35	3600

*Water displacement gallons per hour.

THREE EASILY INTERCHANGEABLE PATTERNS INCLUDED





FLINT & WALLING

Zoeller Family of Water Solutions™

Products for the Irrigation Market

FLOATING POND PUMP SYSTEMS

ADDITIONAL PUMP CABLE PACKAGES FOR 230V "FPS" FOUNTAIN SYSTEMS

CABLE	CABLE LENGTH FT.	50'	100'	150'
14 GA. SOOW	PART NO.	022923	022924	022925
12 GA. SOOW		022920	022921	022922

Cable packages include 022919 heat shrink splice kit

OPTIONAL QUICK DISCONNECT		HEAT SHRINK SPLICE KITS			
The optional Quick disconnect for the motor electrical connection enables disconnecting the unit for cleaning and winter storage. Part No. 022918		For use on 14 and 12 gauge pump cable. Part No. 022919		For use on 18 GA. light cable. Part No. 022933	

OPTIONAL FOUNTAIN "NIGHT BRIGHT" LIGHTING SYSTEM

Flint & Walling floating fountains are even more dramatic at night with the addition of a "Night Bright" lighting system. The three light, 120V, 120 watt equivalent system includes stainless steel housings that can easily be installed onto the float. The fountain control center includes an adjustable 24 hour timer for controlling the "Night Bright" lighting system.

OPTIONAL 120V LIGHT KITS

PART NO.	STANDARD LIGHT KIT PACKAGE COMPONENTS		
023069	• Three white LED lamps † • 100 Ft. of 18 GA. AWG SOOW underwater cable ‡ • Stainless steel mounting brackets and hardware • Heat shrink splice kit		
023369	Light kit with GFI connector for fountain systems without control box		

† Optional colored lamps are available in red, green and blue sets of 3.

‡ Optional cable available in 50 ft. increments up to 150 ft additional.

ADDITIONAL LIGHT CABLE PACKAGES FOR OPTIONAL LIGHTING SYSTEM

CABLE	CABLE LENGTH FT.	50'	100'	150'
18 GA. SOOW	PART NO.	022930	022931	022932

Cable packages include 022933 heat shrink splice kit

COLORLED LED LAMP SETS FOR OPTIONAL "NIGHT BRIGHT" LIGHTING SYSTEM

Part No.	Description			
023059	Red			
023058	Green			
023057	Blue			

Products for the Irrigation Market



FLINT & WALLING

Zoeller Family of Water Solutions™

FLOATING POND PUMP SYSTEMS

Available in 1/2 HP 115V or 230V single phase models and 3/4 and 1 HP, 230V, single phase models

Operates in 5 ft. of water or deeper

Easily interchangeable nozzles to achieve three different spray patterns

Polyethylene, foam-filled flotation system: UV resistant, will not waterlog

Stainless steel eye bolts anchor system to pond bottom or shore line with nylon rope

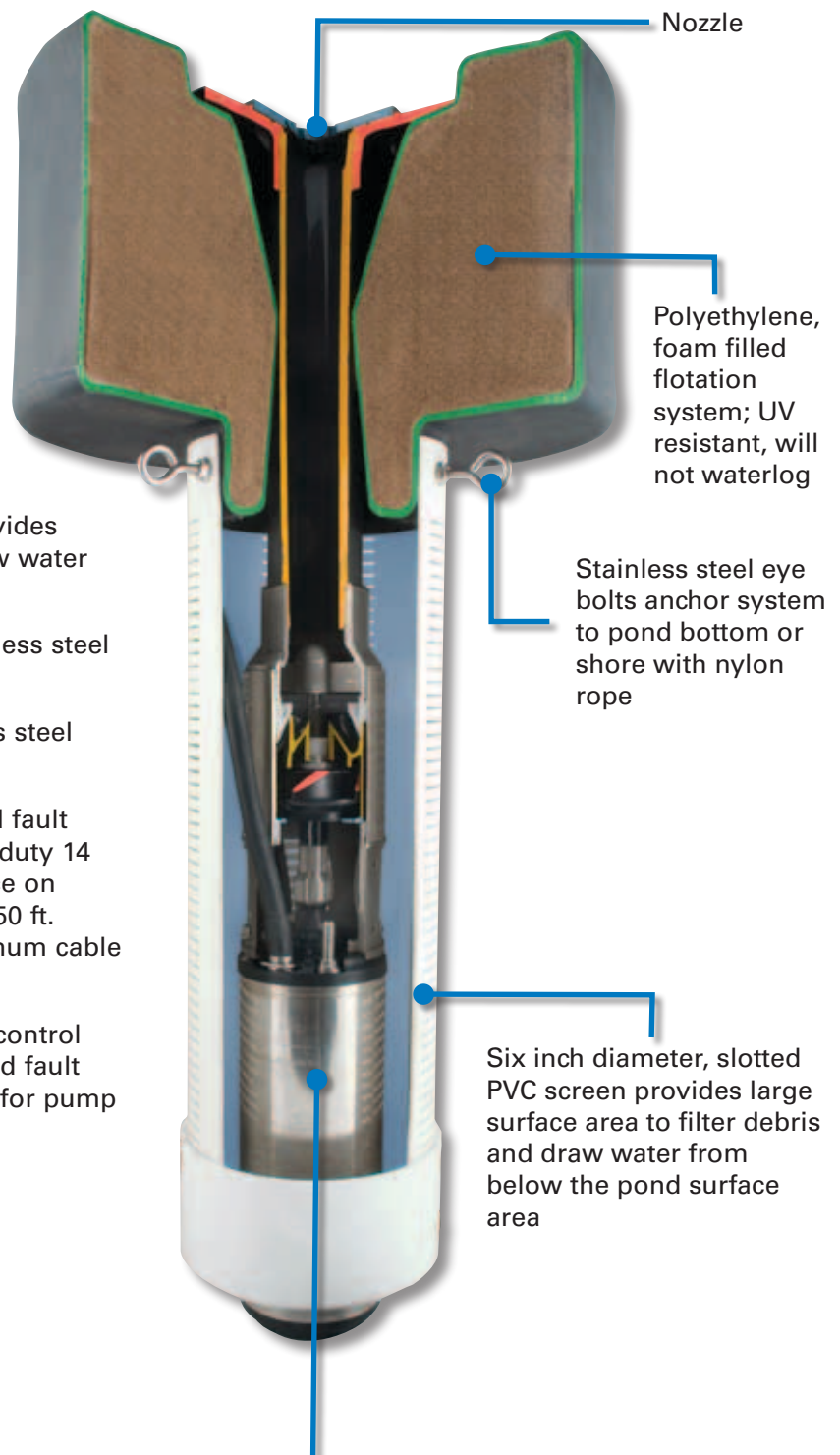
Six inch diameter, slotted PVC screen provides large surface area to filter debris and draw water from below the pond surface area

Four inch diameter pump fitted with stainless steel and thermal plastic components

Water-cooled Franklin motor with stainless steel shell. Oil-free design. Single phase, 230V

100 ft. S00W waterproof cord with ground fault interruptor on 115V models. 100 ft. heavy duty 14 Ga. waterproof cord with heat shrink splice on 230V models. Optional cable available in 50 ft. increments up to 150 ft. additional. Maximum cable length 250 ft.

230V models include rain-proof, lockable control center. Includes internally mounted ground fault interrupter and 24 hour adjustable timers for pump and optional lights.



Four inch diameter pump and motor fitted with stainless steel and thermal plastic components for maximum corrosion resistance



FLINT & WALLING

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Products for the Irrigation Market

CONSTANT PRESSURE CONTROLS FOR CENTRIFUGALS

Artesian Drive®

Artesian Drive® is a line of custom programmed Variable Speed Drives (VFD) that enhance the performance of standard centrifugal pumps. When applied correctly to three phase motor driven pumps, the Artesian Drive® eliminates pressure cycling associated with conventional pressure switch controlled water pumping systems and provides a constant output pressure by increasing or decreasing motor speed, based upon demand.

Artesian Drive® is factory programmed for F&W centrifugal pumps to provide optimum performance and motor protection. The Artesian Drive can be used with other pump brands, providing the pump is powered by a three phase motor that does not exceed the maximum current output rating of the drive.



INCLUDED ITEMS

- Factory programmed variable speed drive unit
- NEMA 1 enclosure
- Pressure sensor, preset at 50 PSI
- Sensor adjustment tool
- Sensor cable (10 ft.)

FEATURES

- Pre-programmed Drives: No need for field technician to program the drive at the site
- Drives are available for any 1 thru 20 HP centrifugal pump that is powered by a three phase motor
- Drives up to 3 HP permit the use of widely available 230 volt, single phase power source
- Constant water pressure with a wide range of settings (30 - 80 PSI)*
- Pressure is easily adjusted with a 7/32" allen wrench
- Works with a small pressure tank or a larger tank, already in place
- No in-rush current at startup
- Soft start reduces mechanical/electrical stress, prolonging pump and motor life
- Built-in protection and diagnostics
 - Motor overload
 - Locked or bound pump - with auto reversing torque
 - Low line voltage
 - Short circuit
 - High voltage / lightning protection
 - Dry run conditions, using intelligent load monitoring
 - Overheated drive with automatic reset

NOTE: The maximum obtainable system pressure is limited by the performance of the pump installed.

Products for the Irrigation Market



FLINT & WALLING

Zoeller Family of Water Solutions™

CONSTANT PRESSURE CONTROLS FOR CENTRIFUGALS

DRIVE SPECIFICATIONS AND DIMENSIONS

Model Number		AD052045	AD070059	AD096074	AD096096	AD150145	AD220210	AD280280	AD420410	AD540530
Input from power source	Voltage	180 -264 AC (Single orThree Phase)					180 -264 AC (Three Phase)			
	Frequency	50/60 Hz								
	Current (Max) - RMS	14.2 Amps 1ø (6.7 Amps 3ø)	17.4 Amps 1ø (8.7 Amps 3ø)	23.2 Amps 1ø (11.9 Amps 3ø)	23.2 Amps 1ø (11.9 Amps 3ø)	29.5 Amps 1ø (15.7 Amps 3ø)	22.6 Amps	28.3 Amps	43.1 Amps	54.3 Amps
	Power Factor	1.0 (constant)								
Output to Motor (Three Phase)	Voltage	Voltage Automatically Adjust with Frequency (0 thru 230 Volts)								
	Frequency Range	15 - 60 Hz								
	Current, Factory Programmed* (RMS, Each Phase)	4.5 Amps	5.9 Amps	7.4 Amps	9.6 Amps	14.5 Amps	20.0 Amps	28.0 Amps	41.0 Amps	53.0 Amps
	Current (Max) (RMS, Each Phase)	5.2 Amps	7.0 Amps	9.6 Amps	9.6 Amps	15.0 Amps	21.0 Amps	28.0 Amps	42.0 Amps	54.0 Amps
For Use With	Motor	Standard 60 Hz. Pump & 230 Volt 3 Phase Motor Combination								
	Reference HP Rating*	1	1.5	2	3	5	7.5	10	15	20
Pressure Setting	Factory preset	50 PSI								
	Adjustable Range	30 - 80 PSI								
Operating Conditions	Temperature (@ 230 VAC input)	10° to 40° C (14° to 104° F)						0° to 50° C (32° to 122° F)		
	Relative Humidity	Max 95% Non-condensing								
Controller Size	NEMA 1 (indoor)	10.47" H x 3.35" W x 6.15" D	12.54" H x 3.94" W x 6.90" D		15.60" x 4.48" x 8.05"		14.5" H x 6.1" W x8.6" D		14.5" H x 9.9" W x10.4" D	
Weight		2.9 lbs.	3.1 lbs.	4.6 lbs.	4.6 lbs.	9.9 lbs.	15.4 lbs.	15.4 lbs.	33.1 lbs.	

RMS = ROOT MEAN SQUARED

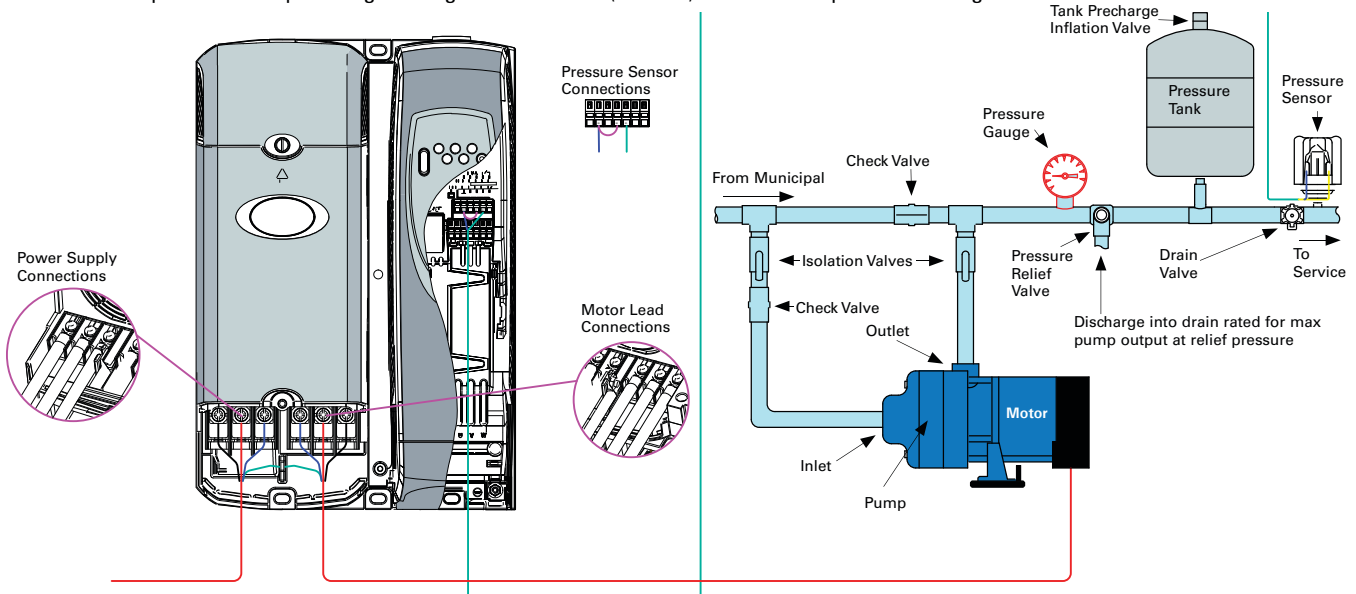
*The electrical characteristics of motors vary slightly. See Amp draw on motor nameplate. If the maximum motor current value (Amp draw) is more than 5% of the programmed value of the Drive, the Drive will need to be set to the current value of the motor to provide proper protection..

The Artesian Drive® needs only a small Captive Air pressure tank to maintain constant pressure. A larger tank can be used if desired.

MINIMUM PRESSURE TANK SIZE

TANK SIZE	PUMP CAPACITY		
	Less than 12 GPM	Greater than 12 GPM but less than 25 GPM	Greater than 25 GPM
TOTAL VOLUME	4 Gallon (AT15)	8 Gallon (AT25)	14 Gallon (AT44)

The pressure tank pre-charge setting should be 70% (± 2 PSI) of the sensor pressure setting.



Flint & Walling | 95 North Oak Street | Kendallville, IN 46755
800-345-9422 | www.flintandwalling.com



FLINT & WALLING

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Products for the Irrigation Market

COMPLETE VARIABLE SPEED DRIVE PACKAGES

"Cruise Control for your Irrigation Water System"

- Energy efficient - conserves electricity
- Pre-programmed with seven built-in self-diagnostic test features for comprehensive system protection
- Maintains consistent pressure for multiple sprinkler zone applications
- Saves water with fully adjustable pressure sensor — eliminates water fluctuation for consistent zone spray from 30 to 85 PSI
- Factory tested and preset to exact engineering specifications
- Soft start/stop technology extends pump life and reduces water hammer



**NEMA 1
Enclosure for
indoor use only**

Model	Description
ADS101C203	2 HP 3 Phase with 1 phase incoming
ADS101C303	3 HP 3 Phase with 1 phase incoming
ADS22253	5 HP 3 Phase with 3 phase incoming
ADS22273	7 HP 3 Phase with 3 phase incoming

Products for the Irrigation Market



FLINT & WALLING

Zoeller Family of Water Solutions™

CONSTANT PRESSURE PUMPING STATIONS

Deliver Flow and Pressure Where You Want It!

Artesian Drive® pumping stations adapt to your changing flow requirements, using a pump control system to deliver constant pressure at any flow required.

Significant energy savings from variable speed drives make constant speed pumps obsolete.

Golf Course Irrigation



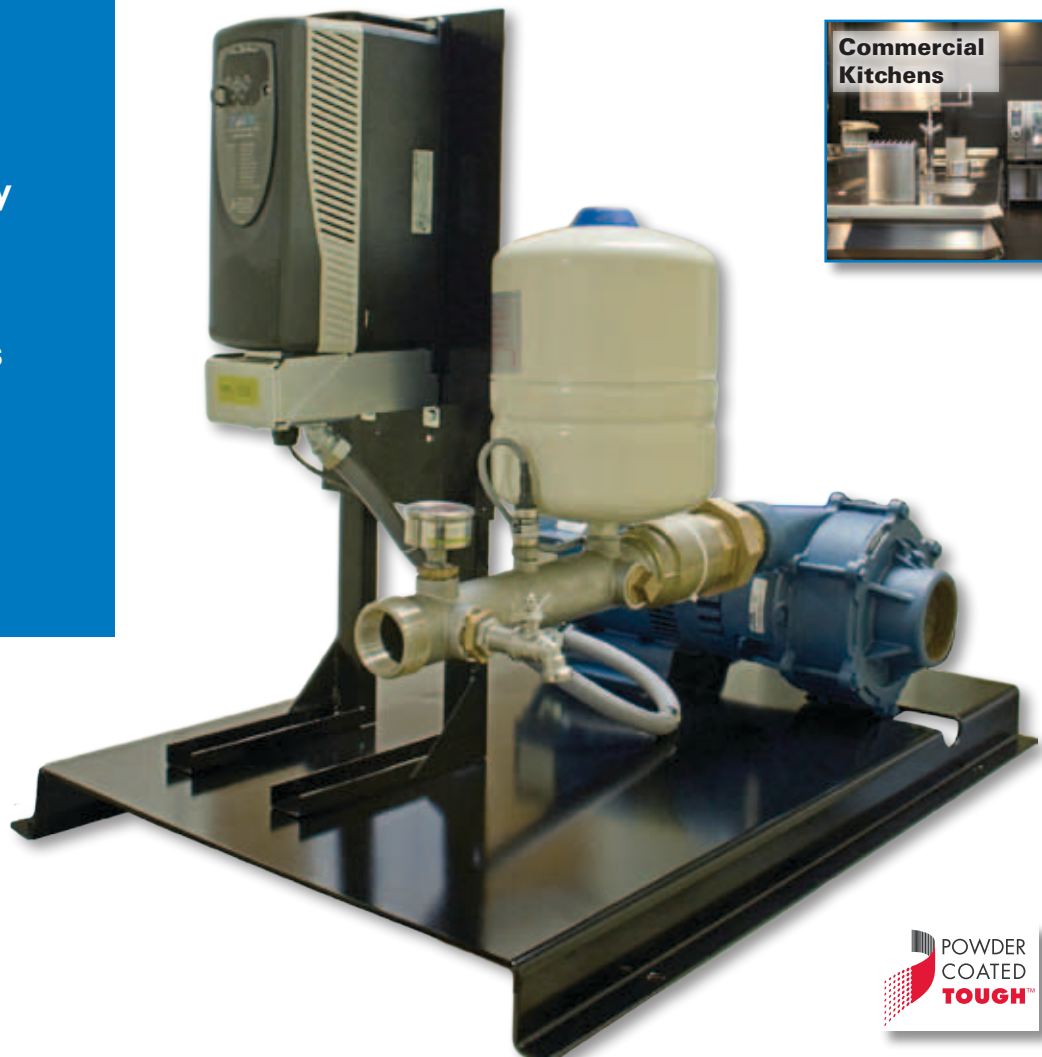
Poultry Operations



Nurseries



Commercial Kitchens



Products for the Irrigation Market



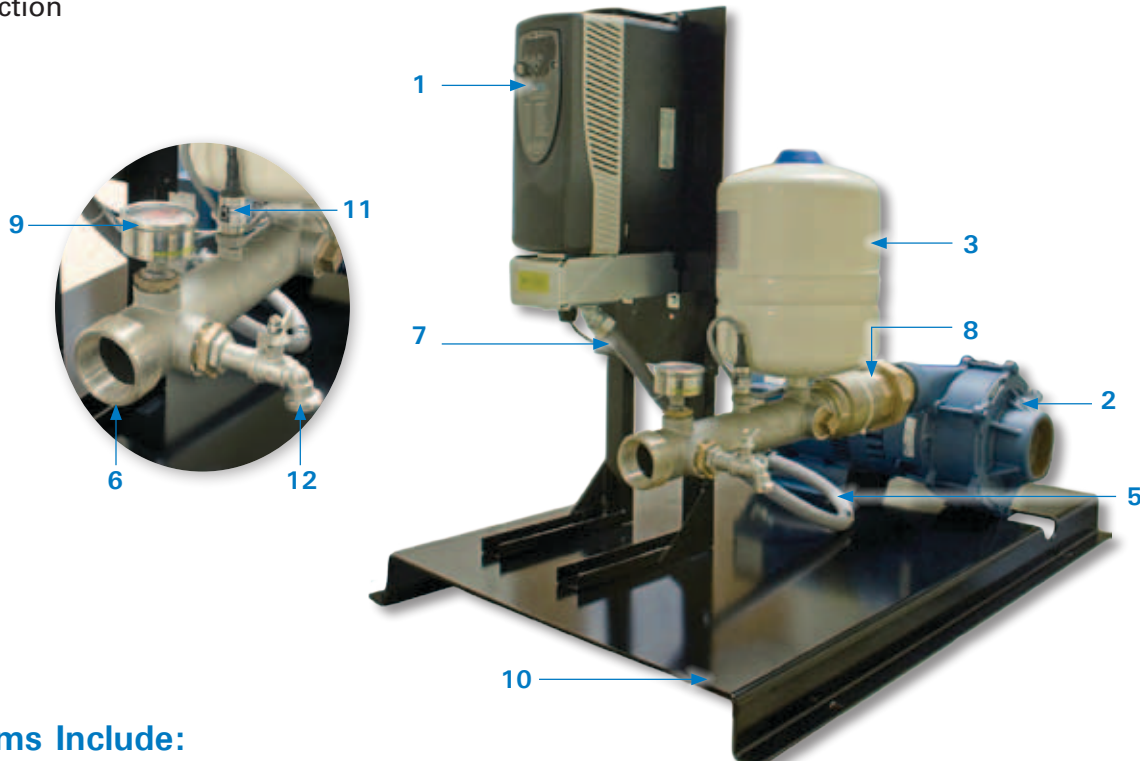
FLINT & WALLING

Zoeller Family of Water Solutions™

CONSTANT PRESSURE PUMPING STATIONS

Features and Benefits:

- Artesian Drive constant pressure pumping stations provide constant water pressures
- Pre-plumbed, pre-wired, pre-programmed and pressure tested. Typical installation time takes less than 1 hour
- Models available up to 145 gallons per minute in 3 HP, 5 HP, and 7.5 HP
- Variable frequency drive operates on 230 volt single or three phase power – With three phase output to motor
- Advanced 'on board' diagnostics and pump protection
- Energy efficient – uses significantly less electricity than conventional centrifugal pump applications
- 3" suction with 2" discharge for easy installation
- Includes check valve, gauges and unions for easy serviceability
- 'Powder Coated Tough' skid, panel, and supports to resist rust and corrosion. Efficient in size - Fits through any 27" access door



Systems Include:

1. Artesian Drive® variable speed controller drive assembly can rotate 90° for flexibility
2. Centrifugal pump with brass impellers and 'Power Plus' motor
3. Air-E-Tainer diaphragm tank
4. Thermal sensor (not shown)
5. Sealtight conduit
6. 2" Stainless steel manifold for gauge, transducer and hose bib
7. 3 Phase output to motor
8. 2" brass outlet check valve
9. Premium liquid filled gauge
10. "Powder-coated tough" skid
11. Pressure transducer
12. Hose bib