



ARTIFICIAL LIFT SYSTEMS

ELECTRIC SUBMERSIBLE
PROGRESSIVE CAVITY
PUMP SYSTEMS

Progressive Cavity Pump Systems

Franklin Electric's newest system solution combines years of tested technology to create a packaged system designed specifically for coalbed methane applications. Franklin's progressive cavity pump, coupled with the Franklin CBM+ motor, is designed to address the demands of CBM pumping applications. Traditionally, progressive cavity pumps are known to operate in the harshest conditions. Now as a Franklin system, together the progressive cavity pump and CBM+ motor provide the confidence needed to know that you have the most robust, dependable system available in the industry.

These pumps are designed to run between 20 Hz and 40 Hz so we recommend the use of our Artificial Lift drive systems which limit the operational frequency to this range. The Artificial Lift drives also incorporate superior protection algorithms and are designed to handle the large motor load required with these pumps. Please see the Artificial Lift drives and controls brochure for more information.

PUMP FEATURES

All ESPCP Pumps (Standard Low Temp, HNBR Low Temp, and HNBR High Temp)

- Franklin Electric exclusive direct drive system (no gear box)
- High head design allows for operation in depths to 3300 ft / 1000 meters
- Abrasive-resistant progressive cavity technology
- Stainless steel rotor is chrome plated for extra abrasion resistance
- Franklin Electric exclusive spring ball check valve.

ESPCP Standard Low Temp Pumps

The Standard ESPCP pumps are ideal for coalbed methane applications where hydrocarbons are not present. These models have an ambient temperature rating of 122 °F/50 °C.

ESPCP HNBR Low Temp Pumps

Ideal for applications where hydrocarbons and increased oil are present, these models include all of the standard ESPCP pump features along with a higher oil tolerance and hydrocarbon-resistant elastomeric stator.

ESPCP HNBR High Temp Pumps

Ideal for applications where hydrocarbons and increased oil are present, these models include all of the standard ESPCP pump features along with a higher oil tolerance as well as a higher ambient temperature range. The higher oil cut tolerance is realized by the hydrocarbon-resistant elastomeric stator. The 5-10 hp High Temp ESPCP pumps have an ambient temperature range of 113 °F/45 °C to 176 °F/80 °C. The 15 hp High Temp ESPCP pump has an ambient temperature range of 113 °F/45 °C to 158 °F/70 °C.



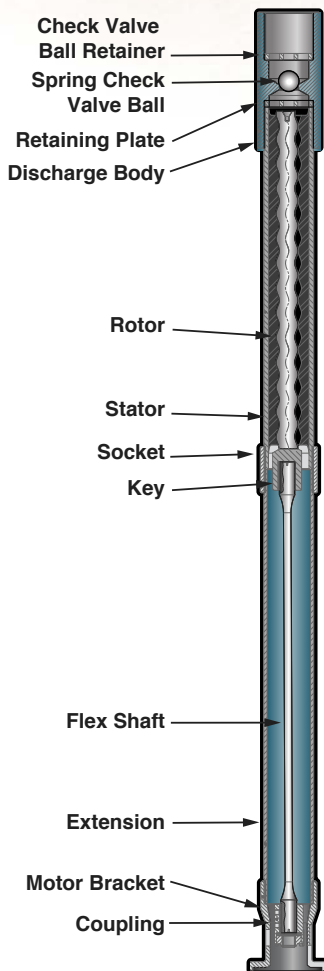
PROGRESSIVE CAVITY PUMPS

Coalbed Methane Models

Ordering Information

Progressive Cavity Pumps - A-Depths 1600 ft / 500 m				
Model	Order Number	BPD	US GPM	LPM
75FPC 05/3.7 A4	87811	75	2	7.5
150FPC 07/5.5 A4	87265	150	4	15
300FPC 10/7.5 A4	87804	300	8	30
75FPC 05/3.7 A4 H	83051	75	2	7.5
150FPC 07/5.5 A4 H	83053	150	4	15
300FPC 10/7.5 A4 H	83055	300	8	30
75FPC 05/3.7 A4 HT	83057	75	2	7.5
150FPC 07/5.5 A4 HT	83059	150	4	15
300FPC 10/7.5 A4 HT	83061	300	8	30

Progressive Cavity Pumps - B-Depths 3300 ft / 1000 m				
Model	Order Number	BPD	US GPM	LPM
75FPC 07/5.5 B4	87818	75	2	7.5
150FPC 10/7.5 B4	87257	150	4	15
300FPC 15/11.2 B4	87262	300	8	30
75FPC 07/5.5 B4 H	83052	75	2	7.5
150FPC 10/7.5 B4 H	83054	150	4	15
300FPC 15/11.2 B4 H	83056	300	8	30
75FPC 07/5.5 B4 HT	83058	75	2	7.5
150FPC 10/7.5 B4 HT	83060	150	4	15
300FPC 15/11.2 B4 HT	83062	300	8	30



ESPCP Nomenclature Guide

150 FPC 07/5.5 A4 HT

150 = Flow rate (options: 75, 150, 300 bpd)

FPC = Pump series (Franklin Progressive Cavity)

07/5.5 = Motor rating (options: 05/3.7 = 5 hp/3.7 kW, 07/5.5 = 7.5 hp/5.5 kW, 10/7.5 = 10 hp/7.5 kW, 15/11.2 = 15 hp/11.2 kW)

A = Pumping depth 4 = 4" Pump (options: A = 1,600 ft/500 m, B = 3,300 ft/1,000 m)

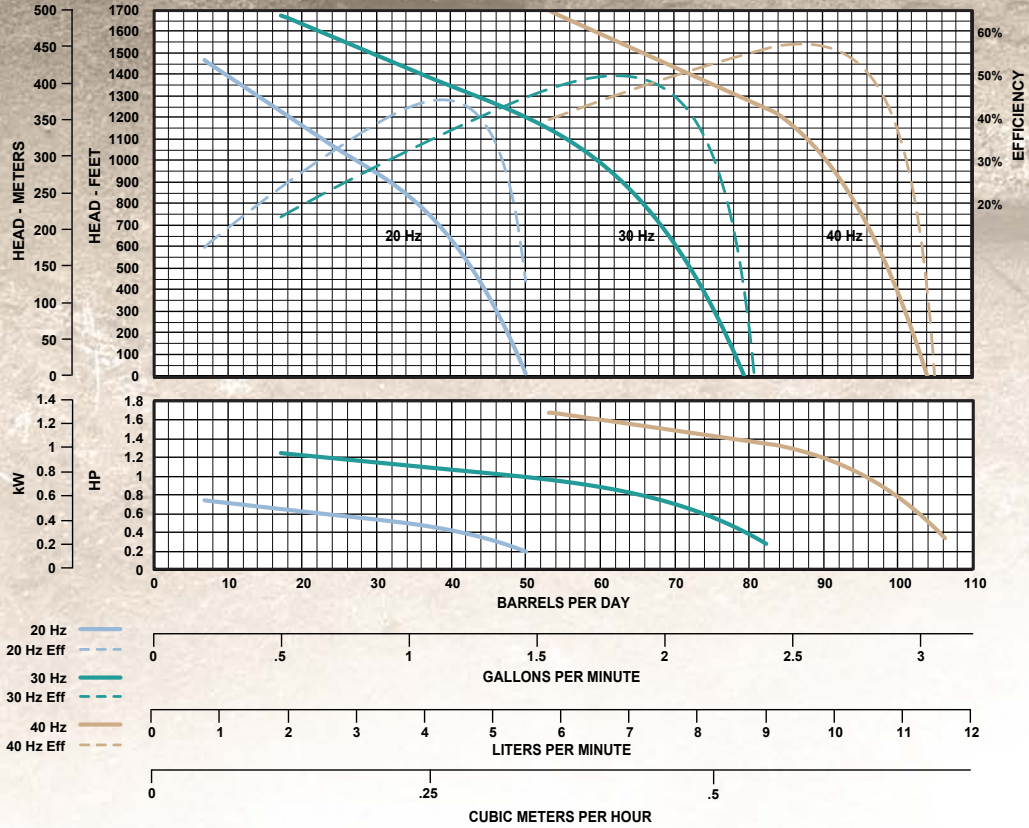
HT = Pump model (options: blank = Standard Low Temp, H = HNBR Low Temp, HT = HNBR High Temp)

PROGRESSIVE CAVITY PUMPS

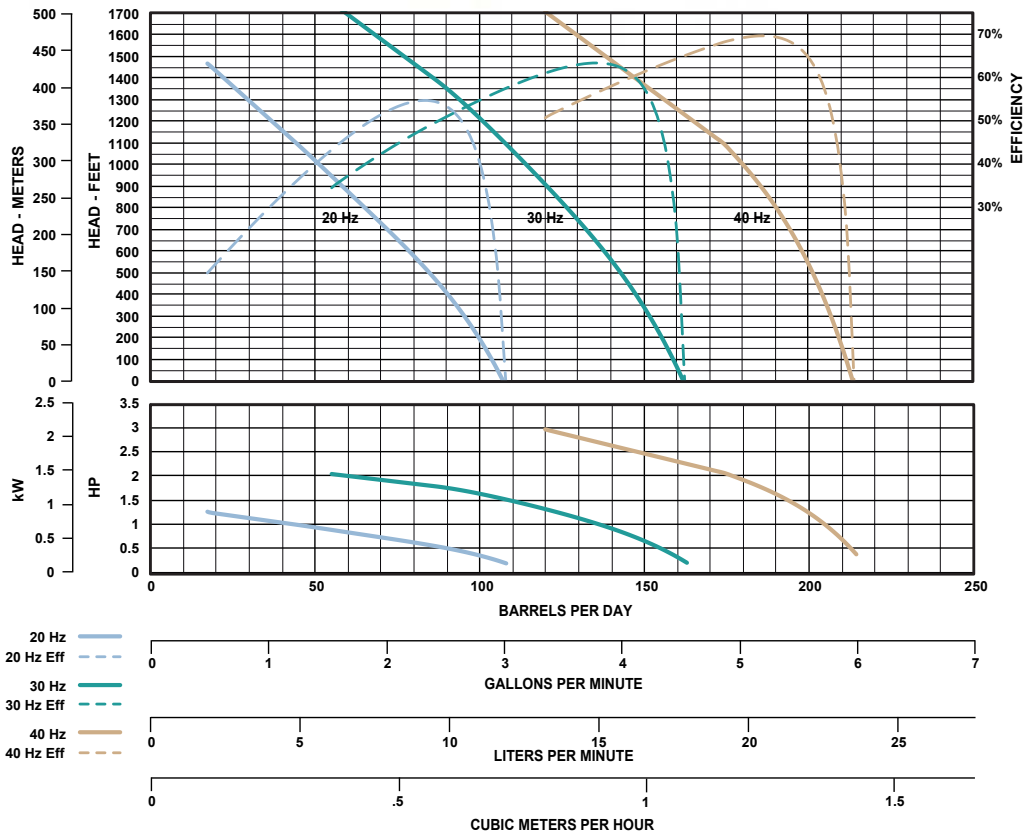
Materials of Construction

Component	Material
Coupling	304 Stainless Steel
Motor bracket	CF8M Investment Casting (316 SS)
Extension	ASTM 312 - 316 Stainless Steel
Flex shaft	EN57 ANSI 431 Stainless Steel
Socket	316 Stainless Steel
Stator	Nitrile Rubber/Epoxy-Coated Steel Housing
Rotor	304 Stainless Steel
Key	304 Stainless Steel
Discharge body	CF8M Investment Casting (316 SS)
Retaining plate	Bronze
Check valve ball	316 Stainless Steel
Check valve ball retainer	316 Stainless Steel

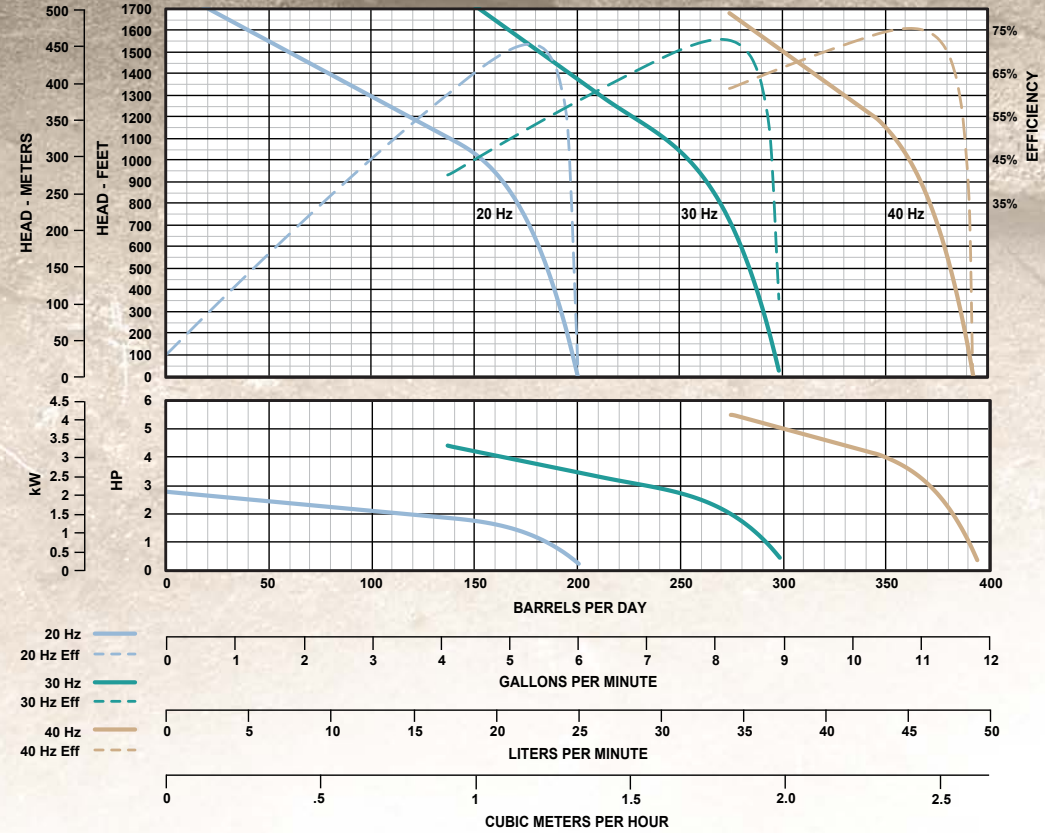
PERFORMANCE CURVE TYPICAL 75FPC 05/3.7 A-PERFORMANCE



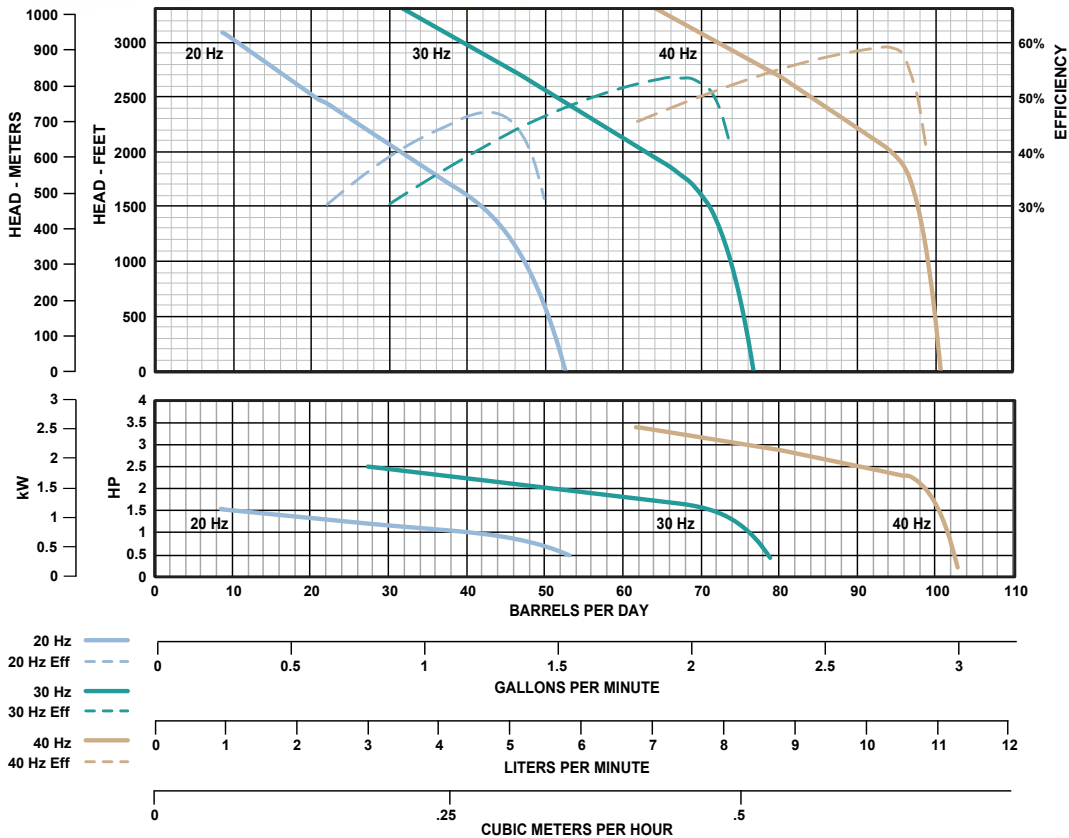
PERFORMANCE CURVE TYPICAL 150FPC 07/5.5 A-PERFORMANCE



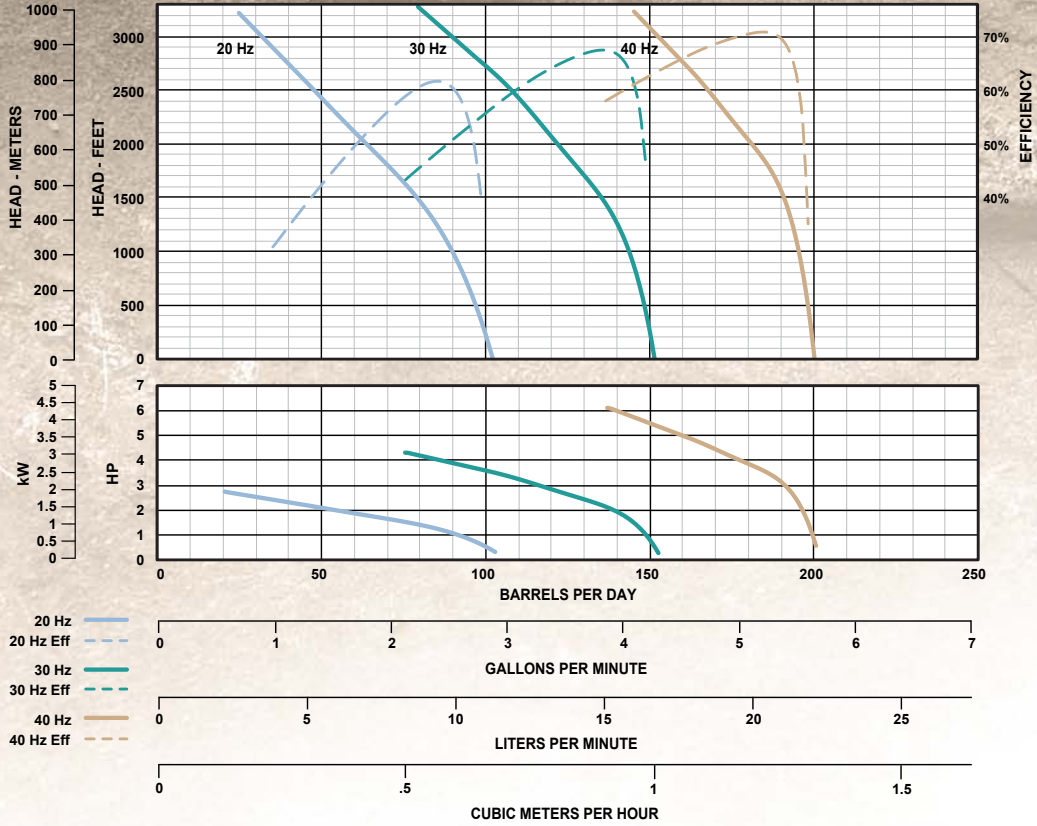
PERFORMANCE CURVE TYPICAL 300FPC 10/7.5 A-PERFORMANCE



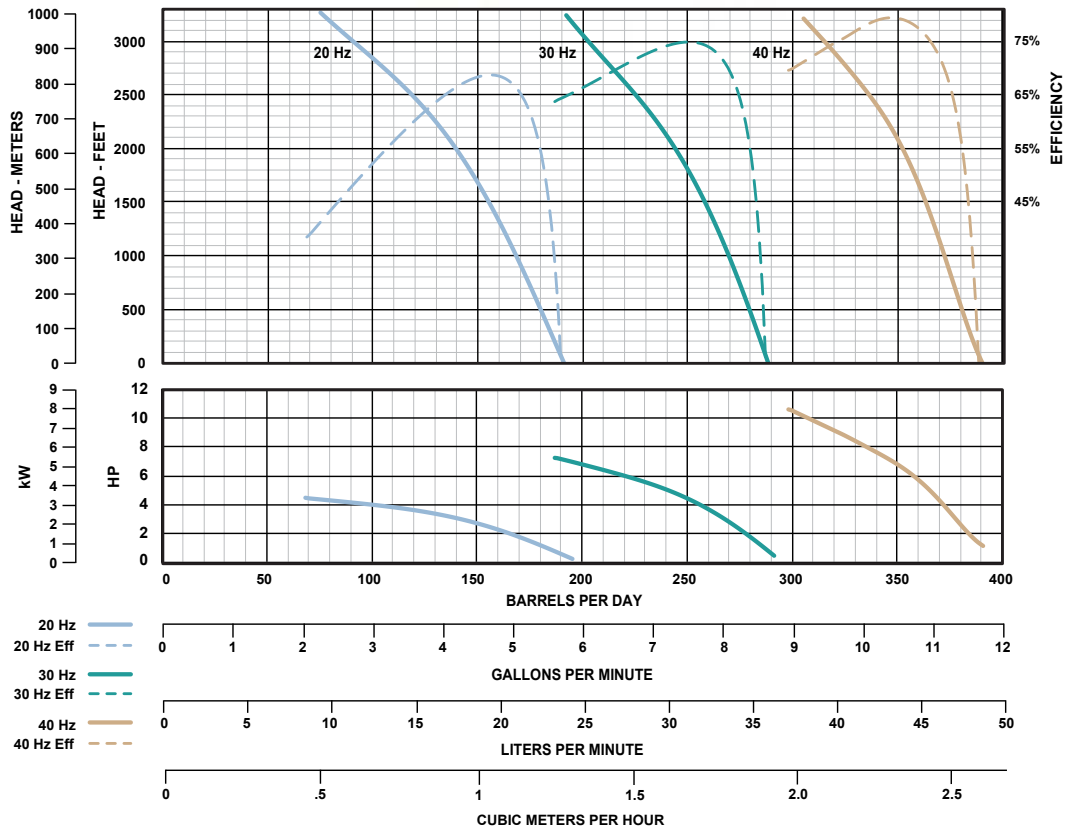
PERFORMANCE CURVE TYPICAL 75FPC 07/5.5 B-PERFORMANCE



PERFORMANCE CURVE TYPICAL 150FPC 10/7.5 B-PERFORMANCE



PERFORMANCE CURVE TYPICAL 300FPC 15/11.2 B-PERFORMANCE



ELECTRIC SUBMERSIBLE PROGRESSIVE CAVITY PUMPS

75-300 BPD

Weights and Dimensions A-Performance

Model	"A" Dimensions		"B" Dimensions		"Lp" Dimensions		Shipping Weight		Discharge
	in	mm	in	mm	in	mm	lbs	kg	NPT
75FPC 05/3.7 A4	3.75	95	3.07	78	37.89	962.5	24	11	2"
150FPC 07/5.5 A4	3.75	95	3.07	78	45.76	1,162.5	30	13.5	2"
300FPC 10/7.5 A4	3.75	95	3.07	78	55.33	1,405.5	36	16.5	2"
75FPC 05/3.7 A4 H	3.75	95	3.07	78	37.89	962.5	24	11	2"
150FPC 07/5.5 A4 H	3.75	95	3.07	78	45.76	1,162.5	30	13.5	2"
300FPC 10/7.5 A4 H	3.75	95	3.07	78	55.33	1,405.5	36	16.5	2"
75FPC 05/3.7 A4 HT	3.75	95	3.07	78	37.89	962.5	24	11	2"
150FPC 07/5.5 A4 HT	3.75	95	3.07	78	45.76	1,162.5	30	13.5	2"
300FPC 10/7.5 A4 HT	3.75	95	3.07	78	55.33	1,405.5	36	16.5	2"

Weights and Dimensions B-Performance

Model	"A" Dimensions		"B" Dimensions		"Lp" Dimensions		Shipping Weight		Discharge
	in	mm	in	mm	in	mm	lbs	kg	NPT
75FPC 07/5.5 B4	3.75	95	3.07	78	45.75	1,162	44	20	2"
150FPC 10/7.5 B4	3.75	95	3.07	78	61.50	1,562	51	23	2"
300FPC 15/11.2 B4	3.75	95	3.07	78	75.00	1,905	56	25.5	2"
75FPC 07/5.5 B4 H	3.75	95	3.07	78	45.75	1,162	44	20	2"
150FPC 10/7.5 B4 H	3.75	95	3.07	78	61.50	1,562	51	23	2"
300FPC 15/11.2 B4 H	3.75	95	3.07	78	75.00	1,905	56	25.5	2"
75FPC 07/5.5 B4 HT	3.75	95	3.07	78	45.75	1,162	44	20	2"
150FPC 10/7.5 B4 HT	3.75	95	3.07	78	61.50	1,562	51	23	2"
300FPC 15/11.2 B4 HT	3.75	95	3.07	78	74.92	1,903	56	25.5	2"

CBM+ SUBMERSIBLE MOTORS Model Availability

5-15 hp, 460/380 Volts - 60/50 Hz

Three-Phase								
Order No.	HP	KW	Nominal Amps (A)		"LM" Dimensions		Shipping Weight	
			@ 50 Hz	@ 60 Hz	in	mm	lbs	kg
2347273525L	5	3.7	9.2	8.5	22.9	582	59	26.8
2347283525L	7.5	5.5	12.5	12.4	27.8	707	74	33.6
2347293525L	10	7.5	17.1	16.8	30.9	785	80	36.3
2346268995	15	11.2	26.5	26.5	47.5	1208	115	52.3

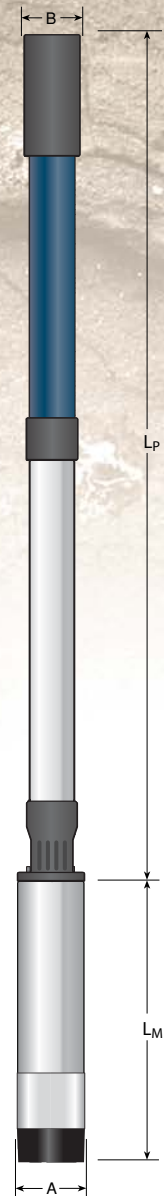
5-15 hp, 380 Volts - 60 Hz

Three-Phase								
Order No.	HP	KW	Nominal Amps (A)		"LM" Dimensions		Shipping Weight	
			@ 60 Hz		in	mm	lbs	kg
2347473527L	5	3.7	10.8		22.9	582	59	26.8
2347483527L	7.5	5.5	15.0		27.8	707	74	33.6
2347493527L	10	7.5	20.3		30.9	785	80	36.3
2346468995	15	11.2	31.2		47.5	1208	115	52.3

Cable Sizing ESPCP Pump w/400 V-50 Hz CBM+ Motor - units Feet (Meters)

Motor Rating	Pump	6 AWG	4 AWG	2 AWG	10 mm ²	16 mm ²	25 mm ²	35 mm ²	50 mm ²
15 hp/11.2 kW	300 bpd	950	1490	2310	770	1230	1890	2590	3580
	1000 m	(290)	(455)	(705)	(235)	(375)	(575)	(790)	(1090)
10 hp/7.5 kW	150 bpd	1940	3030	4640	1510	2360	3610	4890	6670
	1000 m								
7.5 hp/5.5 kW	300 bpd	3120	4820	7310	2390	3780	5690	7690	-
	500 m								
5 hp/3.7 kW	75 bpd	5540	8510	-	4310	6690	-	-	-
	1000 m								
	500 m	(1690)	(2595)		(1315)	(2040)			

Refer to the CBM+ Motor literature for more information on these motors.
All weights and dimensions are for estimating purposes only.



ARTIFICIAL LIFT SYSTEMS

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