



Pump Model: **K4RP**

Physical Data:

Discharge Size	ANSI 4" Horizontal
Solids Size	3"
Impeller Type	Balanced, Recessed
Power/Control Cable Length	40' Standard
Paint	Blue, Water Reducible Enamel, One Coat, Air Dried – Standard

Motor Construction:

Motor Type	Enclosed Submersible Oil Filled
NEMA Insulation Code	Class H
Service Factor	1.2
NEMA Design Type	B (3Ø) L (1Ø)
Single Phase Configuration	External Start and Run Components if Applicable
Motor Protection	Thermal Sensors Embedded in the Windings
Maximum Stator Temperature	356°F (180°C)
Power Cord Type	SOOW - 600V, 90° C; Type W - 2000V, 90° C
Control Cord Type	16-4 or 18-5 - SOOW - 600V, 90° C

Materials of Construction:

Cord Entry	Cast Iron, ASTM A48, Class 35
Motor Housing	Cast Iron, ASTM A48, Class 35
Bearing Housing	Cast Iron, ASTM A48, Class 35
Volute	Cast Iron, ASTM A48, Class 35
Impeller	Ductile Iron, ASTM A536, 60-40-18
Shaft	ANSI 400 Stainless Steel
Inboard Mechanical Seal	Silicone Carbide / Silicone Carbide
Outboard Mechanical Seal	Silicone Carbide / Silicone Carbide
Fasteners	ANSI 18-8 Stainless Steel
O-Rings	Nitrile Rubber
Upper Bearing	Conrad Style Single Row Deep Groove Ball Bearing
Lower Bearing	Single Row Angular Contact Ball Bearing
Labyrinth Seal	Bronze, CDA 836



Pump Model: **K4RP – 1150 RPM**

Thermal Data:

Maximum Liquid	140° F (60° C) Intermittent
Maximum Stator	356° F (180° C)
Heat Sensor	Open: 275° F (135° C) Max. / 257° F (125° C) Min.
	Closed: 205° F (96° C) Max. / 154° F (68° C) Min.
Oil Flash Point	390° F (199° C)

Electrical Data:

RPM	1150			
Electrical Ratings	Heat Sensor	24VDC 5AMPS	115VAC 5AMPS	230VAC 5AMPS
	Seal Fail	300VAC 5mAMPS		
Voltage Tolerance	± 10%			

HP	Voltage	Phase	NEC Code	Service Factor	Full Load AMPS	SF Amps	Locked Rotor AMPS	Run KW	Start KVA	Run KVA
3	208	3	L	1.2	16.0	19.2	99.5	5.2	35.7	5.7
	230				14.4	17.3	89.6			
	460				7.2	8.6	44.8			
	575				5.8	6.9	35.8			
5	208	3	J	1.2	19.5	23.4	99.5	6.3	35.7	7.0
	230				17.6	21.1	89.6			
	460				8.8	10.5	44.8			
	575				7.0	8.4	35.8			

Motor Efficiencies & Power Factor									
HP	Phase	Motor Efficiency %				Power Factor %			
		Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load
3	3	80	78	75	68	61	56	48	39
5	3	81	81	80	76	72	69	62	51



Pump Model: **K4RP – 1750 RPM**

Thermal Data:

Maximum Liquid	140° F (60° C) Intermittent
Maximum Stator	356° F (180° C)
Heat Sensor	Open: 275° F (135° C) Max. / 257° F (125° C) Min.
	Closed: 205° F (96° C) Max. / 154° F (68° C) Min.
Oil Flash Point	390° F (199° C)

Electrical Data:

RPM	1750			
Electrical Ratings	Heat Sensor	24VDC 5AMPS	115VAC 5AMPS	230VAC 5AMPS
	Seal Fail	300VAC 5mAMPS		
Voltage Tolerance	± 10%			

HP	Voltage	Phase	NEC Code	Service Factor	Full Load AMPS	SF Amps	Locked Rotor AMPS	Run KW	Start KVA	Run KVA
5	208	1	C	1.2	26.2	31.4	91.7	5.4	19.1	7.1
	230				22.8	28.3	82.6			
5	208	3	J	1.2	21.6	25.9	129.5	6.9	39.3	7.7
	230				19.3	23.2	116.8			
	460				9.6	11.5	58.1			
	575				7.7	9.2	46.5			
7.5	230	1	D	1.2	37.1	44.5	129.9	8.6	30.0	11.1
7.5	208	3	G	1.2	25.4	30.5	129.5	8.2	46.5	9.1
	230				22.9	27.5	116.8			
	460				11.4	13.7	58.1			
	575				9.1	10.9	46.5			
10	208	3	H	1.2	35.1	42.1	179.0	11.3	64.0	12.5
	230				31.6	37.9	161.2			
	460				15.7	18.8	80.1			
	575				12.5	15.0	63.8			
15	208	3	H	1.2	54.2	65.0	276.4	17.5	99.2	19.4
	230				48.9	58.7	249.4			
	460				24.4	29.3	124.4			
	575				19.4	23.3	98.9			



Motor Efficiencies & Power Factor									
HP	Phase	Motor Efficiency %				Power Factor %			
		Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load
5	1	77	78	78	68	97	97	95	87
5	3	80	78	73	67	77	73	66	58
7.5	1	77	77	75	67	98	98	97	92
7.5	3	80	80	79	73	82	80	76	66
10	3	80	81	79	75	81	79	75	66
15	3	80	82	81	79	80	78	71	60



Pump Model: **K4RP – 3450 RPM**

Thermal Data:

Maximum Liquid	140° F (60° C) Intermittent
Maximum Stator	356° F (180° C)
Heat Sensor	Open: 275° F (135° C) Max. / 257° F (125° C) Min.
	Closed: 205° F (96° C) Max. / 154° F (68° C) Min.
Oil Flash Point	390° F (199° C)

Electrical Data:

RPM	3450			
Electrical Ratings	Heat Sensor	24VDC 5AMPS	115VAC 5AMPS	230VAC 5AMPS
	Seal Fail	300VAC 5mAMPS		
Voltage Tolerance	± 10%			

HP	Voltage	Phase	NEC Code	Service Factor	Full Load AMPS	SF Amps	Locked Rotor AMPS	Run KW	Start KVA	Run KVA
7.5	208	3	J	1.2	29.4	35.3	206.6	9.5	75.2	7.2
	230				26.5	31.8	186.1			
	460				13.2	15.9	93.0			
	575				10.6	12.7	74.4			
10	208	3	J	1.2	40.5	48.6	206.6	13.1	75.2	7.4
	230				36.5	43.8	186.1			
	460				18.2	21.9	93.0			
	575				14.6	17.5	74.4			
15	208	3	H	1.2	56.1	67.3	286.1	18.2	102.8	11.9
	230				50.5	60.6	257.8			
	460				25.3	30.3	128.9			
	575				20.2	24.3	103.1			
20	230	3	H	1.0	60.6	60.6	287.9	19.9	102.8	16.1
	460				30.3	30.3	143.9			



Section VORTEX

Dated APR 2016

Motor Efficiencies & Power Factor									
HP	Phase	Motor Efficiency %				Power Factor %			
		Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load
7.5	3	75	73	67	58	80	75	69	59
10	3	77	76	73	65	83	81	75	65
15	3	80	78	74	62	76	74	69	59
20	3	82	79	75	63	75	73	68	58