12” Discharge – 2-Vane Enclosed Impeller

6” Solids Handling

1750 & 1150 & 870 RPM

This section contains the following material:

1. **Pump Family Curves & Technical Data**	• K12VK
2. **Individual Performance Curves**	• K12VK
3. **Dimensional Drawings** Pump Lift-Out & Base Elbow Wet Well Installations	• K12VK

Ashland, Ohio 44805
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12” Solids-Handling Pumps

Model Number Identification Chart

K 12 VK 50 - 21 M 2 Y

Keen Pump

Discharge Size:
12 = 12”

Pump Model

Horsepower (HP x 10)
30 = 3 HP
50 = 5 HP
75 = 7-1/2 HP
100 = 10 HP
150 = 15 HP
200 = 20 HP
250 = 25 HP
300 = 30 HP
400 = 40 HP
500 = 50 HP

Voltage/Phase
01 = 208/1
21 = 230/1
03 = 208/3
23 = 230/3
43 = 460/3
53 = 575/3

Manual Pump Operation

Speed
2 = 3450 RPM
4 = 1750 RPM
6 = 1150 RPM
8 = 870 RPM

Frequency
Blank = 60 Hz
Y = 50 Hz

Pump Model: **K12VK**

Physical Data:

Discharge Size	ANSI 12” Horizontal
Solids Size	6”
Impeller Type	Balanced, Enclosed, 2 Vane
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	311ºF (155ºC)
Power Cord Type	SOOW - 600V, 90º C; Type W - 2000V, 90º C
Control Cord Type	16-4 or 18-5 - SOOW - 600V, 90º 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
Wear Ring	Bronze, CDA 836
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: **K12VK – 870 RPM**

Thermal Data:

Maximum Liquid		140º F (60º C) Intermittent
Maximum Stator		311º F (155º C)
Heat Sensor	**Open:**	257º F (125º C) Max. / 239º F (115º C) Min.
	Closed:	194º F (90º C) Max. / 119º F (48º C) Min.
Oil Flash Point		390º F (199º C)

Electrical Data:

RPM		**870**			
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**
15	208	3	K	1.2	54.2	65.0	346.3	17.6	124.5	19.5
	230				48.8	58.6	312.0			
	460				24.4	29.3	156.0			
	575				19.5	23.4	124.8			
20	208	3	G	1.2	67.9	81.5	346.3	22.0	124.5	24.5
	230				61.2	73.4	312.0			
	460				30.6	36.7	156.0			
	575				24.5	29.4	124.8			
25	208	3	H	1.2	82.1	98.5	484.0	26.6	173.9	29.6
	230				74.0	88.8	436.0			
	460				37.0	44.4	218.0			
	575				29.6	35.5	174.4			
30	208	3	G	1.2	94.9	113.9	484.0	30.8	173.9	34.2
	230				85.5	102.6	436.0			
	460				42.7	51.3	218.0			
	575				34.2	41.0	174.4			

Motor Efficiencies & Power Factor									
		Motor Efficiency %				**Power Factor %**			
HP	**Phase**	**Service Factor Load**	**100% Load**	**75% Load**	**50% Load**	**Service Factor Load**	**100% Load**	**75% Load**	**50% Load**
15	3	84	83	79	72	76	73	70	64
20	3	85	84	80	73	77	74	72	64
25	3	86	84	81	74	76	74	71	65
30	3	87	86	85	81	79	78	73	67

Pump Model: **K12VK – 1150 RPM**

Thermal Data:

Maximum Liquid		140º F (60º C) Intermittent
Maximum Stator		311º F (155º C)
Heat Sensor	**Open:**	257º F (125º C) Max. / 239º F (115º C) Min.
	Closed:	194º F (90º C) Max. / 119º F (48º C) Min.
Oil Flash Point		390º F (199º 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
40	208	3	G	1.2	127.8	153.4	651.8	41.4	234.1	45.9
	230				115.1	138.2	587.2			
	460				57.6	69.1	293.6			
	575				46.1	55.3	234.9			
50	208	3	G	1.2	164.8	197.8	840.5	53.3	301.9	59.3
	230				148.5	178.2	575.2			
	460				74.2	89.1	378.6			
	575				59.4	71.3	302.9			
60	460	3	H	1.2	84.5	101.4	507.7	60.6	404.5	67.3
	575				67.6	81.1	406.2			
75	460	3	F	1.2	99.5	119.5	507.7	71.4	404.5	79.4
	575				79.6	95.6	406.2			

Motor Efficiencies & Power Factor									
		Motor Efficiency %				**Power Factor %**			
HP	**Phase**	**Service Factor Load**	**100% Load**	**75% Load**	**50% Load**	**Service Factor Load**	**100% Load**	**75% Load**	**50% Load**
40	3	85	84	80	76	84	82	79	74
50	3	83	82	81	77	86	81	81	75
60	3	84	83	80	78	86	84	83	78
75	3	84	83	80	73	86	86	83	78

Pump Model: **K12VK – 1750 RPM**

Thermal Data:

Maximum Liquid		140º F (60º C) Intermittent
Maximum Stator		311º F (155º C)
Heat Sensor	**Open:**	257º F (125º C) Max. / 239º F (115º C) Min.
	Closed:	194º F (90º C) Max. / 119º F (48º C) Min.
Oil Flash Point		390º F (199º 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**
75	460	3	F	1.2	99.5	119.5	507.7	71.4	404.5	79.3
	575				79.6	95.6	406.2			
100	460	3	F	1.2	132.9	159.5	691.0	95.3	550.5	105.9
	575				106.3	127.6	552.8			
125	460	3	G	1.2	172.1	206.5	962.2	123.4	766.5	137.1
	575				137.7	165.2	769.7			
150	460	3	F	1.2	200.5	240.5	962.2	143.7	766.5	159.7
	575				160.4	192.4	769.7			

Motor Efficiencies & Power Factor									
		Motor Efficiency %				**Power Factor %**			
HP	**Phase**	**Service Factor Load**	**100% Load**	**75% Load**	**50% Load**	**Service Factor Load**	**100% Load**	**75% Load**	**50% Load**
75	3	84	83	79	72	86	83	80	70
100	3	85	84	80	73	87	84	82	74
125	3	83	82	81	74	86	84	81	75
150	3	84	83	80	73	86	86	83	78