



4" Discharge – Vortex Impeller

3" Solids Handling

3450 & 1750 & 1150 RPM

This section contains the following material:

1. Pump Family Curves & Technical Data

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- K4RH
 - K4RN
 - K4RP
 - K4RB

2. Individual Performance Curves

-
- K4RH
 - K4RN
 - K4RP
 - K4RB

3. Dimensional Drawings
Pump
Lift-Out & Base Elbow
Wet Well Installations

-
- K4RH
 - K4RN
 - K4RP
 - K4RB
-

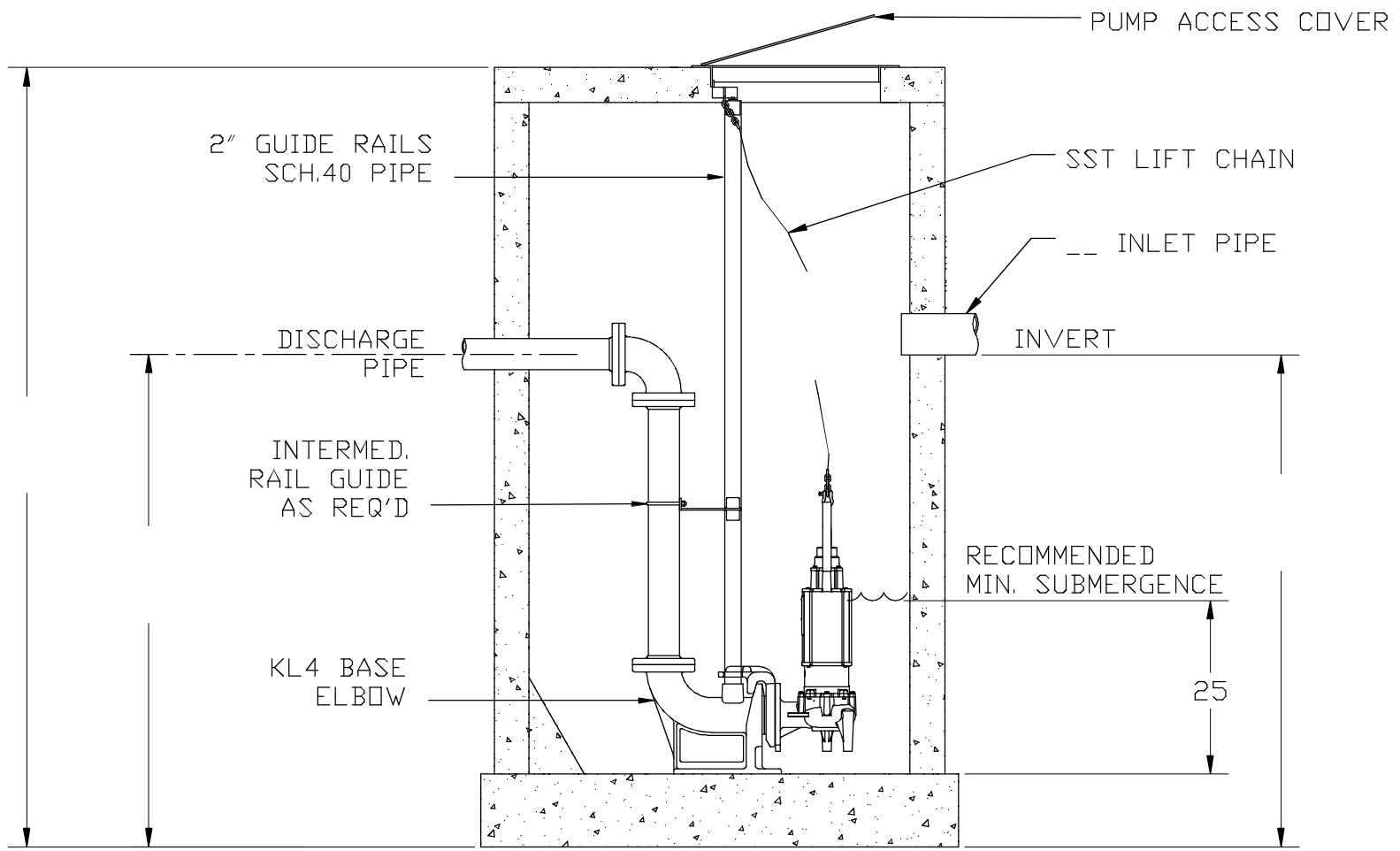
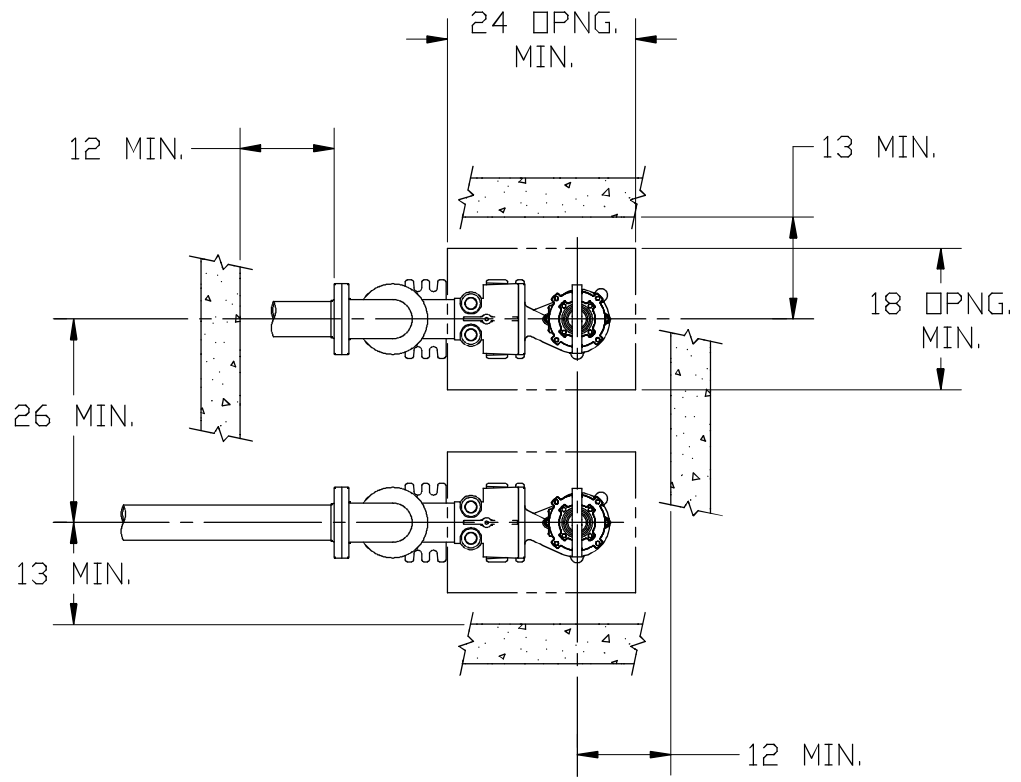


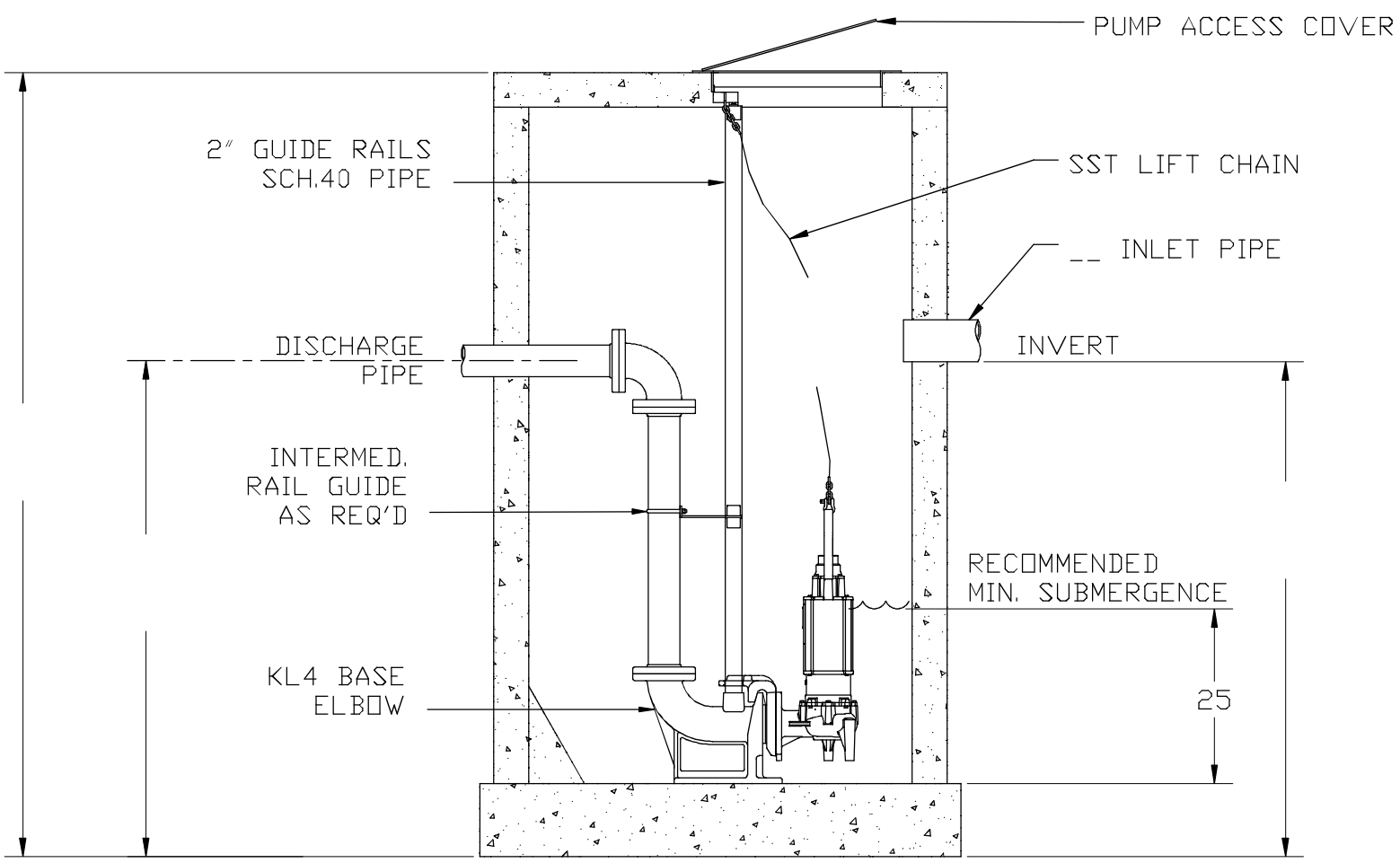
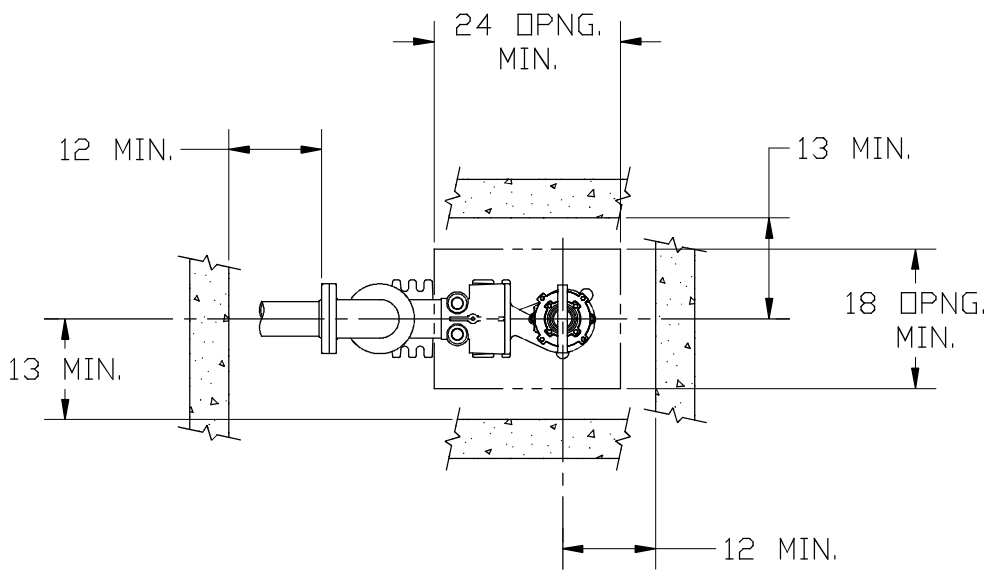


4" Vortex Pumps

Model Number Identification Chart

	<u>K</u>	<u>4</u>	<u>RN</u>	<u>50</u>	-	<u>21</u>	<u>M</u>	<u>2</u>	<u>Y</u>
Keen Pump									
Discharge Size: 3 = 3" 4 = 4"									
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									
Frequency Blank = 60 Hz Y = 50 Hz									







Pump Model: **K4RH – 3450 RPM**

Thermal Data:

Maximum Liquid	140° F (60° C) Intermittent
Maximum Stator	311° F (155° C)
Heat Sensor	Open: 257° F (125° C) Max. / 239° F (115° C) Min.
	Closed: 194° F (90° C) Max. / 119° F (48° 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	230	1	L	1.2	32.5	39.0	113.8	7.5	26.3	9.8
7.5	208	3	L	1.2	22.1	26.5	77.4	6.3	27.9	9.3
	230				19.9	23.9	69.7			
	460				10.0	11.9	34.8			
10	208	3	J	1.2	29.1	34.9	101.9	8.3	36.7	7.3
	230				26.2	31.5	91.8			
	460				13.1	15.7	45.9			
15	208	3	J	1.2	45.2	54.2	158.2	12.8	56.9	7.6
	230				44.1	48.9	142.5			
	460				22.1	24.4	71.3			

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	1	65	65	64	59	86	83	76	62
7.5	3	78	78	75	70	79	76	71	60
10	3	75	76	75	70	79	78	71	59
15	3	74	76	74	68	78	77	72	58



Pump Model: **K4RH**

Physical Data:

Discharge Size	ANSI 4" Horizontal
Solids Size	3"
Impeller Type	Balanced, Vortex, 10-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 F
Service Factor	1.2
NEMA Design Type	B (3Ø) L (1Ø)
Single Phase Configuration	External Start and Run Components
Motor Protection	Thermal Sensors Embedded in the Windings
Maximum Stator Temperature	311°F (155°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	Conrad Style Single Row Deep Groove Ball Bearing
Line Bearing	Bronze, CDA 836