

# KHG(X)3



## 3HP High Head Grinder Pump, 1 or 3 Phase (Class 1, Div. 1, Groups C & D Hazardous Location)

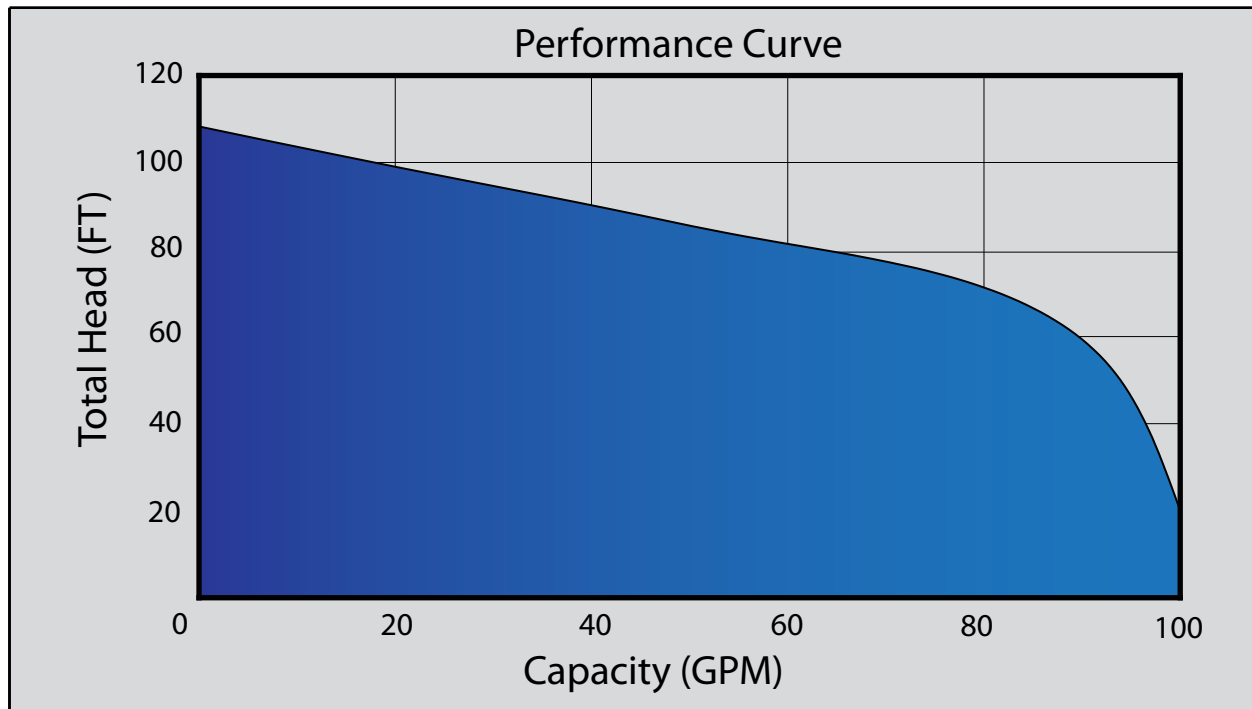


The KEEN PUMP **KHG(X)3** series centrifugal grinder pumps easily handle residential, commercial or industrial sanitary waste, reducing it to a fine slurry. The **KHG(X)3** pump is designed for use in pressure sewer applications or any piping network.

The recessed vortex impeller design of the **KHG(X)3** grinder pump provides trouble-free, non-overloading operation over the entire performance curve. The modular design provides quick and easy serviceability. The hardened stainless steel grinder assembly provides many years of dependable operation.

The **KHG(X)3** series pump features:

- Interchangeable with Competitor Installations
- Dual Silicon-Carbide Mechanical Shaft Seals w/ Viton<sup>®</sup> Elastomers
- Pressed-In Motor with Internal Overload Protection
- 3-Bearing Shaft Support (Upper / Lower / Sleeve)
- Internal Moisture Detection
- Strong Motor, 1-Phase (208/230) Volt or 3-Phase (208/230/460) Volt



## Features and Benefits

### 1. Watertight Cable Entrance

Agency-approved, watertight strain relief cord grip with compression grommet protects outer cord jacket (**FM Explosion-Proof**) or Heavy-duty molded compression grommet protects outer cord jacket. Epoxy-filled inner cord cap provides anti-wicking moisture protection to the motor even if power cable is cut or damaged.

### 2. Modular Pump Design

Commonality of parts across the Keen product line minimizes the amount of parts required for servicing. Heavy-duty ASTM A48, Class 35 cast iron components.

### 3. Strong Motor

Powerful high-torque motor for reliable pump operation. Pressed stator securely holds motor and efficiently transfers heat. Class F insulation with overload protection in oil-filled chamber for cool operation and long motor life.

### 4. 3-Bearing Support

Motor / Pump shaft securely held with upper and lower ball bearing plus additional sleeve bearing in lower seal chamber. Long 100,000 hour L-10 bearing life.

### 5. Double Mechanical Seal Protection

Dual silicon carbide mechanical shaft seals w/ Viton® Elastomers provide twice the moisture protection for the motor. Dual seals are housed in a secondary oil-filled seal chamber. Tougher silicon carbide seals better handle sand, grit and abrasive materials.

### 6. Moisture Detection

Dual Seal leak probe signals alarm in control panel for scheduled maintenance.

### 7. Non-Overloading Hydraulic Design

The recessed centrifugal impeller allows 100% performance curve operation from shut-off to maximum flow without damage to the pump or system. The recessed vortex impeller is out of the passageway of fluid flow, eliminating concerns of blockage or wear.

### 8. Proven Grinder Assembly

Hardened (Rockwell 56-60) stainless steel grinder assembly has 30+ years proven field experience. The reversible grinder ring and grinder impeller effectively reduce solids into a fine slurry, easily passable in a piping system without concerns of clogging. Highly efficient 12,400 cuts/second.

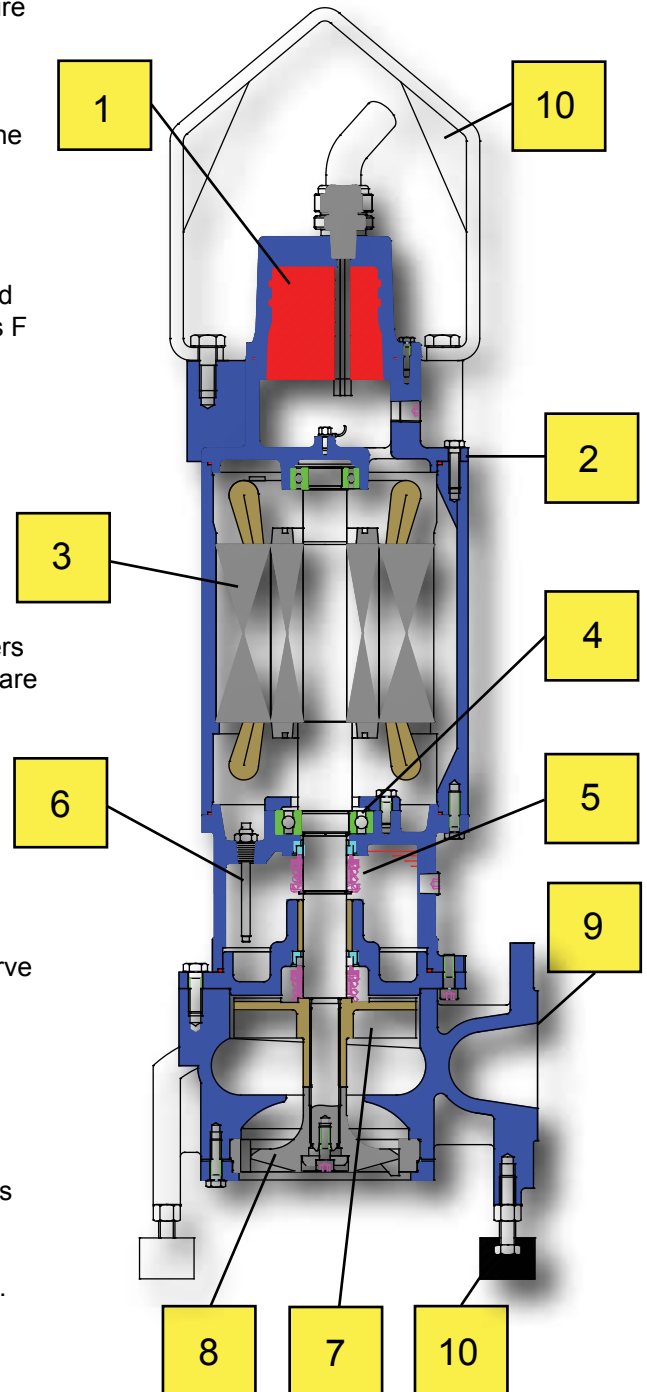
### 9. Versatile Flange Connection

Combination 2-1/2" and 3" horizontal flange. Industry-standard ANSI Class 125 dimensions.

### 10. Accessories

Stainless steel lifting handle included. Anti-vibration nylon

## 3HP Grinder Pump High Head KHG(X)3



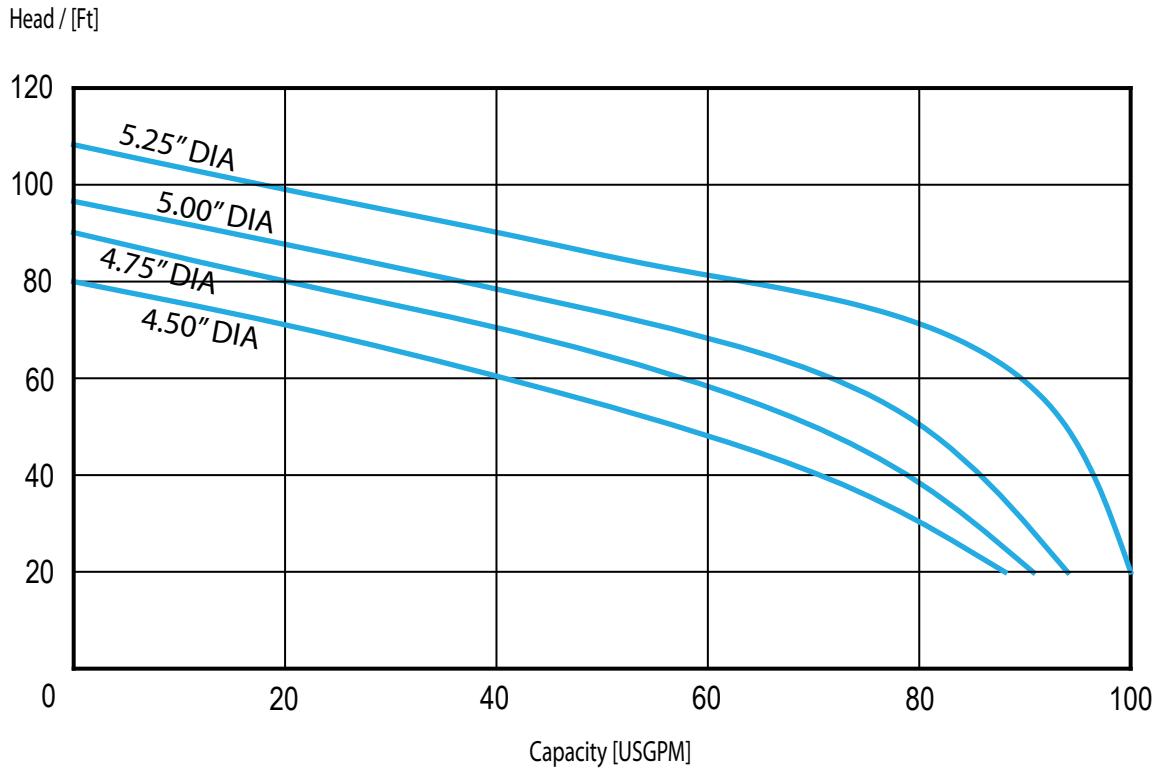
471 US Hwy 250 East · Ashland, Ohio 44805  
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### 3HP SUBMERSIBLE GRINDER PUMP

GENERAL		MOTOR DATA	
Pump Model	<b>KHG(X)3</b>	HP / Power Supply	3HP / 1 $\phi$ , 60 Hz
PUMP DATA		Full Load Amps 208V	27 Amps
Date	01/06/2017	Start Amps 208V	135 Amps
Discharge Flange	2-1/2 & 3" ANSI Horizontal	Full Load Amps 230V	25 Amps
Grinder Ring	25 Slots	Start Amps 230V	125 Amps
Impeller Type / Std. Dia.	Recessed / 5.25"	Poles / Rated Speed	2 P / 3450 rpm
<b>Single Phase</b>	START KIT SK-5 includes: Start & Run Capacitors, Relay, and Mounting Hardware	Insulation Class	F Class
		Start Capacitor	300 ufd, 250 VAC
		Run Capacitor	30 ufd, 370 VAC

#### PERFORMANCE CURVE



<u>MODEL</u>	<u>HP</u>	<u>Phase</u>	<u>Volts</u>
KHG(X)3-2081	3	1	208
KHG(X)3-2301	3	1	230

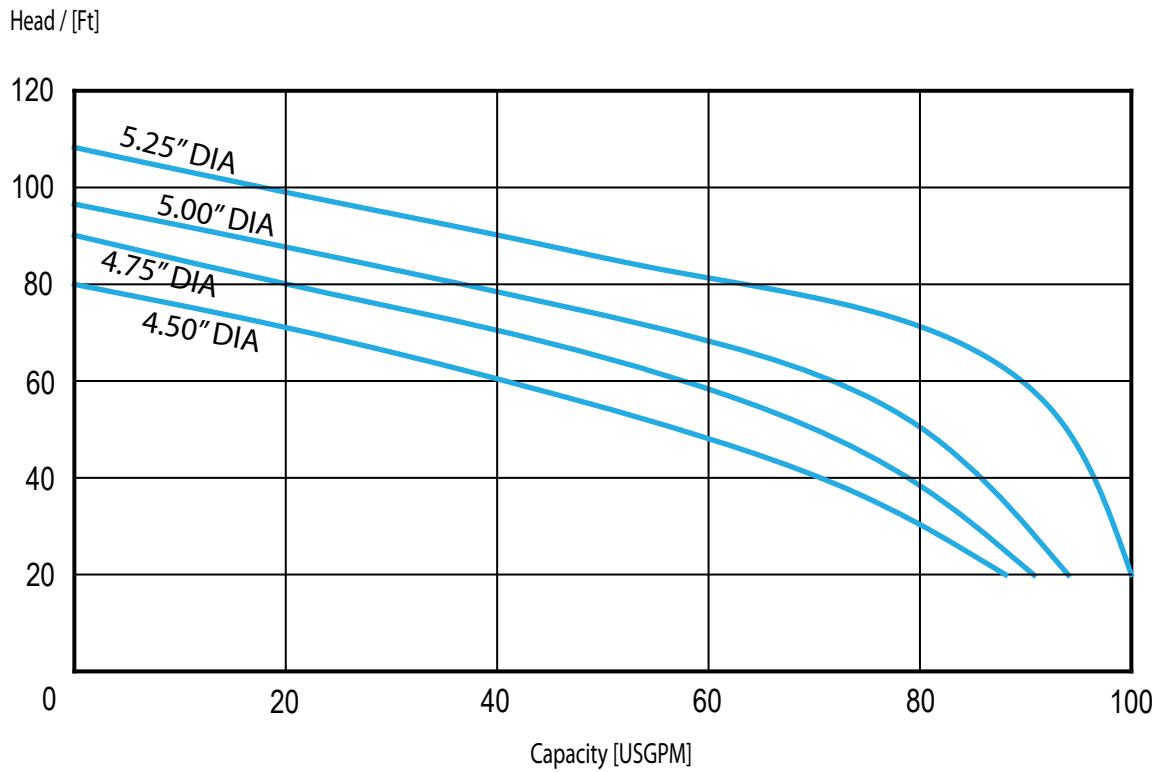
\* Performance with clear water and ambient temp 20°C (68°F)



**3HP SUBMERSIBLE GRINDER PUMP**

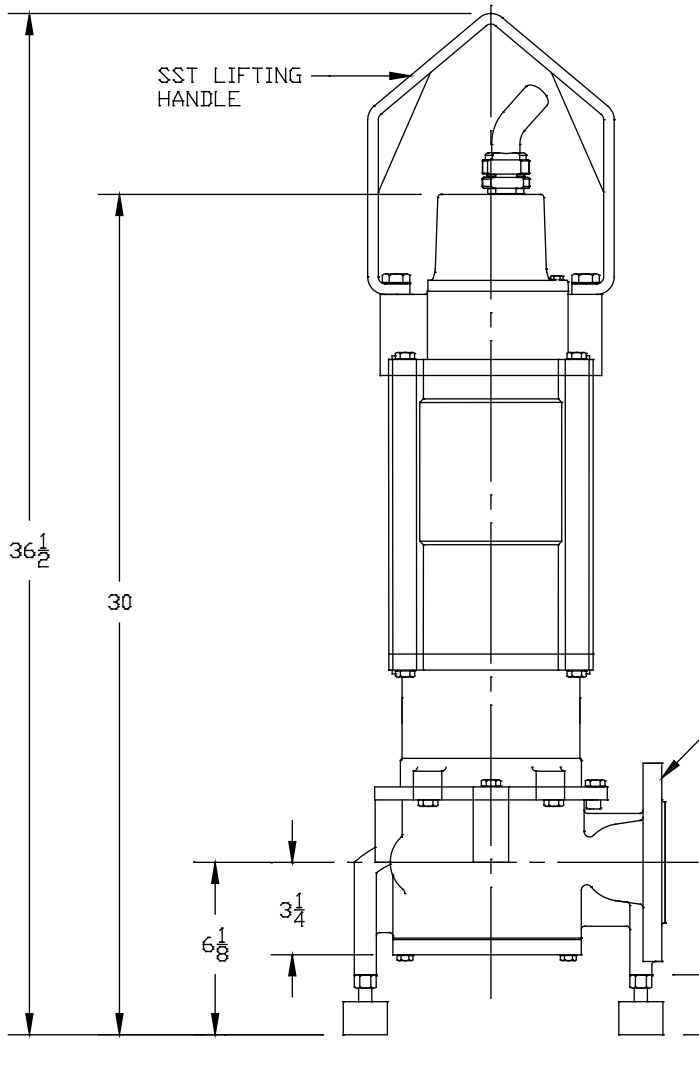
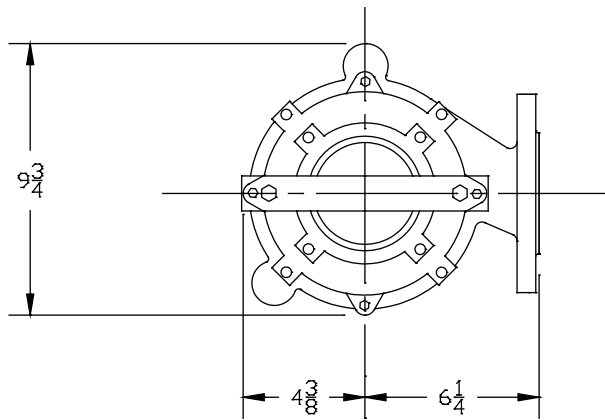
<b>GENERAL</b>		<b>MOTOR DATA</b>	
Pump Model	<b>KHG(X)3</b>	HP / Power Supply	3HP / 3 $\phi$ , 60 Hz
<b>PUMP DATA</b>		Full Load Amps 208V	21 Amps
Date	01/06/2017	Start Amps 208V	105 Amps
Discharge Flange	2-1/2 & 3" ANSI Horizontal	Full Load Amps 230V	18 Amps
Grinder Ring	25 Slots	Start Amps 230V	90 Amps
Impeller Type / Std. Dia.	Recessed / 5.25"	Full Load Amps 460V	9 Amps
<b>Three Phase</b>		Start Amps 460V	45 Amps
		Poles / Rated Speed	2 P / 3450 rpm
		Insulation Class	F Class

**PERFORMANCE CURVE**



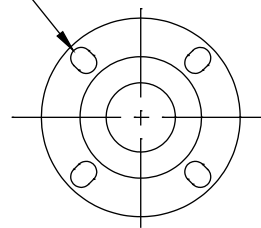
<b><u>MODEL</u></b>	<b><u>HP</u></b>	<b><u>Phase</u></b>	<b><u>Volts</u></b>
KHG(X)3-2083	3	3	208
KHG(X)3-2303	3	3	230
KHG(X)3-4603	3	3	460

\* Performance with clear water and ambient temp 20°C (68°F)




\* PUMP STANDARD HORIZONTAL FLANGE  
(2-1/2" OR 3" ANSI) STANDARD BASIN  
PACKAGE DISCHARGE (2" PIPING)  
ACCEPTABLE WITH MACERATED  
SEWAGE SLURRY

\* DISCHARGE FLANGE "SLOTS"  
FOR OPTIONAL 2.5" OR 3" ANSI  
DISCHARGE, CLASS 125., 4-BOLT



NOTE: ALL DIMENSIONS FOR  
REFERENCE ONLY

REV	INITIALS	DATE
B	SE	01/06/2017
A	SE	03/26/2015

 <b>KEEN PUMP CO.</b> 471 US HWY 250 EAST ASHLAND, OHIO 44805		PHONE: 419-207-9400 FAX: 419-207-8031
<b>TITLE</b> 3-7.5HP HIGH FLOW/HIGH HEAD GR. PUMP DIMENSIONS		
<b>SCALE</b> NTS		<b>DWG. #</b> KN-28
<b>DWG. BY</b> SE	<b>DATE</b> 01/27/2014	<b>REV.</b> B