FM PENDING

KGP(X)

7.5 - 15HP Grinder Pump, 3 Phase

The KEEN PUMP KGP(X) series centrifugal grinder pumps are designed for municipal, commercial or industrial applications. The KGP(X) pump is also designed for use in pressure sewer applications or any piping network with long discharge distances or high heads.

The recessed vortex impeller design of the KGP(X) 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 KGP(X) SERIES PUMP FEATURES:

- Interchangeable with Competitor Installations
- Dual Silicon-Carbide Mechanical Shaft Seals w/ Viton® Elastomers
- Slip-Fit Motor with Internal Overload Protection
- 3-Bearing Shaft Support (Upper / Lower / Sleeve)
- Internal Moisture Detection

1. WATERTIGHT CABLE ENTRANCE
Agency-approved, watertight strain relief cord grips with compression grommets protects outer cord jacket. Epoxy-filled inner cord cap provides anti-wicking moisture protection to the motor even if the power cable is cut or damaged. 40' UL power & control cords. Additional sealing is accomplished by wire terminal plate, separating cord cap from motor housing.

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 strong pumping. 208/230/460 Volt, 3-phase. Slip-Fit stator efficiently transfers heat to cast housing. Class N construction with overload protection in oil-filled chamber for cool operation and long motor life. Inverter-duty capable for VFD / soft start operation.

3A. OIL
Proprietary Keen oil ensures industry-low operating temperatures.

4. SOLID BEARING SUPPORT
Two-bearing design featuring high load-rated angular contact for 100,000 hour B-10 life.

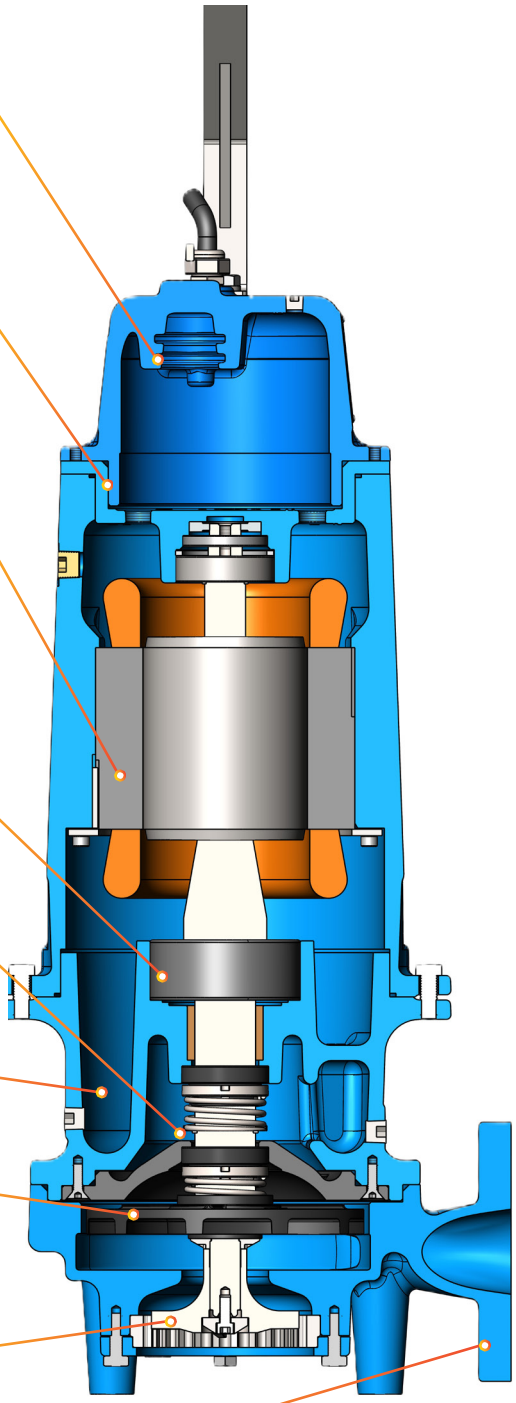
5. SEVERE DUTY DUAL MECHANICAL SEALS
Dual silicon carbide mechanical shaft seals w/ Viton® Elastomers provide twice the moisture and grit protection for the motor. Dual seals are housed in a secondary oil-filled seal chamber. Tougher silicon carbide seals better handle sand, grit and abrasive materials.
** Additional bronze labyrinth seal for explosion-proof model.

6. MOISTURE DETECTION
Seal leak probe signals alarm in control panel for scheduled maintenance.

7. NON-OVERLOADING HYDRAULIC DESIGN
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 58-60) 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 17,250 cuts/second.

9. STANDARD FLANGE CONNECTION
2-1/2" / 3" Horizontal, Class 125 ANSI discharge flange. Industry standard, 4-bolt pattern.

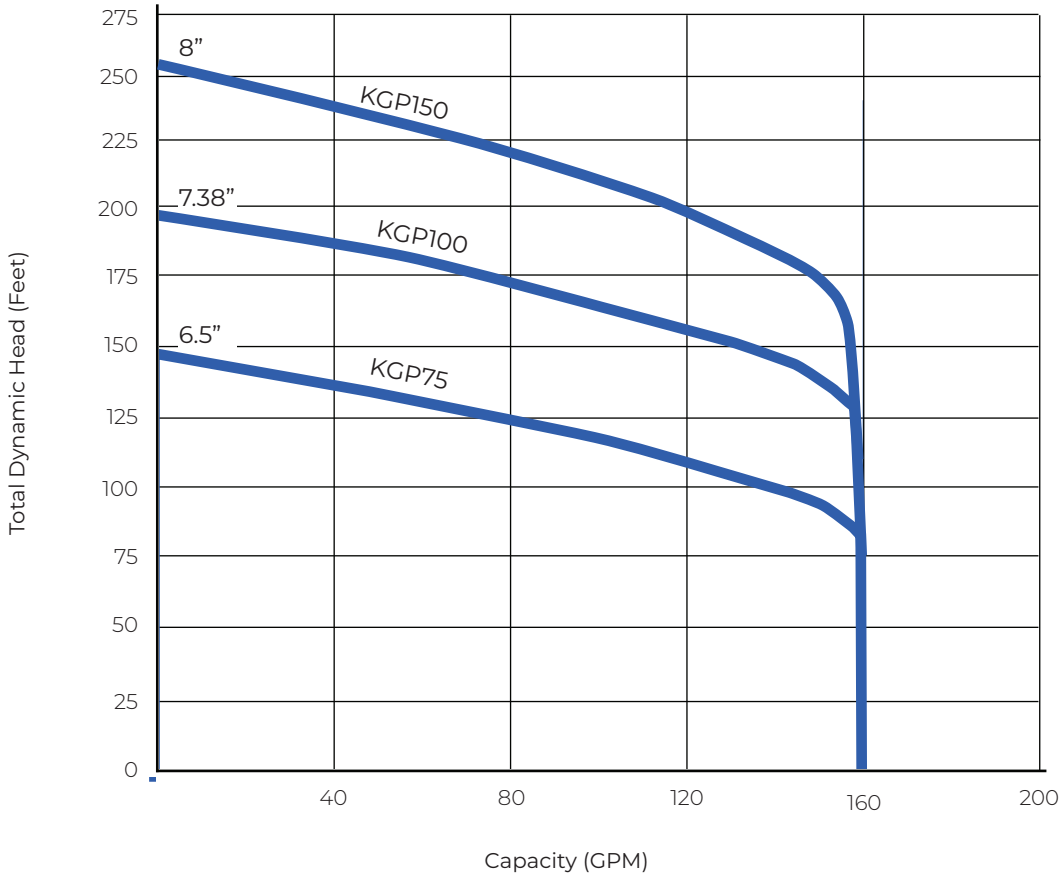


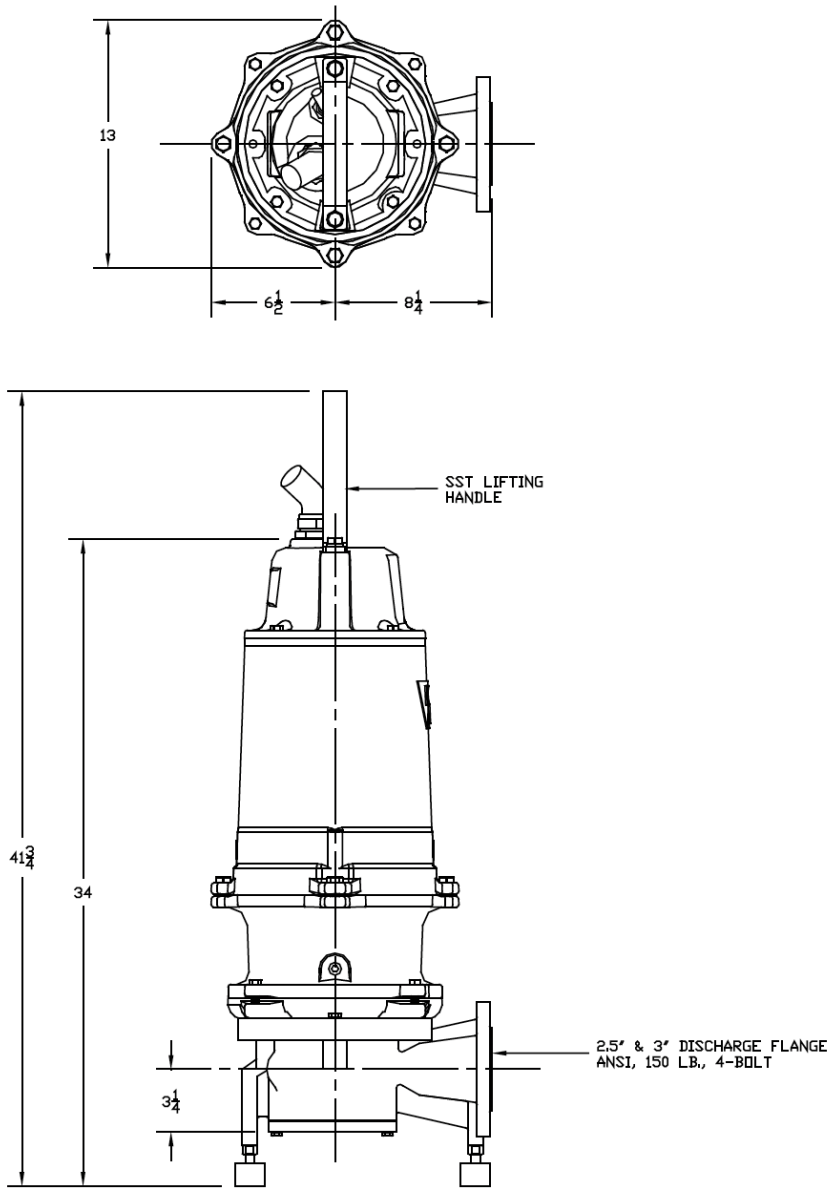
7.5 - 15HP GRINDER PUMP

GENERAL	KGP(X)75/100/150
Pump Model	
PUMP DATA	
Date	09/2022
Discharge Flange	2-1/2 & 3” ANSI Horizontal
Grinder Ring	Hardened SST
Impeller Type / Std. Dia.	Recessed / As Shown

MOTOR DATA	
HP / Power Supply	7.5-15HP / 3 ϕ , 60 Hz
Poles / Rated Speed	2P / 3450 rpm
Insulation Class	N

PERFORMANCE CURVE

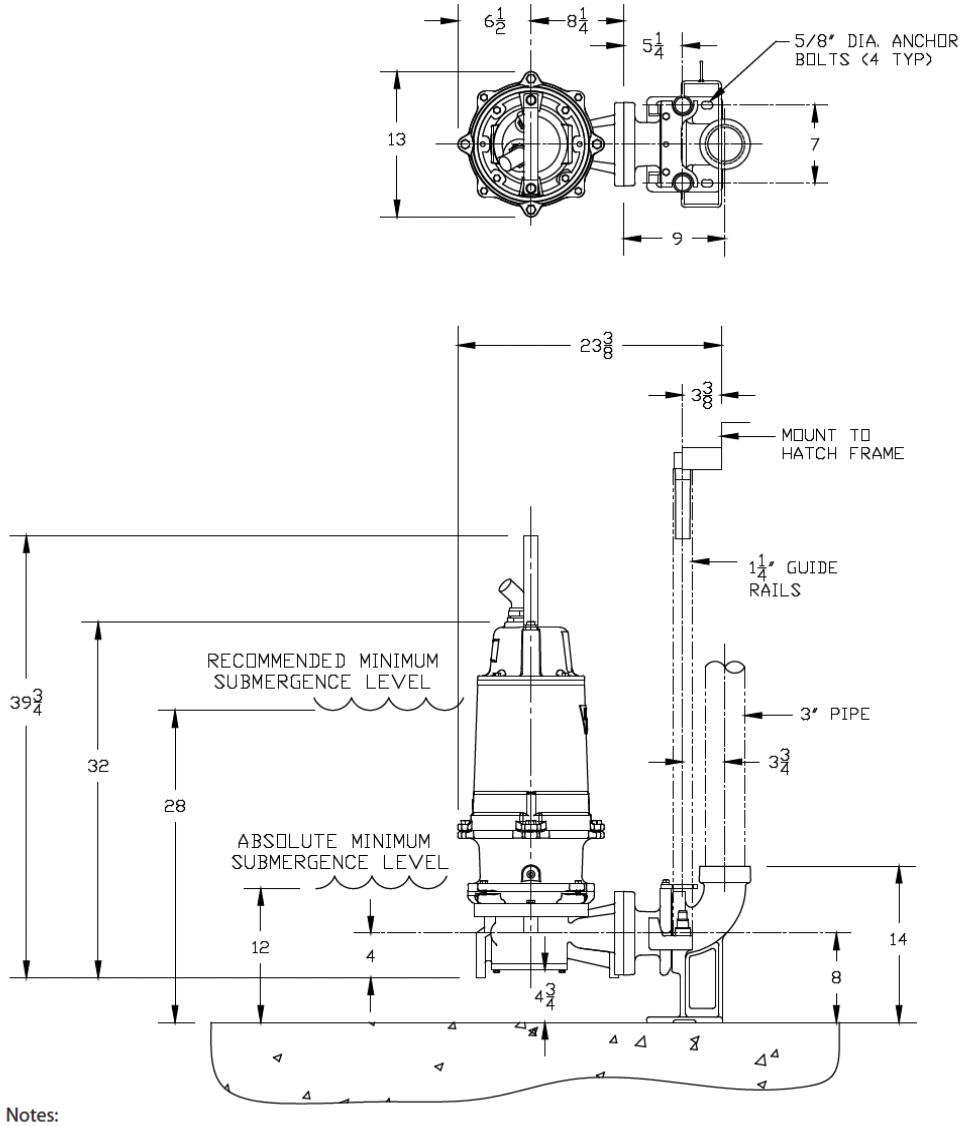




KEEN PUMP COMPANY	KEEN PUMP CO. 471E STATE ROUTE 250 EAST ASHLAND, OHIO 44805	PHONE: 419-207-9400 FAX: 419-207-8031	
TITLE: KGP75-150 7.5-15HP GRINDER PUMP OUTLINE			
SCALE: NTS		DWG. #: KN-919	REV.: -
DWG. BY: SE	DATE: 06/10/2014		

PUMP SERIES	KGP	SUBMERSIBLE GRINDER PUMPS

LIFTOUT DIMENSIONAL DATA



Notes:
1. All dimensions in inches unless noted.
2. Discharge flange 3" NPT.
3. Absolute minimum and recommended minimum submergence levels noted.
4. Dimensions may vary due to normal manufacturing tolerances.
5. If discharge pipe is larger than discharge elbow, eccentric reducer must be used limited to 2X larger maximum.

File: KGP Liftout Dimensions

PHYSICAL DATA	
Discharge Size	ANSI 2-1/2 / 3" Horizontal
Impeller Type	Balanced, Recessed
Power/Control Cable Length	40' Standard
Paint	Baked on Powder Coat Finish

MOTOR CONSTRUCTION	
Motor Type	Enclosed Submersible Oil Filled
NEMA Insulation Code	Class N
Service Factor	1.2
NEMA Design Type	B (3Ø)
Motor Protection	Thermal Sensors Embedded in the Windings
Maximum Stator Temperature	392° F (200° C)
Power Cord	Type SOOW-600V, 90° C , Type W-2000V
Control Cord Type	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
Rotating Cutter	440 SST Hardened 58-60 Rockwell C
Stationary Cutter	440 SST Hardened 58-60 Rockwell C
Inboard Mechanical Seal	Silicon Carbide / Silicon Carbide, Viton® Elastomers
Outboard Mechanical Seal	Silicon Carbide / Silicon Carbide, Viton® Elastomers
Fasteners	ANSI 18-8 or 304 Stainless Steel
O-Rings	Fluorocarbon
Upper Bearing	Conrad Style Single Row Deep Groove Ball Bearing
Lower Bearing	Single Row Angular Contact Ball Bearing
Labyrinth Seal	Bronze, CDA 836

THERMAL DATA		
Maximum Liquid		140° F (60° C)
Maximum Stator		392° F (200° 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	VOLTS	PHASE	NEC CODE	SERVICE FACTOR	FULL LOAD AMPS	LOCKED ROTOR AMPS	RUN KW	START KVA	RUN KVA
7.5	208	3	K	1.2	39.8	206.6	10.8	75.2	14.1
	230				34.5	186.1			
	460				17.3	93.0			
	575				13.9	74.4			
10	208	3	H	1.2	55.6	206.6	15.5	78.3	19.4
	230				48.5	186.1			
	460				24.3	93.0			
	575				19.4	74.4			
15	208	3	F	1.2	68.5	286.1	19.8	82.8	24.1
	230				59.5	257.8			
	460				29.8	128.9			
	575				23.9	103.1			

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