

# KIRLOSKAR PUMPS

## Mini Range Pump

### Installation, Operation and Maintenance Manual



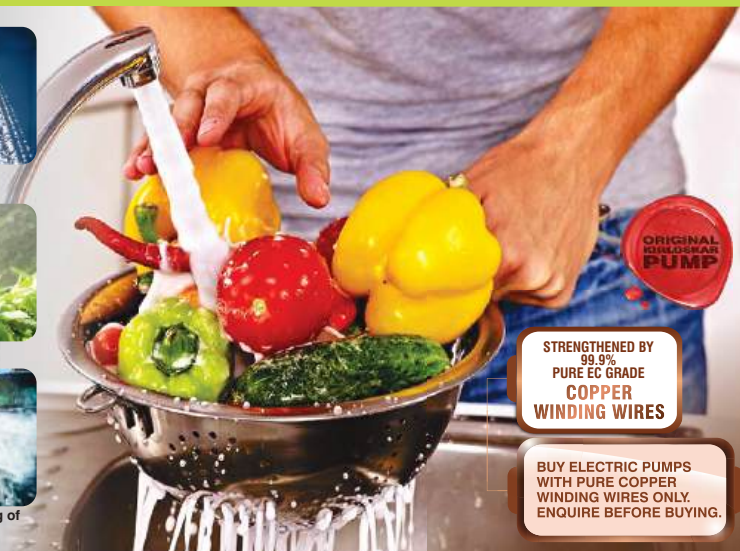
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CM-0071

**KIRLOSKAR BROTHERS LIMITED**

Established 1888

A Kirloskar Group Company

## **Congratulations.**

on your acquiring one of the finest pumps in the country.

The KIRLOSKAR pump series in your possession is scientifically designed by using the state of art design software (CREO,ANSYS,CFD) for better aesthetics, performance, optimum material Contents etc. These pumps are reliable, robust, compact in size. careful selection of materials, manufacturing and testing assures you a satisfactory performance over a long period of time.

These pumps will give you years of trouble free performance if it is handled with due care. This booklet is a step in this direction. It covers general instructions on installation, operation and maintenance of Kirloskar pumps. Please read booklet comply with the instructions and your pump is bound to serve you well.

While reporting the damages or missing part always quote name plate details including its Sr. No.

Our products are meant for pumping water and they do not have any significant effect on environment during their use, if properly selected and used as per instructions given in this manual.

Customers are advised to dispose unusable components through appropriate disposal agencies to avoid the impact on work environment.

**DO NOT RUN THE PUMP DRY TO AVOID DAMAGE TO SEAL**

**FOR PROMPT SERVICE & SPARES**



We are now on WhatsApp to assist you better

**9922710710**

Toll Free Number: **1800 123 4443**

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## Features

- ✓ TEFC (Totally Enclosed Fan-cooled) Motor
- ✓ Capacitor start and run motor.
- ✓ B' Class of insulation.
- ✓ Specially processed steel shaft for corrosion resistance and durability
- ✓ Fitted with Thermal Overload Protector (TOP) for safety of motor.
- ✓ Both side double shielded ball bearings. No Need of external lubrication.
- ✓ Sturdy and rigid in construction.
- ✓ Aluminum extruded motor body for better heat dissipation and corrosion.
- ✓ Motor can withstand wide voltage fluctuations

## Installation & Use

- ✓ Read the operation manual carefully before installing the pump.
- ✓ Your pump is provided with broad based feet and hence does not require any special foundation for installation.
- ✓ Use specified pipe size to get higher discharge.
- ✓ Though suction lift capacity of the pump is 7m, for more discharge keep suction lift as minimum as possible.
- ✓ Ensure minimum number of BENDS and fittings in the pipeline. Ensure air tight joints.
- ✓ Use of additional foot valve is recommended for trouble free performance of pump.

### OR

- ✓ Fit a correct size strainer at suction end so that no foreign matter (Hard particles) can enter the pump.
- ✓ The horizontal length of the suction pipe should be straight. The pumpset must be installed in an enclosed environment or at least sheltered from inclement weather

## Precautions

- ✓ Keep strainer end at least one foot above the bottom of the well or tank.
- ✓ Suitable for use with clean water that does not contain abrasive particles and liquid that are not chemically aggressive towards the material from which the pump is made.
- ✓ During cleaning of well or tank, do not suck residual muddy water through pump.
- ✓ Do not use any gate valve for throttling the delivery pipe, as this will result in overloading of the pump and subsequently burning of motor.
- ✓ Do not run the pump dry to avoid the damage to mechanical seal.

## Operation

- ✓ Before starting the pump for the first time, fill it with clean water.
- ✓ Check the freeness of shaft by rotating it with the help of a screw driver.
- ✓ A provision should be made in the delivery branch of the pump for easy priming. Open the priming plug / air vent nipple cock, fill water through the priming hole and tighten the plug. Now the pump is ready for starting.

## Maintenance

- ✓ Ensure daily or alternate day running of the pump.
- ✓ If pump is to be kept idle for a long period, fill it fully with water or any other preservative.
- ✓ Periodically clean the strainer to avoid clogging.
- ✓ Do not wrap the pump with air tight material such as polythene bag to avoid condensation.

## Caution & Care

During servicing or attending the pump, always ensure that:

- ✓ Power is switched off and unplugged.
- ✓ Electrical Connections are to be serviced only by qualified personnel.
- ✓ All parts are thoroughly cleaned in kerosene to remove the dirt and dust before re-assembly
- ✓ All parts are checked and replaced if damaged and worn out.
- ✓ Ensure that shaft rotates freely after assembly.

## Detailed Installation Procedure

### Unboxing and E-warranty Registration

- On opening the box, a Product Manual is available inside the box. Please go through the manual thoroughly before proceeding for installation.
- Warranty card is included in the manual on the back cover.
- A QR code is given on the warranty card. Please scan the QR Code from the card through your mobile phone using any QR Code scanner app. it will lead you to E warranty registration of the product for availing hassle free service.
- A strainer is also available in the box, which is to be fitted at the end of suction pipe to prevent any foreign objects to the enter the pump and prevent the pump from any damage.



### Tools / Accessories Required

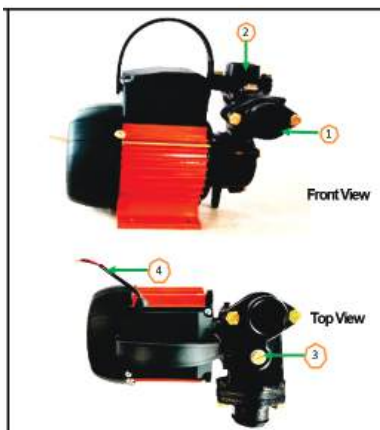
1. Plier
2. Adjustable Pipe Wrench
3. Screw Driver
4. Spanner(13mm)
5. Pipe Clips
6. Hose Nipples
7. 90°GI Bend
8. Thread Sealing Tape - Teflon Tape
9. Cable With Plug And Socket
10. Connecting Pin
11. Rigid HDPE / GI Suction Pipe
12. Delivery Pipe As Per Requirement



**\* size of suction and delivery pipe should be as per recommended size (please refer leaflet of the product)**

1. Suction Flange.
2. Delivery Flange.

3. Brass nut for water filling.
4. Electric cable for power connection.



## Suction Flange Pipe Nipple Connection

1. Take the hose nipple and wrap teflon tape on the threaded portion to avoid any leakages through threads.
2. fit the hose nipple on the suction flange.



## Suction Pipe Connection

1. Fix the suction pipe on the hose nipple of the pump inlet. It is advisable to slightly heat the hose pipe for easy fitting.
2. Use the pipe clip for tightening purpose.
3. Add the strainer at the other end of the suction Pipe and tighten it with the clip.



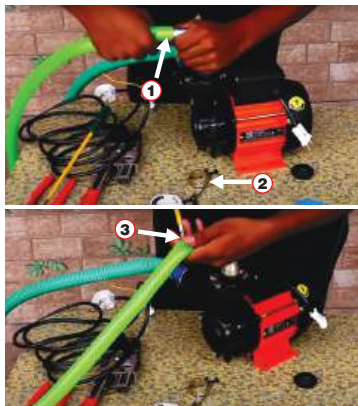
## Delivery Flange, Gasket And Bend Connection

1. Remove the nuts from the pump outlet and take out delivery flange and Rubber Gasket.
2. Cut the centre portion of the gasket with the help of scissor as shown in picture.
3. Fit the cut rubber gasket and delivery flange on the pump and tighten properly.
4. Take the GI bend and wrap teflon tape on the threaded portion to avoid any leakages through threads.
5. Connect the GI bend with the delivery flange.



## Delivery Pipe Connection

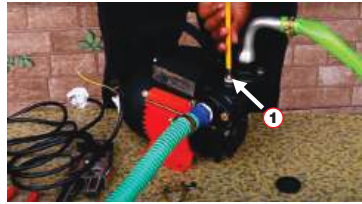
1. Fix the delivery pipe on the 90° GI bend of the pump outlet.
2. Use the pipe clip for tightening purpose.
3. Clip to be tightened with the help of screw driver as shown in picture.



## Priming of Pump

First time the pump is required to be Primed, which means water is to be filled in the delivery casing After fitting of suction and delivery pipes.

1. Remove the brass nut with the help of screw driver from the delivery casing as shown.
2. Fill the pump casing with sufficient water and close the brass nut.



## Electric Connection

- Connect the pin to the lead wire of the pump for electric connection.



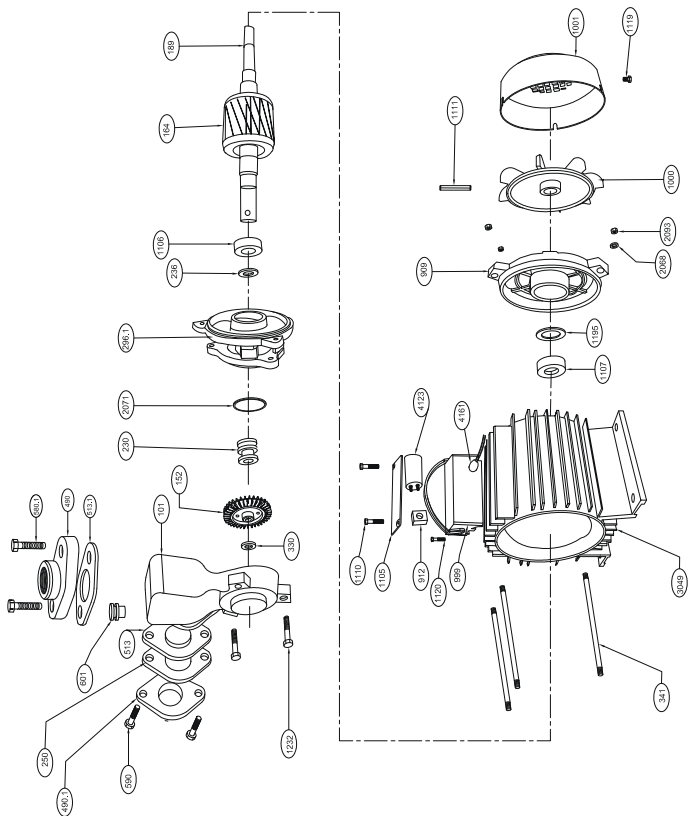
## Testing of Pump

- Make suitable connection with electric point and ensure that all the connection are properly insulated to prevent electric shock.
- Switch on the power supply and pump will start delivering water.
- For better service and longer life, it is that the pump should be fixed on solid and plain surface to avoid vibration and unwanted noise.





# Exploded View of Self Priming Pump



## Parts List

Part No.	Part Description
101	Delivery Casing
152	Impeller
164	Rotor (motor)
189	Rotor Shaft
230	Mechanical Seal
296.1	Mounting Casing
341	Tie Rod
490	Delivery Flange
490.1	Suction Flange
513	Packing for Suction Flange
513.1	Packing for Delivery Flange
580.1	Hex head Bolt for Delivery Flange
590	Hex head Bolt for Suction Flange
601	Priming Plug
909	Cover N.D.E./ End Shield / Bottom End Shield
912	Terminal Board
999	Terminal Box
1000	Fan
1001	Fan Cover
1105	Terminal Box Cover
1106	Ball Bearing D.E.
1107	Ball Bearing N.D.E.
1110	Self-Tapping Screw for Terminal Box and Terminal Box Plate
1120	Star Head Screw for Terminal Box and Motor Body
1195	Wave Washer
1232	Hex Bolt for Mounting Casing & Delivery Casing
2093	Hex Nut For Tie Rod
3049	Stator Fitted Motor Body
4123	Capacitor
4161	Grommet
250	NRV Assembly
1119	Screw Cheese Head for Fan Cover
1111	Cotter Pin
2068	Spring Washer for Cover NDE
236	Water Deflector
2071	O Ring for Mounting Casing
330	Hex Nut for Impeller Locking

## Trouble Shooting

	Problem / Causes	What to do
a	<b>Motor Fails to Start</b>	
1.	No power supply	Check incoming connections.
2.	Capacitor failed	Get it replaced.
3.	Impeller stuck due to keeping idle for longer time.	Rotates the shaft with help of Screwdriver
b	<b>Pump does not deliver water / insufficient discharge</b>	
1.	Pump not primed properly	Reprime the pump
2.	Suction lift too high	Place pump closer to water level.
3.	Too many bends in suction branch.	Reduce number of bends.
4.	Water level gone down below foot valve / suction pipe end.	Submerge the foot valve / pipe end in water.
5.	Piping is not airtight in Suction branch.	Apply proper sealing at all joints.
6.	Air trapping in suction branch.	Horizontal length of suction pipe should be straight
c	<b>Motors starts with a humming noise, does not rotate and then trips</b>	
1.	Pump Jammed	Switch off the supply and rotate the shaft with the help of screwdriver.
d	<b>Pump set trips after discharged for a while</b>	
1.	Abnormal supply voltage conditions than that specified	Switch off the supply and check supply Voltage.

## Warranty Conditions

- The warranty does not hold good if the supply voltage is not in the prescribed range and has resulted in damage to all electrical components including burning of electrical winding & capacitors.
- The warranty does not hold good for the defects caused by dry running, wrong relay setting & failure of any electrical equipment & accessories.
- This warranty does not hold good if the pump is operated at load over & above its specified range of operation.
- This warranty will not hold good if the pump is not used exclusively for the purpose of pumping clear, cold fresh water & for damage caused due to slit, excessive sand or any other foreign particles in water.
- This warranty shall not cover any costs or charges including cost of removal of pump, installation, Transportation etc. that may be occasioned by a claim under this warranty.
- This warranty does not hold good if the serial number is deleted, defaced or altered.

### Registered Office & Global Headquarters :

"Yamuna", Survey No. 98/(3 to 7), Plot No. 3, Baner, Pune - 411045, Maharashtra, India.  
 Tel.: +91 (20) 2721 4444 Fax: +91 (20) 67211060  
 Email: marketing@kbl.co.in Website: www.kirloskarpumps.com  
 CIN No.: L29113PN1920PLC000670

### Works :

S. F. No. 324/1, Moperipalayam Road, Thattampudur,  
 Kaniyur Village, Coimbatore, Tamil Nadu - 641659

## Other Product range manufactured by Kirloskar Brothers Limited.

Pump Series	Construction Feature	Drive Unit	Power Rating
KDS+/++	Monobloc	Electric Motor 1 Phase	0.5 HP TO 5 HP
KDS+/++/KDI/GMC	Monobloc	Electric Motor 3 Phase	0.5 HP TO 30 HP
KDT+	Two stage monobloc	Electric Motor 3 Phase	5 HP TO 20 HP
KS+	Slow speed monobloc	Electric Motor 3 Phase	3 HP TO 10 HP
SRF	High head monobloc	Electric Motor 3 Phase	25 HP & 30 HP
KSMB	Monobloc	Electric Motor 3 Phase	1 HP TO 10 HP
KJ	Monobloc	Electric Motor 1 Phase	0.5 HP TO 1.5 HP
KOS, JOS & JVS	Openwell submersible	Electric Motor 1 and 3 Phase	0.5 HP TO 30 HP
Submersible	Borewell Submersible	Electric Sub. Motor 1 and 3 Phase	0.5 HP TO 75 HP
KVM	Vertical Multi - stage	Electric Sub. Motor 1 and 3 Phase	1.5 HP TO 5.0 HP
SP	Monobloc / Coupled	Electric Motor	1 HP TO 25 HP
KSIL/KCIL	Vertical Multi-Stage Inline pump	Electric Motor 3 Phase	0.5 HP TO 60 HP
KV/DV	Vacuum Pump	Electric Motor 1 and 3 Phase	1 HP TO 10 HP
CW/SW/BW/HL	ETERNA	Electric Motor 3 Phase	0.4 HP TO 10 HP
MINI	Monobloc	Electric Motor 1 and 3 Phase	0.25 HP TO 1.5 HP
NW/KE/KH/KHDT/SR	Coupled	Engine / Motor	.....
Alternator	.....	.....	2 KVA — 50 KVA



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## Steps for E-Warranty Registration for Newly Purchased Pumps



### THROUGH KBL'S OFFICIAL/COMPANY WEBSITE

- ✔ Please log on to the web site [www.kirloskarpumps.com](http://www.kirloskarpumps.com)
- ✔ Scroll down and go to the option of E-Warranty Registration
- ✔ Enter the pump serial number and other necessary details as requested
- ✔ Register for E-Warranty



### USING WHATSAPP NUMBER

- ✔ For your newly purchased pumps, please keep the pump invoice ready with you
  - ✔ Please message on KBL's **whatsapp number 9922710710** & provide requested details for registration of e warranty
- You can also email us necessary details for registration of E-Warranty on : [kblcare@kbl.co.in](mailto:kblcare@kbl.co.in)



### USING KBLONE4ALL APP

- ✔ Please download **KBLOne4All App** from **Google Play Store** and **iOS App Store**
- ✔ Please select user category and login with the help of mobile number by filling up necessary details as requested
- ✔ System has 2 options regarding capturing of pump serial number either through QR Code scanning which is already available on pump or through manual entry of pump serial number
- ✔ Register for E-Warranty

Note: Registration of the E-Warranty of your newly purchased pump is mandatory for getting the services & required support from our company without any difficulties.

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## नए खरीदे पंप्स की ई-वारंटी पंजीकरण के चरण



### कंपनी की वेबसाइट के माध्यम से

- ✓ कृपया [www.kirloskarpumps.com](http://www.kirloskarpumps.com) लॉगऑन करें
- ✓ नीचे स्कॉल करें और ई वारंटी पंजीकरण विकल्प पर जाएं
- ✓ अनुरोध के अनुसार पंप क्रमांक और अन्य आवश्यक विवरण दर्ज करें
- ✓ ई वारंटी के लिए पंजीकरण करें



### Whatsapp नंबर के माध्यम से

- ✓ कृपया आपके नये खरीदे पंप का इन्चाइस/बिल अपने पास रखें
- ✓ कृपया **KBL** के **whatsapp** नंबर **9922710710** पर मैसेज करें और पंजीकरण के लिए अनुरोधित विवरण दर्ज करें
- ✓ ई वारंटी पंजीकरण के लिए **kblcare@kbl.com** पर आवश्यक विवरण ई-मेल कर सकते हैं



### KBLOne4All App के माध्यम से

- ✓ कृपया **Google Play Store** और **ios App Store** से **KBLOne4All App** डाउनलोड करें
- ✓ कृपया उपयोगकर्ता श्रेणी का चयन करें और मोबाइल नंबर की सहायता से अनुरोधित आवश्यक विवरण पूर्ति कर लॉग इन करें
- ✓ सिस्टम में पंप सीरियल नंबर को अंकित करने के लिए **2** विकल्प हैं। या तो **QR** कोड जो पंप पर पहले से ही उपलब्ध है उसे स्कैन करें या पंप की लिखित एंटी करें
- ✓ ई वारंटी के लिए पंजीकरण करें

नोट : बिना किसी परेशानी के हमारी कंपनी की सेवायें प्राप्त करने के लिए आपके नवीन खरीदे पंप की ई-वारंटी का पंजीकरण अनिवार्य है

किर्लोस्कर ब्रदर्स लिमिटेड

स्थापित १८८८

किर्लोस्कर ग्रुप कंपनी



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Single Phase  
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**KDS**  
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Openwell Submersible Pump



**KU4 NEO KS6**  
10 CM & 15 CM Borewell  
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ALWAYS BUY PUMPS WITH



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and



LOGOS ON PACKAGING

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## Warranty Certificate

This product is warranted against manufacturing defects and workmanship under normal use and service for the period of 12 months from the date of invoice (or) 24 months from the date of manufacturing, whichever is earlier.

Company to repair or replace the product at its discretion or any part thereof, for which is originally defective in material or workmanship, provided the product or its parts are returned to the point of purchase (To the dealer from where the product/ parts were purchased) on freight paid basis with inspection report from the KBL Authorized Service Centre (Field Complaint Report) within warranty period. This warranty does not cover any consequential damage of any nature.

This warranty excludes every condition, whether statutory or otherwise, whatsoever is not expressly set out here.

**SPECIAL INSTRUCTIONS:** "Customers are advised to go through the product manual carefully for proper installation, use and servicing of the product and genuine spare parts. It is also advisable to go through the company's published literature, catalogue or other official publication. Any deviation, if made by the customer will void the warranty obligations. Repair by KBL trained mechanics will ensure trouble free performance

This card must be produced at the time of claiming the warranty along with purchase documents. All disputes subject to Pune jurisdiction.

**Dealer's Stamp and Signature** \_\_\_\_\_

**Date of Purchase:** \_\_\_\_\_ **Bill / Cash Memo No.:** \_\_\_\_\_