



Enriching Lives



## Pressure Boosting (Hydro Pneumatic) System

Customised Solutions to Suit the user demand

Buildings



Airports



Metros



Hotels



Municipal Corporations



Automotive



Textiles



Steel Industry



Chemicals



**KIRLOSKAR BROTHERS LIMITED**

Established 1888

A Kirloskar Group Company

Kirloskar Brothers Limited (KBL) is the flagship company of the Kirloskar Group. Established in 1888 and incorporated in 1920, it is known as a leading and innovative solution provider in hydraulic machines and systems the world over. KBL manufactures rotodynamic pumps from 0.1 kW to 26 mW across its 14 factories on 6 continents. As an ISO 9001, 14001 and OHSAS 18001 company it has robust processes and systems as well modern manufacturing facilities, skilled human resources and significant technical strength in design and application engineering. KBL has in house ferrous and non ferrous foundries as well as one of Asia's largest hydraulic research centre with a testing facility to test pumps up to 50000 m<sup>3</sup>/ hour, 4500 kW motors in both 50 Hz and 60 Hz configurations.

**Offering including pumps ranging from 0.1 kW to 26000 kW**

- Projects and Engineered Pumps
- Infrastructural Pumping Projects
- Industrial Pumps
- Agricultural and Domestic Pumps
- Valves
- Motors
- Hydroturbines
- Alternators



Smallest Pump



Biggest Pump

KBL's proud manager standing at the discharge pipe of KBL's large pump and holding KBL's smallest pump



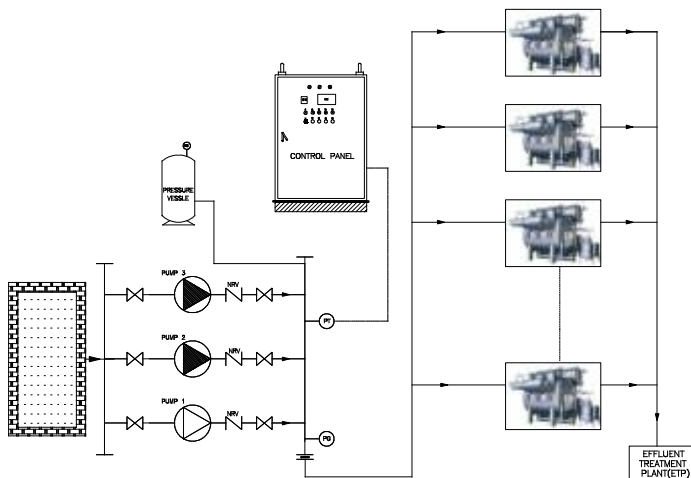
Manufacturing unit at Kirloskarvadi Celebrating 100 Years (1910-2010)



'YAMUNA', Global headquarters of Kirloskar Brothers Limited is among the Greenest Building in India with LEED Certified Platinum Rating



## Segments and Applications



Residential/ Commercial/ Industrial Buildings  
 Airports  
 Hotels  
 Municipal Corporation  
 Automotive  
 Textiles  
 Steel/ Cement/ Process/ Pharma Industries  
 Power  
 IT Parks  
 Hospitals  
 Sugar Industries  
 Multiplexes  
 Bottling Plant

### KBL's Comprehensive Solutions for Pressure Boosting Industry

#### Type of systems

- Constant speed system - Fx1 - Tank filling , Water transfer, Residential housing, Small size commercial - Residential buildings
- Cascade system - MX (only 1 VFD common to all pumps) - Medium size commercial - Residential buildings, Demand based industrial applications
- All pump VFD system - EX (all pumps having their individual VFD) - Townships, Hospitals, Airports, Malls, Metros, Demand based industrial applications



Listed - Packaged Pumping System



Approved - Pumps

#### Our Offerings

Pumps	Long and short coupled pumps, Single and double suction pumps, Vertical inline multistage pumps, Horizontal multistage pumps and Submersible pumps
Motors	EFF2, EFF1 and premium efficiency
Control Panel	Wall and floor mounted panels
Energy Saving and Efficiency Sustainable Coatings	Glass flake coating on Pumps, Valves, Tanks, Pipes etc.
Accessories	Skid (Suction and Discharge header, NRVs, Isolating valves, Pressure switch/ Pressure transmitter), Pressurized tank, Solenoid valves, Float switches
Service Backup	24x7 Service backup, Energy audit, O and M Contract, etc.

# Flexibility in Pump Offering for Pressure Boosting System

## Vertical / Horizontal multistage centrifugal pumps



IL / KCIL / KSIL



RKBV



RKB



### Specifications and Features

System Flow	Up to 400 m <sup>3</sup> / hr (1760 USgpm)
System Head	Up to 240m (788 ft)
Liquid Temperature	(-) 20°C to (+)120°C
Frequency	50Hz/ 60Hz
Mounting	Skid/ Customized Mounting
Pump head and Base	CI/ SS
Impeller	SS304/ SS316 (All wetted parts)

System Flow	Up to 4000 m <sup>3</sup> / hr (17600 USgpm)
System Head	Up to 850m (2788 ft)
Liquid Temperature	(-) 20°C to (+)100°C
Frequency	50Hz/ 60Hz
Mounting	Skid/ Customized Mounting
Casing	Cast Iron/ Cast Steel/ CF8M(SS)
Impeller	Cast Iron/ Bronze/ Cast Steel/ CF8M(SS)

# Flexibility in Pump Offering for Pressure Boosting System

## End Suction Pumps



CE/ CPHM/ DBC



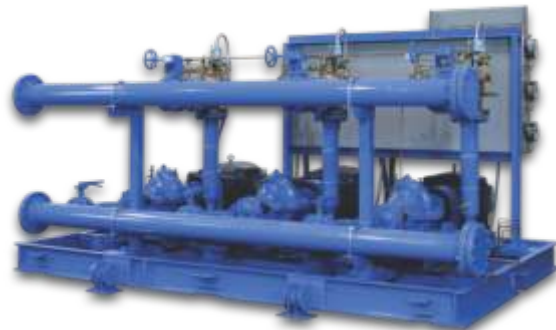
Monobloc



## Split Case Pumps



SCT/ DSM/ i-HT/ UP



### Specifications and Features

System Flow	Up to 5000 m <sup>3</sup> / hr (22000 USgpm)
System Head	Up to 120m (394 ft)
Liquid Temperature	(-) 20°C to (+)100°C
Frequency	50Hz/ 60Hz
Mounting	Skid/ Customized Mounting
Casing	Cast Iron/ Cast Steel/ CF8M(SS)
Impeller	Cast Iron/ Bronze/ Cast Steel/ CF8M(SS)

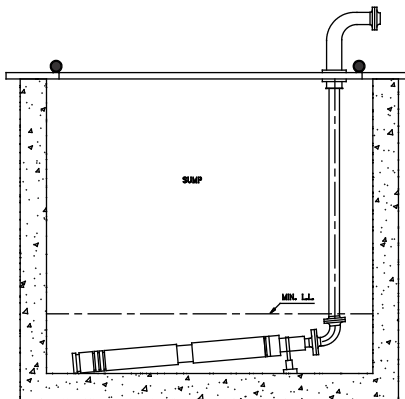
System Flow	Up to 10000 m <sup>3</sup> / hr (44000 USgpm)
System Head	Up to 240m (788 ft)
Liquid Temperature	(-) 20°C to (+)100°C
Frequency	50Hz/ 60Hz
Mounting	Skid/ Customized Mounting
Casing	Cast Iron/ Cast Steel/ CF8M(SS)
Impeller	Cast Iron/ Bronze/ Cast Steel/ CF8M(SS)

# Flexibility in Pump Offering for Pressure Boosting System

## Submersible Pumps



KS/ KU/ HH/ KOS



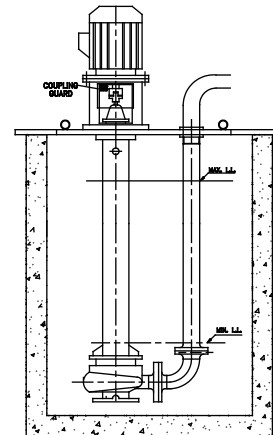
### Specifications and Features

System Flow	Up to 150 m <sup>3</sup> / hr (660 USgpm)
System Head	Up to 178m (584 ft)
Liquid Temperature	(-) 20°C to (+)90°C
Frequency	50Hz
Mounting	Skid/ Customized Mounting
Pump Housing	SS410
Impeller	Noryl

## Wet Pit Pumps



KPDS



System Flow	Up to 4000 m <sup>3</sup> / hr (17600 USgpm)
System Head	Up to 150m (492 ft)
Liquid Temperature	(-) 20°C to (+)90°C
Frequency	50Hz/ 60Hz
Mounting	Skid/ Customized Mounting
Casing	Cast Iron/ Cast Steel/ CF8M(SS)/ Duplex Steel
Impeller	Cast Iron/ Bronze/ Cast Steel/ CF8M(SS) Chrome Steel/ Duplex Steel

## ShowerJoy Pressure Boosting System



### Single stage

Specification	SJ-42420	SJ-32820	SJ-52820	SJ-42820	SJ-53220
Rating	0.37/0.5	0.55/0.75	0.75/1.0	1.1/1.5	1.1/1.5
Suc/De	25 x 25	25 x 25	25 x 25	25 x 25	25 x 25
Tank Size	20	20	20	20	20
Maximum Head	32	38	40	45	46
Discharge (lpm)	24-40	9-40	30-48	10-40	24-48

Single Stage Booster



### Mutistage

Specification	SJ-72824MS	SJ-83224MS	SJ-63824MS
Rating	0.75/1.0	1.1/1.5	1.1/1.5
Suc/Del	25 x 25	25 x 25	25 x 25
Tank Size	24	24	24
Maximum Head	33	45	46
Discharge (lpm)	35-65	30-72	36-60

Multi Stage Booster

### Application

- \* High pressure showers/ wall shower panels
- \* High pressure supply to Bungalows/ small apartments/ hostels/ small hotels
- \* Gardening with lawn sprinklers
- \* Domestic washing of cars
- \* Small farms

### Material of construction

Pump Casing	Stainless steel
Impeller	Stainless steel/ Noryl (Multistage)
Mechanical Seal	Carbon/ Ceramic
Pressure switch	Danfoss make
Pressure tank	Aluminium

# Control Panels



Floor mounted VFD panel for pressure boosting system



Skid mounted VFD panel



Fixed speed panel



HMI



PLC



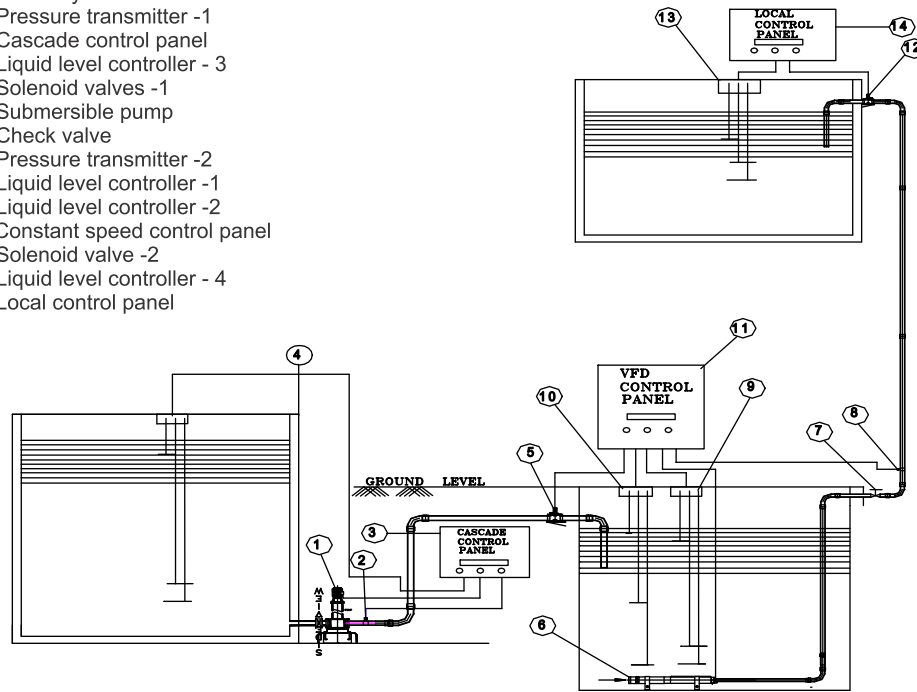
## Salient Features of Control Panel

Sr. No.	Feature	All variable speed	Cascade	Fixed speed
1	Pressure control device	Pressure transmitter	Pressure transmitter	Pressure switch
2	Setting of pressure	On HMI	On HMI	On pressure switch
3	Controller	PLC based	PLC based	Microcontroller based
4	Display unit	4 line 20 characters HMI	4 line 20 characters HMI	LED display
5	VFD	All pump	Common to all pump	Not required
6	Rotation of pumps on VFD(Each pump)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not applicable
7	Bypass of VFD in case of failure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not applicable
8	Switchgear	Standard	Standard	Standard
9	Enclosure	Panel IP 42 Eq IP 54 optional	Panel IP 42 Eq IP 54 optional	Dedicated controller In plastic housing
10	Maximum nos. of pumps in parallel operation	Up to 12	Up to 8	Up to 4
11	Pump alternation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	Standby pump alternation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not avl
13	Equal running hours of pumps	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	User selectable working and standby pump configuration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not avl
15	Auto Take Over Of Stand By Pump In Case Of Working Pump Failure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	Alarms and messages. alarm history last 100 faults	On HMI	On HMI	On LED display/ lamp
17	Display of system parameters like set pressure, actual pressure	On HMI	On HMI	On pressure gauge
18	Fixed or rtc based set points	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not avl
19	High pressure cutout	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	Dry run protection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

# Tank Filling System: An Emerging Trend

## Schematic Diagram

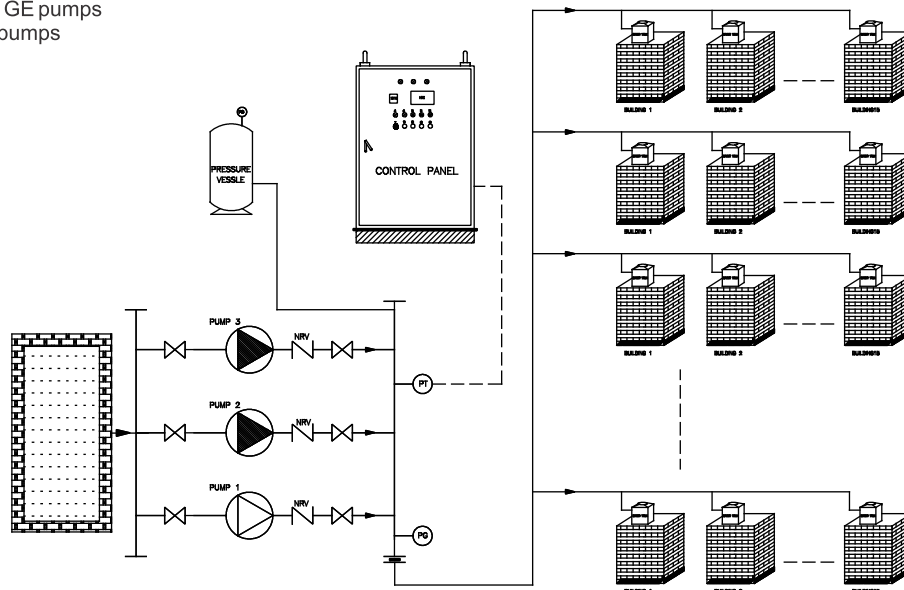
1. HYPN system
2. Pressure transmitter -1
3. Cascade control panel
4. Liquid level controller - 3
5. Solenoid valves -1
6. Submersible pump
7. Check valve
8. Pressure transmitter -2
9. Liquid level controller -1
10. Liquid level controller -2
11. Constant speed control panel
12. Solenoid valve -2
13. Liquid level controller - 4
14. Local control panel



## Overview of Tank Filling System

### Offered pumps:

- Vertical inline multistage GE pumps
- Horizontal split case pumps
- End suction pumps
- Submersible pumps



## Major Customers





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## **KIRLOSKAR BROTHERS LIMITED**

Established 1888

A Kirloskar Group Company

### **Global Headquarters & Registered Office**

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### **GLOBAL PRESENCE**

Cambodia | Egypt | India | Lao PDR | Senegal | South Africa | Thailand | The Netherlands |  
United Arab Emirates | United Kingdom | United States of America | Vietnam

[www.kirloskarpumps.com](http://www.kirloskarpumps.com)



### **OUR COMPANIES**



United Kingdom



U.S.A.



South Africa



India



The Netherlands