



Enriching Lives

**cascade**  
JULY - DECEMBER 2017

## KBL GETS FUTURE READY

# PRODUCT



2018

# PROCESS



# SERVICE

**KIRLOSKAR BROTHERS LIMITED**

A Kirloskar Group Company  
Established 1888



# T H E M E

The future beholds unfolded mysteries of great times ahead. It is but a reflection of one's present efforts that will pave the way to a pleasant path where efforts turn to reality and goals are met. In business great feat is achieved with persistent efforts to evolve and build our future. The dynamic world calls for always being prepared for the future. In KBL, the legacy to build the future continues even after 130 glorious years of operations. The previous year KBL geared up once again to be ready for the future. Process, Product, and Service the backbones of Kirloskar Brothers Limited's operations were improvised for better customer experiences in 2018. Thus, being future ready Kirloskar Brothers Limited is prepared for a great future delivering delight to all its stake holders.

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## FOREWORD

The future is made with today's zealous endeavours. The passion to deliver, the enthusiasm to excel and intellectual pursuits for customer centricity are the drivers of our efforts at KBL. Constant evolution backed by future ready technology and products is the means to achieve our goals. As the dynamics of customer expectations is constantly changing, so is the need to map its needs ahead of time. Future ready products and processes are the inherent way of how we operate at KBL.

Being the pioneers and market leaders in the pump and valve manufacturing business for over a century and quarter, we take accountability to develop products that are future ready. Our products are designed and manufactured focusing on changing customer requirements. Apart from ensuring highest standards of quality, our wide service network

of highly skilled engineers always ensures complete support to our customers.

The year 2018 brings with it new aspirations and hopes of a brighter future backed by preparedness with products, processes, and services for a truly enthralling customer experience. KBL wishes all its stake holders a fascinating journey throughout the year 2018.



### **SANJAY KIRLOSKAR**

Chairman and Managing Director,  
Kirloskar Brothers Limited



## B U S I N E S S H E A D

Dear All,

Wishing you and your family a very happy and prosperous New Year 2018!

2018 brings along with it new hope and aspiration for business. The impact of Demonetisation is over and GST has now become routine. The market is now fully operational and liquidity of cash is back. The stressed phase that wedged businesses is over and the future only looks brighter. The economic indicators are all looking very positive for the country at large and business in general.



This is also the pre-election year and government is focusing primarily on infrastructure and rural development. This indicates a boost for the pump and valve industry. This was much anticipated by the management at KBL and while the market seemed sluggish, we reinvented our process and systems to address the future demands that will surge in. We also used our market intelligence to develop products that will address the future needs of our customers. A unique revolutionary product, "KOSi", with many customer benefits is launched and introduced to market.

Product, Process, and Systems, to always be ahead in the market is a given at KBL. Thus, being prepared for the future, we are hopeful that the year will witness significant gains in business for KBL and all its Stake holders.

### **ANURAG VOHRA**

India Business Head  
Kirloskar Brothers Limited

## EDITOR'S WORD



Beginnings are always exciting. As we enter the New year on a high note for a greater future, we recall in retrospect the efforts we put together at KBL and subsidiaries to build a brighter future in 2018. Every aspect of the organization has reinvented itself to ensure we are ready for the future. The humongous efforts that the teams have put in is commendable and one must be blind to not acknowledge it.

My pleasure lies in not just being a part of the KBL team but also being witness to change that will benefit all customers. As my team put their heads together to select the best cases for you we were challenged with

every case weighing one over the other. It is with the merits of these processes, products, and services that these cases are featured just for you. KBL's preparedness for the future only reinstates our confidence for a better future in 2018.

### **ANURAG KUMAR**

Divisional Marketing Manager  
Kirloskar Brothers Limited



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# COVER STORY

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## Future, Here We Come!!

At Kirloskar Brothers Limited (KBL), it is our constant endeavour to introduce innovative products with supreme quality that impart a sense of reliability and credibility among our customers. For us, our customers are at the centre of everything we do. We continue to strive towards bringing improvements in our product strategies and our complete process cycle on a regular basis to deliver unmatched customer experience.

Keeping up with our approach to be a step ahead, KBL recently embarked on an IT transformational journey. Upgrading from our existing ERP – KBL's allied ecosystem, comprising SAP ECC, SAP BIW, CRM and host of other allied systems, to the latest SAP S/4 HANA ecosystem was the first phase in this evolutionary journey. KBL completed this phase in October 2017. Further phases would include a template ERP implementation globally.

This new ERP system is expected to improve order visibility and tracking performance related to complex and time-driven business activities such as real-time planning and execution, reporting and analytics based on live data and improved forecasting. It will help us serve our customers in a faster and effective way.

Meanwhile, the phase 2 is aimed at bringing all domestic and international entities of KBL onto a single platform in order to introduce consistency in business processes globally and for facilitating seamless transactions across all our business locations. It will act as a single system for financial and sales reporting.

The implementation of the SAP S/4 HANA ecosystem will also introduce us to a whole new area of potential opportunities such as predictive analysis, machine learning, Internet of Things (IoT), etc., which will pave the way for a total digital transformation of the organisation. For KBL, this is a giant stride forward towards the achievement of our vision.

If the launch of S/4 HANA was a major revolutionary step taken towards the integration of our core business processes across the globe, KBL also registered other noteworthy achievements in the form of launch of an array of new products in 2017, particularly the KOSi, Vertical Inline Pump (VIP) and the elbow pump sets.

KOSi, the newest entrant to our small pumps submersible pump range, is a pure blend of cost-effective design and energy-efficient



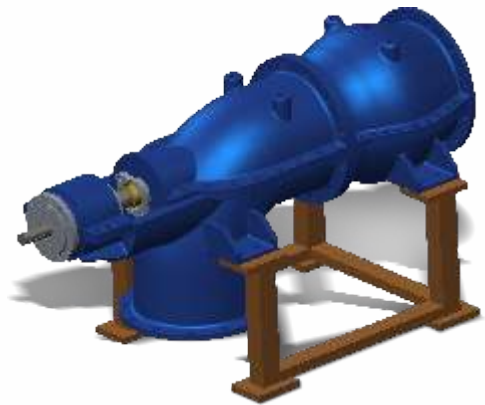
S/4 HANA Implementation Team with KBL Management



performance. It is a 5 star rated pump that helps significantly reduce electricity bill of the customer. In KOSi, the 'i' factor stands for 'Integrated' technology that promises to deliver 'Improved' performance and offer 'Infinite' benefits to the customer by significantly reducing energy consumption and delivering more water at a lesser cost. The axially split elbow type pump, on the other hand, is aimed at bigger irrigation schemes for transfer of large mass of water, especially through river canals. The pump, which is very easy to assemble and maintain, eliminates the need for a separate sump or water tank, thus drastically reducing the overall civil cost of the pump house, making it a preferred choice of the customer. While the KOSi and the elbow pumps have been designed for exclusive purposes, the vertical inline pump has been developed exclusively for our customers in the U.S. The pump carries a unique hydraulic design in accordance with the HIS (Hydraulic Institutes Standards)/Euro standards applicable in the Europe & US markets and complies with the Minimum Efficiency Index (MEI) requirements.

Over the past six months, apart from upgrading our existing product portfolio and exploring uncharted territories for new concepts and ideas, we have been bestowing special focus on raising our service standards and reshaping them, keeping in mind, customer's present and future demands.

With over 450 authorised service centres and more than 125 authorised service and spare dealers, KBL today boasts of one of the largest spare distribution and service networks in the global pump industry. To extend our customer reach further and ensure a faster service, KBL has been expanding its network aggressively. In fact, over the past one year alone, we have successfully added 54 authorised service centres and 22 new



Elbow Pump



Vertical Inline Pump



KOSi Pump



**Self  
Monitoring  
Analysis  
Reporting  
Technology**



**KirloSmart**<sup>TM</sup>

spares dealers to our already extensive service network that is spread across all the major states and cities of the country. Even when it comes to our after-sales services, we are among the only few pump manufacturers in the country to offer a free pump health check-up for KBL customers.

We always endeavour to provide a technological edge with our services. KirloSmart technology, a part of our intelligent pumping solution used for remote condition monitoring of the pump, is amongst our most prominent service innovations of late. It is an analytic tool used for predictive maintenance of the pumps, alerting about any pump disorder beforehand, thereby helping prevent a complete system shutdown and minimise production loss and maintenance costs. As a matter of fact, since the last two years, this technology is an integral part of the smart pumping system installed in Magarpatta City, a mega-township in Pune.

Be it our processes, products or services, our innovations clearly reflect that we have already braced ourselves for the future. Our progressive approach and the constant pursuit to stay in tandem with technological evolution and customer expectations is what truly makes us “Future Ready.”





SOLAR POWER TO WATER





# Enriching Lives through Solar Energy

Last year, the KBL solar team executed several solar pumping projects. Of these, two critical endeavours involving different set of challenges but a common objective of facilitating the use of solar energy for pumping purposes have been discussed below.

## Small Pump for a Big Purpose

**KBL, in association with KARMA, developed an innovative, low-cost and high performance pumping solution for small land holding farmers in Orissa.**

Recently, KBL solar team, in association with KARMA, a startup company founded by technocrats from IIT Bhubaneswar, developed an innovative and customised solar pumping solution with just 500Wp solar module capacity for small land holding farmers. This was created by modifying its KU4 pump series pump and its trademark Jalverter to create an exclusive low-cost high-performance small solar-powered pump.

The basic objective behind developing the product was to offer an economical, efficient, reliable, sustainable and convenient solar pumping solution (with just 500Wp solar module capacity) for irrigating smaller-sized farms within a limited budget in the absence of electric supply. After all, majority of (almost 90%) the farmers in Orissa own small-land holdings.

After understanding the exact end-user requirements and detailed analysis of other relative factors such as price pressures, solar PV module capacity constraints and the site survey details provided for designated areas in Orissa, KBL recommended developing a customised small capacity 4" submersible pump having only 8 stages (KU4-0208) and driven by 0.5 HP, 120V, 3 phase, 50 Hz motor for the project, which received a prompt approval from the client.

The pump set was first tested in-house by KBL to ensure that this is the best match for satisfying the given head and discharge needs of the end users. (Typical head range of 10 to 12 metres and water output of more than 15,000 – 10,000 ltr per Day.)

The 0.5 HP rated solar pump set and Jalverter™ sample were certified by National Institute of Solar Energy (NISE) Gurgaon (MNRE approved test centre) in December 2016. After successful demonstrations and approvals from financing banks/NABARD and concerned govt. departments, the pilot project was launched with subsidy provision through NABARD in April 2017 and executed from June 2017. The project, which involved the supply, installation, and commissioning of over 100+ solar pumping systems, was recently accomplished.



This solar pumping system is the first of its kind to get certified in India with 0.5 HP rating, backed by a 500 Wp solar capacity and capable of delivering more than 15,000 ltrs of water per day at 10 m head under standard test conditions. More importantly, the whole system is portable, enabling the beneficiaries to mount it in their farms during the day and carry it back home during the night, thereby making it even more convenient and user-friendly.

Within a short-period after its launch, the execution agency and banks received more than 1000 enquiries for this innovative pumping solution. In view of the high-demand and stupendous success of this one-of-its-kind pumping system, a new subsidy-less business model is being planned with the due support of various banks.



CONVERTING CHALLENGES  
INTO OPPORTUNITIES

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## Solar Pumping at Remote Location

**KBL recently installed a 10 HP solar pump set at a remote island with no electricity connection in Nagarjuna Sagar, Telangana to facilitate water supply in the region.**

Nagarjuna Sagar is a dam built across the Krishna river between Guntur and Nalgonda District in Telangana, India. There is remote island located near the dam, which the state government endeavoured to develop into a tourist spot. However, the development plan was stuck earlier due to lack of electricity and appropriate water supply system at the island.

After inspection of the site, the Telangana government decided to build a solar pumping project at the island to facilitate water supply, for which they approached many leading pump manufacturers across the country. However, after realising about the challenges of operating in a remote location where even basic electricity supply was unavailable, almost all the competitors refused to undertake the project.

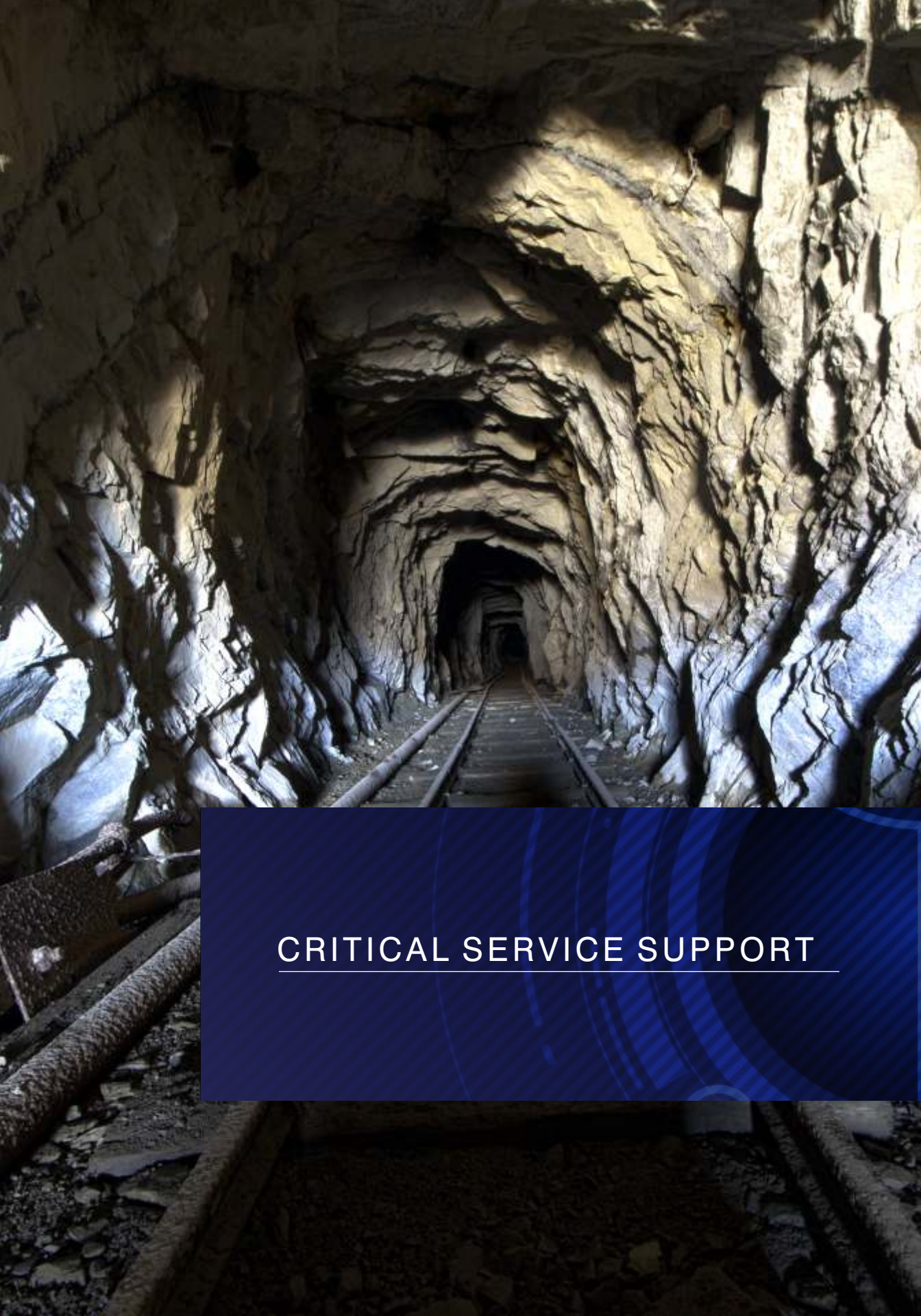
On the other hand, KBL with its capabilities and experience was fully equipped and confident of successfully executing the project. After accessing our capabilities on the basis of the reference list of our past projects, the Government of Telangana awarded the project to the KBL SPB Solar Team.

The pilot project involved supply, installation and commissioning of 10 HP Solar Pumping systems on-site to facilitate ample water supply on top of the island for duly meeting the daily water requirements of animals and for other activities like horticulture and maintaining the flora and fauna life on the island. In this case, the biggest challenge was to install the pump set in the dam backwaters and, at the same time, ensuring that the pump set does not drift from its position.

After a thorough analysis of the situation and site requirements, the KBL team installed 10 HP submersible pump set Model KS6B 1016 with Jalverter J2.10 at the site. The pump set was installed in the dam backwaters with the help of local boats and with floating arrangement and it was stabilised using ropes and rocks immersed in the back water. A 400 metres pipeline of 50 mm diameter was fitted for delivering water from the pump set to the final location.

The KBL solar pump-set installed on-site operates at a head of 52 metres and is capable of delivering 1,00,000 litres of water per day with 10800 Wp solar modules. The forest department was duly satisfied with the end result and has assured us repeat orders.





CRITICAL SERVICE SUPPORT



## Excelling Even in Extreme Environments

**KBL commissions pumpsets in one of Asia's deepest underground mines despite serious dearth of space and unfeasible installation conditions.**

Recently, KBL commissioned pump sets in Chinakuri (1 & 2), one of the deepest underground mines in Asia, situated 1.2 miles (1.9 km) below the earth's surface. Chinakuri, the oldest coal mine in India, extends for around 3.5 miles (5.6 km) into the Puralia district.

Before taking up the project, the KBL team coordinated with the client, Eastern Coalfields Limited (ECL), a subsidiary of Coal India Ltd. (CIL), for evaluating the pump performance for such a critical application. While executing the endeavour, the biggest challenge was to lift water to a vertical height of approximately 750 - 800 metres from the bottom of the mine. The task to lift the water became all the more challenging after our team realised that there

was not enough space available inside the mine to install the pumps in series one after the another.

The pumping system is connected in such a way that the water, with a pressure discharge of 35 to 40kg/cm<sup>2</sup> from the 1st pump, is transferred immediately into the 2nd pump suction and, subsequently, the 2nd pump delivers the water received under such a high pressure to the corresponding height elevation extending up to 800 metres.

Executing and successfully commissioning a pumping project in such challenging conditions is indeed a job well-accomplished by the KBL team and a befitting testimony to the high service standards maintained by our experienced KBL engineers even in extreme environments.





# NEW PRODUCT DEVELOPMENT



# KBL launches Axially Split Elbow Type Pumps

KBL recently developed a specially designed centrifugal pump called “Axially Split Elbow Type Pump” at its Kirloskarvadi factory. The pump is typically aimed at irrigation schemes for transfer of large mass of water, especially through river canals.

Our dedicated R&D team, after assessing the market requirement, realized that there was a considerable dearth of a suitable pumping solution for transferring large mass of water directly from a reservoir to the feeding canal. This is when we decided to develop the exclusive Axially Split Elbow Pump as part of a development project.

Some of the major details of the axially split elbow pump are listed below:

## Major Applications

- Irrigation
- Rain water drainage
- Industry
- Water intake

## Rated Duty

- Flow -  $1850 \text{ M}^3/\text{Hr}$
- Head - 6.0 m
- Speed - 740 RPM
- Rating - 55 kW

## Prominent Features

- Axially split diffuser vanes, mixed flow pump
- Pump casing and body is split axially in two different parts
- Rotating assembly can be assembled and removed as a single unit like split case pumps

At present, there are only a few pump manufacturing companies in the world that supply these types of pumps. KBL, being a world-class pump manufacturer, has proven its competence yet again by designing, developing, and manufacturing a pump-type that only a few can develop.



Developed by Team KOV





## 1100mm Main Inlet Butterfly Valve

KBL's Kondapuri operations and R&D team recently developed an 1100mm main inlet butterfly valve (PN30). KBL's expertise in developing customised valves exactly in accordance with the client specifications makes it one of the most trusted and preferred providers of fluid control products, solutions and services across the globe. This made-to-order 1100mm valve is part of the Nam Ban-2 H.P.P (2X11MW + 10% COL) project.

This exclusive valve carries a design pressure of 30 kgs/cm<sup>2</sup> and has a maximum flow of 6.501m<sup>3</sup>/s. As per the project design, it would be used as the main inlet for the vertical Francis Hydro Turbine, an integral component in the overall project.

The features of this inlet butterfly valve are as follows:

- Fabricated construction, double offset design
- Hydraulically operated body-mounted hydraulic cylinder
- Opening via hydraulic cylinder and closing by way of dead weight
- Locking arrangement, end-travel stoppers, mechanical position indicator
- Proximity sensors for open/close/intermediate positions
- By pass arrangement comprising gate valve and dismantling joint
- Upstream pipe and connecting hardware
- Foundation plates, anchors bolts and jacking arrangements

This custom-made butterfly valve is yet another befitting testimony to the years of experience and exceptional capabilities of our dedicated engineering team in designing exclusive fluid management products and solutions as per client requirements and expectations.



Developed by Kondhapuri Valves Design and CRED Team





# KBL’s Vertical Inline Pump (VIP) is Here

KBL recently developed a Vertical Inline Pump (VIP) series of 22 models, each long as well as close coupled. The new series has been developed for our US customers seeking pumping solutions for Heating, Ventilation, and Air Conditioning (HVAC) applications.

Apart from temperature management systems, these pumps are used in various types of pressure boosting systems and are also suitable for industrial applications requiring a compact pump. Also, these VIP pumps are suited for other secondary applications such as cooling towers, spray washers, fountains, etc.

This newly developed vertical inline pump series by KBL carries a unique hydraulic design. The pump is designed in accordance with the Hydraulic Institutes Standards (HIS)/Euronorm standards applicable in the Europe and US markets and complies with the Minimum Efficiency Index (MEI).

The technical specifications of both the close and long coupled series pumps are mentioned below:

Pump Size	32 to 200 mm
Flow Range	15 to 295 m <sup>3</sup> /hr
Head Range	15 to 51 m
Speed	1450 -1760 rpm
Power Range	1.5 to 55 kW

The launch of the vertical inline pump is yet another successful milestone achieved in the form of a specialised solution for specialised purposes by KBL.







# Kirloskar KOSi Submersible Pump

KBL recently introduced a new standard in openwell submersible pumps with the launch of its 'KOSi' pumps for the domestic and agriculture segments. The 'i' factor in the KOSi stands for an 'Integrated' technology that promises to deliver an 'Improved' performance and offer 'Infinite' benefits to the customer.

'KOSi' pumps are designed to address specific needs of the Indian consumers. These pumps boast of a lightweight and compact design, reduce energy consumption significantly and efficiently address electric overload issues caused due to fluctuating power.

Precisely, it can deliver up to 1,000 litres of water at just ₹1.60/-, resulting in overall cost savings of up to ₹10,000/- P.A. on consumption of around 1,400 units of power. On the whole, the KOSi pump is a pure blend of design and performance, aimed at providing our customers an energy efficient, cost-effective and trustworthy product.

## Features:

- 5 star rated pump
- Significantly reduces electricity bill
- 45% higher Specific Discharge (SD)
- 50% higher Power to Weight Ratio (PWR)
- Easy maintainable design
- Virtually noiseless
- Cathode Electro Deposition (CED) coating

## Applications:

- Gardening and small farm irrigation
- Domestic and community water supply
- Water fountains
- Construction site
- Water supply to overhead tanks





LARGEST IN MAKING



## As Big as It Gets

### **TKSL develops its biggest-ever steel-casting weighing 13.5 MT for a customised valve contract**

The Kolhapur Steel Limited (TKSL), Kirloskar Group Company, is a steel foundry involved in the manufacturing of high quality steel castings since 1965. The company recently created history by manufacturing its biggest-ever steel casting. The gigantic casting weighs 13.5 MT, which also makes it the heaviest steel casting developed by the company till date. The development of such a personalised steel casting was part of a contract received from our end-client, Larsen & Toubro Limited, to create an exclusive gigantic valve for one of its projects.

Manufacturing such a unique, large, and heavy casting came with its own set of challenges and called for a very distinct engineering approach, sensibilities and skills to bring it into reality. The TKSL engineers were well-aware that pouring such a

humongous casting was bound to be a herculean task and a traditional method would not work. So, they decided to pour the casting with the help of two different ladles, a plan that proved to be thoroughly successful. The end-result was a perfect 13.5 MT steel-casting developed exactly in accordance with the client requirement and expectations.

The made-to-order steel casting was finally used to create the requested valve at our dedicated valve manufacturing facility in Kondhapuri.

The successful accomplishment of this project is an ideal reflection of our capabilities, standards and commitment towards the client. Yet again, the client's trust in KBL stood the test of time, proving that whatever be the expected size or design, our talented engineering team, with its decades of experience and proficiency, is fully-equipped to shape it into reality.



Developed by Team TKSL





## Largest Rating Turbine Supplied by KEPL

**KEPL recently supplied, erected and commissioned 19.5 MW bleed-cum-back pressure turbine and generator set for Shri Dnyaneshawar Sahakari Sakhar Karkhana, Ahmednagar, Maharashtra. This is the largest rating turbine manufactured by KEPL.**

This exclusive made-to-order turbine is driven by KEPL's high efficiency and reliable technology - HEART. Thus, like all KEPL HEART turbines, even this steam turbine is built on a premium reaction technology, offering best-in-class efficiency with exclusive design features, safety characteristics and reliability aspects to cater to the wide spectrum of industrial needs.

When compared to the impulse design turbines, such reaction technology turbines have much higher and better efficiencies ranging up to a significant order of 1-2%, based on fundamental principles of design. This higher efficiency may result in increased revenue returns ranging in the order of up to 10% against the initial investment made during the first year of operation, and yet the number of stages will be 50-60% higher. Thus, assuming that the life of these KEPL HEART turbines is 15 years, there can be additional revenue returns of up to 150% against the initial investment made. Furthermore, the part load efficiency of these turbines is much higher than that of impulse turbines, thus resulting in better financial benefits.

More importantly, this HEART based turbine manufactured by KEPL is a power turbine. KEPL, after manufacturing more than 275 steam turbines (in past 12 years) for API sectors such as oil & gas, fertilisers, petrochemicals, etc., has diversified into the manufacturing of power turbines over the last few years. Right since the time that such power turbines have been commissioned over the last 3-5 years, they have been exhibiting excellent results with much better and smooth performances than

committed prior to manufacturing.

The turbine rating for this particular power turbine was typically decided based on the HMBD provided by the customer. Based on the HMBD



provided by SDSSK, we designed the turbine with a power generation capacity of 19.5 MW.

The scope of supply mainly included:

- 19.5 MW Multi-stage Reaction Turbine manufactured by KEPL
- Gear Box
- Generator
- High Speed and Low speed Coupling
- Lub Oil System, High Pressure Control Oil System & Oil Centrifuge
- Gland Vent Condenser, QC NRV and PRDS
- Turbine Inlet, Exhaust & Bleed Piping, Motorised Valves, Safety Valves, etc.
- Turbine Control Panel, including Vibration Monitoring System
- Electrical Panels, including TGMCC, LAVT NGR & DC System

The turbine was manufactured in a span of 10 months while its erection and commissioning was successfully accomplished in 2 months.



PROJECTS COMMISSIONED

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## Pumping Solutions for One of The Biggest Townships in Chennai

State Bank of India Officers Association's (SBIOA's) Unity Enclave is one of the biggest residential projects in Chennai. The housing project, which includes over 21 towers, can accommodate up to 1875 families. Meeting the fluid management and fire safety demands of such a large township was a major challenge that called for a reliable and experienced engineering team.

After a brief analysis of the project requirements and a thorough background study of various pump manufacturers, SBIOA awarded the project to KBL, taking into account our reputation of being the leading pumping solutions provider in the Building and Construction industry. KBL's capability to provide end-to-end solutions for residential projects worldwide, including firefighting pump sets as well as HYPN, sewage and water supply management products and solutions, was a major factor responsible for reinforcing the client's trust in us.

In accordance with the client requirements, KBL supplied 28 Hydro Pneumatic System (HYPN), 16 Fire Pump sets, and series of sewage pumps for this project. While our HYPN systems and sewage pumps would be used for fluid control and management purposes, KBL's fire pump sets would be used for securing the housing towers against fire.

For KBL, the effective commissioning of the pumping project was yet another feather in the cap and the latest addition to our list of successful accomplishments and association with some of the largest landmark residential projects in the country and across the globe.







## Pumping Glory along the Banks of the Holy Ganges

KBL is regarded among the global market leaders in fluid management technology. Right since its inception, KBL has been associated with some of the most critical government and municipal projects in India as well as many other countries across the globe. Be it supplying and installing pump sets, providing after-sales and pump monitoring services, replacing other old pumps with more efficient and upgraded pumps at a particular client site or the end-to-end commissioning of some of the world's largest and most critical pumping projects, KBL is the most preferred and trusted choice for most of the state government endeavours.

Keeping with the same tradition, UP Jal Nigam, one of the major municipal water bodies in the country, recently chose KBL for one of its critical water sewage management projects located near Mansarovar Ghat at the banks of the river Ganga in Varanasi, UP. The project involved the dismantling and replacement of old non-clog vertical centrifugal pumps with more efficient pumps suitable for handling sewage of specific gravity of 1.03 with minimum passible solids of 10 mm size. The contract included the

erection, testing and installation of pump sets at the existing site.

Out of the 5 pumps already installed by another manufacturer some years ago, 3 needed replacement as, over the years, their performance had deteriorated, leading to rise in their maintenance cost. Now, replacing the old pump with a new pump set was bound to be a routine task for an industry veteran like KBL. However, the real challenge was the site's location, which was situated 18 metres below ground level. Obviously, dismantling the older pumps from an 18 metres deep pump well and then lifting them up to the floor and, finally, the underground installation of the new pump sets at the same location was a major challenge and called for an experienced engineering team. Besides, the Mansarovar terrain is narrow and some of the material had to be sent via river. This is where our project management skills and experience of working on various similar challenging projects in the past made us the favoured choice of the client.

KBL received the order to not just supply the non-clog vertical centrifugal pumps for the project but to also ensure that the electrical panels were aligned with the other two existing pumps on-site. KBL supplied SHV 100 x 40 Q pump model and, in accordance with the project requirements, enhanced the pump capacity to 2600 lpm. The expected pump head was 21 m with a speed of 980 rpm.

KBL's engineers did a commendable job in successfully executing this small but critical sewage project on-time. It is this expertise, dedication and commitment that positions KBL among the industry leaders in the global pump market.







# Asia's Largest Lift Irrigation Project Backed by Kirloskar Pumps

**KBL supplied large single stage VT pumps for the Pattiseema project, the largest lift irrigation project in Asia**

The Pattiseema Lift Irrigation project was envisaged with an aim to make Rayalaseema, a geographic region located 500 km away from the project site, drought free. The project was aimed at lifting flood waters, precisely drawing 240 cumecs (8500 cusecs), from the Godavari river and diverting it into the Polavaram irrigation canal. The flood water diverted into the canal is expected to finally reach the Prakasam barrage reservoir in 7-9 days, thereby bringing around 700 thousand acres of land area in the region under irrigation.

In keeping with the pumping requirements of such a mammoth project, KBL received an order to supply large single-stage VT pumps developed by us, carrying a colossal capacity of 36,000 m<sup>3</sup>/hr. The planned pump design came with a two-floor arrangement.

KBL ensured the timely execution of the order and the first VT pump was commissioned in record time of 5 months from the receipt of the order. For this endeavour, KBL partnered with other pump manufacturers to make this project the largest lift irrigation project in the entire Asian region. For KBL, it is the first ever irrigation project completed within a fixed time of 12 months and within a specific budgeted cost. Overall, we have supplied 16 pump sets for the project.

This project has the capacity to divert 80 TMC of the overall 2,500 TMC of Godavari water into river Krishna, which otherwise goes into the sea and

thereby remains unutilised every year. Thus, the Krishna delta region is now protected from famine and, at the same time, assured of an adequate water supply in the coming years.

The Hon'ble Chief Minister of Andhra Pradesh, Chandrababu Naidu, commemorated the day when water from river Godavari met Krishna as a national achievement and dedicated the Pattiseema project to the people of Andhra Pradesh.

The project is a perfect testimony to the government's Make in India mission. This is a perfect example of a visionary river linking project. Utilisation of available arable land by way of a technology-intensive irrigation method is a progressive step towards a greener future of the country and will help us sustain agricultural growth and improve the overall water management system standards in the country.





# ENERGY AUDIT



## Performance Always Pays

**KBL conducts energy audit and, accordingly, supplies its highly energy-efficient LLC pump series for an age-old client project, resulting in substantial energy savings.**

Thirumalai Chemicals Limited (TCL), a company started in 1973, was looking for a suitable firm for conducting an energy assessment study of its pumping system.

The company earlier approached a few pump audit firms for conducting the study. However, due to a series of challenges associated with the project, around 3-4 firms had already been unable to submit a detailed report and energy saving details.

This is when the company entrusted the job to KBL. On receiving the contract, primarily, KBL's Energy Audit Cell and Industry team visited the customer site for presenting a gist about our energy auditing capabilities and for carrying out a preliminary site survey.

After analysing the situation and condition of the pumping system, the team noticed that the delivery pipes associated with the system were almost 25 years old. Conducting an energy audit for such a system was bound to be challenging and complex. On further analysis, the team noticed that the pumps experienced high scaling. Besides, the ultrasonic flow meter reading of the pumping system was constantly flashing a low signal, indicating that it was not detectable. This, by far, was the most critical observation made by the team with respect to the energy audit.

Although there were a number of complex challenges associated with the project, with KBL's decades of experience and engineering capabilities, our expert Energy Audit team was successful in addressing all these above challenges effectively. Further, on the basis of the survey, KBL team submitted a proposal for conducting the audit with thermodynamic instruments, which was duly approved by the

client. Consequently, the order to conduct the energy audit was awarded to KBL and our specialist engineers accomplished the job successfully without any difficulties.

After conducting the energy audit, our team also explained the client about our audit report as well as about the energy savings, technical features and benefits of our LLC series pumps. Being thoroughly impressed with the "Lowest Lifecycle Cost" concept as well as on the basis of the successful accomplishment of the energy audit work order, the customer awarded an order to KBL for the supply of 2 LLC pumps. Later, based on the performance and energy savings achieved with the help of the supplied LLC pumps, the company placed a repeat order for 2 more LLC pumps.



Recently, the company officially informed us that it was thoroughly satisfied with the performance of all the supplied pumps as it resulted in energy savings of 24 KW/H for the company. More importantly, again, based on the satisfying performance of the pumps and the resultant energy savings, the customer is keen to award another audit work order to KBL for conducting audit of 4 more pumps installed with 75 KW motors each.

And, so, the cycle continues. This is why they say- Performance always Pays!! Be it that of our team or our pumps!

# ACHIEVEMENTS

## 2 Star Exim Certificate



## Quality Forum Award Coimbatore Chapter



## Quality Forum Award Housar Chapter





## Small Manufacturing Engineering Excellence in HR



## The Kolhapur Steel Limited TUD SUV Certification



# EXHIBITIONS

**IFAT Mumbai**



**India Nuclear Event**



**Submarine Technology DRDO**





# MEETS AND SUMMITS

**SPB Dealer Meet - Yamuna, KBL**



**IDCD - Dealer Meet - Yamuna, KBL**



**Dhaka Dealer Meet**



**Siemens - KBL Summit - Yamuna, KBL**



# ACTIVITIES INSIDE KBL

**Quality Month Celebration  
Dewas & Sanand**



**X & XII Felicitation Programme,  
Kirloskarvadi**



**X & XII Felicitation Programme,  
Dewas**



**X & XII Felicitation Programme,  
Pune**





# KOV KEY VISITS

**WRM Metawater from Japan & USA**



**IDCD - Dealer Meet**



**M/s Doosan India**



**Delegates from SPP**



# CSR ACTIVITIES

**Daan Utsav @ Yamuna, KBL**



**Medical Camp @ Palus**



**Daan Utsav @ Bavdhan, Pune**



**Medical Camp @ Palus**





**Study Skills - Hind Kesari School, KOV**



**Study Skills - KOV School**



**Wash- Dewas**



**Study Skills - Shivaji School, KOV**



A close-up, sepia-toned photograph of a vintage motorcycle headlight. The headlight is oval-shaped and has the brand name 'किंगडोल्फ' (Kingdolph) embossed in a stylized Hindi script. Below the name is a horizontal line. The background is blurred, showing parts of the motorcycle's frame and handlebars.

किंगडोल्फ

**KBL HERITAGE**



## Quality that defines a Heritage

Penipech, a small village located near Jaipur, is home to a pump station set-up during the British reign that once used to supply water to the entire Jaipur city. The pump station was installed around 110 years back by the regional king with the help of the British Government to supply water from the dam to the city. Initially, the station was run on steam, which was later followed by diesel, and finally by electricity.

There's a well located at the site, which once housed over 15 pumps. However, today, the only pump that can still be seen at the site is a Kirloskar pump. The site has now been declared as a heritage site by the Government of Rajasthan.



## फिर आ रहा है १९०५ का हाईटेक सिस्टम, जिसने जयपुर को दिया पानी

**पानी के घर तक आने का पहला कदम**

1470 कलाह नदी के जल को जयपुर के लिए पानी के घर तक आने का पहला कदम

जयपुर राजा (सम्राट) जयसिंग द्वितीय ने पानी के घर तक आने का पहला कदम जयपुर के लिए पानी के घर तक आने का पहला कदम

जयपुर राजा (सम्राट) जयसिंग द्वितीय ने पानी के घर तक आने का पहला कदम जयपुर के लिए पानी के घर तक आने का पहला कदम

द्वारकाजी रिक्टर प्रोजेक्ट को पर्यावरण के साथ धर्मन और नालेज स्टडी से भी जोड़ा गया है. लोग जानते हैं 110 साल में विज्ञान अपग्रेड हुआ बाटर सफाई सिस्टम

रव: भाप के पंप के जरिये खुली नालियों से लिफ्ट किया पानी अब 110 किमी. दूर बीसलपुर बांध से घरों तक आ रहा फिल्टर पानी



110 साल पहले द्रव्यवती ही थी प्रमुख जलस्रोत, रामसागर बांध बनाया, 16 कुएं खोदकर लाए पानी

जयपुर सिटी के अंदर जलस्रोत से जल लाने का पहला कदम 110 साल पहले ही लीटिंग बांध बनाया गया था. जयपुर राजा (सम्राट) जयसिंग द्वितीय ने पानी के घर तक आने का पहला कदम

भाप पंप से हाईटेक विजली सिस्टम तक

1905 में जयपुर पंप स्तंभ बनाया गया था. जयपुर राजा (सम्राट) जयसिंग द्वितीय ने पानी के घर तक आने का पहला कदम



A photograph of a large, mature tree with dense green foliage, standing in a park-like setting. The tree has a thick, brown trunk and many branches with small, dark green leaves. In the background, there are other trees and a clear blue sky. A blue banner with a white text overlay is positioned in the lower half of the image. The banner has a subtle pattern of concentric circles and diagonal lines. The text "FOOD FOR THOUGHT" is written in white, bold, uppercase letters, underlined.

**FOOD FOR THOUGHT**



## Where there's a Will, there's a Way

Nature in its splendid ways teaches us lessons for life. Every human who has tried to achieve great feat has often encountered temporary defeat. It's only the resilient spirited that go on and accomplish the unimaginable, often to the point where death also seems to have bowed to them.

Last year, an ordinary looking tree planted three decades ago at Kirloskarvadi, KBL's first manufacturing facility, achieved the impossible, teaching and instilling the "Never Say Die" spirit in all of us. During the beginning of 2017, due to certain unforeseen seasonal circumstances, this tree was in a bad condition almost on the verge of perishing. Even with all the gardener's efforts to sustain it, it showed no signs of improvement. In fact, after repeated failed attempts, the gardeners had given up all hopes on the tree's revival. However, to the utter surprise of one and all, this tree miraculously started growing new leaves and branches over the next six months of the year. By the end of the year, it was back to being a full grown healthy tree with its own zeal to survive.

The wisdom we get from this tree is to combat whatever life serves us with. The resilience and the never-say-die spirit of this tree is a motivational lesson that proves – "Where there's a will, there's always a way."

[Courtesy: Kirloskarvadi Team]





Enriching Lives

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