Kirloskar

Enriching Lives

Kirloskar Pumps and Systems for Irrigation, Water Supply and Sewage

KIRLOSKAR BROTHERS LIMITED

THE PROFILE

KBL brings water closer to you through innovative, cost effective and reliable fluid handling solutions

For more than 75 years, Kirloskar Brothers Limited has been providing reliable and cost effective fluid handling solutions to end users of pumps and pumping applications. For as many years, customers across the world have turned to Kirloskar Brothers Limited for our comprehensive range of pumps and valves to fulfil myriad applications across Power, Water Supply and Sewerage, Irrigation, Utilities, Oil and Natural Gas, Chemical , Process, Pharmaceutical, Fertilizer, and Air conditioning sectors.

Project Management Expertise

The strength of Kirloskar Brothers lies in its long experience in designing, manufacturing, installing and commissioning a variety of tailor-made pumping systems, with commitment to innovation, quality and continuous technological advancement, making us a one-stop-shop for all pumping applications.

Our focus on developing unique, well designed, precisely engineered solutions to solve complex fluid handling problems has earned us our reputation. Our dedicated team of resourceful engineers using the latest tools and techniques have consolidated our standing as people who enable timely execution of each project.

Well Equipped R&D Centre

KBL has long been conducting research in pumping technology to bring to its clients the latest solutions for pumping applications. This is done at its Research and Development centre which is equipped with modern workstations and mechanical as well as fluid analysis software, several of them specially tailored to keep us at the forefront of pumping technology.

The applied research work conducted here has resulted in appropriate technology for development of many new series of pumps like horizontal split case, multistage, small end suction, large end suction and mixed flow pumps. KBL has introduced India's first energy efficient pump to the more recent solar photo voltaic pumping system, canned motor






pumps, concrete volute pumps, metallic volute pumps, sodium pumps and magnetic drive pumps.

It is the only pump manufacturing company in India to manufacture canned motor pump for harsh and toxic chemicals and liquid sodium pump for special applications, and is also the only company in India to have designed, manufactured and commissioned several pumping systems involving concrete volute pumps.

One of Asia's Largest Hydraulic Research Centres

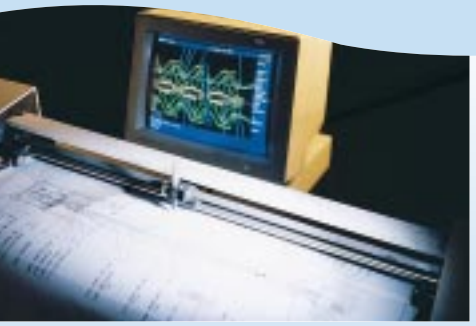
KBL has one of Asia's largest hydraulic research centres at Kirloskarvadi, with testing facilities up to 5000 kW, 11kV and discharge up to 50,000 m^3/hr (13,850 litre/sec) with closed circuit testing up to 500 kW and sump model study expertise. The testing facility includes a Centralized Data Acquisition System by which on-line testing as well as off-line testing of pumps is possible. KBL undertakes sump model studies for satisfactory operation of pumps. Pumping Station Intake Study Analysis using Computational Fluid Dynamic (CFD) Techniques for prediction of the flow patterns is also carried out without conducting actual fluid flow studies using scaled models of intake sumps of pumping stations.

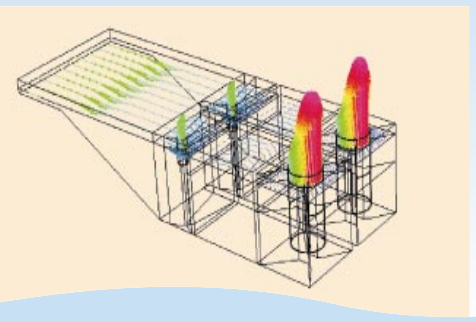
KBL's products and services are exported to over 70 countries across continents. On both the national and International fronts KBL has developed and preserved an enviable reputation for products and services that meet global standards.

Committed to total fluid handling solutions for over a century, KBL - the name you can trust for centuries to come !!

Association with International Consultants and EPC Contractors

KBL is associated with renowned consultants and EPC contractors for pump projects worldwide, such as ABB Power, Alstom, Ansaldo Energia, Bechtel, Binnie and Partner, Daelim, Dalal, DCL, Desein, EIL, DSD, Hanjung, Humphreys and Glasgow, Hyundai, Hitachi, Kvaerner, Marubeni, Mitsubishi, Rolls Royce, Siemens, Sumitomo, TCE, Toshiba, Toyo and Uhde India, to name a few.

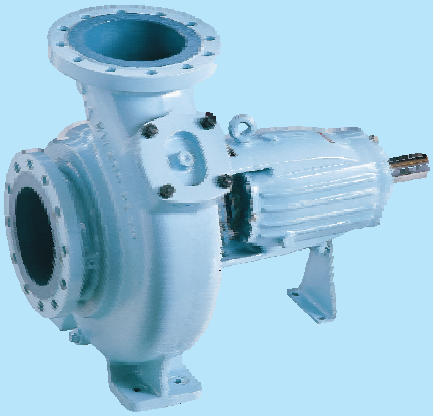


Irrigation, Water Supply and Sewage

Kirloskar Pumps and Valves at a glance

Solid Handling Pumps Type SHM / SHL



Range :

- Size : 50 mm to 900 mm
- Capacity : up to 17000 m^3 / hr
- Head : up to 90 metres
- Solid size : up to 100 mm (Max.)
- Temperature : up to 90°C

Applications :

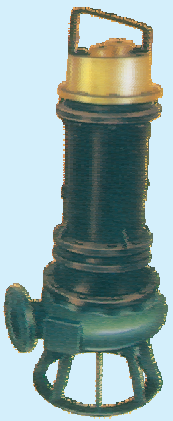
Suitable for handling water with solids in suspension :

- Paper Industries - slurry and Pulp handling
- Sugar Industries
- Breweries
- Sewage and Waste

Constructional features :

- Horizontal / Vertical mounting
- Single stage
- Single suction
- Volute casing
- Operating at 50 Hz or 60 Hz

Submersible Sewage Pumps Type NS



Range :

- Size : 40 mm to 250 mm
- Capacity : up to 750 m^3 / hr
- Head : up to 48 metres
- Temperature : up to 90°C

Applications :

- Effluents
- Raw sewage
- Storm water
- Waste water

Constructional features :

- Non-clog two vane or single vane enclosed impeller
- Permissible solid size up to 150 mm (maximum)
- Gland packed or mechanical seal
- Operating at 50 Hz or 60 Hz

Mixed Flow Pumps- Type MF/MFX

Range :

- Size : 200 mm to 650 mm
- Capacity : up to 7000 m^3 / hr
- Head : up to 30 metres
- Temperature : up to 90°C

Applications :

- Industries
- Irrigation
- Air conditioning
- Water treatment plants
- Power plants
- Aquaculture
- Sewage

Constructional features :

- Horizontal / Vertical mounting
- Single stage
- Single suction
- Volute casing
- Operating at 50 Hz or 60 Hz

Kirloskar Pumps and Valves at a glance

End Suction Pumps- Type DB (Large Size)

Range :
- Size : 150 mm to 300 mm
- Capacity : up to 1900 m^3 / hr
- Head : up to 35 metres
- Temperature : up to 90°C

Applications :
- Industries
- Urban water supply
- Irrigation
- Air conditioning
- Water treatment plants
- Power plants
- Aquaculture

Constructional features :
- Horizontal mounting
- Back pull out type
- Single stage
- Single suction
- Operating at 50 Hz or 60 Hz

Horizontal Axially Split Casing Pumps - Type UP/UPLV/UPH/ UP(T)

Range :
- Size : 50 mm to 1200 mm
- Capacity : up to 20000 m^3 / hr
- Head : up to 330 metres
- Temperature : up to 90°C

Applications :

Suitable for handling water with slight impurities in :
- Industries
- Urban water supply
- Irrigation
- Air conditioning
- Fire fighting
- Mine Dewatering
- Water treatment plants
- Power plants

Constructional features :
- Horizontal mounting
- Axially split casing
- Single stage or double stage
- Single suction or double suction
- Single volute or double volute
- Operating at 50 Hz or 60 Hz

Horizontal Axially Split Casing Pumps- Type DSM/ DSM(T)

Range :
- Size : 50 mm to 150 mm
- Capacity : up to 470 m^3 / hr
- Head : up to 180 metres
- Temperature : up to 90°C

Applications :

Suitable for handling water with slight impurities in :
- Industries
- Urban water supply
- Irrigation
- Air conditioning
- Fire fighting
- Mine Dewatering
- Water treatment plants
- Power plants

Constructional features :
- Horizontal mounting
- Axially split casing
- Single stage or double stage
- Single suction
- Single volute
- Operating at 50 Hz or 60 Hz

Irrigation, Water Supply and Sewage

Kirloskar Pumps and Valves at a glance

Horizontal Axially Split Casing Pumps Type SCT

Range :

- Size : 50 mm to 350 mm
- Capacity : up to 4500 m^3 / hr
- Head : up to 330 metres
- Temperature : up to 100°C

Applications :

Suitable for handling water with slight impurities in :

- Air conditioning and refrigeration
- Fire fighting
- Mining
- Petroleum refineries
- Liquid with slight impurities

Constructional features :

- Horizontal or vertical axis
- Gland packed or mechanical seal
- Operating at 50 Hz or 60 Hz

Vertical Turbine Pumps - Type BHR/ BHQ/ BHM/ BHMA/ BHA

Range :

- Size : 150 mm to 2200 mm
- Capacity : up to 40000 m^3 / hr
- Head : up to 200 metres
- Temperature : up to 90°C

Applications :

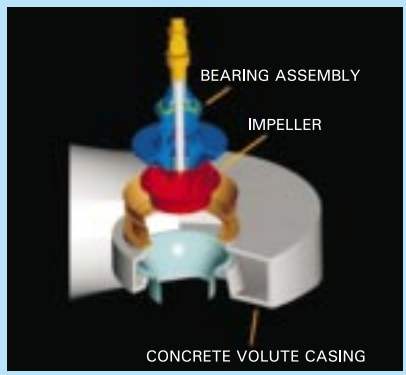
Suitable for handling sea water and water with slight impurities in :

- Industries
- Urban water supply
- Lift Irrigation
- Fire fighting
- Nuclear and Thermal Power Plants
- Offshore platforms

Constructional features :

- Vertical mounting
- Single stage or double stage
- Enclosed or semi open impellers
- Single suction
- Direct or right angle drive
- Dry pit or wet pit arrangement
- Special material of construction
- Operating at 50 Hz or 60 Hz

Concrete Volute Pumps



Range :

- Size : up to 4000 mm
- Capacity : up to 120000 m^3 / hr
- Head : up to 50 metres
- Temperature : up to 90°C

Applications :

- Aquaculture
- Circulating Water/Condensor
- Cooling Water for Power Plants
- Desalination
- Drainage and Flood Control
- Dry Docks
- Lift Irrigation
- Water Supply

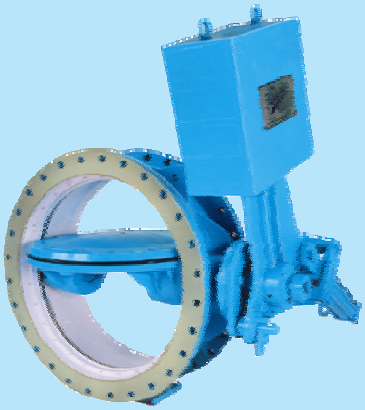
Constructional features :

- Oil lubricated bearings
- No water contact with shaft, hence no corrosion
- Corrosion proof volute casing- Reinforced Concrete
- Shaft, Impeller and other components with special material available

Irrigation, Water Supply and Sewage

Kirloskar Pumps and Valves at a glance

Butterfly Valves



Range :

- Size : 80 mm to to 2500 mm
- Manufacturing / Testing standards : BS 5155
- Pressure Rating : up to PN 1.6
- Temperature : up to 60°C

Applications :

- Industries
- Irrigation
- Water supply and sewage
- Power Plants

Constructional features :

- Double flange
- Short Body / Long Body
- Single / Double Eccentric Disc
- Self cleaning and jamming seat
- Electric/Pneumatic/Hydraulic actuator (optional)
- Extension shafting / headstock / locking arrangement

Sluice Valves

Range :

- Size : 50 mm to 1200 mm
- Manufacturing / Testing standards : BS 5163, IS 14846
- Pressure Rating : up to PN 1.6
- Temperature : up to 60°C

Applications :

- Industries
- Irrigation
- Water supply and sewage
- Power plants
- For clear water and turbidity up to 5000 ppm

Constructional features :

- Double flange
- Rising stem/Non rising stem
- Isometric Trapezoidal threads for screw
- Channel and shoe arrangement

Non Return Valves

Range :

- Size : 50 mm to 1200 mm
- Manufacturing / Testing standards : IS 5312 Part I & Part II
- Pressure Rating : up to PN 1.6
- Temperature : up to 60°C

Applications :

- Industries
- Irrigation
- Water supply and sewage
- Power plants
- For clear water and turbidity up to 5000 ppm

Constructional features :

- Double flange
- Gun metal body rings
- Cast Iron/Cast steel Body

The pumping systems supplied by KBL are in operation in over 60 countries across five continents, including United States and countries in Western Europe. Our pumping systems bring water to tens of millions of people and irrigate millions of hectares of agricultural land in Asia and Africa.

A large number of pontoon mounted pumping equipments supplied by KBL to Laos in the last decade brought a phenomenal change in the country's economy, with hundreds of thousands of hectares of land being irrigated and rice production increased by several times. It is the same success story in Egypt. During the past three decades KBL has played a leading role in reclaiming hundreds of thousands of acres of desert land for agriculture. Kirloskar pumping equipments for sprinkler irrigation have brought in a green revolution in that water starved country.

Mixed Flow pumps working in Savanakhet, Laos

Vertical Turbine pumps in operation for a water supply scheme at Sabah, East Malaysia

Axially Split Case pumps in vertical execution, for a water supply scheme in Kedah, Malaysia

Split Case pumps at Banhe Pumping Station, Lao PDR

Vertical Turbine pumps installed for irrigation at Wadi Sheeh, Egypt

Vertical Turbine pumps in operation at Royal Bangkok irrigation scheme, Thailand

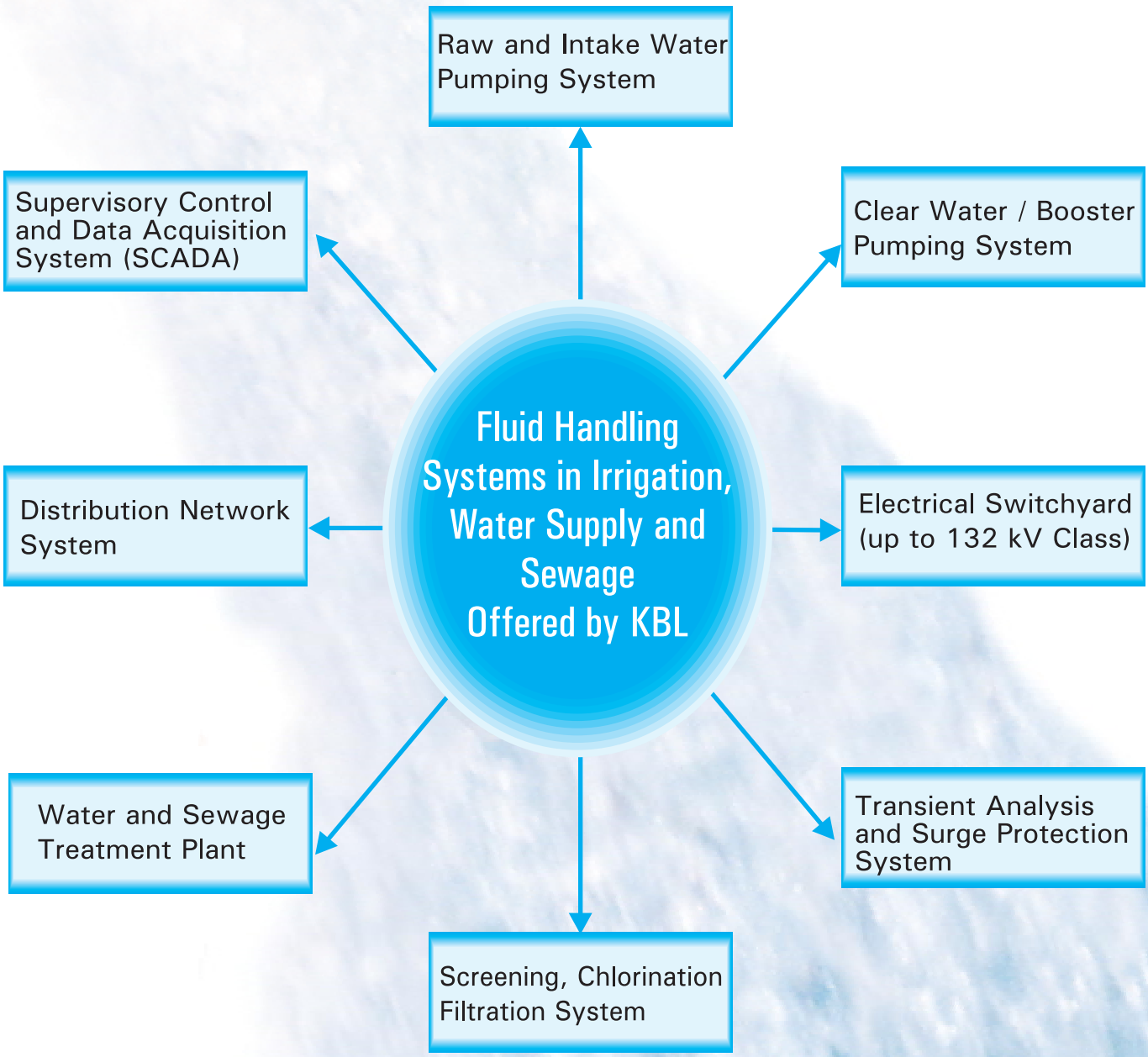
Split Case pumps at Moung sen Project, Champassak Province, Lao PDR.

Some prestigious customers

- Consolidating Farming, Zambia
- Department of Water Affairs, Namibia
- El Dorado Nigeria Ltd, Lkeja, Lagos, Nigeria
- EL Anhar Est., Abu Dhabi
- GARPAD/Umm El Reish Pumping Station, Egypt
- Hung Dong Pumping Station, Vietnam
- Irrigation Improvement Project, Ministry of Public Works and Water Resources, Egypt
- ISO Octane Company, Dubai, U.A.E.
- Kenyir Water Supply Scheme, Malaysia
- Langkawi Water Supply Scheme, Malaysia
- Labuan Water Supply Scheme IPCO, Malaysia
- Mechanical and Engineering Department, Tabiat el Abd Pumping Station, Egypt
- Ministry of Irrigation, Iraq
- Ministry of Water Supply Resources and Meterology, Cambodia
- Pelubang W.S.S. JKR, Kedah, Malaysia
- Seychelles Marketing Board, Seychelles
- Sudanese Sugar Company, Sudan
- Sungai Langat W.S.S. Negeri Sembilan, Malaysia
- Sabah Interim Project, JKR, Sabah, Malaysia

Mixed Flow pumps for sewage application at Faiyad Egypt.

Capability Spectrum



Irrigation

A series of Vertical Turbine pumps at Takari in Maharashtra, for Irrigation purpose

Domestic Dominance

In whole length and breadth of India

KBL takes pride in its close association with various organisations in the country such as, municipal corporations, state water supply and irrigation boards and all of the core industrial sectors. Its focus has been, and continuous to be, on developing unique, well designed, precisely engineered innovative solutions to solve complex fluid handling problems.

Vertical Turbine pumps installed at Chagalnadu Lift Irrigation Scheme, Andhra Pradesh.

A Series of Vertical Turbine pumps and valves installed at Janai Sirsai Lift Irrigation Project, Pune.

Vertical Turbine pumps installed at Pise pumping station, Mumbai.

Vertical Turbine pumps installed at Koil Lift Irrigation Scheme, Padampura/Pulwana Srinagar

Vertical Turbine pumps installed at Mhaisal Lift Irrigation Scheme, Sangli

Vertical Turbine pumps installed at Ichalkaranji Water Supply Scheme, Dist. Kolhapur

Some prestigious customers

- Ahmedabad Municipal Corporation, Ahmedabad
- Bangalore Water Supply and Sewerage Board
- Brihan Mumbai Municipal Corporation, Mumbai
- Chennai Metropolitan Water Supply and Sewerage Board
- Kolkata Metropolitan Development Authority, Kolkata
- CESPO Uttar Pradesh Irrigation Department, Lucknow
- Irrigation and C.A.D. Department Government of Andhra Pradesh,
- Delhi Jal Board, New Delhi
- Gujarat Water Supply and Sewerage Board
- Public Health Engineering Department, Mizoram
- Hyderabad Metropolitan Water Supply and Sewerage Board
- Jammu and Kashmir Irrigation and Flood Control Department, Srinagar
- Karnataka Urban Water Supply and Drainage Board, Bangalore
- Kerala Water Authority
- Maharashtra Krishna Valley Development Corporation, Pune
- Maharashtra Jeevan Pradhikaran
- Maharashtra Industrial Development Corporation
- Municipal Corporation of Delhi
- Public Works Department, Government of Goa
- Public Health Engineering Department, Rajasthan
- Public Health Engineering Department, Jabalpur
- Uttar Pradesh Jal Nigam

Horizontal Split Case pumps and Butterfly valves at Gujarat water supply and sewerage board, Pipli, Gujarat

World's Largest Pumping System

KBL is creating the world's largest pumping system for Sardar Sarovar Narmada Nigam Ltd. The pumping system comprises five pumping stations with twenty six concrete volute pumps and twenty two vertical turbine pumps. The world's foremost pumping technology will bring in 410,000 liters of water per second to irrigate 1.8 million hectares of land and provide drinking water to millions of people in Gujarat. This project, exclusively undertaken by KBL, covers Design, Engineering, Manufacturing, Supply, Installation, Testing and Commissioning of pumping system including civil work on turnkey basis.

Water Supply Scheme with Multiple System

New Tirupur Water Supply Scheme in Tamilnadu, which is under execution by KBL, involves intake, clear, booster and master balancing and reservoir pumping stations with three vertical turbine pumps and fifteen large split case pumps. All the above pumping stations are fully automated with PLC and SCADA control systems using fluid coupling and variable frequency drives to meet fluctuating demands in water supply.

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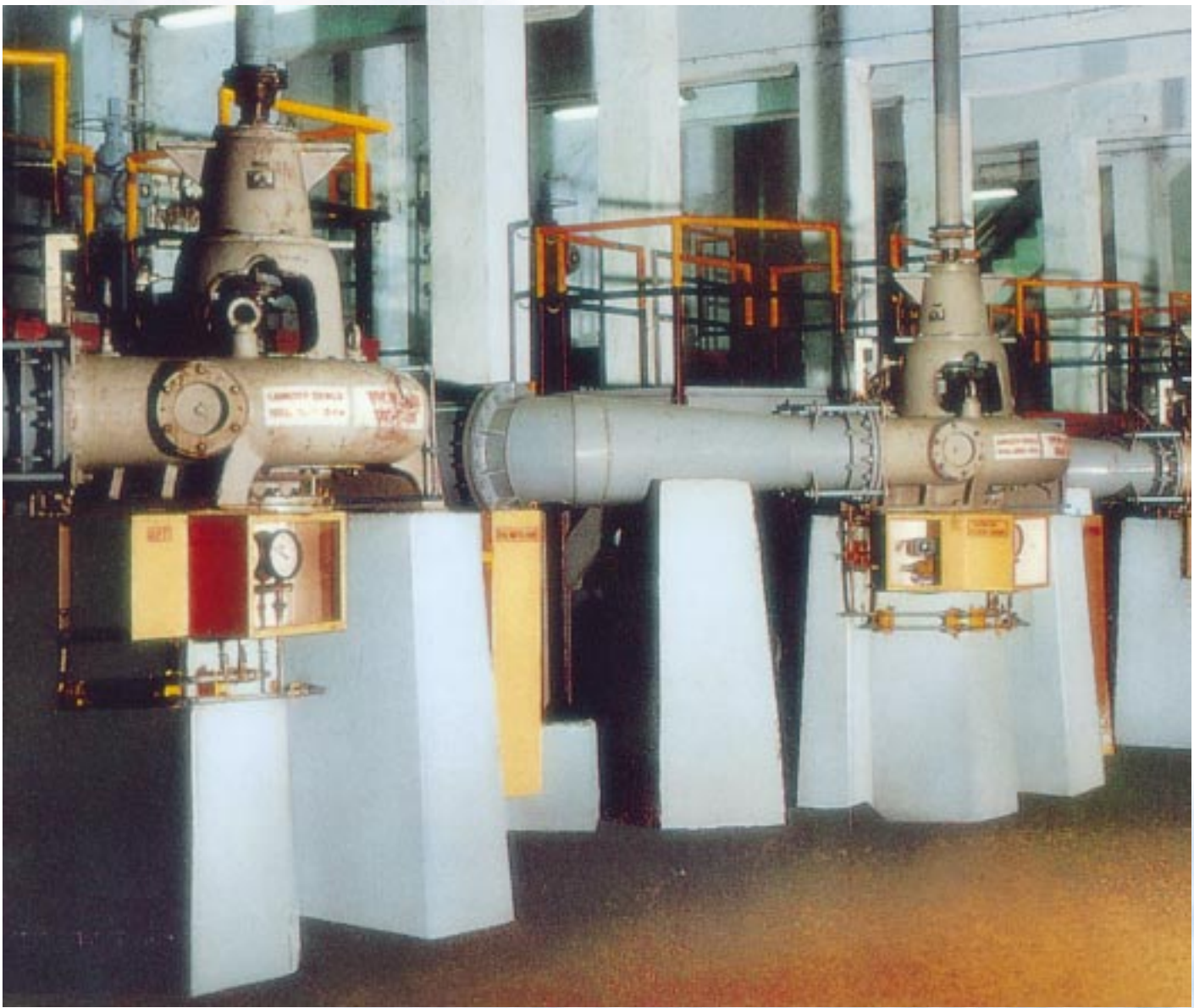
One of the Largest Water Supply Scheme in India

KBL has executed Krishna Water Supply Scheme for Hyderabad Metropolitan Water Supply and Sewerage Board. This scheme involving six high head horizontal Split case pumps with 2000 HP motors, electromechanical equipment and 132 kV, 15 MVA substations, was completed within 9 months. The scope also includes supply of SCADA/Telemetry system connected by UHF system over a distance of 132 Kms and also a large surge protection system.

Devadula Project : One of the Biggest Lift Irrigating Projects in India

KBL is executing one of the biggest lift irrigation projects in Telangana region of Andhra Pradesh. The pumping system involving metallic volute pump technology will lift water at the rate of 10000 liters per second from Godavari river with the help of eight large vertical turbine pumps driven by 8500 kW motor (maximum), largest ever and for pumping in India. The water will be transported in steel pipes of 2.5 meter diameter through a distance of 135 kms across a difficult terrain with a total pumping head of 400 meters. KBL is responsible for offering innovative and cost-effective pumping solutions with Design, Manufacture, Erection and Commissioning of pumping systems.



Sewage Handling pumps at Varsova, Maharashtra, India.

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KIRLOSKAR BROTHERS LIMITED

Registered & Corporate Office : Udyog Bhavan, Tilak Road, Pune - 411 002, India.
Tel. : +91 - 20 - 2444 0770
Fax : +91 - 20 - 2444 0156 / +91 - 20 - 2444 4198 / +91 - 20 - 2444 0822
email : kblin@kbl.co.in

Projects & Engineered Pumps Group : 'Chintan', 408 / 15, Mukund Nagar, Pune - 411 037, India.
Tel. : 91 - 20 - 2444 0770 Fax : 91 - 20 - 2427 0879
Email : projects@pnr.kbl.co.in

www.kirloskar.com
www.kbl.co.in