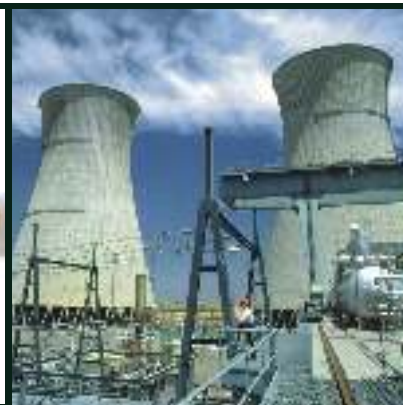




Enriching Lives



KIRLOSKAR

PUMPS &

VALVES

IN SUGAR

INDUSTRY

KIRLOSKAR BROTHERS LIMITED



Profile

The Company

Kirloskar Brothers Limited (KBL) incorporated in 1920 is Asia's largest centrifugal pump manufacturing company. The company provides a complete single window pumping solutions starting from application consultancy, design, manufacturing, testing, installation and commissioning of variety of centrifugal pump ranging from 0.1 KW to 12000 KW.

Kirloskar Brothers Limited is recognized as the largest exporter of centrifugal pumps all over the world consistently for the last few decades. The company is uniquely equipped with complete facilities like foundry, modernized manufacturing set up and testing arrangement meeting to all International standards.

The company shares the pride of Gujarat having executed the Asia's Largest pumping project named as Sardar Sarovar Narmada Nigam Limited.

Strengths of KBL

All facilities under one roof

- Research & Engineering
- Enterprise Resource Planning
- Modern In-house Foundry and Machining Facility
- System Engineering
- Quality Assurance System
- Asia's Largest state-of-the-art Testing Facility
- Worldwide Sales & Service Network
- Engineering Procurement and Contract Execution Capabilities

Subsidiaries / Joint Ventures

Kirloskar Ebara Pumps Limited (India) : Boiler feed pumps

SPP Pumps Limited, UK : Lowest Life cycle cost pumps, package pumps systems

Aban Construction : Construction Business

Kirloskar Corrocoat Private Limited : Anti-Corrosion Products Business



- Cast Iron Foundry
- Non Ferrous Foundry
- Alloy Steel Foundry



Hydrostatic test of casing

Machining Facilities



Material Treatment and Testing

- Heat Treatment
- Material Testing Laboratory
- Non Destructive Testing Laboratory

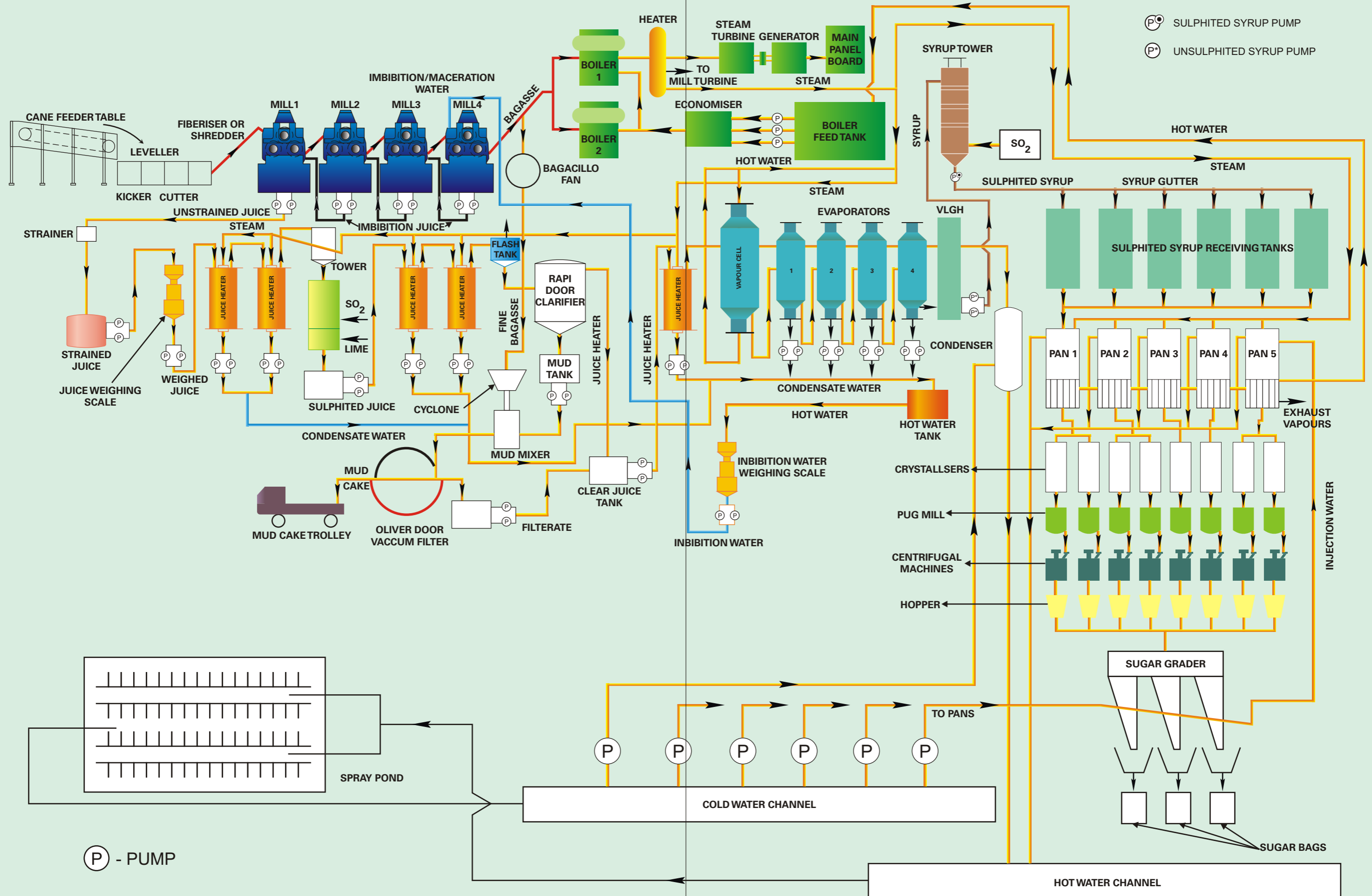
Research Centre

- Hydraulic Performance test over the complete range of operations on the prototype pump
- Mechanical performance test on prototype
- Close circuit NPSHR
- Noise, vibration and endurance test
- Cavitation and erosion test
- Computational Fluid Dynamic Analysis
- Surge Analysis
- Structural Analysis

Sugarcane factory flow diagram



use genuine spare parts to get consistent performance and save energy cost



Complete process cycle



use genuine spare parts to get consistent performance and save energy cost



The only pump manufacturing company catering to all sugar sector requirements

Applications of KBL pumps

CAPACITY →	2500 TCD	3500 TCD	5000 TCD	12000 TCD	15000 TCD
SERVICE ↓	PUMP MODEL	PUMP MODEL	PUMP MODEL	PUMP MODEL	PUMP MODEL
mill units	IMBIBITION JUICE	SHM	SHM	SHM	SHM
	UNSCREENED JUICE	SHM	SHM	SHM	SHL
	SCREENED JUICE	KPD	KPD	KPD	KPD
	MASCREATION WATER / IMBIBITION WATER	KPD	KPD	KPD	KPD
clarifier	MUD RECIRCULATION	SHM	SHM	SHM	SHM
	MUD LIQUIDATING	SHM	SHM	SHM	SHM
	FILTRATE PUMP	SHM	SHM	SHM	SHM
	CLEAR JUICE	KPD	KPD	KPD	KPD
	FILTRATE PUMP	KPD	KPD	KPD	KPD
	CAKE WASH	KPD	KPD	KPD	KPD
boiling house	WEIGHED JUICE	KPD	KPD	KPD	KPD
	JUICE HEATER COND.	KPD	KPD	KPD	KPD
	SULPHATED JUICE	KPD	KPD	KPD	KPD
	COND. FOR EVA	KPD / CE / IL	KPD / CE	KPD / CE	KPD / CE / IL
	COND. FOR EVA1	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL
	COND. FOR EVA 2 & 3	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL
	COND. FOR EVA 4	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL
	SYRUP EXTRACTION	SHM	SHM	SHM	SHM
	PHOSPHATE SLURRY	KPD	KPD	KPD	KPD
	MILK OF LIME PUMP	KPD	KPD	KPD	KPD
	CAUSTIC SODA	KPD	KPD	KPD	KPD
	PAN CONDENSATE	KPD / CE	KPD / CE	KPD / CE	KPD / CE
	INJECTION PUMP	KPD / CE	KPD / CE	KPD / CE	KPD
	HOT & COLD WATER	KPD	KPD	KPD	DB
falling film	INJECTION WATER	MF / VT	MF / VT	MF / VT	MF / UPH / VT
	SYRUP PUMP	SHM	SHM	SHM	SHM
	SUGAR MELT	SHM	SHM	SHM	SHM
	SPRAY WATER	MF / DBL	MF / DBL	MF / DBL	MF / UPH
	HOT WATER PRD	RKBF / CF / IL	RKBF / CF / IL	RKBF / CF / IL	RKBF / CF / IL
	RECIRCULATING JUICE	MF	MF	MF	MF
	TRANSFER PUMP	KPD	KPD	KPD	KPD
	CONDENSATE PUMP	KPD	KPD	KPD	KPD
	STEAM DRIVEN PUMP	RKBF	RKBF	RKBF	RKBF
	MOTOR DRIVEN PUMP	RKBF	RKBF	RKBF	RKBF

1. These selection is given as a general guide lines. pump capacity and head may vary depending on the site and accordingly pump model may change.
2. We have complete product range for irrigation, distillery, cogeneration, fire fighting & utilities
3. We can supply pumps with corrosion resistant and energy saving coating

KBL pumps for sugar industries



use genuine spare parts to get consistent performance and save energy cost



Type : KPD (End Suction Process)
 Application : Screened Juice, Imbibition Water, Clear Juice, Filtrate Pump, Cake Wash, Weighed Juice, Juice Heater Condensate, Condensate For Evaporation, Milk Of Lime, Caustic Soda, Pan Condensate
 Features : Conforming to DIN 24256 and ISO 2858
 Back pull-out design
 Provision Cartridge type mechanical seal which can be fitted at site
 50 HZ / 60 HZ availability
 Oil Lubricated bearings
 Robust Bearing housing -Three bearing arrangement
 Provision for stuffing box cooling arrangement

Delivery Size up to 200 mm
 Capacity up to 750 m³/hr
 Head up to 150 meters
 Temperature up to (-) 50°C to 350°C

Type : MF (End Suction Mixed Flow)
 Application : Injection Water, Spray Water, Recirculating Juice
 Features : Low head, High capacity pumps
 Gland packed / Mechanical Seal
 50 HZ / 60 HZ availability
 Option available in horizontal delivery position

Delivery Size up to 650 mm
 Capacity up to 7000m³/hr
 Head upto 30 meters
 Temperature (-) 5°C to 140°C



Type : SHM (Non Clog)
 Application : Imbibition Juice, Unscreened Juice, Mud Recirculation, Mud Liquidating, Filtrate Pump, Syrup Extraction, Syrup Pump, Sugar Melt
 Features : Solid size up to 105 mm (maximum)
 Back pull-out design
 Gland packed / Mechanical Seal
 50 HZ / 60 HZ availability
 Four types of impellers to suit desired service

Delivery Size up to 200 mm
 Capacity up to 800m³/hr
 Head up to 90 meters
 Temperature (-) 10°C to 140°C

Type : VT (Vertical Turbine)
 Application : Injection Water, Spray Water
 Features : Dry pit/ wet pit arrangement available
 Gland packed / Mechanical Seal
 50 HZ / 60 HZ availability
 Radial / axial / mixed flow type

Delivery Size up to 2200 mm
 Capacity up to 40,000m³/hr
 Head up to 240 meters
 Temperature (-) 10°C to 90°C



Type : IL (Vertical Multistage Inline)
 Application : Condensate For Evaporation 1,2,3 and 4, Hot Water PRD
 Features : Durable and light parts of high quality materials
 Energy efficient pump
 Fitted with Mechanical Seal
 All sealing by means of O-rings

Delivery Size up to 100 mm
 Capacity up to 75m³/hr
 Head up to 225 meters
 Temperature (-) 15°C to 120°C

Type : UP (Split Case)
 Application : Injection Water, Spray Water
 Features : Unique THRU BORE split case design - Maintenance free
 Gland packed / Mechanical seal
 50 HZ / 60 Hz availability

Delivery Size up to 2200 mm
 Capacity up to 40,000m³/hr
 Head up to 240 meters
 Temperature (-) 10°C to 90°C



KBL pumps for sugar industries



use genuine spare parts to get consistent performance and **save energy cost**



Type : CE (End Suction)
 Application : Condensate For Evaporation 1,2,3 and 4, Pan Condensate, Injection Pump
 Features : Conforming to DIN 24256 and ISO 2858
 Back pull-out design
 Gland packed / Mechanical Seal
 Provision for stuffing box cooling arrangement
 Delivery Size up to 125 mm
 Capacity up to 660m³/hr
 Head up to 100 meters
 Temperature (-) 10°C to 140°C



Type : DB (End suction, large size)
 Application : Hot and Cold water
 Features : Back pull-out design
 Gland packed/ Mechanical seal
 50HZ / 60HZ availability
 Delivery Size up to 300 mm
 Capacity up to 1900m³/hr
 Head up to 35 meters
 Temperature (-) 10°C to 90°C



Type : RKB (Multistage)
 Application : Hot water PRD
 Features : Also available in vertical execution
 Gland packed/ Mechanical seal
 50HZ/60HZ availability
 Delivery Size up to 250 mm
 Capacity up to 850m³/hr
 Head up to 850 meters
 Temperature (-) 40°C to 140°C

Kirloskar Fire Fighting Pumpset - Conventional and FM approved



Engine Drive Split Case Pumpset (Stationary)



Portable Fire Pump (KDF - 700)

KBL pumps for sugar industries



use genuine spare parts to get consistent performance and save energy cost

Kirloskar support sugar plants to run their operation efficiently

KBL is partnering the pumping solutions in sugar industries for the last 65 years by providing :

- Pumps customized and designed to sugar industry applications.
- Highly reliable and rugged quality design product.
- Complete Range of pumps and offering as packages.
- Pre-sales consultancy for application specific pump.
- Optimum clearances are maintained between wearing parts.
- Complete service maintenance through Annual Maintenance Contract by wide service dealer network.
- Conducts energy audit to save energy and make operation of the plant efficient by short pay back period.
- KBL service engineers visit sugar plants to provide training for maintenance of pumps.
- Energy audit for the existing plant to recommend energy savings with pay back report for pumping systems.
- Faster availability of spares and services through more than 60 nos service dealers across the country
- Corrosion protection coatings

The Kirloskar Rotating Assembly / Back Pullout Assembly is the best alternative to save downtime. Installation is very easy as only the casing need be opened without disturbing the pipelines, motor & alignment. The pump is put into operation within shortest possible time.

Rotating Assembly



New UP(M) Rotating Assembly

Back Pullout Assembly



KPD Back Pullout Assembly

Kirloskar offers energy audit to reduce energy and maintenance cost

Brief References of customers and OEMs in Sugar Sector

- | | |
|--------------------------------|--|
| Andhra Sugar Limited | Mankapur Chini Mills |
| Bajaj Sugar Limited | Mawana Sugar Limited |
| Balrampur Chini Mills Limited | National Heavy Engineering Corporation |
| Bannari Amman Sugar Limited | NavaBharat Ventures Limited |
| Birla Group of Sugar Companies | Parle Sugar Mills Limited |
| Chamundeswari Sugars Limited | Purna Sahakari Sakhar Limited |
| Dalmia Sugars Limited | Renuka Sugar Limited |
| Dhampur Sugar Mills Limited | S.S.Engineers |
| Dharani Sugar Limited | S.V. Sugar Mills Limited |
| DSCL Sugar Mills Limited | Saraswati Sugar Mills Limited |
| Dwarikesh Sugar Mills Limited | Shakti Sugar Limited |
| EID Parry Group | Spray Engg Devices Limited |
| Fivescail KCP Limited | Thirurooran Group |
| Gem Sugar Limited | ThyssenKrupp Industries India |
| GMR Industries Limited | Triveni Group |
| ISGEC John Thompson | Uttam Sugar Mills Limited |
| Jeyopore Sugars Limited | Vidarbha Sugar Mills Limited |
| Kothari Sugar Limited | Walchandnagar Industries Limited |

Selective References of Sugar Mills Abroad

- | | |
|---|--|
| Birganj Sugar Factory Limited, Nepal | Miwani Sugar Company Limited, Kenya |
| East Africa Sugar Industries Limited, Kenya | Sevenagala Sugar Company Limited, Sri Lanka |
| Etiopian Sugar Factory, Ethiopia | Societe Des Sucrieries Et De Distillerie D'Egypte, |
| Finchaa Sugar, Ethiopia | South Nyanza Sugar Company Limited, Kenya |
| Guyana Sugar Corporation, Guyana | Sriram Sugar Mills, Nepal |
| Kagera Sugar Works, Tanzania | Sudanese Sugar Company, Sudan |
| Kakira Sugar Works Limited, Uganda | Sugar Corporation of Uganda Limited, Uganda |
| Kinyara Sugar Works, Uganda | Tropicana Sugar Estate, Jamaica |
| Metahara Sugar Factory, Ethiopia | |

All India service dealer network ensures spare parts availability and reduction in down time

KBL valves for sugar industries



use genuine spare parts to get consistent performance and save energy cost



Type : Cast Iron Sluice Valves (Non Rising or Rising SpindleType)
 Application : Cold Water, Syrup, Juice, Exhaust Steam Application
 Features : Rigid and sturdy design
 Low pressure loss
 Available in Non Rising or Rising SpindleType
 Size Range : 32mm to 1300mm
 Pressure Rating PN 1.0 & PN 1.6 (Conforming to IS:14846)
 Pressure Rating PN 10 & PN 16 (Conforming to BS:5163)

Type : Cast Steel Globe Valves
 Application : Water, Steam, Air, Gas, Liquids with Corrosive properties
 Features : Rigid and sturdy design
 Low pressure loss
 Available in Class 150, 300 & 600#
 Size Range : 50mm to 600mm
 Conforming to BS 1873



Type : Cast Steel Gate Valves (Outside Screw & Yoke Type)
 Application : Water, Steam, Air, Gas, Liquids with Corrosive properties
 Features : Rigid and sturdy design
 Low pressure loss
 Available in Class 150, 300 & 600#
 Size Range : 50mm to 600mm
 Conforming to API 600

Type : Cast Steel Check Valves
 Application : Water, Steam, Air, Gas, Liquids with Corrosive properties
 Features : Rigid and sturdy design
 Low pressure loss
 Available in Class 150, 300 & 600#
 Size Range : 50mm to 600mm
 Conforming to BS 1868



Type : Cast Iron Swing Check Type Reflux Valves (Single Door)
 Application : Water, Fluids
 Features : Rigid and sturdy design
 Low pressure loss
 Available in Pressure Ratings PN 1.0, PN 1.6 as per IS:5312 Part-1
 Available in Pressure Ratings PN 10, PN 16 as per BS EN 12334
 Size Range : 40mm to 700mm
 By-pass arrangement, Dash Pot arrangement against requirement

Type : Butterfly Valve
 Application : Liquids, Gaseous Media Flow
 Features : Available in Single Eccentric as well as Duo Eccentric Design
 Less wear of Seal
 Streamlined Disc profile for low pressure drop
 Low operating torque
 Pressure Ratings PN 6, PN 10, PN 16 as per BS EN 593 (BS:5155) / IS:13095
 Size Range : 65mm to 2600mm
 Also available in Centric Design in range 50mm to 600mm





Over 80 years of experience in fluid handling

Present across 5 continents

Exports to over 70 countries

India's largest manufacturer and exporter of Pumps

One of Asia's Largest Hydraulic Research Centres

ISO 9001 / ISO 14001 Certification for its factories

Kirloskar Middle East Fze

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As we are constantly endeavoring to improve the performance of our products/equipment, we reserve the right to make alterations from time to time and as such our products/equipment may differ from that detailed in this publication. For latest information, you may get in touch with our regional office.



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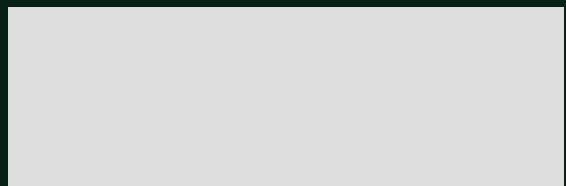
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sugar 270700