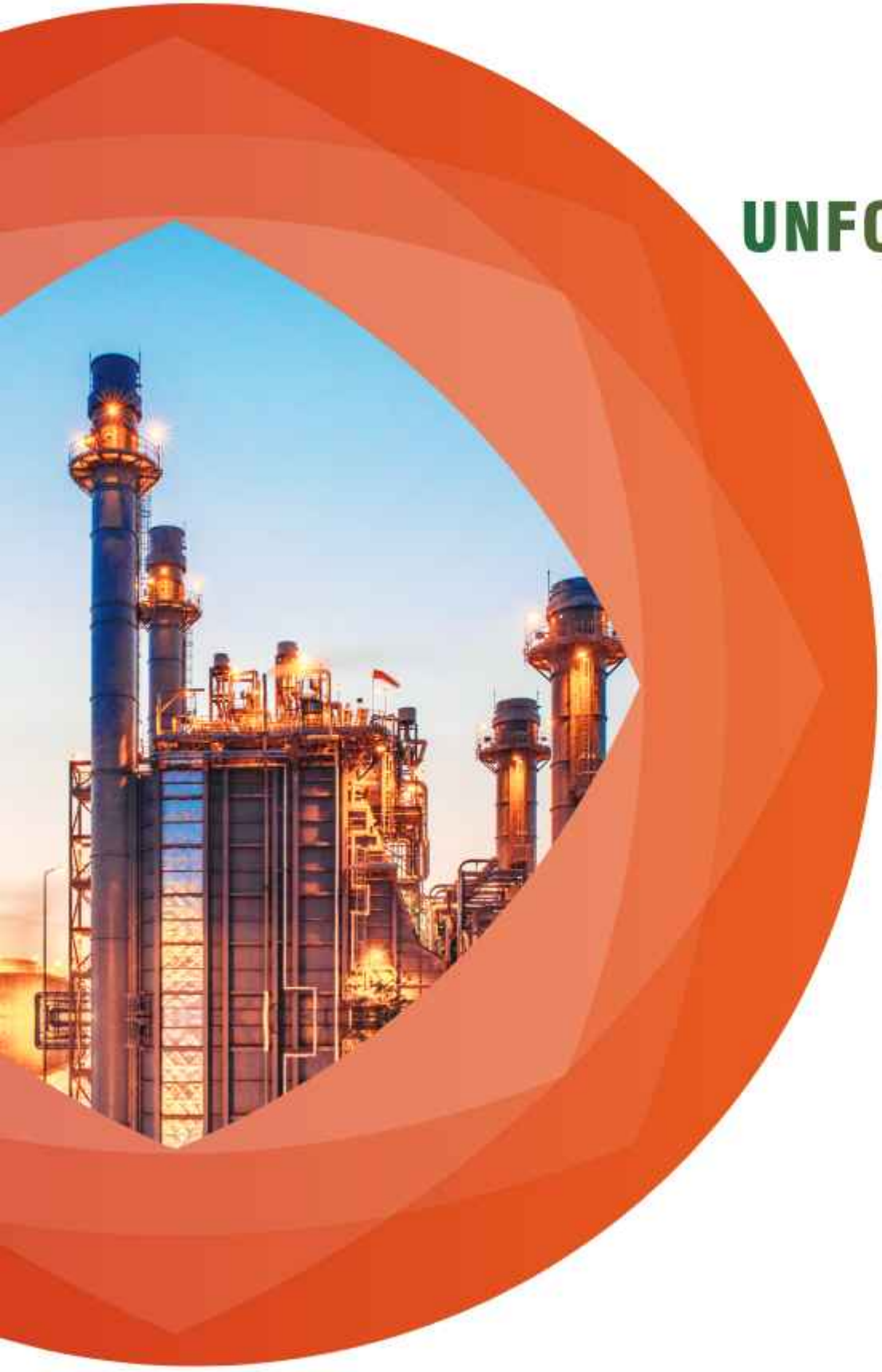
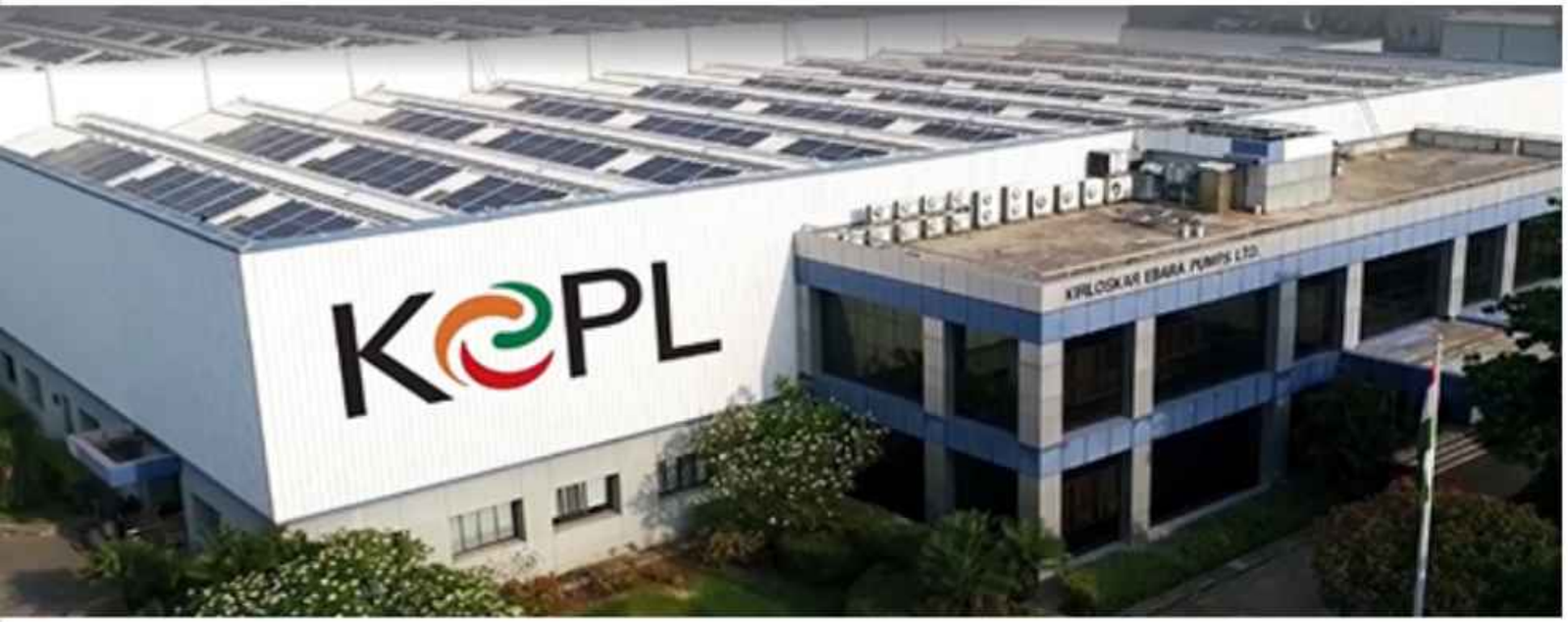
KEPL



UNFOLDING THE SECRET OF

SUCCESS WITH GREATER PROFICIENCY!

KIRLOSKAR EBARA PUMPS LIMITED



KEPL a joint venture of Kirloskar Brothers Limited in India, established in 1988, is an ISO 9001, ISO 14001 and OHSAS 18001 company accredited by Lloyds (LRQS).

KEPL is a leading company in the Indian rotary equipment market with the finest engineering brains and highly exemplary manufacturing setup in Kirloskarvadi, consisting of latest CNC machines, assembly, piping fabrication, heat treatment, testing, inspection facilities including CMM, PMI testing, painting and packing. This facility is approved by major global customers like Aramco, SABIC, Technip and SNC Lavalin etc.

It is a leading brand in Indian and International market for Process applications, Boiler feed water pumps, API Steam turbines and Turbo Gensets.

We aim at betterment of customer relations, products that we make, the human ecology and environment safety for safer future for the generations to come. The KEY is our people who are the driving force behind every uncommon success story. With our approach and commitment we strive to exceed the expectations of our clients and provide the best solutions by utilising the most innovative processes and futuristic technology.

To enable the product meet its highest order of quality for reliability,

KEPL ensures the following while designing and manufacturing its products:

- Reliable performance for a long duration with high nominal service life of equipment
- High MTBM (Mean Time Between Maintenance)
- High MTBF (Mean Time Between Failures)
- Low MTTR (Mean Time To Restore)
- LLC (Low Life Cycle Cost)
- Minimal Risk of Operational Hazards and Accidents

KEPL has developed a comprehensive Environment, Health and Safety (EHS) Policy. This policy describes the commitment of our company to protect the environment through prevention of pollution and conservation of energy. It also stipulates compliance to all environmental norms and conservation of natural resources like water, oil, wood and other raw materials.

We Cater to

- Hydrocarbon Extraction and Processing
- Fertilizers
- Power Plants
- Petrochemical
- Chemical Process
- Water Treatment Plants

Pump Offerings

Application Matrix

			Upstream				Midstream & Downstream									Fertilizer				High Pressure Water				Power Plant				
API Pumps Classification	Pump Model	Pump Model (previously known)	Water Injection	Pipeline	Pressure Booster	Others	Charge	Process Transfer	Bottom Reflux	Propane/ Butane/ LPG Handling	Diesel Oil/ Gasoline/ Naptha/ Lube Oils etc.	Sodium Carbonate/ Caustic/ Sour Water	MEA/ DEA / TEA (Stock & Lean Solution)	Power Recovery	Others	Carbamates/ Lean & Semilean Solutions	NH3 Feed	Power Recovery	Other Removals	Desalination	Water Treatment	Descaling in Steel Industry	Mining	Boiler Feed	Hot Water Circulation	Condensate Transfer	Fuel Oil	Others
OH1	KE1				●	●		●			●	●	●		●	●	●		●	●	●			●	●	●	●	●
OH2	KESS	UCW			●	●		●	●	●	●	●	●		●	●	●		●	●	●			●	●	●	●	●
OH3	KV3				●	●		●	●	●	●	●	●		●	●	●		●		●			●	●	●	●	●
OH5	KV5				●	●		●	●	●	●	●	●		●	●	●		●		●			●	●	●	●	●
BB1	KBAD	KBAD		●			●	●	●					●	●			●	●	●	●	●	●	●	●	●	●	●	●
BB2	KBSD	KS		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●
BB2	KBTS, KBTD	R2, R2D		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●				
BB3	KB3S, KB3D	KB3S, KB3D	●	●			●	●						●		●		●		●	●	●	●	●	●				
BB4	KBSH, KBDH	SS, SSD														●		●		●	●	●	●	●	●		●		
BB5	KBDS, KBDD	DCS, DCD	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●		●	●	●	●			●			
VS4	KVS4							●		●	●	●	●				●							●	●	●			
VS1	KVSL																												●
VS1, VS6	KVSL, KVSH	VPCS, VPCH						●		●	●	●	●				●							●	●	●			
Non API	KBSL, KBSM	MSS, MSSH																			●				●	●	●	●	●
Non API	KRO	KRO																		●	●								

OH2 PUMPS

BB1 PUMPS

BB2 PUMPS

BB2 PUMPS

BB3 PUMPS

KVS4 PUMPS

BB4 PUMPS

BB5 PUMPS

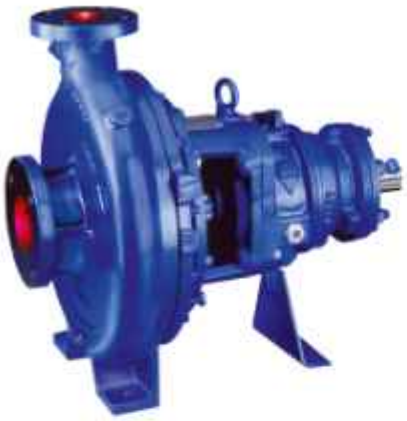
VS1/VS6

NON API PUMPS

NON API PUMPS

KVSL PUMPS

API Standard Pump OH1



KE1

The KE1 is an API OH1 type; foot mounted single stage overhung application process pump with a back-pullout design. It is manufactured as per API 610. The range covers a pump head of 225 m with a discharge pressure of up to Cl. 300#. The pump is designed to have maximum parts with interchangeability for customisation.

Rating

Parameters	KE1
Capacity @ m3/hr	Up to 1800
Head (m)	Up to 225 m
Temperature Range °C	-50 TO 150 DEG CEL
Discharge Pressure	Up to Cl. 300 #
Suction Pressure kg/cm²(g)	Up to 5
Nozzle Orientation (Suc./Dis.)	End-Top
Standard Motor Synchronous Speeds (rpm)	1000 / 1200 / 1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 150 / 300

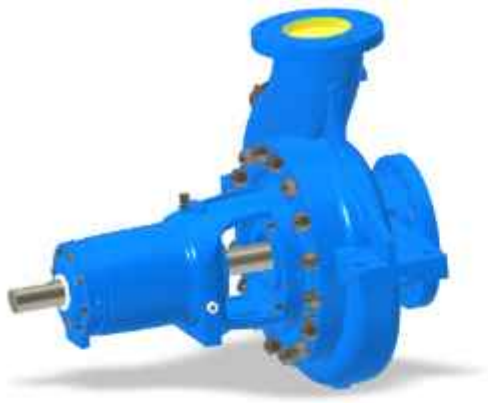
Features

- Design and manufacture as per API 610 standard
- It is a foot mounted, single stage overhead pump
- The KE1 pump is designed to have maximum interchangeable parts
- The pump comes with Gland Packaging / Mechanical Sealing options
- Back-pullout facility enabling rapid dismantling and assembly
- Optional Open type and Semi-open Impeller design can be offered.
- Pump can be offered with Oil Mist option

Applications

- Water Treatment Plants
- Air-Conditioning
- Condensate Extraction, Distilleries
- Refinery Process
- Pumps suitable for handling corrosive liquids Hydro Carbons, Oils, Condensates, Viscous Liquids, etc.

UCW (KESS)



The UCW (KESS) is an API OH2 type process pump with centerline support. This pump with a heavy-duty design ensures high reliability and efficiency during stringent operating conditions. It is manufactured as per API 610. The back pullout feature ensures swift dismantling and assembly. The range covers a pump head of 380 m with a discharge pressure of up to Cl. 600#. Nozzle orientation as the end-top and top-top, the direction of rotation is clockwise from the coupling end. The UCW (KESS) pump is suitable for applications in oil refineries and petrochemical industries, chemical and allied industries. The pump is designed to have maximum parts interchange-ability.

Rating

Parameters	UCW (KESS)
Capacity (m^3/hr)	Up to 1920
Head (m)	Up to 380
Temperature Range $^{\circ}C$	-70 to 450
Discharge Pressure Rating	Up to Cl. 600 #
Suction Pressure kg/cm^2(g)	Up to 80
Nozzle Orientation (Suc./Dis.)	End-Top & Top-Top
Standard Motor Synchronous Speeds (rpm)	1000 / 1200 / 1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 300 / 600

Features

- The pump is designed and manufactured as per API 610 standard
- The pump is designed with heavy-duty centerline support to ensure high reliability under stringent operating conditions
- Its Back pullout pump design permits removal of the complete rotating element without disturbing suction/discharge piping and driver
- Some optional features include steam jacketed casing and Inducer to improvise NPSH R
- The UCW (KESS) family is designed to have maximum interchangeable parts
- A variety of materials of construction and seal flushing plans are available to cater to a wide range of applications
- Optional Semi-open Impeller design can be offered
- Pump with purge mist and pure mist lubrication option

Applications

- Oil Refineries & Petrochemical processes
- Chemical & Allied industries
- Can cater to BFW Circulation and as a Reverse Osmosis Booster
- Onshore and Offshore Process
- Multiphase Liquids with gas content upto 25% with Special Design

API Standard Pump OH3

KV3

The KV3 is an API OH3 type, vertically inline mounted, flexible coupled, radial split case, single-stage, single suction, heavy-duty, centrifugal pump. It is manufactured as per API 610. The inline configuration is a compact pumping solution that eliminates the need for an expensive baseplate, saving valuable floor space.

Rating

Parameters	KV3
Capacity (m^3/hr)	Up to 600
Head (m)	Up to 180
Temperature Range °C	-50 to 425
Discharge Pressure Rating	Up to Cl. 300 #
Suction Pressure kg/cm^2(g)	Up to 20
Nozzle Orientation (Suc./Dis.)	In Line Position
Standard Motor Synchronous Speeds (rpm)	1000 / 1200 / 1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 150 / 300

Features

- Design and manufacture as per API 610 standard
- Reduces minimum flow requirements
- High efficiency at any duty
- Meets API Nozzle load requirements
- Space-saving construction
- Accommodates API 682 seal systems
- Stable head characteristics
- Grease and Oil Mist Option can be provided
- Inducer can be provided for Low NPSH3 requirement

Applications

- Fluid handling in oil refineries and petrochemical processes
- High temperature and pressure critical applications in chemical and allied industries
- Upstream, pressure booster
- Fertilizer
- Power plant

Note 1 : Higher pressure class rating and higher suction pressure suitability can be offered

API Standard Pump OH5

KV5

The pump KV5 (OH5) is a vertically inline mounted close-coupled, radial case, single-stage, single suction, heavy-duty centrifugal process pump. It is manufactured as per API 610. The inline configuration is a compact pumping solution with a mounting impeller to an extended motor drive shaft, presenting a very compact pumping solution. The KV5 (OH5) offers a space saving footprint and eliminates the need for expensive baseplates. This pump is also available in the KV3 (OH3) for high-temperature operations.

Rating

Parameters	KV5
Capacity (m^3/hr)	Up to 400
Head (m)	Up to 180 m
Temperature Range ^{0}C	-50 to 250
Discharge Pressure Rating	Up to Cl. 300 #
Suction Pressure kg/cm^2(g)	Up to 20
Nozzle Orientation (Suc./Dis.)	In Line Position
Standard Motor Synchronous Speeds (rpm)	1000 / 1200 / 1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 150 / 300

Features

- Design and manufacture as per API 610
- Reduces minimum flow requirements
- High efficiency at any duty
- Alignment free construction
- Meets API Nozzle load requirements
- Space-saving construction
- Accommodates API 682 seal systems
- Stable head characteristics

Applications

- Fluid handling in oil refineries and petrochemical processes
- High temperature and pressure critical applications in chemical and allied industries
- Upstream, pressure booster
- Midstream, process transfer, bottom reflux, propane/butane/LPG handling, diesel oil/gasoline, naphtha/lube oils, etc.
- Fertilizer
- Power plant
- Liquid gas plants

Note 1 : Higher pressure class rating and higher suction pressure suitability can be offered

API Standard Pump BB1

KBAD

The KBAD is an API BB1 type process pump with near centerline support. This pump with a heavy-duty axial split casing design ensures high reliability and efficiency during operations. It is manufactured as per API 610. The range covers a pump head of 460 m with a discharge pressure of up to Cl. 600#. Nozzle orientation as the side-side, the direction of rotation is clockwise when viewed from the coupling end. The KBAD pump is suitable for applications in oil refineries and petrochemical industries and chemical and allied industries.

Rating

Parameters	KBAD
Capacity (m^3/hr)	Up to 20,000
Head (m)	Up to 460 m
Temperature Range °C	-50 to 200
Discharge Pressure Rating	Up to Cl. 600 #
Nozzle Orientation (Suc./Dis.)	Side-Side
Standard Motor Synchronous Speeds (rpm)	750 / 900 / 1000 / 1200 / 1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 300 / 600

Features

- The pump is designed and manufactured as per API 610 standard
- KBAD has a single-stage design with heavy-duty near centerline support with axial split casing to ensure efficient performance at high capacity operations
- Easy inspection and repair maintenance of bearings and mechanical seal after removal of coupling spacer only. The rotor can be removed by disassembling the upper half casing without disturbing suction/discharge piping and driver
- Low NPSH requirement is achieved with double suction impeller

Applications

- Oil Refinery, Crude Oil , Product and Hydrocarbon liquid transfers
- Corrosive liquids like benfield solution, MDEA solutions etc. in fertilizer industry
- Onshore and Off shore Process
- Cooling Water Application
- Sea Water and De-watering

Note 1 : Higher capacity and head are possible at speed higher than synchronous motor speed

API Standard Pump BB2

KS (KBSD)

The KS (KBSD) is an API BB2 type process pump with centerline support. This pump with a heavy-duty design ensures high reliability and efficiency during stringent operating conditions. It is manufactured as per API 610. The back pullout feature ensures swift dismantling and assembly. This range of pumps come with a pump head up to 550 m, with a discharge pressure of up to Cl. 600#. Nozzle orientation as the and top-top, side-top, side-side. The direction of rotation is clockwise from the coupling end and anti-clockwise is also possible if required. This pump is suitable for applications in oil refineries and petrochemical industries, and chemical and allied industries. The pump is designed to have maximum parts interchangeability.

Rating

Parameters	KS (KBSD)
Capacity (m^3/hr)	Up to 5500
Head (m)	Up to 550 m
Temperature Range °C	-70 to 450
Discharge Pressure Rating	Up to Cl. 600 #
Suction Pressure kg/cm^2(g)	Up to 80
Nozzle Orientation (Suc./Dis.)	Top-Top, Side-Top & Side-Side
Standard Motor Synchronous Speeds (rpm)	1000 / 1200 / 1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 300 / 600

Features

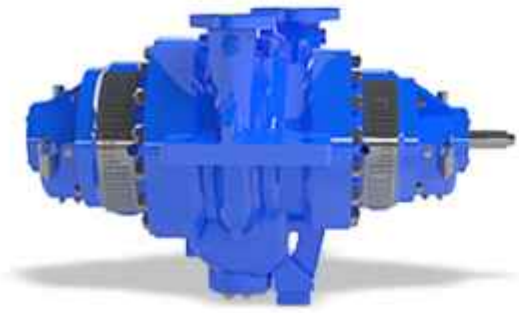
- Design and manufacture as per API 610 standard
- Centerline supported heavy-duty design to ensure high reliability under stringent operating conditions
- A variety of materials for the construction of the pump and seal flushing plans are available to cater to customer requirements and a wide range of applications
- After removal of the coupling, spacer, bearings, and mechanical seals on both sides, the rotating element can be removed without disconnecting suction/discharge piping and the driver
- Some optional features include steam jacketed casing and Inducer to improvise NPSH R
- Pump with purge mist and pure mist lubrication option

Applications

- Fluid handling in oil refineries and petrochemical industry
- High temperature and high-pressure critical applications in chemical and allied industries
- The pumps can also function as hydraulic power recovery turbines in chemical and process plants
- High pressure and temperature applications in chemical and allied industries
- Onshore and Offshore Process
- Multiphase Liquids with gas content upto 25% with Special Design

Note 1 : Anticlockwise when viewed from coupling end is also possible against requirement
Note 2 : Higher pressure class rating and higher suction pressure suitability can be offered if required
Note 3 : Higher capacity and head are possible at speed higher than synchronous motor speed

R2 (KBTS), R2D (KBTD)



The R2 (KBTS)/R2D (KBTD) is an API BB2 type process pump with Centerline support. This pump with a heavy-duty design ensures high reliability and efficiency during stringent operating conditions. It is manufactured as per API 610. The back pullout feature ensures swift dismantling and assembly. This range of pumps come with a pump head of 550 m, with a discharge pressure of up to Cl. 600#. Nozzle orientation as the and top-top, side-top, side-side. The direction of rotation is clockwise from the coupling end and anti-clockwise is also possible if required. The R2 (KBTS)/R2D (KBTD) pump is suitable for applications in oil refineries and petrochemical industries and chemical and allied industries. The pump is designed to have maximum parts interchangeability.

Rating

Parameters	R2 (KBTS)/R2D (KBTD)
Capacity (m^3/hr)	Up to 2500
Head (m)	Up to 550 m
Temperature Range °C	-70 to 450
Discharge Pressure Rating	Up to Cl. 600 #
Suction Pressure kg/cm^2(g)	Up to 80
Nozzle Orientation (Suc./Dis.)	Top-Top, Side-Top & Side-Side
Standard Motor Synchronous Speeds (rpm)	1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 300 / 600

Features

- Design and manufacture as per API 610 standard
- Centerline supported heavy-duty design to ensure high reliability under stringent operating conditions
- After removal of the coupling, spacer, bearings, and mechanical seals on both sides, the rotatin element can be removed without disconnecting suction/discharge piping and the driver
- The R2 (KBTS)/R2D (KBTD) pump family is designed to have max. parts interchangeability
- Pump with purge mist and pure mist lubrication option
- Steam jacketed casing

Applications

- Fluid handling in oil refineries and petrochemical industry
- High temperature and high-pressure critical applications in chemical and allied industries
- A variety of materials for the construction of the pump and seal flushing plans are available to cater to customer requirements and a wide range of applications
- The pumps can also function as hydraulic power recovery turbines in chemical and process plants
- Onshore and Offshore Process

Note 1 : Anticlockwise when viewed from coupling end is also possible against requirement
Note 2 : Higher pressure class rating and higher suction pressure suitability can be offered if required
Note 3 : Higher capacity and head are possible at speed higher than synchronous motor speed

API Standard Pump BB3

KB3S, KB3D

The KB3S / KB3D is an API BB3 type process pump with near centerline supported heavy-duty split casing axial. This pump's design offers high performance and efficiency during stringent operating conditions. It is manufactured as per API 610. The KB3S/KB3D pumps come with a pump head up to 1840 m with an option of upgrading to a higher capacity and head for operations at higher speeds. The pumps operate at a discharge pressure of up to Cl. 2500, nozzle orientation as side-side. The direction of rotation is clockwise from the coupling end. The KB3S / KB3D pump is suitable for applications in oil refineries and petrochemical industries, descaling operations in steel industries, oil wells, petroleum product applications, and chemical and process plants, pipeline applications.

Rating

Parameters	KB3S/KB3D
Capacity (m^3/hr)	Up to 1750
Head (m)	Up to 1840
Temperature Range °C	-50 to 200
Discharge Pressure Rating	Up to Cl. 600 #
Suction Pressure kg/cm^2(g)	Up to 80
Nozzle Orientation (Suc./Dis.)	Side-Side
Standard Motor Synchronous Speeds (rpm)	1000 / 1200 / 1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	7000
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 300 / 600 /900 / 1500 / 2500

Features

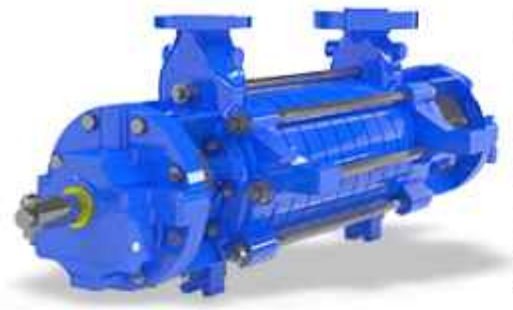
- Design and manufacture as per API 610 standard
- Near centerline supported heavy duty axial split casing design to ensure reliability and performance under high-pressure operating conditions
- Easy inspection and repair maintenance of bearings and mechanical seal after removal of coupling spacer only. The rotor can be removed by disassembling the upper half casing without disturbing suction/discharge piping and driver
- Low NPSH requirement is achieved with the first stage double suction impeller in KB3D pumps
- Thrust compensation by opposed impeller arrangement
- Pump with purge mist and pure mist lubrication option
- Self and External balancing Option available

Applications

- High-pressure fluid handling in oil refineries and petrochemical industry
- MP and HP boiler feed applications
- Descaling application in steel industries
- Sea water injection application in oil wells
- Mine dewatering
- Petroleum product pipeline booster applications
- Pump as hydraulic power recovery turbine in chemical and process plants
- Corrosive liquids like benfield solution, MDEA solutions etc. in fertilizer industry.

Note 1 : Higher pressure class rating and higher suction pressure suitability can be offered if required
Note 2 : Higher capacity and head are possible at speed higher than synchronous motor speed

SS (KBSH) / SSD (KBDH)



The SS (KBSH) / SSD (KBDH) is an API BB4 type pump with ring section diffuser casing design and centerline supported heavy-duty to offer excellent performance in high-pressure operations. It is manufactured as per company standards but it also meets API(American Petroleum Institute) 610. The SS/SSD pumps come with a pump head of 2500 m with an option of upgrading to a higher capacity and head for operations at higher speeds, The pumps operate at a discharge pressure of up to Cl. 2500 #, with nozzle orientation at side-side, side-top and top-top. The direction of rotation is clockwise from the coupling end. The SS/SSD pump is suitable for applications in high-pressure boiler water feed applications, water treatment plants, and mine drainage applications. The pump is designed to have maximum parts with interchangeability.

Rating

Parameters	SS (KBSH) / SSD (KBDH)
Capacity (m^3/hr)	Up to 720
Head (m)	Up to 2500
Temperature Range °C	-5 to 200
Discharge Pressure Rating	Up to Cl. 1500 #
Suction Pressure kg/cm^2(g)	Up to 10 for gland packed pumps Up to 20 for pumps with mechanical seal
Nozzle Orientation (Suc./Dis.)	Top-Top & Side-Top
Standard Motor Synchronous Speeds (rpm)	3000 / 3600
Max. Operating Speed (rpm)	7000
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	CL. 300 / 600 /900 / 1500 / 1500

Features

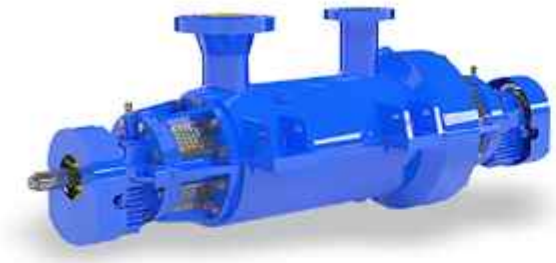
- Design and manufactured as per company standard but can meet API 610 requirements as well
- Multistage pump with ring section diffuser casing design with centerline support to meet high temperature and high-pressure application, especially in BFW application
- Specially designed to meet high performance for superior and extended low-cost operations
- Easy inspection and repair maintenance of bearings and mechanical seal after removal of coupling spacer only
- A First stage impeller with double suction is provided in SSD (KBDH) models to improvise NPSH R performance
- Interstage tapping can be provided to accommodate
- LP & HP take off flow requirements
- Self and External balancing Option available

Applications

- High pressure boiler feed water applications
- High pressure mine drainage applications
- High pressure applications in water treatment plant
- Pump as hydraulic power recovery turbine in water treatment plants
- SWRO Desalination

Note 1 : Higher pressure class rating and higher suction pressure suitability can be offered if required
Note 2 : Higher capacity and head are possible at speed higher than synchronous motor speed

DCS (KBDS) / DCD (KBDD)



The DCS(KBDS)/DCD (KBDD) is a BB5 type multistage pump with centerline support and a heavy-duty double casing diffuser design. This pump is suitable for high pressure and high-temperature operations. It is manufactured as per API 610. The range covers a pump head of 2500 m, expandable to higher heads as per requirement. The pump offers a discharge pressure of up to Cl. 2500#. Nozzle orientation as the top-top, side-top and side-side, the direction of rotation is clockwise when viewed from the coupling end. The DCS (KBDS)/DCD (KBDD) pump is suitable for applications in oil refineries and petrochemical industries, boiler feed applications, hydrocarbon and liquid gas transfer applications, petroleum product pipeline booster applications, mine dewatering, oil well, and chemical and process plants. The parts of this pump family are designed to offer maximum interchangeability to serve customer requirements.

Rating

Parameters	DCS (KBDS) / DCD (KBDD)
Capacity (m^3/hr)	Up to 750
Head (m)	Up to 2500
Temperature Range °C	-70 to 450
Discharge Pressure Rating	Up to Cl. 2500 #
Suction Pressure kg/cm^2(g)	Up to 80
Nozzle Orientation (Suc./Dis.)	Top-Top & Side-Top, Side – Side
Standard Motor Synchronous Speeds (rpm)	1500/3000 / 3600
Max. Operating Speed (rpm)	7000
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 300 / 600 /900 / 1500 / 2500

Features

- The pump is designed and manufactured as per API 610 standard
- The pump is a multistage pump with centerline supported heavy-duty double casing diffuser design for handling high pressure and high temperature applications
- Assembly of all parts except outer casing can be removed without disassembling/dis-piping and the driver
- The axial thrust balancing is with the help of options like straight piston, double piston & balance disk to suit various applications
- Low NPSH requirement is achieved with first stage double suction impeller in DCD pumps
- The DCS(KBDS)/DCD (KBDD)Pump family designed to have max. parts interchangeability
- Interstage tapping can be provided to accommodate LP & HP take off flow requirements
- Pump with purge mist and pure mist lubrication option
- Self and External balancing Option available

Applications

- High-pressure fluid handling in oil refineries and petrochemical industry
- MP and HP boiler feed applications
- Light hydrocarbon and liquid gas transfer applications
- Sea water injection application in oil wells
- Mine dewatering
- Petroleum product pipeline booster applications
- Pump as hydraulic power recovery turbine in chemical and process plants

Note 1 : Higher pressure class rating and higher suction pressure suitability can be offered if required
Note 2 : Higher capacity and head are possible at speed higher than synchronous motor speed

VPCS (KVSL) / VPCH (KVSH)

VPCS(KVSL) / VPCH (KVSH) is a VS1/VS6 type process pump. This pump is suitable to be installed at a below-ground level for the desired NPSH. The design ensured optimum performance at critical suction conditions. It is manufactured as per API 610, suitable to align with standard motors. The range covers a pump head of 1000 m. The pump offers a discharge pressure of up to Cl. 600#. The nozzle has the bottom-side and side-side, the direction of rotation is clockwise when viewed from the coupling end. This pump can be offered with an inducer design to reduce the column length for below surface operations.

Rating

Parameters	VPCS (KVSL) / VPCH (KVSH)
Capacity (m^3/hr)	Up to 45000
Head (m)	Up to 1000
Temperature Range °C	-150 to 425
Discharge Pressure Rating	Up to Cl. 600 #
Suction Pressure kg/cm^2(g)	Up to 40
Nozzle Orientation (Suc./Dis.)	Bottom – Side, Side-Side
Standard Motor Synchronous Speeds (rpm)	1000 / 1200 / 1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 150 / 300 / 600
Suspension Length	Up to 9 m

Features

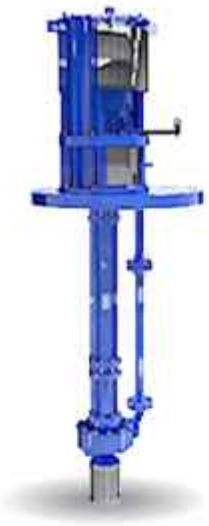
- The pump is designed and manufactured as per API 610 standard
- The first stage impeller can be installed at the desired level below ground to ensure sufficient "Available NPSH". This feature ensures reliable operation under critical suction conditions
- Easy inspection and repair maintenance of bearings and mechanical seal after removal of coupling spacer only
- Inter stage casings and column pipes are flanged and bolted together for easy installation and maintenance
- Inducer design for the VPCS(KVSL) / VPCH (KVSH is an optional feature to reduce column length below ground to increase reliability

Applications

- Hydrocarbon Booster and Transfer
- Cryogenic and Ammonia Service
- Light hydrocarbon and condensate handling in oil refineries and petrochemical industries
- Handling of LPG in loading/unloading applications and in LPG bottling plants
- Water condensate handling
- Sea Water, Cooling water
- Tank Service

Note 1 : Higher pressure class rating and higher suction pressure suitability can be offered if required
Note 2 : Higher head is possible at synchronous motor speed
Note 3 : Higher Suspension Length is possible

API Standard Pump VS4



KVS4

KVS4 is an API VS4 type process pump with a vertical, separate discharge line. This pump comes with a pit/tank mounted design. It is manufactured as per API 610, suitable to align with standard motors. The range covers a pump head of 225m. The pump offers a discharge pressure of up to Cl. 300#. With nozzle orientation at the bottom-top, the direction of rotation is clockwise when viewed from the coupling end. The KVS4 pump is suitable for applications in petrochemical industries, pit/sump applications, drain and amine applications, etc.

Rating

Parameters	KVS4
Capacity (m^3/hr)	Up to 600
Head (m)	Up to 225 m
Temperature Range °C	-46 to 300
Discharge Pressure Rating	Up to Cl. 300 #
Suction Pressure kg/cm^2(g)	Up to 40
Nozzle Orientation (Suc./Dis.)	Bottom – Top
Standard Motor Synchronous Speeds (rpm)	1000 / 1200 / 1500 / 1800 / 3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 150 / 300
Suspension Length	Up to 6 m

Features

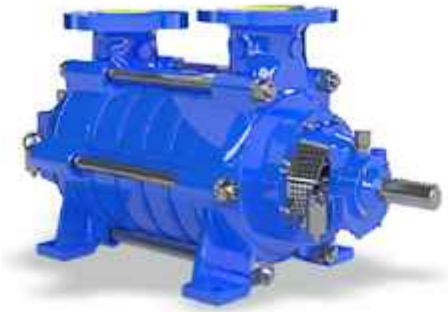
- The pump is designed and manufactured as per API 610 standard
- The Vertical Separate discharge line, Pit / Tank mounted design feature ensures reliable operation under critical suction conditions
- Offers Quick and easy removal and reassembly
- Comes with a Simple vapour seal at the top plate to prevent leakage / API Single or Double Mechanical seal / Gland Packing option also available
- Available at a lower cost than VS1 to perform the same duties
- Available with Semi-open impeller option for handling solids
- Jacketed Pumps can be provided for Suplhur and Similar Application

Applications

- Petrochemical Industries
- Pit/Sump applications
- Drain applications
- Amine applications

Note 1 : Higher pressure class rating and higher suction pressure suitability can be offered if required
Note 2 : Higher capacity and head are possible at synchronous motor speed
Note 3 : Higher Suspension Length is possible

NON API Pump – BFW Pump



MSS (KBSL)

We have successfully delivered over 1000 high pressure pumps to various power plants, RO plants as well DM water applications as required in various industries.

Rating

Parameters	MSS (KBSL)
Capacity (m^3/hr)	Up to 325 (MSS)
Head (m)	Up to 580 (MSS)
Temperature Range °C	-5 to 165
Discharge Pressure Rating	Up to Cl.600#
Suction Pressure kg/cm^2(g)	Up to 14
Nozzle Orientation (Suc./Dis.)	Top-Top & Side-Top
Standard Motor Synchronous Speeds (rpm)	3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Up to CL. 600

Features

- Multistage pump with ring section diffuser casing design with foot-mounted casing suitable for low pressure requirements
- The pump family is designed to have maximum parts for interchangeability
- Bearing unit can be serviced without having to disassemble the pumps
- Wide range of materials available including duplex stainless steel grades
- Pump available with suction / Discharge nozzles with Side / Top or Top / Top orientation

Applications

- Low-Pressure boiler feed applications
- Low-pressure applications in water treatment plants
- Low pressure applications in light chemical plants
- Reverse osmosis application
- Condensate extraction pumps in power stations and industrial plants
- City water supply application

NON API Pump – BFW Pump

MSSH (KBSM)

We have successfully delivered over 1000 medium pressure pumps to various power plants, RO plants as well DM water applications as required in various industries.

Rating

Parameters	MSSH (KBSM)
Capacity (m^3/hr)	Up to 170 (for MSSH)
Head (m)	Up to 850 (MSSH)
Temperature Range °C	-5 to 165
Discharge Pressure Rating	Up to Cl. 600
Suction Pressure kg/cm^2(g)	Up to 14
Nozzle Orientation (Suc./Dis.)	Top-Top & Side-Top
Standard Motor Synchronous Speeds (rpm)	3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Upto Cl. 600

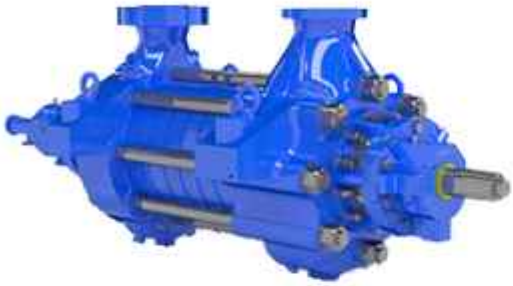
Features

- Multistage pump with ring section diffuser casing design with foot-mounted casing suitable for medium pressure requirements
- The Pump family is designed to have maximum parts for interchangeability
- Pump with TOP /TOP or SIDE / TOP nozzle orientation
- Bearing unit can be serviced without having to disassemble the pumps
- Wide range of materials available including duplex stainless steel grades

Applications

- Medium pressure boiler feed applications.
- City water and medium pressure applications in water treatment plants
- RO plants
- DM Water
- HPRT

NON API Pump – BFW Pump



SS (KBSH) / SSD (KBDH)

We have successfully delivered over 1000 medium pressure pumps to various power plants, RO plants as well DM water applications as required in various industries.

Rating

Parameters	SS/SSD (KBSH/KBDH)
Capacity (m^3/hr)	Upto 750
Head (m)	Upto 2500
Temperature Range °C	-5 to 200
Discharge Pressure Rating	Upto Cl.2500#
Suction Pressure kg/cm^2(g)	Up to 17
Nozzle Orientation (Suc./Dis.)	Top - Top / Side - Side / Side - Top
Standard Motor Synchronous Speeds (rpm)	3000 / 3600
Max. Operating Speed (rpm)	7000
Direction of Rotation	Clockwise when viewed from coupling end
Flange Ratings (#RF)	Cl. 300/600/900/1500/2500

Features

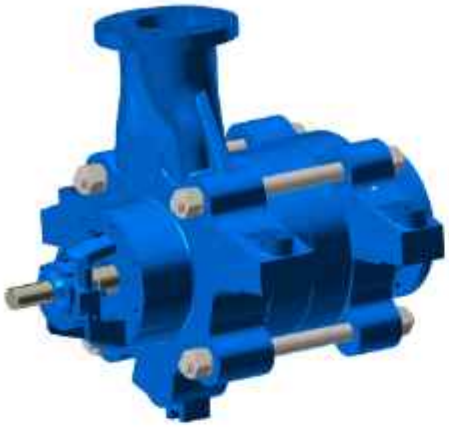
- Multistage pump with ring section diffuser casing design with centerline support to meet high temperature and high-pressure applications, especially in BFW applications
- Easy inspection and repair maintenance of bearings and mechanical seal after removal of coupling spacer only
- First stage impeller with double suction is provided in SSD / KBDH models to improvise NPSH3 performance
- Pump family is designed to have maximum parts for interchangeability
- Bleed off flow extraction from intermediate casing

Applications

- High-pressure boiler feed water applications
- High-pressure mine drainage applications
- High-pressure applications in water treatment plants
- Pump as hydraulic power recovery turbine in water treatment plants

Note 1 : Higher suction pressure suitability can be offered if required
Note 2 : Higher capacity and head are possible at speed higher than synchronous motor speed

NON API Pump – RO Pump



KRO

We have successfully delivered over 1000 medium pressure pumps to various power plants, RO plants as well DM water applications as required in various industries.

Rating

Parameters	KRO
Capacity (m^3/hr)	1115
Head (m)	1200
Temperature Range °C	80
Discharge Pressure Rating	Up to cl 1500 #
Suction Pressure kg/cm^2(g)	Up to 18.5
Nozzle Orientation (Suc./Dis.)	Side - Top / End - Top / Top - Top
Standard Motor Synchronous Speeds (rpm)	3000 / 3600
Max. Operating Speed (rpm)	3600
Direction of Rotation	Anticlockwise when viewed from coupling end
Flange Ratings (#RF)	Upto Cl. 1500

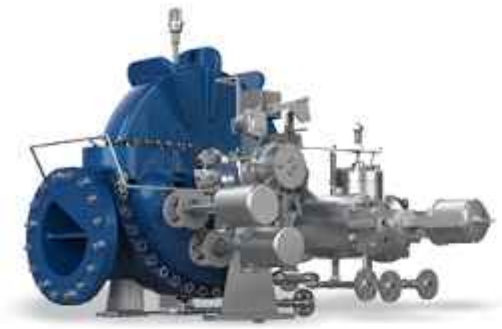
Features

- Multistage pump with ring section diffuser casing design with foot-mounted and centerline mounted support to meet high-pressure requirements especially in RO dealination application
- Specially designed to meet high performance for superior and extended low-cost operation
- Pump family designed to have max. parts interchangeability
- Bearing unit can be serviced without having to disassemble the pumps
- Wide range of materials available including duplex stainless steel grades
- Pump can be offered with End-Top / Side-Top / Top-Top Nozzle Orientation

Applications

- Desalination

Drive Turbines (DT)



KEPL Steam turbines come in various ranges; like; KT-B, KT-D & KTB High Back Pressure Turbine.

These turbine models are designed and manufactured based on experience gained by KEPL in the supply of more than 250 API 611 Steam turbines and the design has been validated with the help of international steam turbine design experts. Our steam turbines can cater for Safe as well as Hazardous areas of operation.

Our manufacturing facility is approved by major global Oil & Gas, Petrochemicals end-users, and consultants. KEPL is capable of Design and Development of customized Control systems for Steam Turbine applications & Steam Piping Design.

The Steam Consumptions offered, Control System designed, etc. during the bidding stage are proven in totality during the performance trials or during regular operations at the site.

Rating

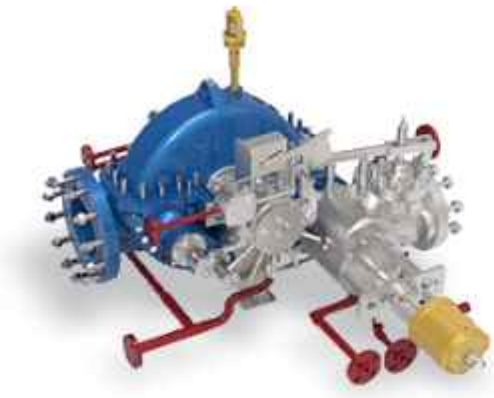
Parameters	K-Tur
Inlet Steam Pressure	Up to 62 bar*
Inlet Steam Temperature	Up to 480 Deg C
Exhaust Steam Pressure	Up to 25 bar*

Features

- Low Initial Cost
- High Reliability
- Short Lead Time
- Compact Design
- Interchangeability of Parts
- Quick start capability
- Variable speed capability

Applications

- Process and Cooling Water Pumps
- Lube Oil Pumps
- Boiler Feed Water Pumps
- Condensate Extraction Pumps
- Forced Draft Fans
- Induced Draft Fans
- Compressors
- Blowers



Saturated Steam Turbines (SST)

ECO-TUR is a single-stage back pressure as well as condensing turbine used in small combined heat and power plants, process plants and decentralised power plants. It uses waste steam to produce electric power which reduces the cost of operations and increases the revenue. KEPL strives to maintain its quality by providing highly engineered Eco-Tur. Our steam turbines can cater for Safe as well as Hazardous areas of operation.

Rating

Parameters	ECO-TUR P ECO-TUR E
Inlet Steam Pressure	Up to 62 bar
Inlet Steam Temperature	Upto 480 Deg C Dry Saturated Steam Temp
Exhaust Steam Pressure	As per Customer Requirement
Power Output	10 – 1000 kW ** 10 – 600 kW **

Features

- Benefits to the Customer
- Continuous incidental power generation
- Possibility of in-house power utilization or exporting of power
- Short installation & commissioning time due to compact(ready to use) skid
- Turnkey project execution (excluding civil work) leading to single point of responsibility
- User friendly control system making virtually attendance less operation
- All relevant power generated parameters and related turbine functions are easily accessible
- Automatic handling of steam flow variation
- Reliable machine with less maintenance
- No extensive special training required for operation of turbine
- Smooth & quick change over from Turbine to PRDS operation mode without disturbing process
- Smooth engagement to identified breaker / grid for power generation
- Opportunity to recover waste energy

Applications

- Process Plants
- Waste Heat Recovery Units
- Small Combined Heat and Power Plants
- Decentralised Power Plants

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CIN: U29120MH1988PLC045865

OUR COMPANIES

BRAYBAR PUMPS (PTY) LTD
Republic of South Africa

KPML
KARAD PROJECTS AND MOTORS LIMITED
India

KBTL
KIRLOSKAR BROTHERS (THAILAND) LIMITED
Thailand

CORROCOAT KCPL
KIRLOSKAR CORROCOAT PRIVATE LIMITED
India

KEPL
KIRLOSKAR EBARA PUMPS LIMITED
India

RODELTA
RODELTA PUMPS INTERNATIONAL B.V.
The Netherlands

spp pumps
SPP PUMPS LIMITED
United Kingdom

SyncroFlo
SYNCROFLO, INC.
U.S.A.

TKSL
THE KOLHAPUR STEEL LIMITED
India