



Equipment for Water &  
Waste Water Industry



Flow Control Products  
Knife Gate Valve  
Water Hammer Control Valve  
Screening Equipment  
Screening Conveying Equipment  
Energy Dissipating Valve  
Hydropower Screw Generator  
Archimedean Screw Pump  
Process Equipment

## ***Jash Group : Innovation & leadership over 65 years and installations in over 35 countries***

Jash group comprises of Jash Engineering Ltd, India and its wholly owned subsidiaries Shivpad Engineers Pvt Ltd - India, Jash USA Inc. - USA, Mahr Maschinenbau GmbH- Austria and Engineering & Manufacturing Jash Ltd - Hong Kong. With its operations spread over different locations of South East Asia, Far East Asia, Europe & America, Jash group is uniquely positioned geographically to cater to the world wide market.

The group offers wide range of equipment for use in Water & sea water intake plants, Water & waste water pumping stations and treatment plants, Desalination plants, Effluent treatment plants, Water transmission lines, Storm water pumping stations and for handling dry bulk solids and solid-liquid mixes in Power, Cement, Steel, Paper & Pulp, Petrochemical, Fertilizer and other process plants.

Brief details of equipment offered for the water industry are given hereunder. For more details pertaining to these products, custom requirements, larger sizes etc please contact the company.

### **FLOW CONTROL PRODUCTS**

#### **PENSTOCK / SLUICE GATE**



Application	: Isolation of flow in and out of a closed conduit for seating and / or unseating water head up to 40 meters (122').
Standards	: AWWAC-560 / 561 / 562 / 563, BS 7775, IS-13349.
Mounting	: Wall mounted / Thimble mounted / Pipe flange mounted.
Sizes	: From 150 x 150 mm (6" x 6") up to 3,000 x 5,000 mm (125" x 200").
Mode of operation	: Manual / Electric / Hydraulic / Pneumatic.
Material of construction	: Cast iron / Ductile iron / Carbon steel / Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex / Aluminum / HDPE / FRP / Composite.

#### **OPEN CHANNEL GATE**



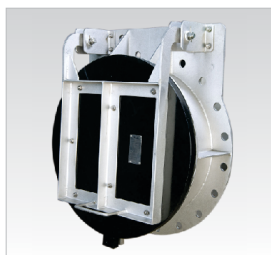
Application	: Isolation of flow within an open channel.
Standards	: AWWAC-560 / 561 / 562, BS 7775.
Mounting	: Embedded in grooves provided on parallel side walls / Anchored on the face of side walls / Anchored on the face of wall at the end of channel.
Sizes	: From 150 x 150 mm (6" x 6") up to 3,000 x 5,000 mm (125" x 200").
Mode of operation	: Manual / Electric / Hydraulic / Pneumatic.
Material of construction	: Cast iron / Ductile iron / Carbon steel / Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex / Aluminum / HDPE / FRP / Composite.

#### **DOWNWARD OPENING WEIR GATE**



Application	: Precise level control or decanting.
Standards	: AWWAC-560 / 561 / 562 / 563, BS 7775, IS-13349.
Mounting	: Wall mounted / Thimble mounted.
Sizes	: From 150 x 150 mm (6" x 6") up to 7,000 x 3,000 mm (275" x 125").
Mode of operation	: Manual / Electric / Hydraulic / Pneumatic.
Material of construction	: Cast iron / Ductile iron / Carbon steel / Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex / Aluminum / HDPE / FRP / Composite.

#### **FLAP GATE / AUTOMATIC DRAINAGE GATE**



Application	: Uni-directional drainage from outfall structures and plants to river / sea.
Mounting	: Wall mounted / Thimble mounted / Pipe flange mounted.
Sizes	: From 150 x 150 mm (6" x 6") up to 3,000 x 3,000 mm (125" x 125").
Mode of operation	: Automatic through differential water pressure.
Material of construction	: Cast iron / Ductile iron / Carbon steel / Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex / Aluminum / HDPE / FRP / Composite.

## STOP LOGS



Application	: Isolation duties in open channel via single/multi piece stop logs.
Mounting	: Embedded in grooves provided on parallel side walls / Anchored on the parallel side walls / Anchored on the face of wall.
Sizes	: From 150 x 150 mm (6" x 6") up to 4,000 x 8,000 mm (160" x 320").
Mode of operation	: Smaller stop logs manually by hand & larger stop logs through hoist using lifting beam.
Material of construction	: Carbon steel, Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex / Aluminum / HDPE / FRP / Composite.

## KNIFE GATE VALVE

### "MONO" SERIES KNIFE GATE VALVE



Description	: MONO series valves are fully lugged, bonneted, glandless knife gate valves with very low operating torque. These can also withstand small bi-directional pressure.
Standard	: AWWA C520-14.
Sizes	: DN 80 - DN 600 as standard, higher sizes on request.
Pressure rating	: PN 10 (150 psig) / PN 16 (240 psig).
Mode of operation	: Manual / Electric / Hydraulic / Pneumatic.
Material of construction	: Cast iron / Ductile iron / Cast stainless steel / Duplex / Super duplex.

### "ZFI" SERIES KNIFE GATE VALVE



Description	: ZFI series valves are bonnet-less knife gate valves having gland with multiple packings to seal the rear opening in the housing.
Standards	: MSS SP-81 / TAPPI.
Sizes	: DN 50 - DN 4,000 as standard, higher sizes on request.
Pressure rating	: PN 10 (150 psig) upto DN 300 / PN 6 (90 psig) from DN 350 to DN 600.
Mode of operation	: Manual / Electric / Hydraulic / Pneumatic.
Material of construction	: Cast iron / Cast carbon steel / Ductile iron / Cast stainless steel / Duplex / Super duplex.

## WATER HAMMER CONTROL VALVE

### ZERO VELOCITY VALVE



Application	: Prevents returning of water column to control pressure surges in large diameter long distance cross country rising mains.
Sizes	: From 100 mm (4") to 3,000 mm (120") diameter.
Pressure	: 10 to 30 Kg/cm <sup>2</sup> (150 to 450 Psig) (Hydrostatic body test pressure).
Mounting	: Flanged - 100 mm (4") to 300 mm (12") diameter, Barrel - 350 mm (14") to 3,000 mm (120") diameter.
Mode of operation	: Self-actuated by velocity of water.
Material of construction	: Carbon steel epoxy painted.

### AIR CUSHION VALVE



Application	: Instantly breaks vacuum & cushions returning water to control the pressure surges in large diameter long distance cross country rising mains.
Sizes	: 100 mm (4") / 150 mm (6") / 200 mm (8") / 300 mm (12") / 400 mm (16")
Pressure	: 10 to 30 Kg/cm <sup>2</sup> (150 to 450 Psig) (Hydrostatic body test pressure).
Mounting	: Flanged.
Mode of operation	: Self-actuated.
Material of construction	: Carbon steel epoxy painted.

## SCREENING EQUIPMENT

### TRASH RACK



Description	: Trash racks are for removal / screening of coarse floating waste coming with water in water and waste water pumping stations, river or barrage intake structures and treatment plants.
Bar spacing	: 50 mm (2") and above.
Single piece width	: Maximum up to 6,000 mm (240").
Single piece height	: Maximum up to 4,000 mm (160").
Mode of operation	: Manual / Electrically by crane hoist.
Material of construction	: Carbon steel, Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex.

### J-TYPE TRASH RACK SCREEN



Description	: J-type trash screen is manually cleaned coarse screening equipment used to prevent large and medium sized floating waste coming with water in water and waste water pumping stations, river or barrage intake structures and treatment plants.
Bar spacing	: 20 mm (0.8") and above.
Single piece width	: Maximum up to 4,000 mm (160").
Single piece height	: Maximum up to 5,000 mm (200").
Mode of operation	: Manual / Electrically by crane hoist.
Material of construction	: Carbon steel, Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex.

### SUSPENDED TRASH RAKE SCREEN



Description	: Suspended trash rake screen is mechanically cleaned coarse screening equipment used to prevent large sized floating wastes from entering in to the intake structure of a pumping station.
Bar spacing	: 50 mm (2") and above.
Channel width	: 1,000 mm to 40,000 mm (40" to 1600").
Channel depth	: 2,000 mm to 10,000 mm (80" to 400").
Mode of operation	: Electrically by rope drum hoist.
Material of construction	: Carbon steel, Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex.

### "JMR" MULTI-RAKE SCREEN



Description	: "JMR" multi-rake screen is a mechanically cleaned medium/coarse screening equipment used to prevent medium/coarse sized floating wastes from travelling to the pumps located into the wet well/pump chamber of the water and waste water pumping station.
Bar spacing	: 10 mm (0.4") and above.
Channel width	: 750 mm (30") to 2,000 mm (80").
Channel depth	: 10,000 mm (400") to 12,000 mm (480").
Mode of operation	: Motorized.
Material of construction	: Stainless Steel 304, 304L, 316, 316L, Duplex, Super duplex.

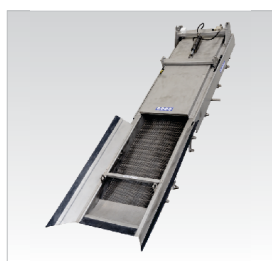
### MAHR MASCHINENBAU "MM2MM"<sup>TM</sup> MULTI-RAKE SCREEN



Description	: "MM2MM" <sup>TM</sup> Multi rake screen is a mechanically cleaned fine / coarse screening equipment used to prevent fine / medium sized floating wastes from travelling to the pumps located into the wet well / pump chamber of the water and waste water pumping station.
Bar spacing	: 2 mm (0.08") and above.
Channel width	: Up to 4,500 mm (15')
Channel depth	: Up to 60,000 mm (198'), larger depth on request
Mode of operation	: Motorized
Material of construction	: Stainless Steel 304, 304L, 316, 316L, Duplex, Super Duplex



## "SCREENMAT"<sup>TM</sup> STEP SCREEN



Description	: "Screenmat" <sup>TM</sup> is a compact mechanically cleaned fine screening equipment used to prevent fine sized floating wastes from travelling further into the water and waste water treatment plants.
Bar spacing	: 2 mm (0.08") to 6 mm (0.24").
Channel width	: 500 mm (20") to 2,500 mm (100"), down to 300 mm in case of very small screen
Channel depth	: 600 mm (24") to 2,200 mm (88"),
Mode of operation	: Motorized / Hydraulic
Material of construction	: Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex.

## "ROTOCLEAN" ROTARY DRUM SCREEN



Description	: "Rotoclean" is a mechanically cleaned fine screening equipment used to prevent fine sized floating wastes from travelling further in to waste water treatment plants.
Wire spacing / Perforation	: 0.5 mm (0.02") to 2 mm (0.08") / 2 mm (0.08") to 6 mm (0.24").
Drum diameter	: 600 mm (24") to 2,000 mm (80").
Channel width	: 800 mm (32") to 2,200 mm (88").
Channel depth	: 600 mm (24") to 2,000 mm (80").
Mode of operation	: Motorized.
Material of construction	: Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex.

## MAHR MASCHINENBAU "PER-SCALATOR"<sup>TM</sup> FILTER BAND SCREEN



Description	: Mahr Maschinenbau "Per-scalator" <sup>TM</sup> screens are mechanically operated self-cleaning fine screen equipment used to prevent floating wastes from travelling further in to waste water treatment plants, especially in waste water treatment plants based on MBR process.
Perforation size	: 2 mm (0.08") to 10 mm (0.4") diameter.
Channel width	: 600 mm (24") to 2,000 mm (80").
Channel depth	: Up to 3,000 mm (120").
Mode of operation	: Motorized.
Material of construction	: Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex.

## TRAVELLING BAND SCREEN



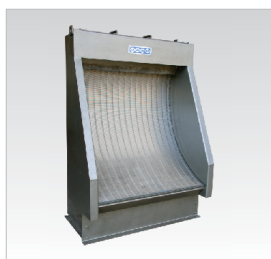
Description	: Travelling band screen is mechanically cleaned fine screening equipment used to prevent medium to fine sized floating wastes from travelling to the pumps located in to the wet well/pump chamber of a water and waste water pumping station or to prevent fine sized floating wastes from travelling further in to waste water treatment plants based on MBR process.
Filter mesh size	: 0.5 mm (0.02") to 3 mm (0.12"), other sizes on request.
Filter perforation size	: 1 mm (0.04") to 12 mm (0.48") diameter, other sizes on request.
Filter element width	: 300 mm (12") to 5,000 mm (200").
Shaft center distance	: Up to 15,000 mm (600").
Material of construction	: Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex.

## "ROTOBRUSH" ROTARY SCREEN



Description	: "Rotobrush" is a mechanically cleaned very fine screening equipment used to prevent fine sized floating wastes from travelling further in to waste water treatment plants based on MBR or similar technology so as to prevent damage to the membranes. These are also ideal for effluent treatment plants of food processing, textile, pharmaceuticals, chemicals, sugar, breweries etc.
Wire spacing / Perforation	: 0.5 mm (0.02") to 2 mm (0.08") / 2 mm (0.08") to 6 mm (0.24").
Mode of operation	: Motorized.
Material of construction	: Stainless steel 304, 304L, 316, 316L, Duplex, Super duplex.

## "HYPERBOLE" STATIC SCREEN



Description	: "Hyperbole" is a manually cleaned very fine screening equipment used to prevent fine sized floating wastes from travelling further in to waste water treatment plants based on MBR or similar technology so as to prevent damage to the membranes. These are also ideal for effluent treatment plants of food processing, textile, pharmaceuticals, chemicals, sugar, breweries etc. Hyperbole screens are static screens & do not require any power.
Slot width	: 0.5 mm (0.02") to 2 mm (0.08").
Material of construction	: Stainless Steel 304, 304L, 316, 316L, Duplex, Super duplex.

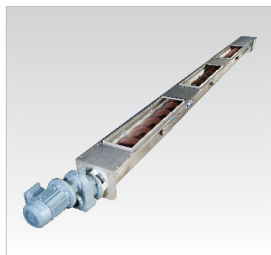
## SCREENING CONVEYING / WASHING / COMPACTING EQUIPMENT

### FLAT BELT CONVEYOR



Description	: Flat belt conveyor is ideal for long distance transportation of waste / screenings removed by screens installed in a non-enclosed area and deliver it to the point of disposal.
Belt width	: 600 mm (24") to 1,000 mm (40").
Mode of operation	: Motorized.
Material of construction	: Carbon steel painted.

### SCREW CONVEYOR



Description	: Screw conveyor is ideal for non-hazardous transportation of waste / screenings removed by the screens installed in an enclosed area with possibility of connection to an odour control system.
Capacity	: 0.75 m <sup>3</sup> /hr to 35 m <sup>3</sup> /hr.
Overall length	: Up to 10,000 mm (394") in multiples of 1,000 mm (40").
Type of screw	: Shaftless screw made of hardened steel.
Material of trough	: Stainless steel 304 / 316 lined with UHMWPE.

### SCREW CONVEYOR WITH WASH COMPACTOR



Description	: Screw conveyor with wash compactor is ideal for transportation, washing and compaction of waste / screenings removed by the screens with a view to recover carbon content & reduce odour from waste and reduce the volume to achieve reduced transportation cost and area required for landfill.
Capacity	: 0.75 m <sup>3</sup> /hr to 13 m <sup>3</sup> /hr.
Overall length	: Up to 10,000 mm (394") in multiples of 1,000 mm (40").
Dewatering performance	: Up to 50% DR.
Volume & weight reduction	: Up to 70%.
Material of trough	: Stainless steel 304 / 316 lined with UHMWPE.

### "JET BREAKER" WASHER COMPACTOR



Description	: "Jet Breaker" washer compactor is ideal for washing, compacting and safely disposing of screening / waste using bagging unit.
Capacity	: 1.5 m <sup>3</sup> /hr to 6.5 m <sup>3</sup> /hr.
Dewatering performance	: Up to 50% DR
Volume & weight reduction	: Up to 70%
Type of screw	: Shaftless screw made of hardened steel.
Material of trough	: Stainless steel 304 / 316

## ENERGY DISSIPATING VALVE



Application	: Flow control in distribution network, pressure breaking in gravity pipeline, discharge of dams, turbine and gravity pipelines.
Mounting	: Flange mounted (Wafer Construction).
Pressure Rating	: Class 150 - Class 600.
Sizes	: 80 mm (3") to 2,000 mm (80").
Mode of operation	: Manual / Electric / Hydraulic / Pneumatic.
Material of construction	: Cast iron / Ductile iron / Cast stainless steel / Duplex / Super duplex.

## ARCHIMEDEAN SCREW TURBINE / HYDROPOWER SCREW GENERATOR



Application	: Generation of renewable energy power by utilizing low heads of water at outfalls of sewage treatment plants, level drops in water conveyance canals, run of the river sites, existing water mills, water outlets and outfalls of thermal power plants.
Water handling capacity (Q):	From 0.1 to 10 m <sup>3</sup> /sec (3.5 to 354 ft <sup>3</sup> /sec).
Water head (H)	: From 1 m (3') to 10 m (32').
Feasible power generation	: 9.81 x Q x H x 0.75.
Material of construction	: Carbon steel epoxy painted.

## ARCHIMEDEAN SCREW PUMPS



Application	: Pumping or lifting of large volume of water or other fluids up to a short height at storm water, sewage and raw water pumping station, refineries etc.
Pumping capacity	: From 0.1 to 10 m <sup>3</sup> /sec (3.5 to 354 ft <sup>3</sup> /sec).
Pumping head/lifting head	: From 1 m (3') to 10 m (32').
Material of construction	: Carbon steel epoxy painted / Stainless steel 304 / 316.

## PROCESS EQUIPMENT FOR WATER / WASTE WATER / EFFLUENT TREATMENT

Jash - Shivpad also offers diversified process equipment comprising of Detritors, Clarifiers, Thickeners, Digester mixers, Trickling filters, Surface aerators, Decaners, Lime classifiers and various other tailor made equipment to suit process application and client's need for water, waste water and effluent treatment plants.



Detritor



Clarifier



Clarifloculator



Slow speed fixed aerator



Slow speed floating aerator



Trickling Filter





Jash Corporate Office



UNIT-I : Cast Products Plant



UNIT-II : Fabricated Products Plant



UNIT-III : SEZ Export Plant

## Quality through manufacturing excellence

*Jash has invested in a modern & diversified manufacturing facility to enable it to manufacture all its products in-house. With almost 450,000 square feet of built up area under cranes, Jash has the capability to cast products up to 18 tonnes in weight, machine components up to 10m (32') x 5m (16') x 2m (6') size & fabricate products weighing 60 tonnes using qualified welders & processes.*

*Availability of such an extensive and diversified manufacturing facility ensures reliable quality, timely delivery and an ability to meet specific needs of our customers.*

*With over 75 engineers and 450 employees spread across India, USA, Austria & Hong Kong, Jash is well positioned to meet the varied needs of its clients in various markets worldwide.*

*Installations in over 35 countries are a testimony to our manufacturing excellence and ability to meet quality expectation of our clients.*

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