

**EIM** SUBMERSIBLE PUMPS

# PRODUCT GUIDE



ISO 9001 認証



**E.I.M. ELECTRIC CO.,LTD.**

# SUBMERSIBLE PUMPS FOR SUMPS

- For Sewage and Wastewater
  - Model SE: 2-pole Series
  - Model SU: 4-pole Series
- For Solid Sewage
  - Model SER/SUR/SUV: Vortex Type
  - Model SEC: With Cutter Type
- For Corrosion-resistant Stainless Steel Type
  - Model CSE: 2-pole Series
  - Model CSU: 4-pole Series
  - Model CSH (L): Large Capacity Type, 4-pole Series
- Large Capacity Type
  - Model MSA: Axial-flow Pump Type
  - Model MSB: Mixed-flow Pump Type

## Model SE For Waste Water Effluent, Small Lightweight Type

Optimum use in general applications and miscellaneous waste water

- Free from clogging by sewage and dust due to its non-clog impeller.
- Elbow assembly can also be mounted.
- Auto-level control contained type also available. (3.7kW and smaller)



Nominal Dia	50 to 100mm
Output	0.25 to 11kW
Total Head	5 to 40m
Discharge	0.15 to 1.8m <sup>3</sup> /min
Voltage	200 to 550V

Note: 0.4kW for single-phase available.

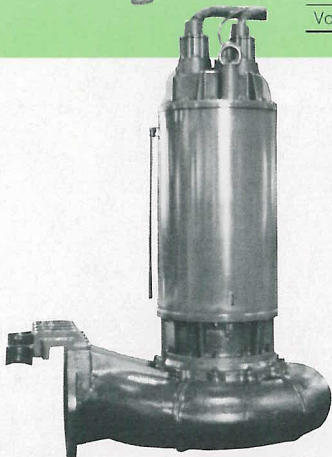
## Model SU For Sewage and Waste Water

Optimum use for sewage in buildings, factories, septic tanks and many others



- Free from clogging by sewage and dust due to its non-clog impeller.
- Smooth delivery of solid and fibrous materials.
- Elbow assembly can also be mounted.

Nominal Dia	50 to 600mm
Output	0.75 to 275kW
Total Head	4 to 38m
Discharge	0.21 to 60m <sup>3</sup> /min
Voltage	200 to 550V



Main Drainage Pump  
(For the Arab Republic of Egypt)  
Model SU-50365DB 275kW

## Model SER(C)·SUR For Solid Sewage

Optimum use for septic tanks, sludge and stock farming

With Cutter Type (Model SEC) is available on your request.

- Even large solid and string matters can be pumped up smoothly due to its specially shaped impeller.
- Elbow assembly can also be mounted.
- Auto-level control can be built-in. (3.7kW and smaller)



Nominal Dia	50 to 100mm
Output	0.4 to 11kW
Total Head	2 to 15m
Discharge	0.15 to 1.5m <sup>3</sup> /min
Voltage	200 to 550V

## Model SUV (2-Pole Motor) For Solid Sewage

Optimum use for manhole pumps, septic tanks and sludge

- Even large solid and string matters can be pumped up smoothly due to its specially shaped impeller.
- Elbow assembly can also be mounted.
- Auto-level control can be built-in. (3.7kW and smaller)



Nominal Dia	50 to 80mm
Output	0.5 to 3.7kW
Total Head	2 to 20m
Discharge	0.1 to 0.6m <sup>3</sup> /min
Voltage	200 to 550V

Model **CSE (U)** Stainless Steel Construction for Corrosive Waste Liquid and Sewage (2-pole Series)

Optimum use for corrosion-resistance in applications requiring stainless steel parts

4-pole Series (Model CSU) is available on your request.



- All parts that come in contact with liquids are made of stainless steel (SUS 316 ) and casting (SCS 14).
- Corrosion-resistant mechanical seal.
- Built-in motor protector.

Nominal Dia	50 to 100mm
Output	0.25 to 11kW
Total Head	6 to 40m
Discharge	0.16 to 1.8m <sup>3</sup> /min
Voltage	200 to 550V

Model **CSH (L)** Large Capacity Type Corrosion-Resistant Stainless Steel Submersible Pumps

Superior corrosion-resistance in applications requiring stainless steel parts.



- All parts that come in contact with liquid are made of stainless steel (SUS 316, SCS 14).
- Corrosion-resistant mechanical seal.
- Built-in motor protector.

Nominal Dia	150, 200mm
Output	22 to 45kW
Total Head	15 to 30m
Discharge	2.0 to 5.0m <sup>3</sup> /min
Voltage	200 to 550V

Model **MSA** Large Capacity Type Axial-Flow Pump

Specially designed for large-capacity, low-head pumping with minimum maintenance costs

- MSA-P: Automatically mounting Type, in column
- MSA-B: Discharge elbow detachable Type
- For flood and storm water controls, river water intake, irrigation, soil, drainage, pond and pool level-controls etc.
- Process, cooling and raw water, dry dock, water supply and others.



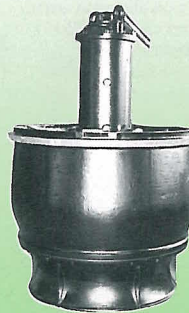
Nominal Dia	400 to 1200mm
Output	11 to 230kW
Total Head	1.5 to 6m
Discharge	15 to 240m <sup>3</sup> /min
Voltage	200 to 1100V



Submersible Propeller Pump

Model **MSB** Large Capacity Type Mixed-flow Pump

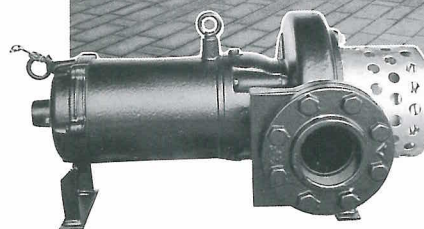
Pumps up to 210m<sup>3</sup>/min max; compact Available in two types.



Model MSB-B

- MSB-P: Automatically setting type, in column.
- MSB-B: Discharge elbow detachable Type.
- Optimum use for submersion counter-measure and other applications requiring the pumping of a large volume of water, agricultural water and industrial water etc.

Nominal Dia	400 to 1200mm
Output	11 to 230kW
Total Head	2 to 15m
Discharge	15 to 220m <sup>3</sup> /min
Voltage	200 to 1100V



Submersible Pump for Fountains

# GENERAL PURPOSE SUBMERSIBLE PUMPS

- For General Drainage
  - Model ESS, V, K&E
- For Super-high Head
  - Model KHT: 2-pole Series
  - Model KH: 4-pole Series
- For Sand
  - Model K: General Purpose
  - Model CSP: For Special Sand
- Horizontal Type for Sand
  - Model SV: General Purpose
  - Model HS: Heavy Duty Type

## Model **ESS** Portable Type for Construction and General Drainage

Most easy-to-use single-phase pump



- Lightweight; portable
- Single-phase can be used.
- Auto-level control contained type also available.
- Motor protector built-in.

Nominal Dia	40 to 50mm
Output	0.25 to 0.75kW
Total Head	6 to 10m
Discharge	0.11 to 0.2m <sup>3</sup> /min
Voltage	100 to 240V

## Model **V** Semi-Vortex Solid Handling Type for Construction and General Drainage

Solves drainage problems dealing with draining at construction work site



- Super-lightweight, changeable discharge port and wide water-way in pump casing due to semi-vortex type.
- No down time due to impeller wearing and no impeller clogging or locking.

Nominal Dia	50 to 100mm
Output	0.4 to 3.7kW
Total Head	8 to 15m
Discharge	0.12 to 0.9m <sup>3</sup> /min
Voltage	200 to 550V

## Model **K&E** Standard Type for Construction and General Drainage

Versatile type for general construction work

- Auto-level control contained type available. (3.7kW and smaller)

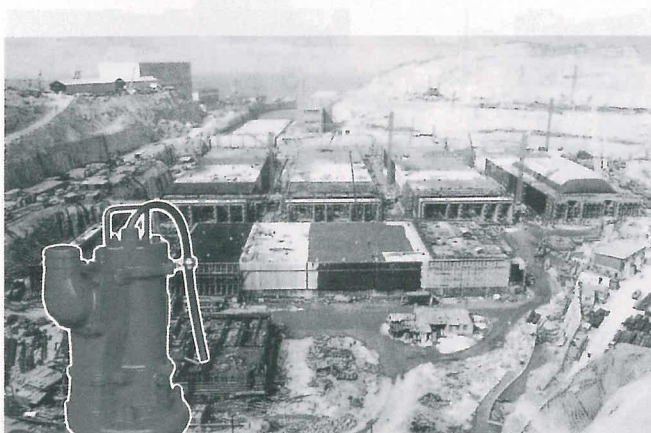


Model KM, EL (Low head type)

Nominal Dia	80 to 250mm
Output	2.2 to 37kW
Total Head	15 to 20m
Discharge	0.5 to 6.5m <sup>3</sup> /min
Voltage	200 to 1100V

Model EH (High head type)

Nominal Dia	100 to 200mm
Output	7.5 to 110kW
Total Head	25 to 35m
Discharge	0.8 to 4.5m <sup>3</sup> /min
Voltage	200 to 1100V



Under Construction of Eastern Harbour Tunnel in Hong Kong

Model "K & E" General-Purpose Pumps



Model SV General Purpose Pump for Tunnel Construction Drainage



Model **KHT** Super-High Head Type for Mine Shaft, Open Pit Dewatering

Now makes possible extremely high head one step pumping by 2-pole motor for speedup resulting in small size and lower costs



- Compact, lightweight, 2-pole motor speed.
- Robust construction, dependable and easy to maintain.
- Portable, simplified installation.
- Pumping can be made with one pump only without requiring booster pump, intermediate tank etc.
- Mine, dam, river water intake.

Nominal Dia	80 to 150mm
Output	22 to 170kW
Total Head	60 to 160m
Discharge	0.6 to 2.0m <sup>3</sup> /min
Voltage	200 to 1100V

Model **KH** Super-High Head Type

Especially for high of up to 250m



- Water flow system incorporated in to pump casing to cool motor and prevents overheating.
- Pumping can be done with one pump only without requiring a booster pump, intermediate tank etc.

Nominal Dia	150 to 200mm
Output	37 to 190kW
Total Head	60 to 200m
Discharge	1.5 to 3.3m <sup>3</sup> /min
Voltage	200 to 1100V

Model **K** General Purpose for Slurry, Sludge and Sand

Powerful pumping and dewatering of slurry, sludge and sand



- With agitating blades.
- Abrasion-resistant high-chrome iron casting mode impeller.
- As water cooling jacket system which is provided in the outside stator housing, operating in very low water level is also available.

Nominal Dia	50 to 200mm
Output	3.7 to 19kW
Total Head	12 to 30m
Discharge	0.35 to 4.0m <sup>3</sup> /min
Voltage	200 to 1100V

Model **CSP** Heavy-Duty Anti-Abrasive Type for Slurry, Sludge and Sand

A mighty pump for rigid solids like iron scale, gravel, various types of slurry and sludge.

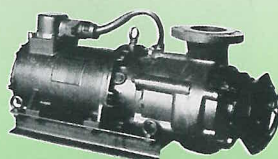


- Used in the following processes.
- Rolling line of ironworks, gravel collecting, mud dredging.
  - Row materials treatment of coal and metal mines, sludge treatment of quarry etc.
  - High density sludge or slurry-drainage etc.

Nominal Dia	50 to 500mm
Output	2.2 to 450kW
Total Head	8 to 40m
Discharge	0.25 to 60m <sup>3</sup> /min
Voltage	200 to 1100V

Model **SV** Horizontally Mounted, Vortex Pump Type for Mine and Factory Slurry and Sludge

Optimum use for sand pump which provides wider passage space for Large solid handling



- Powerful in disposing of slurry, sludge, sandy or muddy water of mine and construction sites.
- Used for disposal of wastewater containing scales or sludges found in various process industries.

Nominal Dia	100mm
Output	5.5 to 22kW
Total Head	10 to 20m
Discharge	0.9 to 2.0m <sup>3</sup> /min
Voltage	200 to 1100V

Model **HS** Heavy Duty Purpose for Slurry, Sludge and Sand

A mighty pump owing to its non-clogging high-chrome cast iron impeller, available for operation in very low water level



- Has horizontal shaft and impeller arrangement running in lower water level allowing.
- High-chrome cast iron impeller in which wide waterways are arranged, brings about high performance for long-term and minimum maintenance cost.
- Motor protector built-in.

Nominal Dia	100 to 150mm
Output	11 to 22kW
Total Head	18 to 22m
Discharge	1.0 to 2.0m <sup>3</sup> /min
Voltage	200 to 1100V

# SPECIAL PURPOSE SUBMERSIBLE PUMPS

- Flameproof Type for Industrial Use
  - Model Y : Standard (EL-Y), High-head Type (CH-Y)
  - Model C<sub>S</sub>-Y : Corrosion-resistant Stainless Steel Type
  - Model C<sub>SH</sub>-Y : Corrosion-resistant Stainless Steel Type
    - High-head Type
  - Model C<sub>WP</sub>-Y : Corrosion-resistant Stainless Steel Type
    - Super High-head Type
- Flameproof Type for Coal Mines
- Hot Water Type
- Automatic Operation Type
  - Model SF, W
- Deep-well Type
  - Model WP
  - Model CSH, CWP: Corrosion-resistant Stainless Steel Type
    - High-head Type

General Industries Use

# FLAMEPROOF Type (Model Y)

Safe operation guaranteed in combustible gas and ignitable vapor atmosphere



- Approved explosion-proof structure by The Research Institute of Industrial Safety of Ministry of Labour in Japan.
- For pumping and discharging water at oil and gas refineries plants and for excavation work.
- Full stainless steel type also available.

Nominal Dia	50 to 150mm
Output	1.5 to 22kW
Total Head	15 to 30m
Discharge	0.2 to 2.0m <sup>3</sup> /min
Voltage	200 to 550V

Coal & Shale Mines Use

# FLAMEPROOF Type (Model X)

Safe operation guaranteed in methane and coal dust atmosphere



- Approved explosion-proof structure by the National Research Institute for Pollution and Resources, Ministry of International Trade and Industry in Japan.
- Optimum use in pits or the like in which combustible gas containing methane as main component or explosive coal dust.

Nominal Dia	50 to 200mm
Output	1.5 to 150kW
Total Head	12 to 120m
Discharge	0.2 to 5.0m <sup>3</sup> /min
Voltage	200 to 1100V

Corrosion Resistant Stainless Steel Type

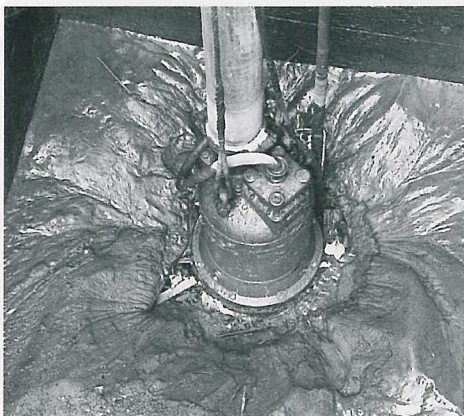
# INDUSTRIAL USE FLAMEPROOF Type (Model C<sub>1</sub>-Y / C<sub>2</sub>-Y)

Best suited for explosion-proof corrosion-resistant use



- Approved explosion-proof structure by The Research Institute of Industrial Safety of Ministry of Labour in Japan.
- For drainage and drilling at petroleum and gas refinery plants
- For all stainless steel products

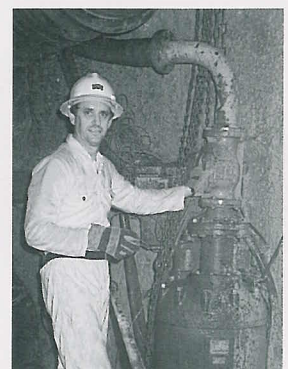
Nominal Dia	32 to 100mm
Output	0.75 to 37kW
Total Head	10 to 80m
Discharge	0.055 to 1.4m <sup>3</sup> /min
Voltage	200 to 550V



Mine Slurry Drainage



Open-pit Mining in India



110kW Main Drainage Pumps for Gold Mine in the Republic of South Africa

Model F (65°C), Model V (80°C)

# HOT WATER Type

Heat-resistant main parts; delivers hot water safely



- Heat-resistant and moistureproof motor.
- For parts that come in contact with liquid, thoroughly tested heat-resistant metal and materials are used.

Nominal Dia	50 to 250mm
Output	0.75 to 45kW
Total Head	10 to 35m
Discharge	0.18 to 4.8m <sup>3</sup> /min
Voltage	200 to 550V

# Model SF Auto-Level Control Type

Dewatering is automatic by combining floats



- Level detection is of float type.
- Relay assembly of compact size required for level control is contained within the body.

Nominal Dia	40 to 100mm
Output	0.25 to 3.7kW
Total Head	3 to 20m
Discharge	0.11 to 0.9m <sup>3</sup> /min
Voltage	200 to 550V

Note: Standard 0.25kW, 0.4kW and 0.75kW models are for single-phase 100 to 240V.



Flameproof Submersible Pump for Draining Waste in Airplane washing (Tokyo International Airport)

# Model W AUTO-ALTERNATING OPERATION Type

Automatic alternating operation of two pumps is realized by combining floats



No.1 pump

No.2 pump

- Level detection is of float type.
- Two pumps are automatically operated alternately, when liquid level is normal, but they are operated together, when liquid level abnormally rises.
- If trouble occurs in one pump, the other pump automatically operates.
- This model is available for 1.5kW and below.

# Model WP Special High Head Type for Deep-Well System, Irrigation, Fountain

Optimum use for deep-well process and others



- Minimum size of outside dia, 270mm (output 3.7, 5.5kW) through 325mm (output 7.5, 11kW)
- Discharge port flange: JIS 10kg
- Motor protector built-in.

Nominal Dia	80 to 100mm
Output	3.7 to 11kW
Total Head	30 to 40m
Discharge	0.25 to 0.75m <sup>3</sup> /min
Voltage	200 to 550V

# Model CSH, CWP Corrosion-Resistant Stainless Steel Type DEEP-WELL Type

Highly efficient draining for corrosive deep-well liquids



- Minimum size of outside dia, for high-head.
- Full stainless steel type.

Nominal Dia	32 to 100mm
Output	1.5 to 37kW
Total Head	35 to 80m
Discharge	0.055 to 1.4m <sup>3</sup> /min
Voltage	200 to 550V

# POLLUTION PREVENTION & WATER TREATMENT EQUIPMENT

- Submersible Motor
  - Model EM
- AP Pump
  - Model AP: Slurry and Semi-solid concentrated Liquid Type
- Submersible Mixer
  - Model WM
- Submersible Pump for Aeration
  - Model AK: Jet Flow
- Super Vacuum
  - Model VX: Powerful sweeping system for solid waste
- New-Suitoler
  - Model VSF2: Water Sediment, General Drainage

## Model **EM** Submersible Motor

Powerful submersible motor for simplification and rationalization of various drive-systems



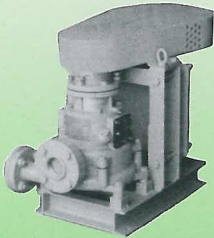
- Optimum use for driving of submersible pumps, aerators, and mixers etc.
- Submersible geared-motor also available.

Output	1.5 to 450kW
No. of Poles	2 · 4 · 6
Voltage	200 to 550V

## Model **AP** For Slurry and Semi-Solid Concentrated Liquid

Non-submersible pump that makes use of the technology of submersible pumps; minimized liquid leakage

- Used for broad applications such as chemical, petroleum, steel, metal, cement, paper making, power plant, mining and food as well as waterworks, sewage and civil engineering.

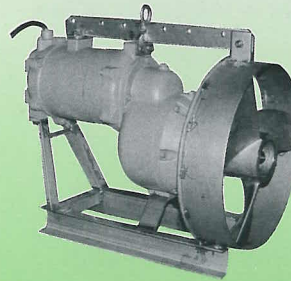


Nominal Dia	20 to 125mm
Output	3.7 to 55kW
Total Head	1.0 to 100m
Discharge	0.02 to 3.5m <sup>3</sup> /min
Voltage	200 to 550V

## Model **WM** Submersible Mixer, Jet Flow Type with Agitating propeller

Gives superior stir-effect with strong jet flow; mounting height and direction of jet flow can be freely adjusted

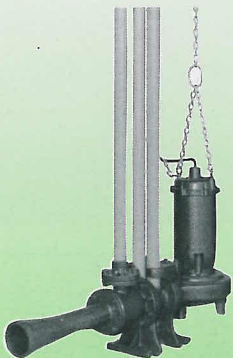
- It creates uniform solution in the pit, prevents formation of scum or sedimentation, diffusion of flocculent, and speeds-up of the processing, in all types of industries.



## Model **AK** Aeration Submersible Pump for Sewage and Waste Water

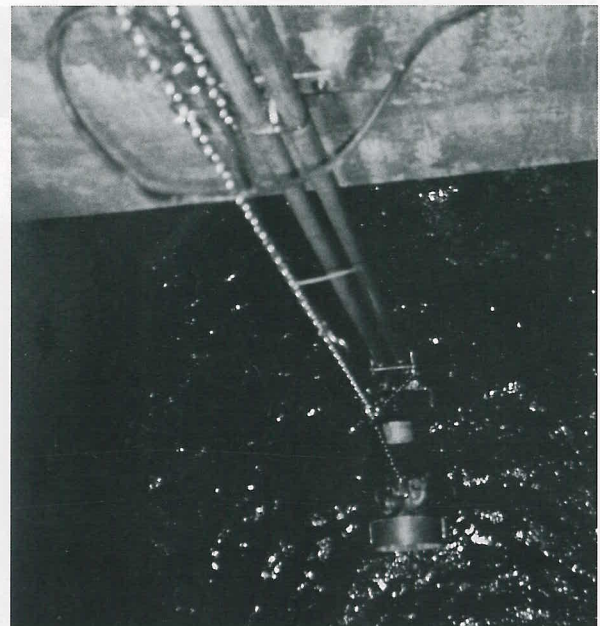
High efficient aerator utilizing an ejector

- High solution rate of oxygen in comparison with other aeration methods.
- Small space required
- No noise and broad agitation range.
- Easy maintenance and inspection of elbow assembly.

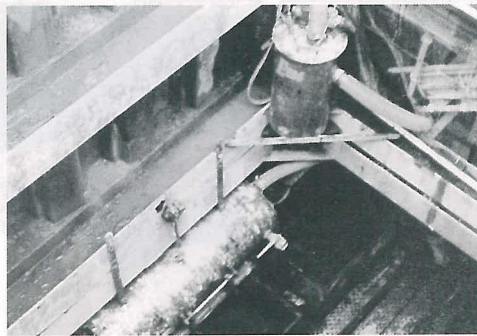
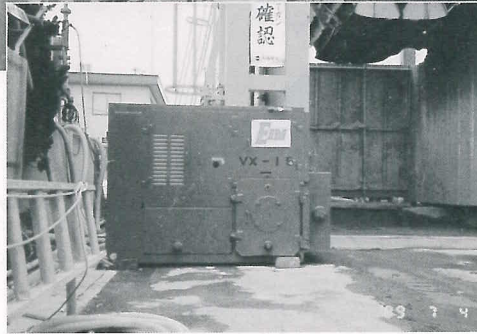
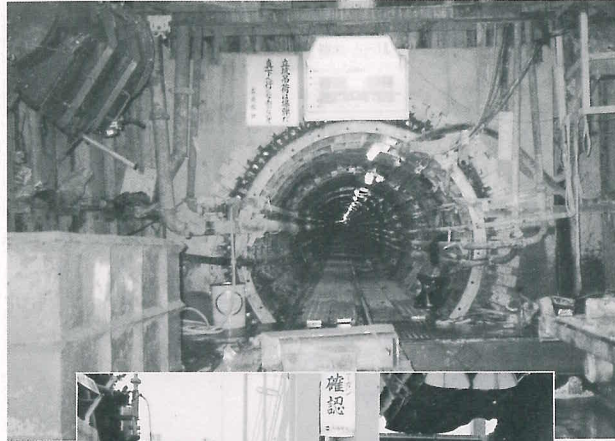


Air Suction Nominal Dia	25 to 50mm
Pump Output	0.4 to 7.5kW
Airflow Rate	5.6 to 106m <sup>3</sup> /h
Rated Water Depth	1.0 to 4.5m
Voltage	200 to 550V

Note: 0.4kW model can be made for single-phase 100 to 240V.





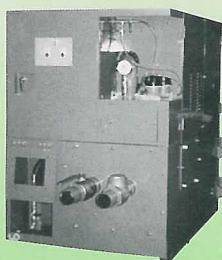


Model VX, Super Vacuum Sweeping Sandy and Stony Slurry behind Boring Shields

Vacuum Pumps 22kW, Drainage Pumps 5.5kW

## VACUUM SWEEPER Model VX

Powerful sweeping system with hatch-tank which completely vacuums solids, for troublefree operation; optimum use for sweeping sandy and stony slurry behind boring shields



Super-Vacuum VX2-15



Pump-Unit



Hatch-Tank

## NEW-SUITOLER\* Model VSF2

Popular lightweight, compact type for treatment of low-level water

- Complete drainage at floor level.
- Drainage of underground, riverside conservation.
- Drainage of clay in the bottom of pools.
- Drainage of floor at excavations at general construction sites.



VSF2-400

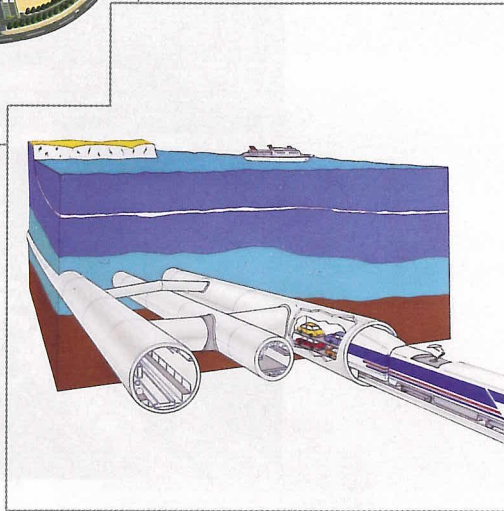
Discharge Nominal Dia	50mm
Output	400W
Total Head	11m
Voltage	Single-phase 100 to 240V
Weight	11kg

\* This is a registered trademark of E.I.M. Electric Co., Ltd.



SPACE WORLD

Submersible Pumps for Drainage for  
Large Amusement Park



Model "VX" Super Vacuum Pump  
adopted for the work at Euro-tunnel  
under the Dover Channel



**E.I.M. ELECTRIC CO.,LTD.**

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