



**YOUR PARTNER IN DESIGN & MANUFACTURING  
OF ENGINEERED SYSTEMS FOR WIDE RANGE OF  
APPLICATIONS.**

**VISION:**

TO MAINTAIN HIGH QUALITY OF SERVICES AND ENGINEERING SOLUTION AND BECOMING A PREFERRED PARTNER FOR OUR CUSTOMERS.

**MISSION:**

HAS AN UNWAVERING COMMITMENT TO CUSTOMER SERVICE.

## OUR ENGINEERED SYSTEMS

- VERTICAL TURBINE SYSTEMS.
- HORIZONTAL CENTRIFUGAL SYSTEMS.
- VARIABLE FREQUENCY DRIVE PUMP STATION
- WELL CONTROLLED SYSTEMS.
- FIRE FIGHTING FOAM SYSTEMS.
- DELUGE FIRE SYSTEMS
- WATER MIST SYSTEMS
- NITROGEN INJECTION SYSTEMS.
- CHEMICAL INJECTION SYSTEMS.
- RO SYSTEMS.
- FILTRATION SYSTEMS.

### Design

OUR EXPERIENCE TEAM WILL LOOK INTO YOUR REQUIREMENT AND PROVIDE THE NECESSARY TURNKEY SKID DESIGN FROM FILTRATION SYSTEM TO PUMP PACKAGES FOR OIL & GAS OFFSHORE PROCESS SKID, TUFF & MUNICIPAL PUMP STATIONS.

**APPLICATION INCLUDES:** IRRIGATION FOR AGRICULTURE, LANDSCAPE, GOLF COURSE, WATER TREATMENT, PLUMBING AND SANITARY, FIRE FIGHTING AND WATER TRANSFER.

### Engineering

OUR LONG LASTING EXPERIENCE IN ENGINEERING PROJECTS IN THE AREAS OF DELUGE VALVE & FOAM PACKAGES AS WELL AS FIREWATER PUMP PACKAGES IS DOCUMENTED IN NUMEROUS GLOBALLY REALIZED PROJECTS.

### Fabrication

OUR UNDERLYING GOAL IS TO PROVIDE THE FINEST-QUALITY FABRICATION SERVICES TO OUR CUSTOMERS IN THEIR OWN UNIQUE APPLICATION AND MEETS THEIR INDUSTRY REQUIREMENTS.

### Assemble

OUR ASSEMBLY IN FILTRATION SYSTEMS AND PUMP PACKAGES HAVE PAVED THE WAY IN TERMS OF EFFICIENTLY AND ECONOMICALLY THAN OUR COMPETITORS. OUR DEDICATED ENGINEERING TEAM ENSURE EVERY SYSTEMS ARE ASSEMBLE IN THE COMPLETE RESPECT OF THE INTERNATIONAL SAFETY STANDARDS.

### Supply

APART FROM DESIGN, ENGINEERING, FABRICATION AND ASSEMBLY, ACEFLO ALSO USES OUR EXPERIENCE IS VARIES INDUSTRIES TO PROVIDE NEW TECHNOLOGY SOLUTIONS BY OFFERING OUR CUSTOMERS WIDE VARIETIES OF OPTIONS TO FURTHER UPGRADE AND ENHANCE THEIR SYSTEMS WITH THE LATEST TECHNOLOGIES IN PARTNERSHIP WITH SOME OF BEST MANUFACTURERS IN THE WORLD.

### Marketing & Support

OUR STRONG PRESENCE IN THE REGION HAD ENABLE US TO PROVIDES CUSTOMERS THE CONNECTIVITY TO OUR GLOBAL NETWORKS AND BRINGING THE BEST MANUFACTURERS IN THE WORLD TO THEM.





## PUMPING STATIONS (IRRIGATION & WATER WORK)

**APPLICATION INCLUDES:** IRRIGATION FOR AGRICULTURE – LANDSCAPE – GOLF COURSE – WATER TREATMENT – WATER TRANSFER.

### ENGINEERING

PUMP TYPE: VERTICAL TURBINE / END SUCTION, (OPTIONAL: WITH VARIABLE FREQUENCY DRIVE)

\*FLOW RATE FROM: 10 M<sup>3</sup>/HR TO 2000 M<sup>3</sup>/HR

\*DISCHARGE PRESSURE FROM: 10M TO 500M

AVAILABLE DESIGN WITH 2/4/6 POLES SPEED (50HZ & 60HZ)

\*FOR OTHER FLOW RATE AND PRESSURE PLEASE CONTACT ACEFLO ENGINEERING.

STANDARD CONSTRUCTION WITH THE FINEST CUSTOMIZES FABRICATION BASE AND DISCHARGE OUTLET & INLET TO SUIT THE SITE CONDITION AND REQUIREMENTS.

### PUMPS STANDARD CONFIGURATIONS:

CASING: CAST IRON (*OPTIONAL*: STAINLESS STEEL OR OTHER EXOTIC MATERIALS)

IMPELLER: STAINLESS STEEL OR BRONZE OR CAST IRON

PUMP SHAFT: STAINLESS STEEL

SEALING: MECHANICAL SEAL (*OPTIONAL*: PACKING)

PUMP SYSTEMS COMPLETE WITH HIGH EFFICIENCY INDUCTION 3 PHASE ELECTRICAL DRIVEN MOTOR WITH IP55 ENCLOSURE /MEETS IE2 (IE3) STANDARDS (*OPTIONAL*: SPACE HEATER)

### SYSTEMS CONFIGURATIONS:

INDIVIDUAL PUMP COMES WITH CHECK VALVES (SALIENT OR DUAL PLATE) AND DISCHARGE ISOLATION VALVES.

EACH SYSTEM COMES WITH STANDARD Y-STRAINER, FLOW METER SPOOL, PRESSURE GAUGE WITH ISOLATION VALVES AND A MAIN DISCHARGE ISOLATION VALVE AND INTERGRADED WET WELL ACCESS HATCH.

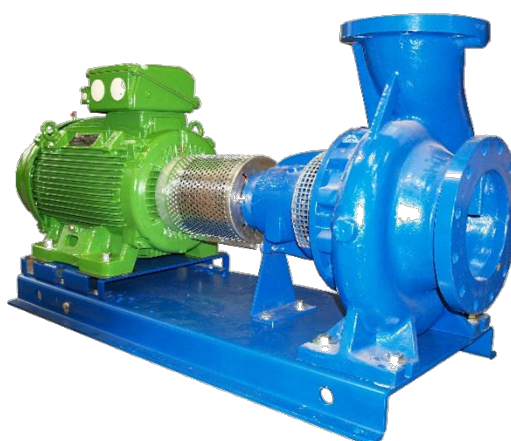
(*OPTIONAL*: DATA INDUSTRIAL SENSOR, MAIN SYSTEMS RELIEF VALVES WITH INLET ISOLATION VALVE, STAINLESS STEEL PRESSURE TRANSDUCERS)

### CONTROLS

STATE OF THE ART DESIGN CONTROL PANEL WITH INTERLOCKED OUTPUT CONTACTORS FOR AUTOMATIC SWITCHING OF PUMPS DUTY, LOW DISCHARGE, LOW WATER LEVEL AND OVERLOAD SHUTDOWN FOR PROTECTION. HIGH DISCHARGE PRESSURE SHUTDOWN WITH AUTO-RESTART. CLEAR LAMP INDICATION WITH TEST FUNCTION. (*OPTIONAL*: VARIABLE FREQUENCY DRIVE(VFD) WITH AUTOMATIC ALTERNATION OF VFD PUMPS BY RUNNING TIME, INDIVIDUAL PUMPSET RUNNING TIME RECORDS, SEQUENTIAL FAULT RECORDS, AUTOMATIC RAMP UP FEATURE AND INDIVIDUAL MOTOR PHASE FAILURE, / SURGE & LIGHTNING ARRESTOR/ GROUNDING SYSTEM

### OPTIONAL SUPPLY (DESIGN)

OUR SYSTEMS ALLOW END-USER TO CHOOSE ONE OF OUR STATE OF THE ART AUTOMATIC FILTRATION SYSTEMS (STAINLESS STEEL OR CAST IRON BODY) WHICH CAN BE EITHER OPERATED BY AIR (PNEUMATIC) OR SINGLE PHASE ELECTRICAL CONTROL. VFD VENTILATION COOLING PACKAGE ARE AVAILABLE FOR ADDITIONAL PROTECTION DUE TO HEAT OR MOISTURE.



## AF Series Bernoulli Self-cleaning Filter

AF series Bernoulli self-cleaning Filter (AF Filter for short) is designed for continuous filtration of water on pressurized systems. AF Filter removes debris and particles from waters such as sea water, river water and the circulating cooling water. AF filter works in BERNOULLI principle, which leads to the simple and highly reliable filtering operation.

Simple and reliable structure with only two moving parts (clean disc and flushing valve), non-contact cleaning, no particle extrusion out of the filter screen, efficient filtration, low and constant pressure drop (even < 11KPa) both when clean and dirty, very low working pressure requirement down to 30KPa, wide flow rate range from 30 to 8000 m<sup>3</sup>/h through single filter, with filtration degree ranging from 150 to 2000µm, no filtration interruption when self-cleaning, easy installation in horizontal or vertical position.



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### Applicable Typical Industries and Liquids

**Industries Served** Water treatment, circulating cooling system, heat-exchanger protection, nozzle protection, etc.

**Typical Applicable Liquids** Groundwater, seawater, freshwater, river water, cooling circulating water, waste water, process water, cleaning water, etc.

**Targeted Filtration Objective** Remove particles, pre-filtration, protect key equipments

**Filtration Type** Back-flushing filtration based on bernoulli principle, automatic continuous on-line filtration

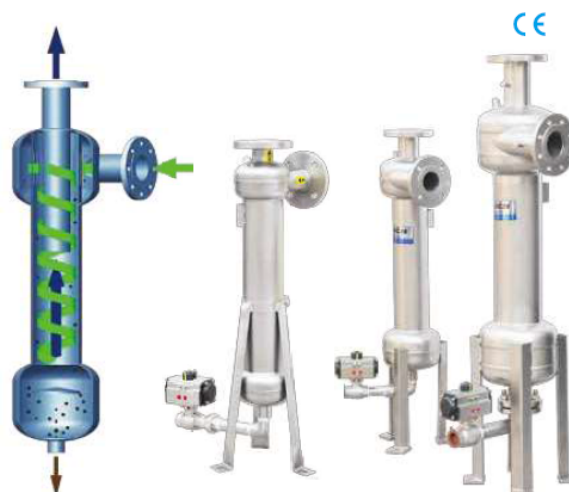
### Main Specification

Sub-series	AFP/AFE/AFM/AFK
Filter Element	V-SLOT slotted or POR porized
Ratings(µm)	150-2000
Inlet & Outlet	DN65/DN600
Housing Material	304/316L/CS/GRP
Temperature(°C)	60
Design Pressure(MPa)	0.6/1.0/1.6/2.5
Cleaning Start Mode	Time or Pressure Drop

## VS Series Centrifugal Solid-liquid Filter

VS Series Centrifugal Solid-liquid Separator (VS Separator for short) is widely used for solid-liquid separation. It separates precipitable particles from liquids by centrifugal force while liquid rotation. The separation efficiency of VS Separator depends on the particle density and the liquid viscosity. The larger density of particles, the lower viscosity of liquid, the better separation efficiency. For high density particles larger than 40µm, its separation efficiency can exceed 98%. VS Separator can separate solid particles as small as 5µm. When separating, VS Separator requires no moving parts and no cleaning or replacing of filter elements, so it keeps running year after year with no maintenance. The highly efficiency, consistent performance and economic running cost make it an ideal solution for solid-liquid separation.

Through multi-stage separation, VS Separator can significantly increase separation efficiency. It is also the excellent pre-separation equipment. VS Separator pre-separates economically and reliably and then Self-cleaning Filter, Bag Filter, Cartridge Filter or other filters removes smaller particles. This kind of combination delivers better filtration performance, less consumption of filter media and less waste liquid discharging. LIVIC provides such kind of integrated filtration solutions.



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### Applicable Typical Industries and Liquids

**Industries Served** Water treatment, pulp and paper, petro-chemical, machining, chemical and bio-pharmaceuticals etc.

**Typical Applicable Liquids** Raw water (river water, seawater, reservoir water, ground water), sewage treatment, circulating water, machining coolants, cleaning agents etc.

**Targeted Filtration Objective** Remove large particles, pre-filtering, purify liquids, protect the key equipment

**Filtration Type** Hydraulic centrifugal separator, automatic continuous online separation

### Main Specification

Inlet & Outlet	DN25-DN300
Flowrate(m <sup>3</sup> /h)	4-1145
Housing Material	304,316L
Viscosity(cp)	1-40
Temperature(°C)	200
Design Pressure(MPa)	1.0
Pressure Drop (MPa)	0.02-0.07

AUTHORISED AGENT