



JNE

Environmental

FS-SERIES DISSOLVED AIR FLOTATION UNITS



CHEMICALS SUPPLIED
REACTOR
METER TWO MIXING
TS

FS-60 DAF UNIT
2 HP, 2
PHASE
0 HP, 2 0
VOLT, 2 PHASE
SOL NO
24 00

EXISTING VIKING
PUMP 2 HP
575VOLT

VFD

E&H
LIQUID

E&H
MEMO
WITH
RETR
ASSE
LOOP

WE TAKE THE WORRY OUT OF WASTEWATER

EVERYDAY

After a decade of troubleshooting existing dissolved air flotation ("DAF") units and two years of intensive development work, the JNE Environmental FS Series DAF Unit was born, representing some of the top "DAF" technology available on the market today.

ENDRESS AND
HAUSER 3" FLOW

WE TAKE THE WORRY OUT OF WASTEWATER

PRINCIPLE OF OPERATION

Our DAF units use a pressurized stream of water to deliver dissolved air to an incoming wastewater treatment stream that contains flocculated waste. When the pressure of the dissolved air and water stream is reduced, the air effervesces out of the water and attaches itself to the waste particles. These particles are then buoyant and will float to the surface. Once at the surface they form a thick sludge blanket which is then drawn to the exit of the DAF unit and scraped into a sludge hopper. The clean pollutant free water leaves the bottom of the DAF unit.



JNE ENVIRONMENTAL FS-SERIES DAF UNIT SPECIFICATIONS

MODEL	USGPM*	SQUARE FOOTAGE	RAS STREAM GPM	AIR NGPM	INCOMING TSS**
FS-10	5-40	10	2-5.7	0.5	0-3000
FS-20	10-80	20	2-11.0	0.9	0-3000
FS-30	15-120	30	2-17.5	1.4	0-3000
FS-60	30-240	60	10-30.7	2.5	0-3000
FS-90	45-360	90	10-50	4	0-3000
FS-120	60-480	120	10-66	5	0-3000
FS-180	90-720	180	10-100	8	0-3000
FS-240	120-960	240	10-123	10	0-3000
FS-480	240-1920	480	20-254	15	0-3000
FS-640	320-2560	640	40-738	60	0-3000

* USGPM - "Gallons per Minute" based on incoming flow rate. ** Incoming TSS figures - Up to 12,000 mg/L can be designed.

OPTIONS

Construction	Carbon Steel or Stainless Steel (304)
Sludge Hopper Sensors	High and Low With/Without Timer
Bottom Hopper Sensors	Air Actuated With/Without Timer
Sludge Pump	Models FS-90, 120, 160, 240, 480, 640
Discharge TSS Probe	Models FS-90, 120, 160, 240, 480, 640
Skimmer Drives	Single or Dual
Remote Start	Models FS-90, 120, 160, 240, 480, 640

FS-SERIES DAFS

FEATURES & BENEFITS

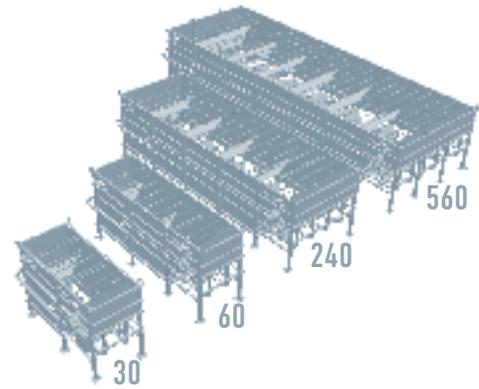


JNE Environmental

WASTEWATER AND WATER TREATMENT EXPERTS
JNEGROUP.COM/ENVIRONMENTAL

MINIMIZING WATER IN THE SLUDGE

JNE Environmental's design for DAF Unit sludge handling is superior to our competitors. Other DAF Units combine sludge skimming and scraping functions into a singular unit. These single drive units do not maximize sludge dryness or save on construction costs. Our DAF units provide a separate sludge thickening skimmer and sludge removal scraper with variable frequency drives, enabling the speed of these two units to be changed independently. This allows for precise fine tuning of the sludge dryness, minimizing sludge removal costs.



MAXIMIZED AIR TO SOLIDS RATIO

JNE Environmental has also maximized the attachment of air bubbles by providing low shear contact time in the inlet piping and in the first compartment of the DAF Unit. This ensures that all of the available air can dissolve directly onto a particle (lower Gibb's free energy) instead of relying on the air bubbles colliding with particles and attaching like many of our competitors designs.

STABLE SATURATED RECYCLE AIR STREAM

JNE Environmental FS-Series DAF Units use a specially designed pump to pressurize and mix air in one step. The pump shears the inlet air into small bubbles, maximizing the interface through which the air can dissolve into the water stream. This process provides maximum air saturation in a single step.

TOTAL COST OF OWNERSHIP

The JNE Environmental FS Series DAF Units were designed with our customers' total cost of ownership in mind. Some competitor units use contactors to vent air continuously to maintain the air-to-water operating level within their units — this is wasteful and increases the cost of operation. Our DAFs are designed to minimize the cost of compressed air by only consuming as much air as can be dissolved into the water. Another total cost of ownership benefit of the JNE Environmental FS Series DAF Units is the reduced electrical cost of operating our Return Activated Sludge (RAS) pump. Our RAS pumps are specifically designed to maintain consistent flow while cavitating, allowing for continuous pumping and efficient discharge pressures. This keeps the overall horsepower of the pump motor much lower than our competitors' traditional multi-stage centrifugal pumps.

**FULL IN-HOUSE
ISO 9001 CERTIFIED
FABRICATION FACILITY**



FS-SERIES DAF UNITS



JNE Environmental can design and supply complete systems up to 2000 gallons per minute. Please call for a free no obligation review of your current wastewater system.

CONTACT US TODAY

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ENGINEERING SUCCESS

The JNE Group of Companies have grown from one to hundreds of professionals from all major engineering disciplines providing services to a variety of clients around the world. Each business unit at JNE has an experienced core group to lead any project to a successful conclusion. JNE strives to deliver quality and exceed client expectations in a timely, flexible and economic manner. Our companies have succeeded based on time honoured values: *respect, integrity, diversity, and reliability.*

<p>JNE Consulting provides comprehensive full-service multi-disciplinary engineering services, enabling clients to deal with a single source through all of the phases of project engineering, conceptual engineering, detailed design/engineering, procurement, construction, and startup. Our approach allows us to maintain efficient cost and schedule controls.</p>	<p>JNE Automation designs custom control systems to optimize productivity, quality performance and reduce operational cost and risk. Our systems with varying levels of sophistication include software, SCADA, HMIs, micro and high level integrated multi-platform programmable logic controllers ("PLCs"), certified safety PLCs, and distributed control systems ("DCS").</p>	<p>JNE Power takes pride in exceeding client expectations with all of our complete design engineering services, fully integrated system installation, and construction services. This includes steam and gas powered turbo-generator systems (natural and process waste gases), reciprocating engine systems, as well as renewable energy projects.</p>	<p>JNE Environmental specializes in resolving wastewater issues, from simple to complex, for all major industries. We design, manufacture, and service our own line of water treatment chemicals and equipment; offering customized solutions with ongoing support to each of our clients.</p>
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