

Rental RT Series DAF Dissolved Air Flotation System



GENERAL DESCRIPTION

Dissolved Air Flotation (DAF) is a proven and effective physical/chemical technology for treating a variety of industrial and municipal process and wastewater streams. DAF systems are commonly used to meet a variety of treatment goals including:

- Product recovery and reuse
- Pretreatment to meet sewer discharge limits
- Pretreatment to reduce loading on downstream biological treatment systems
- Clarification of aerobic and anaerobic biological treatment solids
- Polishing of biological treatment effluent (algae and phosphorous removal)
- Thickening of biosolids

Evoqua's RT Rental DAF systems are designed to remove total suspended solids (TSS), biochemical oxygen demand (BOD), and fats, oils and greases (FOG) from a wastewater stream. Contaminants are removed through the use of a dissolved air-in-water solution produced by injecting air under pressure into a recycle stream of clarified DAF effluent. This recycle stream is then combined and mixed with incoming wastewater in an internal contact chamber where the dissolved air comes out of solution in the form of micron sized bubbles that attach to the contaminants. The bubbles and contaminants rise to the surface and form a floating bed of material that is removed by a surface skimmer into an internal hopper for further handling, while heavier solids sink and are removed by the bottom auger.

RT RENTAL DAF FEATURES

Evoqua offers five sizes of rental DAFs designed to hydraulically handle flows as shown below. Leases are available for any duration of three months or more. RT Series packaged DAF systems have incorporated more than thirty years of continuous improvements with multiple installations in a variety of applications.

DAF Unit	Effluent Flow Ranges*	
	MIN (gpm)	MAX (gpm)
RT-50A	90	200
RT-100A	200	400
RT-150A	300	600
RT-240A	480	1,000
RT-500A	1,000	2,000

* Actual DAF flow rating based on site-specific conditions. Consult with Evoqua engineers for application specific flow rates.



RT SYSTEMS PROVIDE UNIQUE STANDARD FEATURES INCLUDING:

- Complete, skid-mounted design for quick, easy installation
- Rugged 304/316 SS tank design that will not flex and is corrosion resistant
- Integral flocculation tube that is equipped with three chemical injection ports and is designed to provide optimal mixing of coagulant and flocculant chemicals within the recommended flow range
- Safe, simple, reliable design and operation provides superior performance without the use of high maintenance, labor intensive plate-packs that can foul or collapse
- Completely prewired NEMA 4X control cabinet requiring only a single 480 VAC power drop to operate
- An industry-leading Hellbender® whitewater system that is both efficient, and eliminates the need for an external air source
- Variable speed skimmer drive
- Large, internal float hopper minimizes pumping requirement
- DAF float hopper is equipped with a float level sensor to enable an optional sludge pump to be started and stopped automatically
- Automated settled solids auger
- Quality drive and pump components for long-term reliability

SPECIFICATIONS

	RT-50A	RT-100A	RT-150A	RT-240A
Overall Dimensions (L x W x H)	14'1" x 6'4" x 7'2"	18'8" x 8'6" x 8'2"	23'4" x 10'6" x 9'8"	31'1" x 10'5" x 9'8"
Shipping Weight	4,900 lbs	7,000 lbs	10,000 lbs	14,000 lbs
Operating Weight	16,300 lbs	33,300 lbs	55,800 lbs	83,300 lbs
Effluent Water	90 gpm nominal / 200 gpm max.	200 gpm nominal / 400 gpm max.	300 gpm nominal / 600 gpm max.	480 gpm nominal / 1,000 gpm max.
Effluent Water (Produced Water)	N/A	N/A	41,000 BPD max.*	75,000 BPD max.*
Effluent Flow	Gravity	Gravity	Gravity	Gravity
Electrical Requirements	460 VAC / 3φ / 60 Hz / 31 FLA	460 VAC / 3φ / 60 Hz / 31 FLA	460 VAC / 3φ / 60 Hz / 45 FLA	460 VAC / 3φ / 60 Hz / 45 FLA
Optional 3-10 hp pump depending on sludge volume and characteristics, as well as customer preferences.				
Service Connections - Inlet / Outlet / Float	6" / 6" / 4" - 150# Flange	8" / 8" / 6" - 150# Flange	12" / 12" / 6" - 150# Flange	12" / 12" / 6" - 150# Flange
Settled Solids Discharge	4" Flange	4" Flange	6" Flange	6" Flange
Recycle Pump	Hellbender® HB-60, 15 hp	Hellbender® HB-90, 15 hp	Hellbender® HB-150, 20 hp	Hellbender® HP-150, 20 hp
Active Surface Area	57 ft ²	101 ft ²	153 ft ²	239 ft ²
Nominal Water Volume	1,260 gallons	2,400 gallons	5,500 gallons	8,450 gallons
Float Hopper Capacity	100 gallons	170 gallons	390 gallons	360 gallons

* Actual results may vary depending on water chemistry, chlorides, and solids loading.

Environmental Treatment Systems™
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