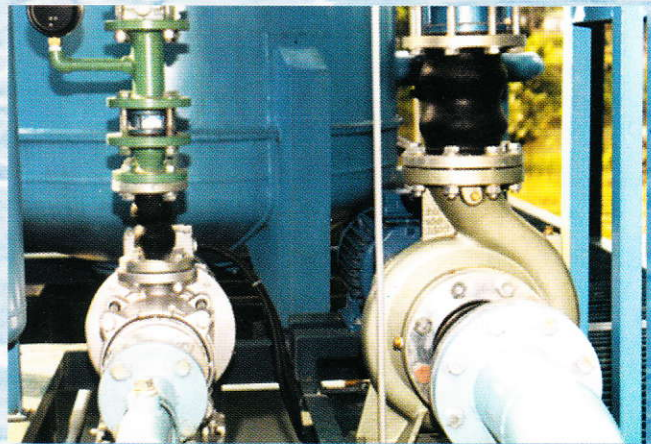
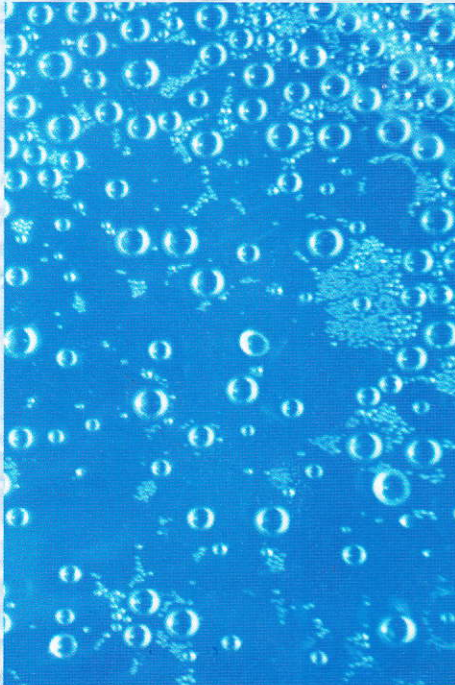
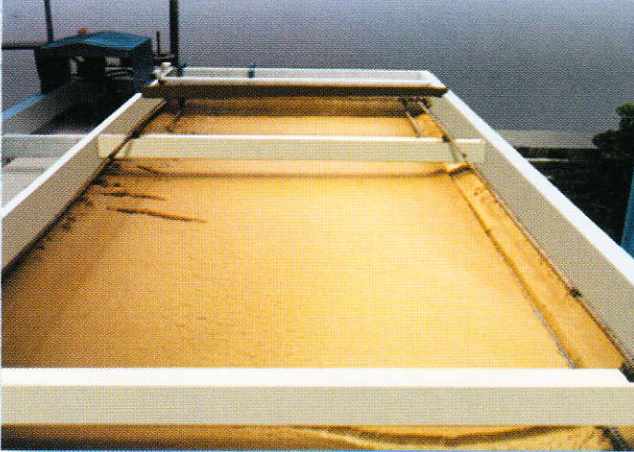


BLUE RIVER - F



Unit Dissolved Air Flotation (DAF)

Today, consumers are more demanding than ever. Only problem solution through innovation is the key to satisfy customers. Source of water or wastewater with high natural organic matter concentration, low density particles such as oil and grease, algae, low turbidity and color sets a limitation for the water treatment according to sedimentation process.

Blue River Model F (Flotation) is our latest innovation to the above mentioned problem. Still maintaining the compact and ease to operate feature the flotation model (F) uses the dissolved air flotation method (DAF). It is an efficient and energy saving process.

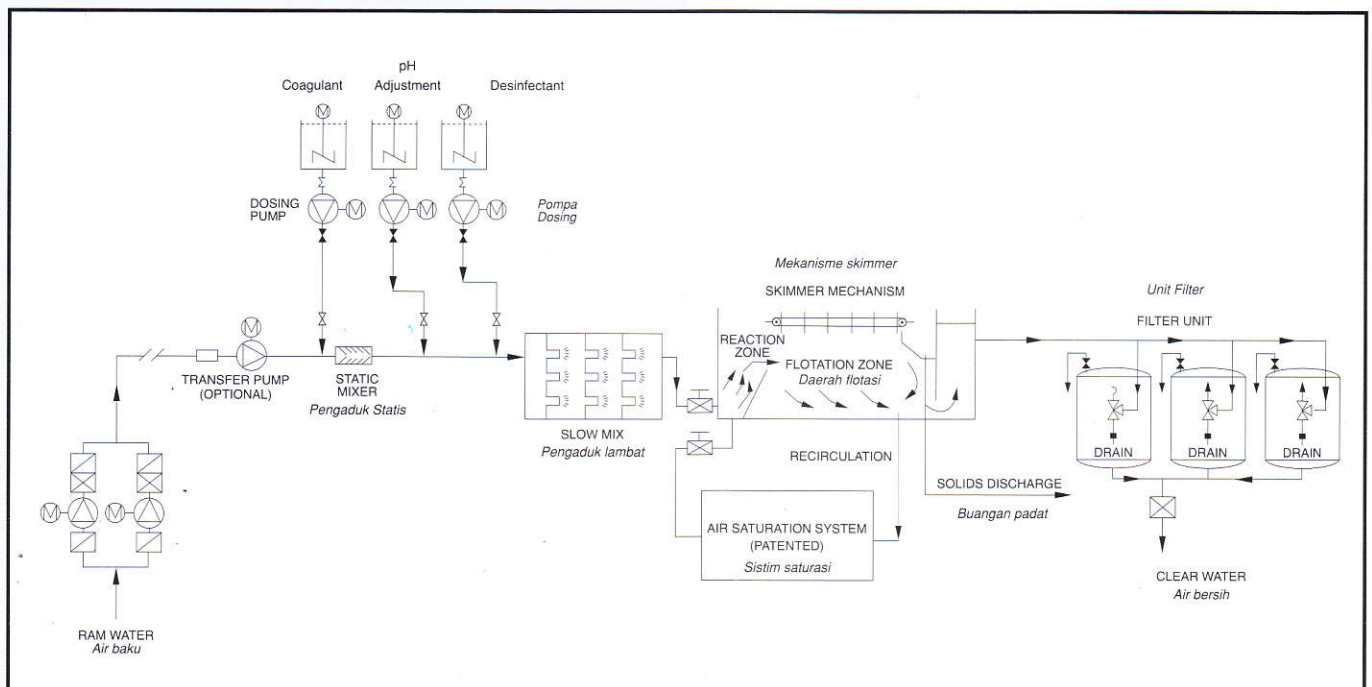
Cost of chemical and the related inventory are reduced to a minimum. Thus putting the operational cost at a minimum.



Standar konsumen dari waktu ke waktu semakin meningkat. Konsumen semakin kritis dan hanya solusi yang inovatif yang menjadi kunci keberhasilan. Dalam beberapa proses pengolahan air dengan kandungan organik tinggi, air berwarna, kekeruhan rendah, dan air yang mengandung partikel ringan, proses sedimentasi menjadi kurang efektif lagi.

Blue River Model F (Flotasi) merupakan hasil inovasi kami dalam mengatasi tantangan tersebut. Dengan tetap mengakomodasikan keunggulan Blue River yakni mudah dioperasikan, desain kompak dan mudah perawatan, BRF dengan metoda Dissolved Air Flotation merupakan alternatif tepat. BRF telah terbukti efektif dan hemat energi. Biaya untuk bahan kimia dapat diminimalkan sehingga biaya operasi menjadi rendah.

PROCESS FLOW DIAGRAM DIAGRAM ALIR PROSES



PROCESS DESCRIPTION

DESKRIPSI PROSES

D.A.F. has long been established as an efficient separation process. It is capable of removing insoluble particles or droplets from carrier water phase. The DAF process can be considered as a combination of several physical and chemical unit processes. This process can be divided into two sub-processes: a pretreatment process and the flotation process. The principal of this water treatment system consists of causing turbidity substances in water to become small and strong flocs, making them float to the surface by attaching fine bubble to them and separating them from water by a skimmer mechanism.

In DAF, the water is saturated with air under pressure, passes to a flotation chamber where pressure is reduced to the atmospheric one. The air is now supersaturated and precipitates out of solution in the form of bubbles. Clouds of bubbles having 10 - 100 μm in diameter are produced just down-stream of the constriction. These bubbles adhere to the suspended solids in the low-pressure influent water stream causing the suspended particles to float to the surface, where they are skimmed off.



Proses dissolved air flotation sejak lama telah terbukti efektif dalam proses pemisahan. Proses ini mampu memisahkan berbagai partikel tak terlarut dari dalam air. Proses DAF merupakan kombinasi dari proses fisik dan kimiawi. Proses ini dapat dibagi menjadi dua proses utama, yaitu proses pretreatment dan proses flotasi itu sendiri. Prinsip sistem pengolahan air ini adalah membentuk flok yang kecil dan kuat dari partikel penyebab kekeruhan air, kemudian flok tersebut mengapung ke permukaan dengan cara mengikatkan flok pada gelembung

udara, dan memisahkan lumpur yang mengapung pada permukaan air secara mekanik

Pada proses DAF, udara dilarutkan ke dalam air oleh tekanan yang selanjutnya dialirkan ke ruang flotasi yang memiliki tekanan atmosferik.

Udara yang larut selanjutnya

terpresipitasi membentuk gelembung udara yang sangat kecil dengan diameter sekitar 10 – 100 μm . Gelembung ini kemudian berkontak dengan padatan tersuspensi pada air baku sehingga padatan tersuspensi tersebut mengapung ke permukaan air. Lalu akumulasi padatan yang membentuk selimut lumpur di atas permukaan air dipisahkan secara mekanik

FEATURES OF BRF

- Modular system and compact
- Quick and easy installation
- Simple operation and maintenance
- Low chemical cost
- Unique saturation system
- Good adaptability

KARAKTERISTIK BRF

- Kompak dan sistem modular
- Instalasi mudah dan cepat
- Pengoperasian dan pemeliharaan mudah
- Biaya untuk bahan kimia rendah
- Sistem pelarutan udara yang baik
- Kemampuan adaptasi yang baik

TECHNICAL SPECIFICATION

SPEKIFIKASI TEKNIS

GENERAL TECHNICAL SPECIFICATION								
BLUE RIVER - F	10	25	50	75	100	125	150	200
Capacity (m ³ /h)	10	25	50	75	100	125	150	200
Space required (m ²)	3 x 7	3 x 7	3 x 15	3 x 15	10 x 6	10 x 6	15 x 6	15 x 10
Total empty weight (kg)	5400	7600	11500	15000	21000	25600	30000	40500
General								
Inlet - outlet pipe connection	2" - 2"	2.5" - 2"	3" - 4"	4" - 4"	5" - 5"	6" - 6"	6" - 6"	8" - 8"
Flow meter	2"	2.5"	3"	4"	5"	6"	6"	8"
Static mixer	2"	2.5"	3"	4"	5"	6"	6"	8"
Flocculation & Sedimentation Tank	1	1	1	1	2	2	2	3
Pressurized Filter Tank								
Diameter (mm)	600	1000	1400	1700	1900	2200	2400	2400
Height (mm)	2352	2352	2910	3010	3105	3218	3545	3786
Nos of filter	2	2	2	2	2	2	2	3
Filter Pump - Pompa Filter								
Head (m)	20	20	20	20	20	20	20	20
Speed (rpm)	1450	1450	1450	1450	1450	1450	1450	1450
Chemical Dosing System								
Consists of chemical tanks, dosing pump, and mixer for each chemical tanks coagulant, pH adjustment, and disinfectant are provided depending on raw water characteristic.								
Optional Equipment								
<ul style="list-style-type: none"> Raw water pump Carbon or multimedia filter Water meter 			<ul style="list-style-type: none"> Fully Automatic control system Presedimentation Polyelectrolite dosing system 					
Remarks:								
1) For raw water with turbidity max 100 NTU, without presedimentation								
2) Total weight including sand								
3) For Blue River F size 150 and 200, filters are free standing								

FIELDS OF APPLICATION

APLIKASI

- Low turbidity water
- Humic water
- Colored water
- Slaughterhouses
- Oil refining
- Soap manufacturing companies
- Paper industries
- Galvanizing industries
- Meat & Food processing companies
- Dairies
- Communal wastewater treatment
- Palm oil manufacturing companies
- Textile industries
- Power station

- Kekerusahan rendah
- Air humus
- Rumah potong hewan
- Air berwarna
- Industri kertas
- Industri galvanis
- Industri pengolahan daging
- Industri susu
- Industri sabun
- Pengolahan limbah terpadu
- Industri minyak sawit
- Industri tekstil
- Penyulingan minyak
- Pembangkit listrik

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