

# DAF

## 浅层气浮装置

### DAF SERIES DISSOLVED AIR FLOTATION CLARIFIER

# DAFR dissolved air flotation claifier



## Applications

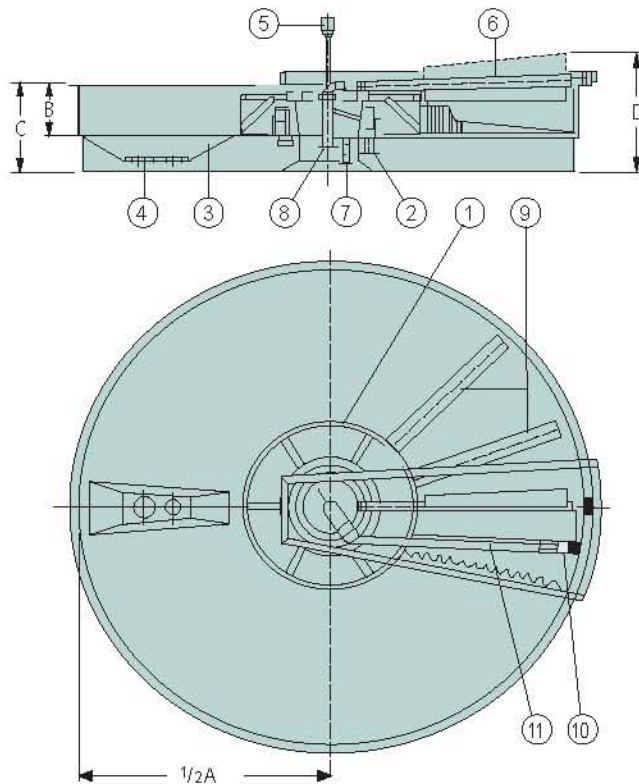
1. Paper making white water treatment and fibre recovery
2. Physical treatment of industrial wastewater such as dyeing wastewater, chemical wastewater, light Industry wastewater, food wastewater and pharmaceutical waste.
3. Separation of water and biologic floccules in biotreatment (instead second setting tank)
4. Reuse of cooling water in production and water baths, other waste water treatment for separating the solid and liquid.

## Features

1. The retention time is short, only 3 minutes are required.
2. Super high surface load:  $180 \sim 200 \text{ m}^3/(\text{m}^2 \cdot \text{d})$ .
3. The water depth of air flotation basin is approximately 40cm, which will not change due to different handling capacity.
4. The above-mentioned three features make the volume, area and height of our company's air flotation basin small and compact. Removal ratio for suspended solid is above 90-95%, after-treated concentration of suspended solid maintains 30-50mg/l.
5. The unit weight of air flotation basin is light. It can be mounted on everywhere. When it is in-service use, the elevated installation can utilize its space as well as its after-treated clear water and scum more efficiently, the costs for design of sludge pump and motive power can be saved because of gravity action.
6. The costs for stainless steel's manufacturing, operation and maintenance are low, and water-producing effect is ideal under the condition no medicament is added.
7. The equipment can be used in sludge concentration basin, making scum to concentrate to 5-8%, increasing dehydration effect for sludge and relieving treatment burden for sludge.
8. All central collectors with special phosphorus-copper material and exterior cable steel rope racks are equipped up to the standard.
9. Motor shaft has a particular plug-in structure.



## Construction



| NO. | Name                             |
|-----|----------------------------------|
| 1   | Movable rotating section         |
| 2   | Clarified water outlet           |
| 3   | Settled sludge sump              |
| 4   | Settled sludge & drain outlet    |
| 5   | Rotary contact                   |
| 6   | Scoop                            |
| 7   | Floated sludge outlet            |
| 8   | Raw water inlet                  |
| 9   | Clarified water extraction pipes |
| 10  | Gear motors                      |
| 11  | Distribution duct                |

## Performance parameters

| Type   | Dimensions |           |           |           |           |           |           | Flow                  |           |                     |
|--------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------|-----------|---------------------|
|        | A<br>(mm)  | B<br>(in) | B<br>(mm) | C<br>(in) | C<br>(mm) | D<br>(in) | D<br>(mm) | (m <sup>3</sup> /min) | US<br>GPM | (m <sup>3</sup> /h) |
| DAFR8  | 2400       | 23.5      | 600       | 33        | 850       | 45        | 1150      | 0.56                  | 148       | 34                  |
| DAFR10 | 3200       | 23.5      | 600       | 33        | 850       | 49        | 1250      | 1.00                  | 263       | 60                  |
| DAFR12 | 3900       | 25.5      | 650       | 35        | 900       | 51        | 1300      | 1.50                  | 394       | 90                  |
| DAFR15 | 4500       | 25.5      | 650       | 37        | 950       | 57        | 1450      | 2.00                  | 525       | 120                 |
| DAFR18 | 5500       | 25.5      | 650       | 37        | 950       | 58        | 1480      | 3.00                  | 789       | 180                 |
| DAFR20 | 6100       | 25.5      | 650       | 37        | 950       | 61        | 1560      | 3.65                  | 961       | 219                 |
| DAFR22 | 6700       | 25.5      | 650       | 37        | 950       | 62        | 1580      | 4.40                  | 1160      | 264                 |
| DAFR24 | 7200       | 25.5      | 650       | 37        | 950       | 63        | 1600      | 5.08                  | 1340      | 305                 |
| DAFR27 | 8100       | 25.5      | 650       | 37        | 950       | 67        | 1700      | 6.44                  | 1695      | 356                 |
| DAFR30 | 9000       | 25.5      | 650       | 37        | 950       | 71        | 1820      | 7.95                  | 2090      | 477                 |
| DAFR33 | 10000      | 25.5      | 650       | 37        | 950       | 72        | 1840      | 9.80                  | 2580      | 588                 |
| DAFR36 | 11000      | 25.5      | 650       | 37        | 950       | 73        | 1860      | 11.87                 | 3125      | 712                 |
| DAFR40 | 12000      | 26        | 660       | 38        | 960       | 76        | 1920      | 14.6                  | 3840      | 876                 |
| DAFR44 | 13400      | 27        | 685       | 39        | 985       | 78        | 1980      | 17.6                  | 4630      | 1056                |
| DAFR49 | 14800      | 27        | 685       | 39        | 985       | 82        | 2070      | 21.5                  | 5650      | 1290                |
| DAFR55 | 16800      | 27        | 685       | 39        | 985       | 87        | 2200      | 27.7                  | 7290      | 1662                |
| DAFR62 | 18900      | 29.5      | 750       | 41        | 1050      | 93        | 2350      | 33.3                  | 8800      | 2000                |
| DAFR70 | 21300      | 29.5      | 750       | 41        | 1050      | 93        | 2350      | 41.6                  | 11000     | 2500                |



# DAFS dissolved air flotation claifier



## Applications

1. Food Industry effluents with high solids concentration.
2. Oil and Fats.
3. Sludge Thickening.
4. Galvanizing Electro plating.
5. Pharmaceutical Industry.
6. Leather Industry, etc.

## Features

1. High loaded rate with hydraulic capacity ( $q=3\sim5$  m<sup>3</sup>/m<sup>2</sup>h, SS=1000mg/L)
2. Compact footprint with high stability of operation.
3. High-rated clarification for low turbidity water (light particles, oil and colloid).
4. Efficient in energy saving, highly cost effective.
5. Package systems bring about lower installation cost.
6. Safety operation because of using fully closed scraper.
7. Positive sludge discharge because of W-shape sludge sedimentation hopper.

## Carbon Steel surface finish and corrosion treatment

1. Sand Blasting/ Shot Peening, ISO Sa $\geq$ 2.5, epoxy Zinc Rich Primer, 50 $\mu$ m/coat.
2. Internal: a) Epoxy Zinc-rich Primer, 50 $\mu$ m/coat $\times$ 1;  
b) Epoxy Mastic Paint, 100 $\mu$ m/coat $\times$ 2 $\sim$ 3;  
c) Total film thickness:  $\geq$ 250 $\mu$ m.
3. External: a) Epoxy Zinc-rich Primer, 50 $\mu$ m/coat $\times$ 1;  
b) Epoxy Micaceous Iron Intermediate Paint, 50 $\mu$ m/coat $\times$ 1;  
c) Polyurethane Finish, 50 $\mu$ m/coat $\times$ 1;  
d) Total film thickness:  $\geq$ 150 $\mu$ m.

Spraying Method: High-Pressure Airless Spraying

Device Color: Light Sea Blue (PANTONE No.RAL5015), or according to customers' demands.

## Standards for Interface Flange

China: JB/T81-1994, PN 1.0

America: ANSI 150

Japan: JIS 10K

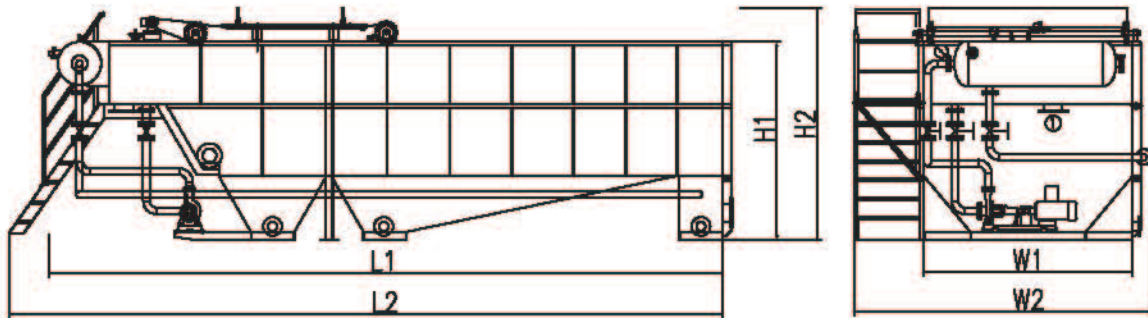
## Bolts and Nuts

Liquid Part: SUS304

Uncontact Liquid Part: Carbon Steel Galvanized



## Performance parameters



| Type    | Capacity            | Power (kW) |                |         | Dimensions (m) |         |         | Pipe connection dimensions (DN) |        |               |
|---------|---------------------|------------|----------------|---------|----------------|---------|---------|---------------------------------|--------|---------------|
|         | (m <sup>3</sup> /h) | Pump       | Air Compressor | Skimmer | L1/L2          | W1/W2   | H1/H2   | inlet                           | outlet | sludge outlet |
| DAFS2   | 2                   | 0.75       | 0.55           | 0.2     | 2.7            | 1.32    | 2       | 40                              | 40     | 80            |
| DAFS3   | 3                   | 0.75       | 0.55           | 0.2     | 2.7/3.6        | 1.5/2.2 | 2.1     | 80                              | 50     | 100           |
| DAFS5   | 5                   | 1.1        | 0.55           | 0.2     | 2.8/3.6        | 1.7/2.3 | 2.1     | 80                              | 80     | 100           |
| DAFS10  | 10                  | 1.5        | 0.55           | 0.2     | 3.7/4.5        | 1.9/2.6 | 2.4     | 100                             | 80     | 100           |
| DAFS20  | 20                  | 3          | 0.75           | 0.2     | 5.0/5.7        | 2.0/2.9 | 2.1/2.5 | 150                             | 100    | 100           |
| DAFS30  | 30                  | 3          | 0.75           | 0.2     | 5.9/6.5        | 2.2/3.0 | 2.2/3.0 | 150                             | 150    | 150           |
| DAFS40  | 40                  | 5.5        | 0.75           | 0.2     | 7.5/8.1        | 2.2/3.0 | 2.2/3.0 | 200                             | 150    | 150           |
| DAFS50  | 50                  | 5.5        | 0.75           | 0.2     | 8.5/9.0        | 2.2/3.0 | 2.3/2.7 | 200                             | 200    | 150           |
| DAFS60  | 60                  | 7.5        | 1.5            | 0.2     | 9.0/9.5        | 2.6/3.6 | 2.3/2.7 | 200                             | 250    | 150           |
| DAFS70  | 70                  | 7.5        | 1.5            | 0.2     | 9.0/9.5        | 2.8/3.8 | 2.3/2.7 | 250                             | 200    | 150           |
| DAFS80  | 80                  | 11         | 1.5            | 0.2     | 11.6/12.0      | 2.8/3.8 | 2.3/2.7 | 250                             | 200    | 150           |
| DAFS90  | 90                  | 11         | 1.5            | 0.2     | 11.2/11.6      | 3.0/4.0 | 2.3/2.7 | 250                             | 250    | 150           |
| DAFS100 | 100                 | 15         | 1.5            | 0.2     | 11.6/12.0      | 3.0/4.0 | 2.3/2.7 | 300                             | 250    | 150           |
| DAFS120 | 120                 | 15         | 2.2            | 0.2*2   | 9.0/9.5        | 6       | 2.3/2.7 | 300                             | 300    | 150           |
| DAFS150 | 150                 | 18.5       | 3              | 0.2*2   | 11.6/12.0      | 6.5     | 2.3/2.7 | 250*2                           | 200*2  | 150*2         |
| DAFS200 | 200                 | 22         | 4              | 0.2*2   | 11.6/12.0      | 6.7     | 2.3/2.7 | 250*2                           | 250*2  | 150*2         |

# DAFSS sedimentation dissolved air flotation clarifier



## Applications

1. For treating suspended solids or contaminants of gravity generally closed to or less than water, especially efficient for suspensions settling slowly, remaining in suspension, or having a tendency to float.
2. Oil and Fats.
3. Food Industry effluents with high solids concentration.
4. Sludge Thickening.
5. Galvanizing Electro planting.
6. Pharmaceutical Industry.
7. Leather Industry, etc.

## Features

1. High hydraulic load and less footprint.
2. High-rated clarification for high SS water (light particles, oil and colloid).
3. Better outlet water quality.
4. Effectively minimize chemical consumption.
5. No blind angle in scum collection chamber.

## Carbon Steel surface finish and corrosion treatment

1. Sand Blasting/ Shot Peening, ISO Sa $\geq$ 2.5, epoxy Zinc Rich Primer, 50 $\mu$ m/coat.
2. Internal: a) Epoxy Zinc-rich Primer, 50 $\mu$ m/coat $\times$ 1;  
b) Epoxy Mastic Paint, 100 $\mu$ m/coat $\times$ 2~3;  
c) Total film thickness:  $\geq$ 250 $\mu$ m.
3. External: a) Epoxy Zinc-rich Primer, 50 $\mu$ m/coat $\times$ 1;  
b) Epoxy Micaceous Iron Intermediate Paint, 50 $\mu$ m/coat $\times$ 1;  
c) Polyurethane Finish, 50 $\mu$ m/coat $\times$ 1;  
d) Total film thickness:  $\geq$ 150 $\mu$ m.

Spraying Method: High-Pressure Airless Spraying

Device Color: Light Sea Blue (PANTONE No.RAL5015), or according to customers' demands.

## Standards for Interface Flange

China: JB/T81-1994, PN 1.0

America: ANSI 150

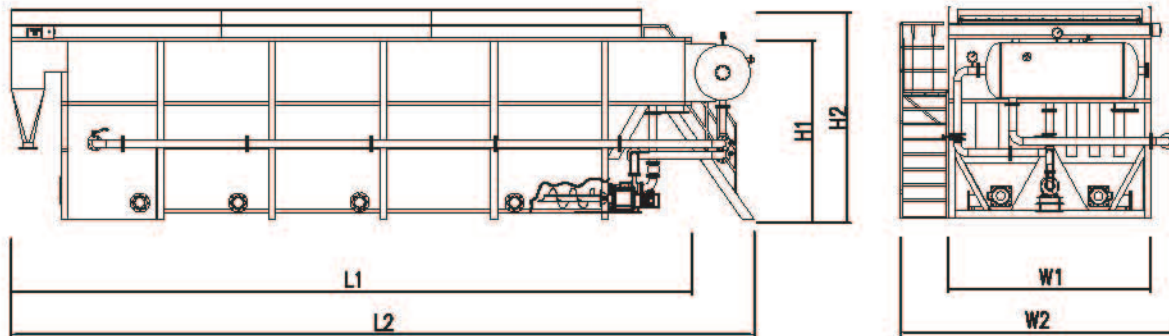
Japan: JIS 10K

## Bolts and Nuts

Liquid Part: SUS304

Uncontact Liquid Part: Carbon Steel Galvanized

## Performance parameters



| Type     | Capacity            | Power (kW) |                |         | Dimensions (m) |         |         | Pipe connection dimensions (DN) |        |               |
|----------|---------------------|------------|----------------|---------|----------------|---------|---------|---------------------------------|--------|---------------|
|          | (m <sup>3</sup> /h) | Pump       | Air Compressor | Skimmer | L1/L2          | W1/W2   | H1/H2   | inlet                           | outlet | sludge outlet |
| DAFSS32  | 3                   | 1.1        | 0.55           | 0.12    | 2.3            | 1.3     | 2.4     | 50                              | 50     | 50            |
| DAFSS5   | 5                   | 1.1        | 0.55           | 0.12    | 2.5/3.7        | 1.5/2.2 | 2.1/2.5 | 80                              | 50     | 100           |
| DAFSS10  | 10                  | 1.5        | 0.55           | 0.12    | 3.8/5.1        | 1.7/2.4 | 2.4/3.0 | 100                             | 80     | 100           |
| DAFSS20  | 20                  | 3          | 0.75           | 0.12    | 4.1/5.4        | 2.2/2.9 | 2.4/3.0 | 150                             | 150    | 150           |
| DAFSS30  | 30                  | 5.5        | 0.75           | 0.12    | 4.9/5.5        | 2.1/3.1 | 2.5/3.1 | 150                             | 150    | 150           |
| DAFSS40  | 40                  | 7.5        | 0.75           | 0.12    | 5.2/6.5        | 2.0/2.9 | 2.5/3.1 | 200                             | 150    | 150           |
| DAFSS50  | 50                  | 7.5        | 1.5            | 0.18    | 6.6/7.2        | 2.0/2.9 | 2.5/3.1 | 200                             | 200    | 150           |
| DAFSS60  | 60                  | 7.5        | 1.5            | 0.18    | 7.3/7.9        | 2.2/3.1 | 2.5/3.1 | 200                             | 200    | 150           |
| DAFSS70  | 70                  | 7.5        | 1.5            | 0.18    | 7.4/8.2        | 2.4/3.3 | 2.7/3.3 | 250                             | 200    | 150           |
| DAFSS80  | 80                  | 11         | 2.2            | 0.18    | 8.5/9.4        | 2.4/3.1 | 3.3     | 250                             | 250    | 150           |
| DAFSS100 | 100                 | 15         | 2.2            | 0.18    | 8.8/10.0       | 3.0/3.7 | 3.3     | 300                             | 300    | 200           |
| DAFSS120 | 120                 | 18.5       | 3              | 0.18    | 9.7/10.9       | 3.0/3.7 | 3.3     | 300                             | 300    | 200           |
| DAFSS150 | 150                 | 18.5       | 3              | 0.18    | 12.2/13.5      | 3.0/3.7 | 3.3     | 350                             | 350    | 200           |
| DAFSS200 | 200                 | 22         | 4              | 0.18*2  | 9.6/10.8       | 6.7     | 3.3     | 300*2                           | 300*2  | 200*2         |
| DAFSS300 | 300                 | 37         | 5.5            | 0.18*2  | 12.6/13.5      | 6.7     | 3.3     | 350*2                           | 350*2  | 200*2         |
| DAFSS500 | 500                 | 45         | 7.5            | 0.18*2  | 15             | 7.2     | 3.3     | 450*2                           | 450*2  | 200*2         |