RIF AERATION UNITS

Saint-Petersburg, 2020

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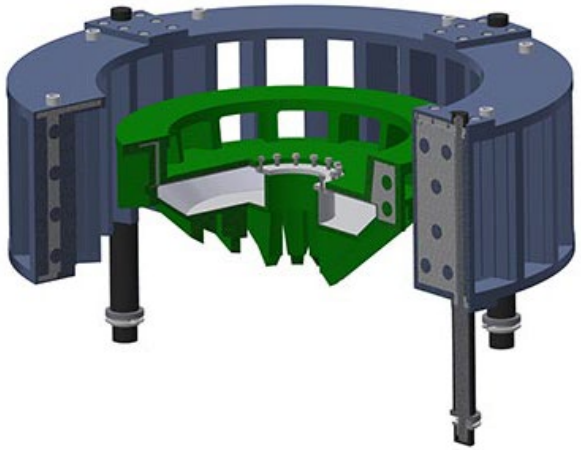

AERATION UNITS

RIVS Company manufactures aeration units for pneumatic mechanical flotation machines with a chamber capacity from **1.2m³** to **300m³**

RIF aeration units can be used for reconstruction of existing fleet of pneumatic mechanical flotation machines of any manufacturers.

Modernizaton of the flotation compartment with the use of the RIF aerator allows improving process performance :

+ **improve the quality of concentrates,**
+ **reduce tailing loss,**
+ **reduce flotation capacity,**
+ **increase pulp flow rate.**

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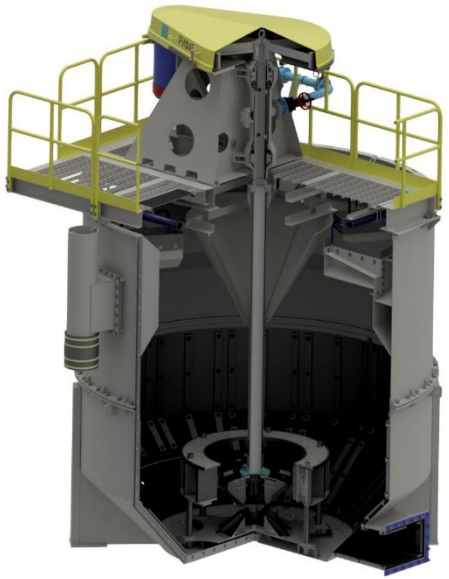

SPECIAL FEATURES

The RIF aeration unit forms a quiet foam layer with continuous removal and allows floating particles of a wide range of size, including +0.2 mm class and more. An increase in the amount of finely dispersed air by 30% compared to analogs is due to the applied methods of air dispersion and vertical circulation of pulp.

MATERIAL

RIF aeration units can be made of :

+ **rubber vulcanized compound,**
+ **polyurethane,**
+ **stainless steel,**
+ **polyurea coated black steel,**
+ and of any other material as required by the customer

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ADVANTAGES

UNIQUENESS

Qualitatively new hydro-aerodynamic conditions created by the newly designed RIF aeration units due to optimal bottom and ascending pulp flows make it possible **to increase the amount of finely dispersed air and reduce the power** consumed by the drive of the newly designed aerator block.

Aeration unit for high capacities

Better air dispersion and vertical pulp circulation ensure high technological performance at high pulp flow rates.

Economic feasibility

Use of RIF type aeration units allows :

+ To reduce power consumption;
+ To reduce the flotation capacity by increasing the flotation speed;
+ To improve operational reliability

Optimal axial clearance

The optimal axial clearance between the impeller and the stator allows to increase the nominal service life of the RIF type aeration units in comparison with existing units with smaller axial clearances.

At the same time, metal recovery rates are maintained over a longer period of operation.

Limited wear

To limit wear on the impeller and stator, the aeration unit is installed much higher from the bottom of the chamber. So, contact with particulate material and random objects is eliminated.

The high position of the impeller makes it easy to start up the cells of flotation machines after emergency stop. This is a positive difference of the RIF type aeration units.

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BASIC PARAMETERS

Parameter Description	UA0,5	UA1,5	UA3,5	UA6,5	UA8,5	UA16	UA25	UA45	UA70C	UA100	UA130	UA160	UA200
1. Impeller	RIF2,9	RIF3,5	RIF5	RIF6	RIF6	RIF7	RIF9 (RIF7)	RIF11 (RIF9)	RIF13 (RIF11)	RIF13	RIF13	RIF15	RIF15
2. Stator unit	RIF2,9/8	RIF3,5/8	RIF5/12	RIF6/12	RIF6/12	RIF7/12	RIF7/12	RIF11/18 (RIF7/12)	RIF13/24 (RIF11/18)	RIF13/24	RIF13/24	RIF15/24	RIF15/24
3. Installed power of the electric motor, max, kW	5,5	11	15	22 (30)	22 (30)	37 (45)	37 (45)	45 (55)	110 (90)	132	132	160	160
4. Impeller peripheral speed, max, m/s	5,5	7,4	7,4	7,4	7,4	7,4	7,4	7,4	7,4	7,4	7,4	7,4	7,4
5. Impeller weight, max, kg	5,6	13,6	23,7	47	47	81	106 (81)	264 (106)	478 (264)	478	478	*	*
6. Stator unit weight, max, kg	7,1	41,0	226	304	304	374	664 (374)	1300 (664)	1529 (1300)	1529	1529	*	*
7. Gear shaft weight, max, kg	-	-	48		43	43	118	278 (118)	288 (278)	*	550	600	655

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