

RBC SERVICES UPDATE

RBC Services
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GOING OVER THE LIMITS

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The last RBC Service UPDATE issue sent dealt with RBC biomass stripping. There were quite a few operators who called for additional information prior to taking their RBCs through those procedures. Two questions asked were, **“What did the RBCs weigh now?”** and **“What is the recommended weight limit?”**

Operating weights are determined by the amount of biomass carried on the media. Many RBCs are unknowingly being operated beyond their recommended limit. By doing so, undue stress is put on the drive components, media, media support structure and most importantly, the process.

RBCs should be operated between 60% and 80% of their respective overall recommended weight limit, regardless of the manufacturer or size of units which are at your plant. This will not only help to protect the equipment, but will ensure the optimum process capabilities of the RBCs.

Listed on the reverse side are the recommended overall weight limits for various sizes of RBCs as manufactured by Autotrol Corporation and Envirex.

While operating weight limits for CLOW, Walker and LYCO RBCs are higher (up to 50,000 lbs.), the suggested 60% to 80% operating theory still applies.

In previous UPDATES, the importance of controlling biomass has been discussed. While the use of chemicals can be very effective for biomass stripping, it also disrupts the process. Aeration, coupled with Load Cells, is still the most highly recommended method of RBC biomass control.

If you would like to discuss the application of a biomass control system for your RBCs – such as **SideCar**, or have any questions regarding their operation in general, please do not hesitate to give me a call. We are here to help you maintain the most effective operations possible for your RBCs.

Maximum Allowable Operating Load Limits

For Wastewater level 14 inches below shaft centerline.

12 FOOT DIAMETER STANDARD DENSITY MEDIA

Autotrol & Envirex RBCs

Media Length Feet	Shaft Wall Thickness Inches	No. Of Stages	Load Limit Pounds
25	1.00	1	42,000
25	0.75	1	31,800
25	1.00	2	40,700
25	0.75	2	31,800
25	1.00	3	39,100
25	0.75	3	31,800
25	1.00	4	37,500
25	0.75	4	31,000
20	-	1	33,900
20	-	2	32,000
20	-	3	30,600
20	-	4	28,700
15	-	1	25,300
15	-	2	23,800
15	-	3	22,500
15	-	4	21,200

Autotrol & Envirex RBCs

Media Length Feet	Shaft Wall Thickness Inches	No. Of Stages	Load Limit Pounds
25	1.00	1	42,000
25	1.00	2	41,000
25	1.00	3	39,500
25	1.00	4	38,000
20	-	1	33,900
20	-	2	32,100
20	-	3	30,800
20	-	4	29,500
15	-	1	25,400
15	-	2	23,700
15	-	3	22,400
15	-	4	21,100

12 FOOT DIAMETER STANDARD DENSITY MEDIA

CLOW, Walker & LYCO RBCs

Media Length Feet	Shaft Wall Thickness Inches	No. Of Stages	Load Limit Pounds
25	0.75	1	50,000
25	0.75	2	48,000
25	0.75	3	46,500
25	0.75	4	44,500
20	-	1	40,000
20	-	2	37,600
20	-	3	35,600
20	-	4	33,600
15	-	1	30,000
15	-	2	28,200
15	-	3	26,400
15	-	4	24,900

12 FOOT DIAMETER HIGH DENSITY MEDIA CLOW, Walker & LYCO RBCs

Media Length Feet	Shaft Wall Thickness Inches	No. Of Stages	Load Limit Pounds
25	0.75	1	50,000
25	0.75	2	48,500
25	0.75	3	47,000
25	0.75	4	45,000
20	-	1	40,000
20	-	2	37,600
20	-	3	36,000
20	-	4	34,800
15	-	1	30,000
15	-	2	27,900
15	-	3	26,400
15	-	4	24,900

12 FOOT DIAMETER HIGH DENSITY MEDIA