

Krebs CycloWash®

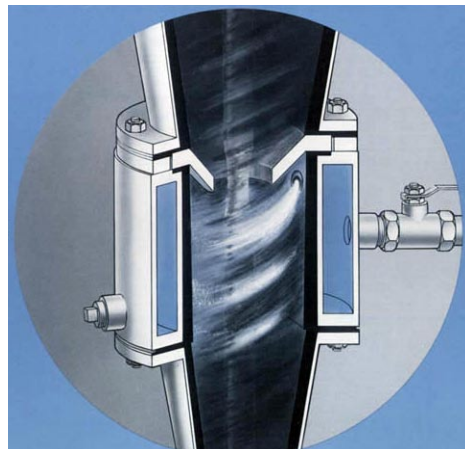
The Krebs CycloWash® is a patented elutriation device which markedly improves the desliming performance of the Krebs Cyclone. The CycloWash® permits the injection of elutriation water above the apex assembly so that fine particles entrained in the underflow pulp are displaced and discharge with the cyclone overflow. Because the device is inexpensive and relatively little injection water is needed for effective displacement of slimes, the CycloWash® offers a low cost means for improving cyclonic classification.

As shown in the illustration below, the CycloWash® is installed between two of the cyclones' conical sections. Normal classification takes place in the upper part of the cyclone to give a first stage of desliming, and the CycloWash® is positioned so that the injection water dilutes the partially thickened underflow pulp. A second stage of classification then takes place with displaced fines rising to join the normal cyclone overflow; the coarse solids are thickened and discharge through the apex orifice as a thoroughly deslimed underflow.

The CycloWash® permits significant savings in the installation and operating costs of a cyclone desliming system. The CycloWash® makes it possible to achieve thorough desliming with only one set of cyclones and minimal injection water. Older systems frequently involved two or more stages of gravity sedimentation, and even systems using cyclones were designed using primary and secondary cyclones with the corresponding duplication of sumps and pumps. The CycloWash® makes it possible to achieve thorough desliming with only one set of cyclones, and the quantity of injection water used will be less than that required for conventional two-stage systems.

The CycloWash® attachment is available with Krebs Cyclones ranging from 4 inches to 33 inches in diameter. The CycloWash® bolt circle matches the flange details of standard cyclone housings. Thus the addition of the CycloWash® introduces no special requirements other than a source of constant pressure injection water.

Maintenance requirements for the CycloWash® are similar to those of the cyclone itself. Internal surfaces are protected with gum rubber liners, and water injection tubes are protected by means of the ceramic truncated cone, which shields the tubes from the abrasive pulp.



Applications for the Krebs Cyclone with CycloWash®

- 🌀 Preparation of tailings for mine back fill or tailings dam use
- 🌀 Washing of sands for separation of soluble values or contaminants such as in soil remediation applications
- 🌀 Desliming in mineral processing applications including desliming prior to gravity concentration devices such as spirals

9-200

Typical Data Comparing a D15B Krebs Cyclone with and without the CycloWash®

Without CycloWash				With CycloWash*		
MESH	FEED	O/FLOW	U/FLOW	FEED	O/FLOW	U/FLOW
STPH Solids	45.7	33.2	12.5	44.0	31.5	12.5
% Solids	39.3	34.2	65.2	37.9	32.8	61.9
US GPM Pulp	343.0	300.0	43.0	348.0	300.0	48.0
MESH	FEED CUM. %+	O/FLOW CUM. %+	U/FLOW CUM. %+	FEED CUM. %+	O/FLOW CUM. %+	U/FLOW CUM. %+
35	2.4	0.1	8.7	2.9	0.0	10.2
48	8.7	0.7	30.0	9.9	0.4	33.9
65	17.3	3.4	54.5	19.1	2.2	61.4
100	27.2	12.3	67.0	27.7	8.4	76.2
150	36.4	22.2	74.2	35.5	16.8	82.6
200	44.2	31.3	78.6	42.8	25.2	86.9
270	49.8	38.0	81.2	47.9	31.6	88.8
325	54.2	43.6	82.6	52.0	36.8	90.1
-325	100.0	100.0	100.0	100.0	100.0	100.0

*Injection water rate: 17 GPM

The Cyclone with the CycloWash® reduced the amount of -325 mesh solids in the underflow from 17.4% to 9.9%.

Customer Service

At Krebs Engineers, we take pride in the service and support we offer our customers in technical assistance, parts inventory, and product quality. We are dedicated to delivering the highest quality equipment backed by the highest level of technical service and support.

Krebs engineering staff specialize in all types of separation and classification processes in a wide range of industries. You can depend on Krebs to provide responsive service and expertise when you need it.



Call for More Details . . .

Contact our applications engineering group for a complete cyclone simulation that will compare the performance of a Krebs Cyclone with and without a CycloWash® attachment for your specific application.

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