FLSmidth Krebs® Cyclones, including Krebs gMAX® Cyclones, are simple, yet highly effective equipment for removing and/or concentrating solids in petro-chemical and chemical processes.

Krebs Cyclones form the foundation of a sound separation process and deliver proven, durable and reliable operation for maximum solids recovery and protection of downstream operations at minimal cost.

The size and number of Krebs Cyclones are dependent on the material being treated and the process objectives as determined by you, our customer. In general, the smaller the particle size to be recovered, the smaller the cyclone diameter. In many instances, however a single cyclone can often be used. Consult a Krebs specialist or nearest representative in selecting the right cyclone for your application.

Some applications include:

**Evaporators and Crystallizers:** Krebs Cyclones effectively recover and concentrate nucleated particles in evaporators and crystallizer circuits. By strategically placing the cyclones before centrifuges or other crystal dewatering equipment, the load can be substantially reduced on the downstream operations. The net result is more stable operation of the dewatering stage as well as allowing for the use of smaller dewatering equipment.

**Filtration:** Krebs Cyclones are used to remove solids ahead of filtration equipment. The primary purpose of the cyclones when used in this manner is to remove the majority of the solids and protect the filter from overloading. Filter maintenance is reduced and filter life extended.

**Analyzers:** By processing a side stream through Krebs Cyclones, solids are removed ahead of analyzer. The overflow of the cyclone reports to the analyzer while the underflow is discarded or sent back to the main process.

**Quench Oil:** Krebs Cyclones are used to remove coke particles from quench oil to protect heat exchangers from plugging.

For more information contact one of our Regional Sales Offices. Visit us at: [www.flsmidthkrebs.com](http://www.flsmidthkrebs.com)
Krebs gMAX® Cyclones for classifying and concentrating crystals in crystallizer circuits

Krebs gMAX® Cyclones may be constructed of the following materials and many other alloys.

- Stainless Steel
- Nickel
- Alloy 20
- Hastelloy
- CD4 MCU
- Duplex 2205

Krebs also provides Close Packed Cyclone Vessels and Krebs CycloClean™ Vessels depending on your specific needs.

Washing or filtration of solids may be improved markedly by increasing the size of the crystals. Classifying the solids with cyclones, and returning fine crystals to the crystallizer or reaction vessel may increase the average size of the crystals. Our Industrial Sales Engineers can assist you with the best selection of cyclones for your process.

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