Alfa Laval Degritting system for starch slurry

Separation of heavy particles

Introduction

The degritting system is installed after rasping and separates sand and clay from starch milk.

Application

The degritting system is used in potato based starch processing.

Benefits

- High capacity units - provide high collecting and separation efficiency.
- High reliability - no moving parts ensures high reliability.
- Compact solution - small footprint resulting in low floor space requirement.

Design

The degritting system is a manifold system consisting of stainless steel hydrocyclones type SCW225. The hydrocyclones have common feed-, and overflow manifolds in stainless steel constructed with a single, flanged, inlet connection. Each cyclone is connected with a grit collector with a drain valve. Cyclones are mounted in a stainless steel supporting frame.

The recommended pressure drop over the cyclone pass is 1 bar. The capacity of one cyclone at a recommended pressure drop of 1 bar is 40 m^3/h (176 gal/min).

Working principle

The liquid is fed tangentially into the cylindrical part of the cyclone forcing it into a spiral. The resulting centrifugal force separates the heavier solids, like sand, that leave the cyclone via the apex of the discharge cone whilst the liquid leaves the cyclone via the overflow.

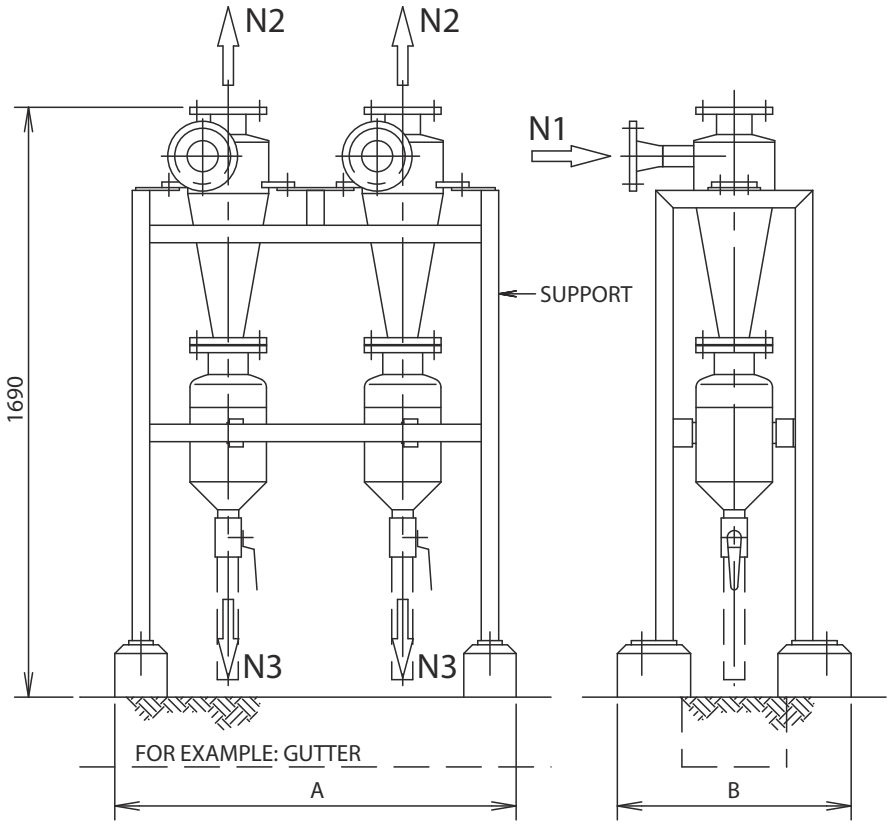
As the grit collector is connected directly to the apex of the cyclone discharge cone, the grit collector is filled with liquid.

Technical data

	Dimension		Net weight without manifolds
	mm (inches)		kg (lbs)
	Length - A	Width - B	
1	650 (26)	670 (26)	80 (176)
2	1150 (45)	670 (26)	145 (320)
3	1650 (65)	890 (35)	290 (639)

Hydrocyclone	Item number	
	AISI 316	Duplex
SCW 225	9680252204	9680252205

Dimensional drawing



- N1 Feed
- N2 Overflow
- N3 Drain