



## LIST OF ADVANTAGES OF THE ROTARY PRESS versus THE CENTRIFUGE

Item	ROTARY PRESS	CENTRIFUGE
1)	<b>Simple :</b> A single drive driving a single rotor.	<b>More complex:</b> Two (2) drives - A main drive and a back drive driving two (2) rotors, the bowl and the scroll.
	<b>Low maintenance.</b>	<b>High maintenance.</b>
2)	<b>Low speed: 0,5 to 2,5 RPM max.</b>	<b>High speed: 1500 to 3500 RPM</b>
	a) No (or very low) live floor loads. Nothing special is required.	a) High live floor loads. Building needs to be designed especially to deal with these loads.
	b) <b>Reduced noise:</b> Nothing special is required. Acoustic protection is not required.	b) <b>High noise:</b> Noise attenuation is required as part of the building construction.
	c) Vibration and temperature: Monitoring is not required for the Rotary Press.	c) Vibration and temperature: Monitoring of the electric motor, bowl and scroll is <b>very critical</b> .
3)	<b>Low Power Consumption:</b>	<b>High Power Consumption:</b>
	a) Low installed HP and reduced power consumption: 10 kW-hr/dry ton.	a) High installed HP and high power consumption estimated at 171 kW-hr/dry ton <sup>1</sup> . The additional power cost over the life of equipment is very significant.
	b) No consideration for power factor.	b) Consideration for power factor.
	c) Reduced installation costs for the electrical connection.	c) High installation costs for the electrical connection.
4)	Simple and short start-up and shut down procedures.  Frequent stops and starts are possible.	More complex and lengthy start-up and shut down procedures. Bowl may continue to rotate for a while after shut down.  Frequent starts and stops are not possible.
5)	In the event of an eventual shut down, repairs can be completed at the waste water treatment plant by regular mechanics.	In the event of a shut down, the centrifuge may have to be shipped to the manufacturing plant for specialized repairs. The centrifuge may require visits from specialty mechanics.

<sup>1</sup> According to an article written by Mr. Chuzo Nishizaki in the "The Proceedings of the Management of Water and Waste Water Solids for the 21st Century June 19-22, 1994" published by the Water Environment Federation, U.S.A. (p 7-35).

P.-S. : The listed advantages are based on past experience, they must not be interpreted as a contractual guarantee.

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6)	For a multi-channel machine, one or more channel(s) may be removed for maintenance purposes, while the machine with the remaining channel(s) may still be operated.	The whole machine is in operation or it is shut down.
7)	Vibration analysis and preventative maintenance are not critical.	Vibration analysis and preventative maintenance are <b>very critical</b> . Additional training of plant personnel may be required.
8)	The Rotary Press includes a flocculator with a variable speed agitator to optimize flocculation and polymer dosage, which most likely results in a reduced polymer consumption.	Flocculation takes place inside the centrifuge and cannot easily be controlled, and may result in a higher polymer consumption and higher annual expenditures.
9)	<b>More reliable:</b> <b>Very few components</b> of the Rotary Press may cause catastrophic shut down of the equipment due to its low speed and simple design.	<b>Less reliable:</b> <b>Many more components</b> may cause a shut down due to the high speed and high power.
10)	A high capture rate is intrinsic in the Rotary Press design giving a reasonable flocculation.	The centrifuge will operate at a lower capture rate, which will reduce further if left unattended.
11)	The effects of grit are greatly reduced in the slow-moving Rotary Press.	The centrifuge may be affected by the presence of grit in the sludge in the form of unpredictable premature abrasion wear.
12)	With the Rotary Press, it is possible to obtain very high cake dryness at reduced flow.	The same cake dryness may not be possible with the centrifuge.
13)	No external lube system is required.	External lubrication system is usually required.
14)	<b>Low maintenance cost.</b>	<b>High maintenance cost.</b>
15)	Generally, no shredder is required upstream.	May require a shredder upstream.

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