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WHY USING A CENTRIFUGAL AUTOMATIC CLUTCH

Inertia is the objects' resitance to change their idle state to a motion state or viceversa. Therefore, and this is something that can be checked every day, on applying one force against an object in order to accelerate it, at first, me must apply a higger force, and only when the motion has begun, this force can be reduced if a constant speed is wanted. In case the force is not reduced once the required speed has been reached, this will result in objects' constant acceleration

From the explanation above, it can be easily understood that there are two main concepts which must be well distinguished on putting a machine into operation: The required torque for normal operation and the required acceleration torque. The sum of both torques is what we call starting total torque.

In all types of activation there are power consumptions due to frictions among mechanical components in contact. Torque resulting from such losses, plus the required torque for the machine to do its work, constitute the operational torque which must be applied in order to keep the system balanced once the machine has reached its normal running.

The acceleration moment can be obtained from the inertia modulus and the rotational speed which must be reached whithin a concrete time. This acceleration moment is, in several machines, much higher than the static. We can take, for instance, a centrifuge drum where a great WD^2 must be accelerated at a extreme speeds, the needed power while accelerating is high; when the machine has reached its normal running, the power consumption is very low for theres is not mechanical work and the consumption is mainly due to frictions.

Sometimes the driving equipment is formed by an altern current engine and its torsion capacity is chosen according to the power needed for normal operation. In this cases, the acceleration torque values and its duration must not exceed the power additional values admitted by the engine during the same amount of time. Otherwise the heat effects caused by the excess of intensity absorved by the engine can cause its destruction. So, we can see that in most of these cases, if the normal operation power is wanted to be applied, it is necessary to reduce the acceleration torque by lengthening the time required for this operation. Such an effect can be obtained using our **CENTRIFUGAL AUTOMATIC CLUTCHES**; Furthermore, these clutches can provide a progressive and soft starting, protecting at the same time not only the driving machine but the driven machine.

All these mechanisms are widely used for explosion engines, achieving an easy and loadles starting, by cluthing to the preestablished speed when the engine is accelerated.

They can also act as torque limiters if they are used at the speed for which they were produced.