



Matching Two (2) Motors to Power One Machine

Items to be considered when mounting two (2) electric motors to power a single shaft on one machine.

1. Purchase the same manufacture motors, preferably manufactured at the same time.
2. Both motors will need to be labeled with the same RPM.
3. Both motors to be of the same design.
4. Two motors have more pounds of copper, which gives you less resistance – which creates less heat.
5. When you have more copper giving you less resistance, you will use fewer kilowatts thus reducing your costs of operation.
6. Premium motors are considered worth the added initial cost.
7. Always use the next size larger wire and starter than the NEMA recommendation. By doing this you have less resistance with the larger size wire, allowing the motors to run as designed. This will not only give you more horsepower, but will reduce your kilowatt usage and reduce your cost per ton.

For direct connecting two (2) motors to one main shaft like on a hammermill where you have a high inertia load to start. Install high quality flex couplings with a minimum of 1.5 service factor.

Here is the key thing to look for where there is a V-belt drive and/or a cog belt drive involved. Be sure that both motor sheaves and both driven sheaves have the same pitch diameter. You may need to machine off one of each of these sheaves to match the other one. Match all sheaves. Very seldom do they match from the manufacturer.