

AssemblyReel versus Spring-driven Reel

Ergonomic Advantage (1)

With conventional spring-driven reels the hose is retracted by a powerful spring. The more length of hose needed the more the spring builds up recoil tension. In fact, the force required pulling out 15 meters of hose starts at 20 Nf and increases gradually till 200 Nf! From ergonomic point of view, this is far too high. This is especially true for work situations where the hose is used several times a day. Consequently, many operators decline to use the hose reel and the hose remains on the floor during production. With the AssemblyReel, in contrast, the retraction of the hose is motorized. Pulling out the hose takes 4 Nf only. And since there is no spring tension involved, this force remains constant regardless the length of hose.

Ergonomic Advantage (2)

Spring driven hose reels are equipped with a locking mechanism that, once engaged, allows the operator to stop retaining the hose. However, once the hose at its desired length, the operator has to search for the nearest lock position. In practice this is experience to be very irritating. With the AssemblyReel, in contrast, this problem does not exist simply because there is no spring that needs to be locked before the operator can start doing his job.

Ergonomic Advantage (3)

Once the operator has finished his job he needs to disengage the locking mechanism to get the hose retracted. To do so he needs to lift up the hose and pull it with a force higher than the force of the tensioned spring. This, again, is experienced to be very irritating. With the AssemblyReel, in contrast, this problem does not exist because there is no spring to unlock.

Safety Advantage (1)

While pulling out the hose a very dangerous situation occurs. If by accident the hose should slip out of the operator's hand the tensioned spring will retract the hose in an uncontrollable manner! Due to acceleration the hose will gain speed and smash with high impact upon the hose reel. Apart from material damage to the hose reel and tool, this situation can easily lead to life threatening injuries to the operator and people standing nearby! Since the AssemblyReel is a motor driven solution, it needs no locking mechanism. Consequently, such a dangerous situation can never occur with the AssemblyReel.

Safety Advantage (2)

The locking mechanism mentioned above consists of a ratchet and a latch that is operated by a small spring. These components are subject to wear. Consequently, the locking mechanism can fail without any warning and at any given time. Here again, due to acceleration the hose will smash with high impact upon the reel creating an extremely dangerous situation! Since the AssemblyReel is a motor driven reel, it needs no locking mechanism. Consequently, such a dangerous situation can never occur with an AssemblyReel.