Benefits of Van der Graaf drummotors

Oilseals run on hardened stainless steel 'wear' rings

Most drummotors shafts are produced from steel. If the oil seals rotate directly on the shaft, sooner or later the shaft will wear and the drummotor will start to leak oil. Not with a Van der Graaf drummotor! All "GV" drummotor seals run on hardened and polished stainless steel 'wear' rings. When these eventually wear they can simply be replaced.

Replace oil after 50.000 operating hours

When we designed the "GV" drummotor we realised that many factories do no maintenance or use sub-contractors for maintenenace. To this end we designed our drummotors to operate maintenance free for a period of 50,000Hrs (over 13 years @10 hours/day). At this time, only an oil change is needed which can be done without removing the drummotor from the conveyor (subject to frame design).

Rotatable terminal box

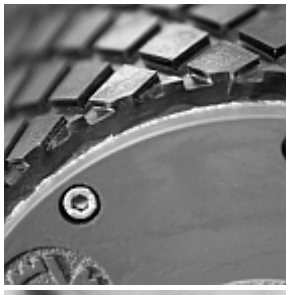
It is not always possible to install a drummotor in a way that the cable enters the terminal box from below. The cable sometimes needs to be bent which increases the possibility of damage, or the terminal box has to be removed and installed in the correct position. With a Van der Graaf drummotor only one 'grub' screw needs to be loosened to rotate the terminal box through an angle up to a maximum of 90° clock wise or counter clock wise.

Cast iron or stainless steel end caps

Many manufacturers of drummotors use aluminium parts for gear housings end caps and shells. They state the main reason for using aluminium is to save weight in comparison with steel or cast iron. The reason however is due to cost as the softer aluminium is easier to machine. Van der Graaf exclusively uses cast iron for the end caps, stator housing, motor housing, gear housing and terminal box. Steel is used for the shell. Compare the weights. Can you really compare the strength of aluminium with steel or cast iron? Does is protect sufficiently against possible external 'impact' forces or high belt tension on a conveyor?

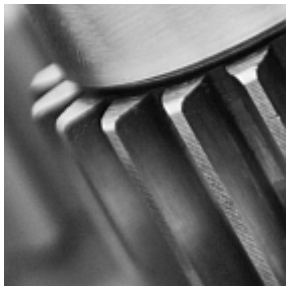
Square shafts

Most drummotors have shafts with 2 flats for fixing into a frame. For normal situations this is sufficient. In more extreme conditions however e.g frequent stop-starts or bi-directional use, a small gap between shafts and brackets can damage the brackets and the shafts. This can produce extra running noise with varying loads and can almost certainly damage the drummotor (this is especially the case when using aluminium brackets). Van der Graaf delivers double security. All shaft ends are machined square and if you use our mounting brackets or design your own to captivate the 4 flats of the shaft, no movement will be possible.



Removeable end caps

Almost all drummotors, especially in the Ø 80 - 320 mm range, are designed with glued or pressed end caps. This makes the motor cheaper to produce, but makes it hard to service or repair . Removing an end cap is only possible with special tools or after applying heat. If the drummotor is lagged, the lagging may get damaged when heating. This all equates to a lower initial cost, but higher costs for maintenance. Not with Van der Graaf drummotors. On smaller diameters one, and on larger diameters both end caps are fitted with bolts. Ask your maintenance engineer what they prefer.



Honed and polished gear teeth

The quality of the the external and internal gears determines how much noise is produced by a drummotor. Milling or hardmilling is not sufficient according to Van der Graaf. Polishing and honing of the gear teeth offer the highest quality. At Van der Graaf both treatments are standard procedure. You can actually predict the life span of a gearbox by the amount of noise produced. Little noise means little friction, thus less wear and increased loguevity.

Stainless steel data plates

Do you consider rusting, missing or unreadable data plates annoying? Van der Graaf makes all their data plates from stainless steel. The plates are mounted on the end cap or terminal box of the drum with stainless rivets. On our stainless steel end caps all the information is engraved by a laser which ensures the data remains legible.