

10.14.16

LM76

Linear Bearings

1-800-513-3163

www.LM76.com



**LM76 VSBMAX
Bearings have a PV
Rating of 300,000**

**High Speed, High
Load, High
Temperature**

**Anodized Aluminum
Shell with PTFE Liner
*PV Rating = 20,000**

*Latest Catalog Information

The Problem

LM76 received a call from the largest ice cream manufacturer in the United States asking for help with a linear bearing application in their pick and place robot cell. Linear bearings are failing after 1 week in operation resulting in unacceptable system downtime. The ABB Spider Robot employs (seen above) pneumatic suction cup end effectors that pick ice cream bars off conveyors and place them in master cartons. The assembly sees multiple moment loads as it articulates: yaw, roll and pitch. Coupled with these moments, the assembly suffers from lack of parallelism between shafts. The lack of shaft parallelism creates a serious side load further contributing to premature bearing failure. Our own Minuteman PTFE Composite linear bearings would suffer the same fate.

The Solution

Reviewing the operation and realizing we would have to offer a material that could handle large side loads, multiple moment forces and 24/7 operation, we looked to the aircraft engine industry and their use of polyimide bearings in their compressor stator vane assemblies. These bearings are self-lubricating, take extreme loads, high temperatures (not relevant here) and can be machined to size. We fully expect months, as opposed to a week, of successful operation.

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