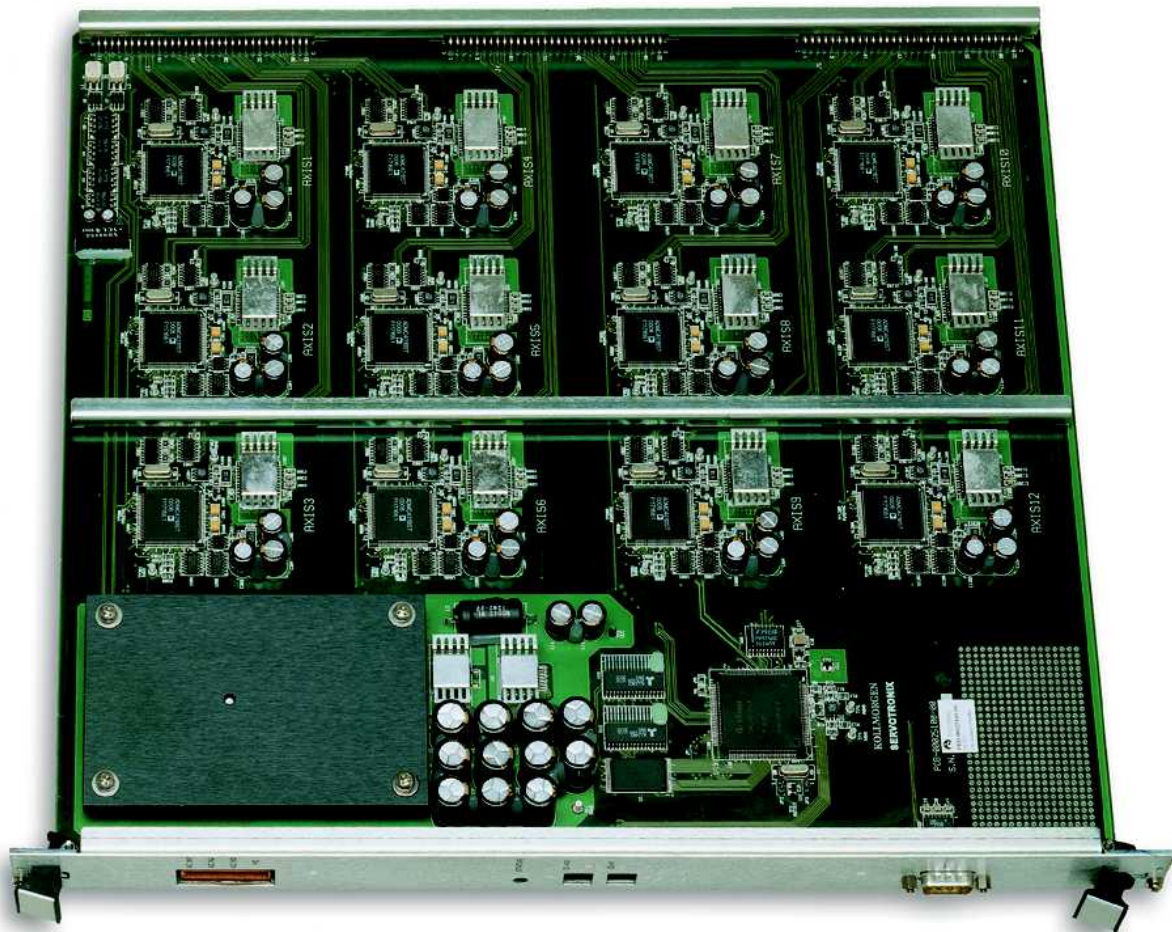


Success Story Servo-Controlled Carpet Tufting



Servo Tufting Machine

A highly customized, servo solution by Danaher motion include custom motors, a 12-axis multi-drive unit, and a backplane for holding up to 8 of the 12-axis multi-drive units. Communication with the drives is via CAN bus, with each backplane having a pair of CAN connectors.

Each yarn is independently controlled with its own servo-driven mechanism. This gives the user the ability to have multiple pile-height capability at every needle with no repeats across the entire width of the carpet or rug, or to choose a custom repeat size. The servo technology makes it possible to create patterns with free flowing designs, geometrics, textures and shading effects, without adversely affecting the carpet manufacturing time.

Key customer requirement	Yarn servo control Position following	Low Cost design	12 drives on one board, low cost motor
	Corresponding technical requirement Gearing control	Centralized job management	One host PC can control up to 2,200 servo axes using CAN BUS as the communication platform.

During 2005, the project reach its sales potential of 20,000 axis per year. This is an excellent example of an OEM project where demands match the original target.

Why a Danaher Motion system?

- Single source for motion system components, One responsible source to make the system work
- Customer Focus
- Capability and willingness to design and build a custom motion system according to the customer specifications, while meeting the customer cost targets.
- Existing field proven software building blocks provide a strong skeleton for software adaptations and additions
- System wide view, cross technical approach and excellent cooperation with customer development team

Products Used

- AC brushless motor (C20001-28A) manufactured by DMI
- Backplane manufactured by Kollmorgen Servotronic
- 12-axis Multi-Drive Unit manufactured by Kollmorgen Servotronic

Lessons Learned

Not just say VOC but really do it.

Contact Information

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