

## **Universal joints and drive shaft assemblies for steering applications**

*Broadview (Chicago), Illinois, USA, May 2006.* Universal joint manufacturer Belden Inc. serves the transport industry with universal joints and drive shaft assemblies for a variety of steering and gearchange linkage applications. Specialized in the design and manufacture of steering and gearchange linkage components and shaft assemblies, Belden's products are used in various applications from racing cars to boats to industrial vehicles.

For the racing industry, Belden has developed steering and gearchange linkages focused on the cross and needle bearing design. Preferred in steering and gearchange linkages for racing cars, the needle bearing universal joint incorporates high strength alloy steel yokes with permanently sealed drawn cup needle bearings and a forged cross. The joint has rigid axial stiffness for push/pull loads. Steering and gearchange linkages for racing cars are available in a variety of hub materials including alloy with or without plating, stainless steel, forged steel and extruded aluminium.

Belden custom-manufactures steering assemblies for light duty and recreational vehicles to customers' exact vehicle specifications. All components for this industry are unique to the type of vehicle and the manufacturer's strict guidelines. Customers in this category include manufacturers of electric cars, golf carts, passenger vehicles, ATVs (All Terrain Vehicles), industrial maintenance vehicles and utility trucks.

Steering and gearchange linkage components for the special-purpose car industry are manufactured to the critical standards this industry requires. The joint and drive shaft assemblies are custom-engineered to OEM specifications. Materials used include aluminium for high strength to weight ratios, forgings, various grades of stainless steel and plated alloys. Belden has engineered high-strength, lighter-weight steering components specifically for the automotive market using state-of-the-art multiple axis CNC machinery and engineering systems technology.

The complete line of universal joints includes a full range of military-certified universal joints of the MS20271 and MS20270 series that are used in defense vehicles, aerospace applications as well as in car racing and other gearchange linkage applications.

Custom assemblies are Belden's speciality. Hubs and connecting shafts can be customized to exact specifications. Materials include alloys, all grades of stainless steel, naval brass as well as extruded aluminium.

**Company information:**

Belden Inc., located in Broadview, Illinois, near Chicago, can be traced back to the year 1939, when three brothers opened a precision machine shop. Through the development of an extensive product line, the company rapidly expanded. In 1968, Belden Inc. was established and began manufacturing high quality, precision universal joints for a variety of applications, creating a primary focus for the company.

Today, Belden focuses on special universal joints and drive shaft assemblies exclusive to a customer's exact application. Unique manufacturing processes give Belden the flexibility to economically produce low volume quantities and made to order custom parts just as cost-effective as high volume standard universal joints. Belden can provide an extensive line of high quality, precision engineered universal joints with drive shaft assemblies as well as couplings for a wide variety of applications. These unique applications include packaging and conveying equipment, food processing equipment, steel roll forming and levelling equipment, machine tools and woodworking equipment for the furniture industry, OEM machine tools, steering, shift linkage assemblies for race cars as well as industrial and off-road vehicles.

Belden's continuing investment in state-of-the-art multiple axis CNC machinery and new engineering systems technology has given the company a manufacturing lead in the worldwide market of power transmission components. Belden's speciality is custom assemblies such as customized hub configuration, length or the complete redesign of joints for specific applications. Materials include alloy, all grades of stainless steels, naval brass as well as extruded aluminium.

