## curtis universal applications



Bottle Capping Machine



Saab Convertible Top

# **Curtis Block and Pin Type U-Joints:** The Universal Solution for Design Engineers

urtis Universal Joints are used throughout the world, transmitting torque in everything from rugged U.S. weapons systems to sophisticated electronic equipment in Disney World's most famous animated characters. Every day, we uncover new applications, as designers specify Curtis joints into their plans for unique new products and equipment of all kinds.

Curtis wants to hear about your U-joint applications. If you are planning a new use for Curtis U-joints or are currently using our products in a unique way, please write or call our engineering department to let us know.

Our design engineers also can provide you with excellent technical support. While this catalog will answer many of your questions, a quick call to our toll-free number will put you in touch with professionals who can help you specify the right joint size and materials for your next project.

### successful joint efforts in every industry

- · Amusement Devices
- Animated Characters
- Astronomical Instrument Controls
- Automated Silicon Wafer Manufacturing Equipment
- Automobile Convertible Top
- · Bakery Equipment
- . Boilers & Tube Expanders for Super Heaters
- Bookbinding Machinery
- Bowling Alley Cleaning and Pin-Spotting Equipment
- Box Manufacturing Machinery
- Bus Door Linkage Systems
- Can Manufacturing
- · Chocolate Coating Machinery & Candy Manufacturing
- Coil Winding Machinery
- Commercial Industrial Scale Calibration Control Linkage
- Computer Printer Drives
- Conveyors & Conveying Equipment
- Corrugated Box Manufacturing
- · Drives on Bottle Capping Equipment
- . Drives on Bottle Cleaning Equipment
- Drives on Carousel for Custom Rock Concert Stages

- · Drives on Grain Augers
- Dune Buggies
- Electronics
- . Elevation & Train Systems
- Encoding Machinery for Specialized Printing
- Feed Roll Drives for Woodworking Machines
- Fire Apparatus
- Fire Truck and Cement Truck Remote Controls
- First-Class Airliner Seat Adjustment Drives
- Food Processing Equipment
- Fuel Metering Equipment in Jet Aircraft
- · Glass Manufacturing Equipment
- Gluing Machinery Drives & Controls
- Golf Cart Accelerator Linkage
- Hamburger Patty Forming Machines
- Handicapped Van Controls
- . Honing Machinery Drive Linkages
- Horizontal Boring Machine Drives
- Hospital Beds and Surgical Tables
- Industrial Furnace Damper/Register Linkage Controls
- Industrial Sewing Machines & Attachments

### successful joint efforts (cont'd)

- Jig Boring Machine Drives & Controls
- Lifeline System Aboard Aircraft Carriers
- Machine Gun Systems on Fighter Aircraft
- Machine Tools
- . Machinery for Dyeing Felt Hats
- Machinery for Removing Corn from Cob
- Mail Processing Equipment
- Marine Installation Valve Extensions & Throttle Controls
- Medical/Orthopedic Equipment
- Multi-Color Printing Machinery
- . Multi-Spindle Drill Head Attachments
- Multi-Spindle Drills
- . Operationg Control Linkages
- · Packaging & Canning Equipment
- · Paper Bag & Paper Cup Manufacturing Equipment
- Paper Manufacturing Machinery
- Periscope Controls
- Plastic Injection Molding Machinery
- Potato Chip Machinery
- Power Station Furnace Damper Controls
- Printing Equipment Feeder Mechanisms
- Refineries & Chemical Plant Remote Controls
- Remote Controls on Nuclear Installations
- · Remote Controls on Saw & Grinding Machinery
- Remote Linkages on Wind Box/Damper Controls on Large Boilers
- Remote Rigid Reach Rod Equipment Aboard Ships
- Remote Valve Actuators
- Resistance Welding Machinery
- Robotic Arms in Clean Room Environment
- Sheet Steel Leveling Equipment
- · Shift Linkages on Stock Car Racers
- Ship Anchor Windlass Drives
- Solar Furnace Mirror Mountings
- Staunch System Aboard Carriers
- Steel Mill Machinery Levelers, Rolling Mills & Shears
- Steel Multi-Strip Forming Machine Drives
- Steering Column on Bradley Fighting Vehicle
- . Steering Linkages on In-Plant Utility Vehicles
- Submarine Periscopes and Depth Control Valves
- · Surgical & Medical Instruments
- Tensile Testing Equipment
- Textile Machinery
- Tobacco Cutting Machinery Knife Operating Devices
- Transformers Power and Distribution Controls
- Trash Compactors
- Valve Actuators on Lawn & Garden Tractor Attachments
- · Vertical Boring Mills

### motion control

# Here's Why Block & Pin U-Joints Are So Universal

rotary or axial motion of a shaft or linkage, block and pin type universal joints are great problem-solvers. Unlike needle-bearing joints formed from forgings or castings, block and pin joints are machined from barstock, providing increased tensile strength and a higher torque rating at a comparable size. Among the benefits: in tight spaces, you can transmit the torque you need using a smaller u-joint. This is a frequent solution for steel mill leveling roller applications, for example.

When your design requires

Double block and pin u-joints also give you extra versatility by accommodating severe angles. Take a look at the design problem at right (Around the Bend), which was called in to our engineers, for example.

When you have a special application challenge and need expert advice, call our Engineering Department at **(800) 466-2144**.

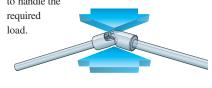
# **Tight Spot?**

### Problem

In steel mill leveling roller applications, there's not enough room for needle-bearing, cross-and-bearing type U-joints with torque ratings high enough to handle the required

### Solution

Use Curtis blockand-pin type U-joints. Size for size, they transmit higher torques than needle-bearing joints.



# **Around the Bend?**

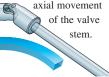
### Problem

This metering valve needed axial and rotational stem movement, but its position deep inside a printing press prevented straight-line access to the valve control

### Solution

Standard Curtis double universal joints were used to connect and transmit torque through the linkage and metering valve with 60-degree shaft offsets.

An internal hex in the joint accommodates axial movement of the valve



ASK US ABOUT OUR GUARANTEED SAME DAY SHIPPING!



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stem