

RS-2000 REEL SPOOL SHAFT SPECIFICATIONS

Please fax this completed sheet to (508)580-2915 for a formal quotation.

COMPANY INFORMATION

Company Name: _____ Date: _____
 Name: _____ Title: _____
 Address: _____
 City, State, ZIP, Country: _____
 Telephone: _____ Fax: _____

PRESENT APPLICATION

Equipment Manufacturer: _____ Model: _____
 Size: _____ Speed: _____
 Tension (PLI): _____ Web Material: _____
 Air Line Pressure Available: 60 PSI 80 PSI 100 PSI
 Bearing Material / Type: Steel Brass Cam Followers
 Safety Chucks Other: _____

GENERAL SPECIFICATIONS

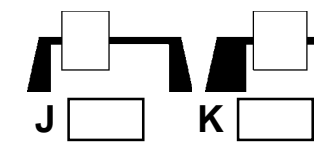
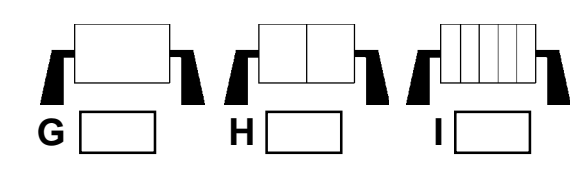
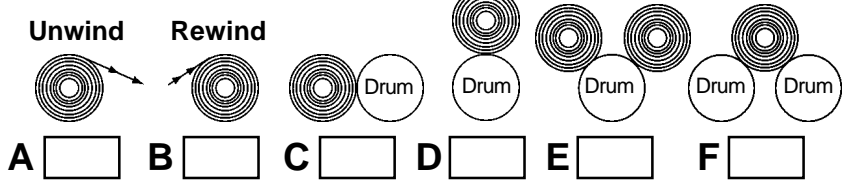
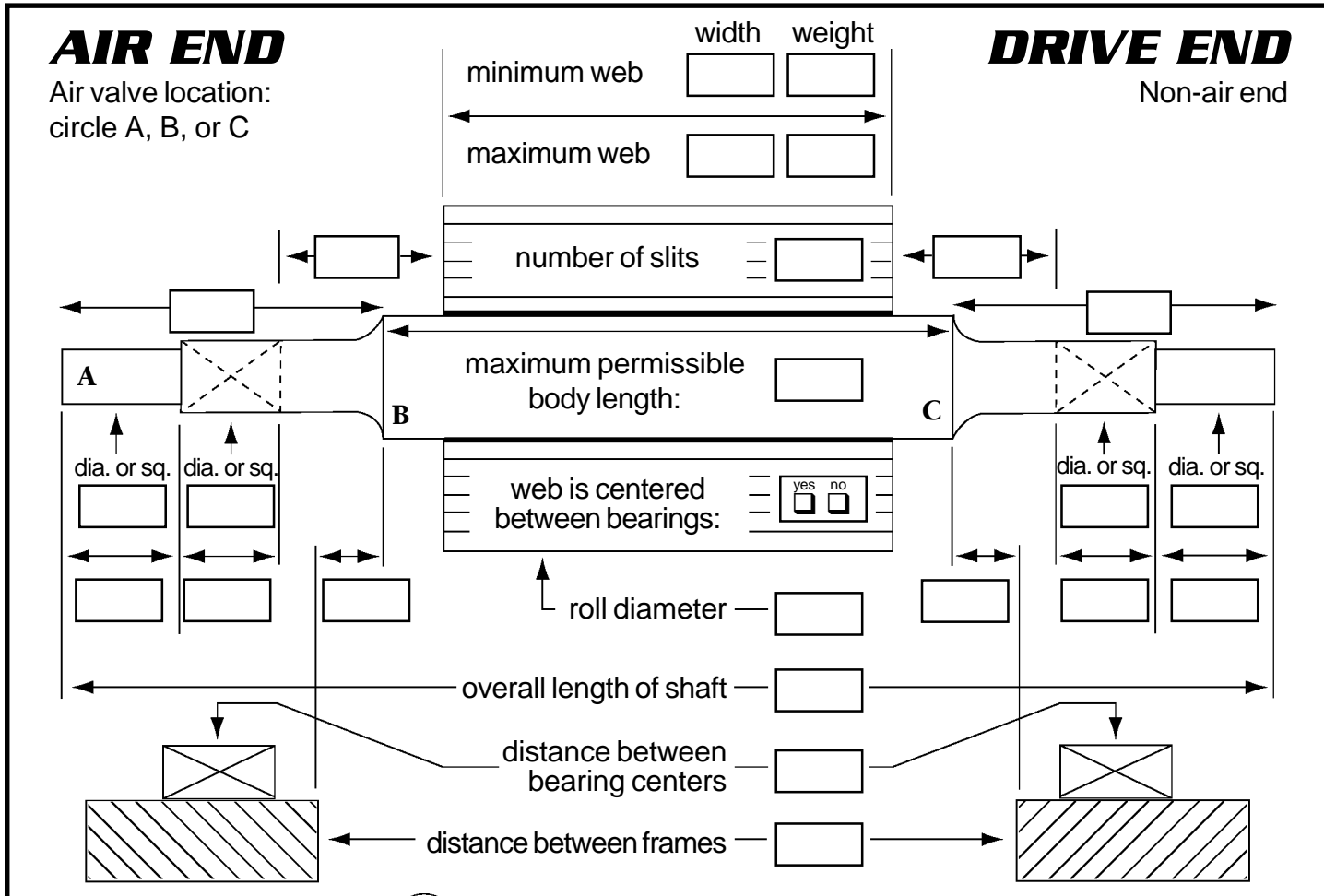
Actual Shaft Diameter: _____
 Nominal Core I.D.: _____
 Core Material: _____
 Wall Thickness: _____
 Core Manufacturer & Grade: _____
 Steel-Capped Cores: All None Some

PRESENT SHAFT

Manufacturer: _____
 Material: _____ Wall Thickness: _____
 Weight: _____ Quantity Required: _____

PROBLEMS W/PRESENT SHAFTS

Weight Deflection Maintenance Other _____

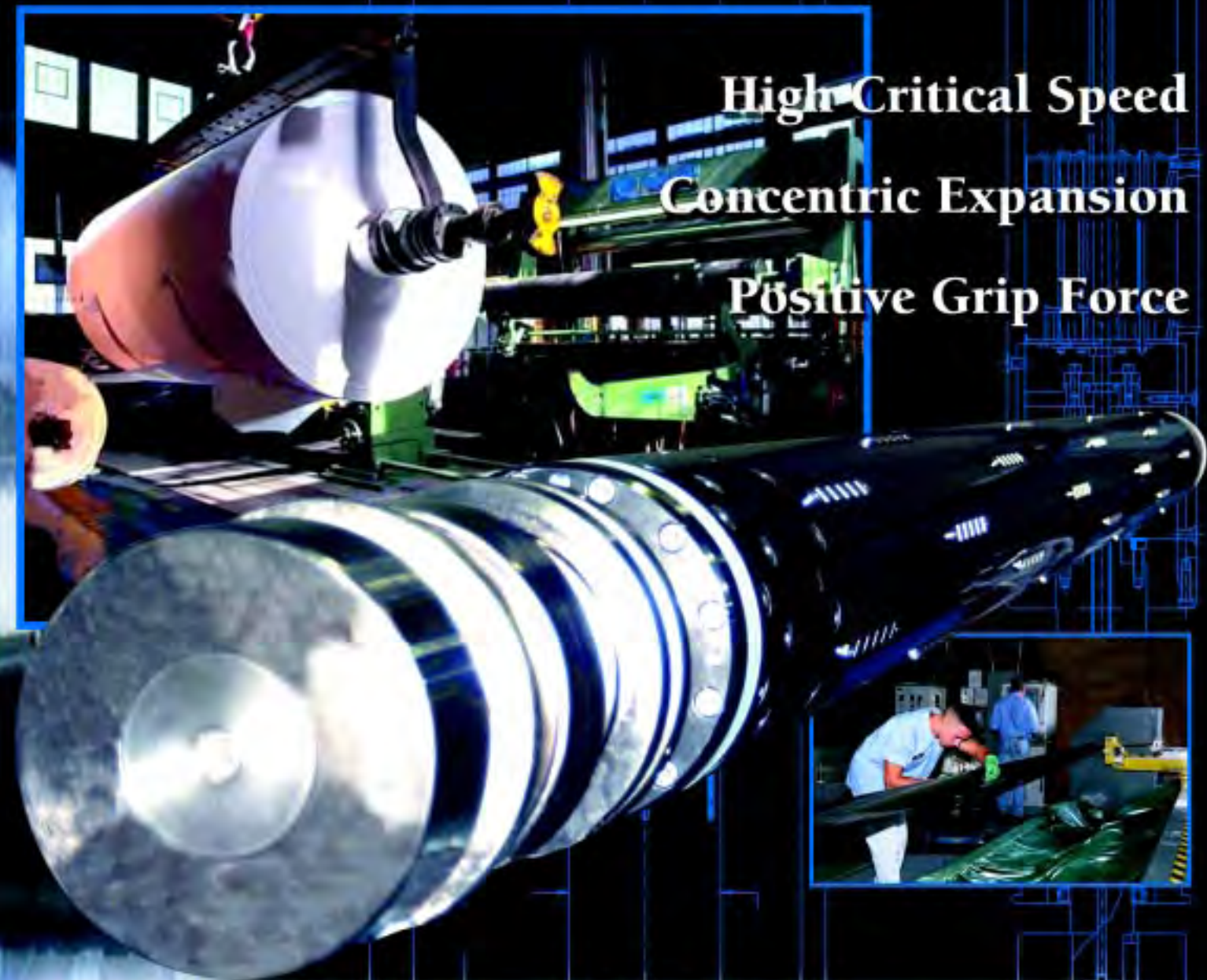


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RS-2000

Expanding Reel Spool Shaft

Carbon Fiber Housing
 Pneumatic/Mechanical Operation



High Critical Speed
 Concentric Expansion
 Positive Grip Force

DOUBLE E COMPANY, INC.
 Excellence in Engineering
www.doubleeusa.com

THE RS-2000 EXPANDING REEL SPOOL SHAFT

The Double E Company designed the RS-2000 Expanding Reel Spool Shaft specifically for large reel winding. By combining its experience in carbon fiber composites with three decades of innovative engineering, Double E is able to produce a unique lightweight shaft for reel spool applications. The new

of using expensive and heavy reel spools, the RS-2000 allows the use of cores for winding, storing, and transporting large rolls. An operation using hundreds of reel spools, for example, can now opt for buying hundreds of cores with just a few RS-2000 shafts. The result is lower maintenance, accelerated winding times, and reduced costs. In addition, the shaft dramatically improves changeover time between rolls.

In mills where expanding shafts are already in use, the RS-2000 can allow faster machine speeds without increasing the diameter of cores.

ADVANCED PERFORMANCE

The RS-2000 is made with a carbon fiber housing which allows high critical speeds. It also has a rotating

inertia of almost ten times less than steel so the shaft comes up to speed faster with less driving power.

The patented design of the shaft's activation mechanism complements the advanced carbon fiber housing material. The shaft retracts pneumatically for convenience, but expands mechanically for positive grip force, guaranteed fail-safe operation, and true concentric expansion. The mechanism will never stop gripping during a production run. More importantly, the shaft actually lifts and centers the roll so it winds concentrically. Concentric winding means little or no vibration, and increased ability to run the machine faster.

HOW IT WORKS

The expansion mechanism inside the shaft uses a master spring to efficiently store all the force provided by the pneumatic system. When the valve is vented, the master spring distributes force evenly to the cam assemblies in use.

Shaft expansion occurs through the action of a symmetrical pattern of hardened steel lugs that engage a steel cam assembly. Each lug set operates independently and automatically adjusts to core variations. Inflation of the pneumatic chambers moves the cams which capture the lug wedges and retract the lugs. Venting the chambers with a proprietary self-

UNIQUE FEATURES & BENEFITS OF THE RS-2000 REEL SHAFT

- Obtain higher critical speeds with less vibration.
- Fail-safe design guarantees roll security during production run - reduces down time.
- High quality materials for exceptional performance, low maintenance & low weight.
- Lightweight carbon fiber reduces hoist lifting requirements.
- Mechanical expansion ensures concentricity - eliminates roll bounce and allows faster speeds.
- Replace costly reel spools.
- Run faster without increasing core diameter.
- Faster changeover time between rolls.

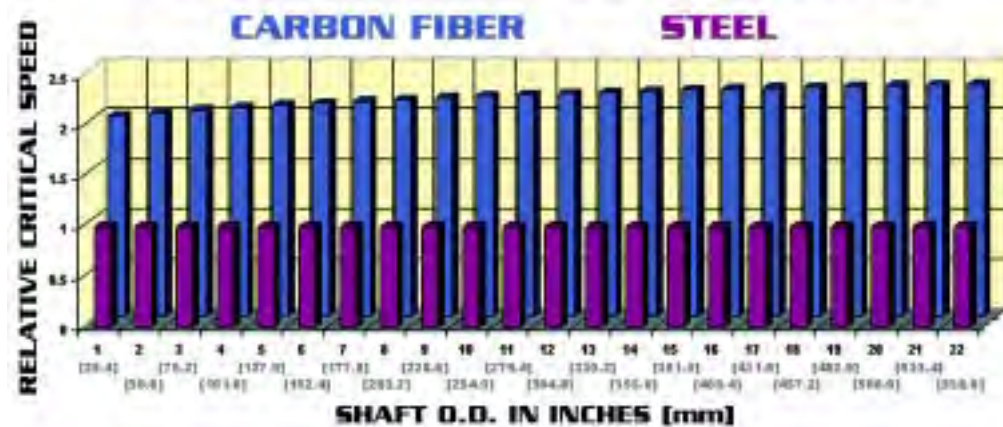


The Double E Company Expanding Reel Spool Shaft can dramatically improve productivity by allowing faster machine speeds in mills currently using reel spools or other types of expanding shafts.

design allows faster critical speeds and increased throughput.

The RS-2000 represents a true advancement in mill winding. Instead

CRITICAL SPEED COMPARISON



This chart gives a relative comparison of critical speed, and assumes that the stiffness of the carbon and steel versions are equal. The diameter to length ratio on all sizes is 18:1.

latching valve activates the gripping mechanism.

EASY MAINTENANCE

The RS-2000 uses an advanced yet uncomplicated design. Corrosion proof pistons and piston cups reduce

maintenance by eliminating abrasive rust, thus greatly extending "O" ring and cylinder wall life. The modular piston design permits complete bench assembly of the center rod components. The insertion of the center rod assembly requires no special tools.

COMPONENTS OF THE RS-2000 EXPANDING REEL SPOOL SHAFT

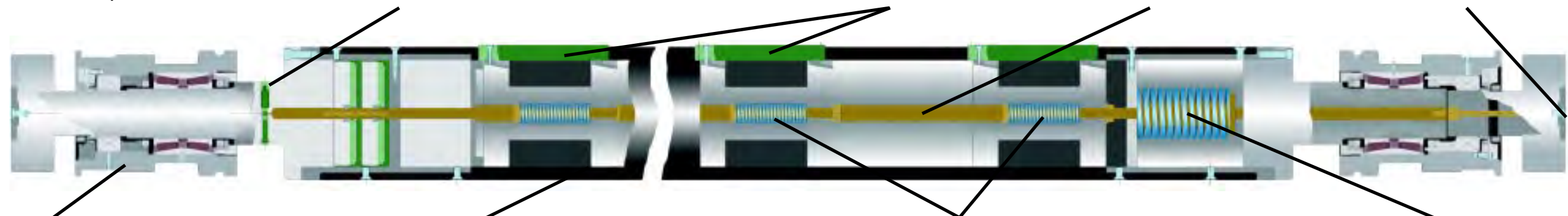
THE EXPANDING REEL SHAFT IS DYNAMICALLY BALANCED TO ISO 1940/41 SPECIFICATIONS

SELF-LATCHING AIR VALVE FOR EASY AND RELIABLE VENTING AND PRESSURIZING

HARDENED STEEL LUGS PROVIDE RELIABLE POSITIVE GRIP FORCE ON ALL CORE MATERIAL TYPES

STEEL CENTER ROD FOR MAXIMUM STRENGTH

JACKING SCREW AT SHAFT END SERVES AS MECHANICAL OVERRIDE



CUSTOM JOURNAL DESIGN

ADVANCED COMPOSITE HOUSING PROVIDES MAXIMUM STRENGTH (ALSO AVAILABLE WITH A SPUN CAST STEEL HOUSING IF COMPOSITES ARE NOT REQUIRED)

INDIVIDUAL CAM SPRINGS INCREASE FORCE DURING ACTIVATION ALLOWING INDEPENDENT LUG RISE

POWERFUL MASTER SPRING DELIVERS GRIP FORCE TO CAMS IN USE



The Double E Company is an ISO-9001 registered organization.

