

Rowan Tri-Brid™ **Improved Universal Engine** **Support System**

Revised September 03
Bulletin #366-1

ADVANTAGES:

WILL FIT ANY MODEL ENGINE FRAME

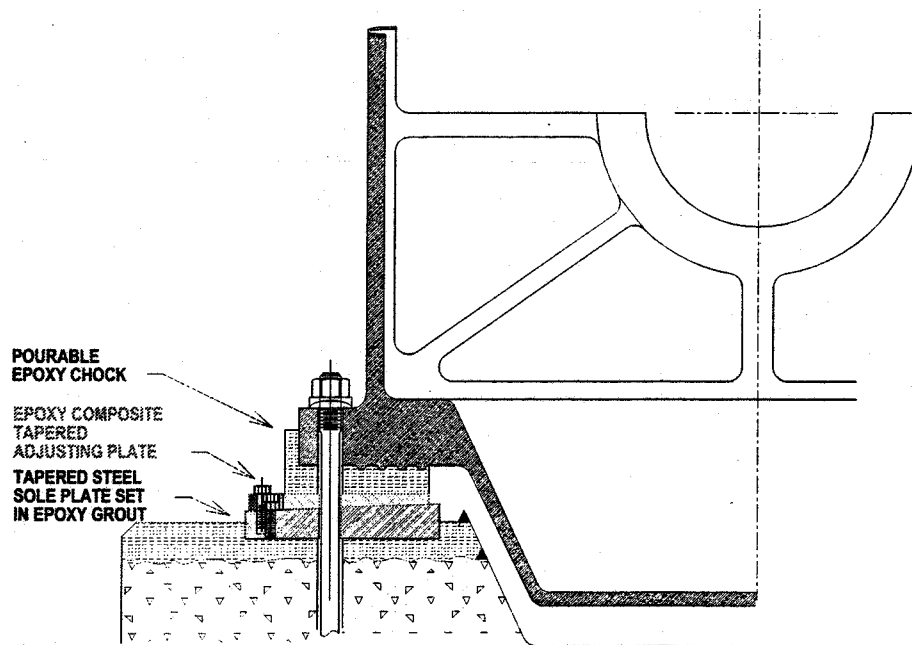
**NO MACHINING OF BASE REQUIRED FITS
WAFFLE BOTTOM OR FRETTED STEEL**

**SHIMLESS ADJUSTABILITY +/- .026" PROVEN
IN OVER 12 YEARS OF SERVICE**

EXCELLENT HEAT INSULATION

STEEL SOLE PLATE WITH GROUT LOCK PROFILE

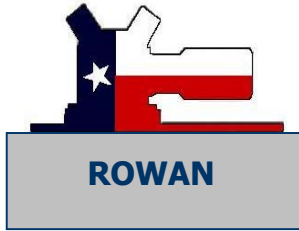
2 BUILT IN JACK SCREWS FOR ALIGNMENT



Robt. L. Rowan & Assoc., Inc. · 3816 Dacoma · P.O. Box 920760 · Houston, Texas 77292-0760
Tel (713) 681-5811 · Toll Free (800) 231-2908 · Fax (713) 681-5815

Visit our website at www.rlrowan.com

© Copyright 1999 – Robt. L. Rowan & Assoc., Inc.



Rowan Tri-Brid™ System (Pat Pend.) **With Tapered Lock-Chock™** **Steel/Composite Plates**

Revised September 03

DESCRIPTION

The Tri-Brid™ Epoxy Chock System is a universal machine support system, meaning it will fit a machine base that is machined flat and true, or in combination with a pourable epoxy chock can be used with worn fretted surfaces, or “waffle” bottoms.

The top plate is made of a strong epoxy composite and precision machined to match the steel sole plate. Infinite adjustment over the range of $\pm.028$ inches is accomplished by precision tapered surfaces. Both the epoxy chock material (when used), as well as the Tri-Brid™ composite material provides heat insulation to reduce thermal humping of the machine being supported.

Recommended as a machinery support system for large:

- Reciprocating gas engine
- Engine-generators
- Gas turbines
- Paper machines
- Marine engines
- Coupled machinery trains
- Motor driven equipment

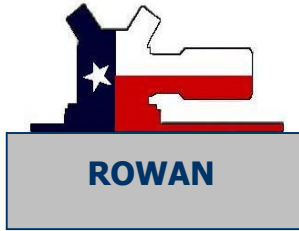
FEATURES

- Independent vertical adjustment at each anchor bolt
- Excellent heat barrier – can be used up to 300° F.
- Vertical adjustment capability of .056” ($\pm.028$ ”)
- Resistant to lubricating oils and cooling water
- Design provides a 2” air gap under machine base for better cooling
- Unique steel sole plate edge detail enhances bond to epoxy grout.
- Allows for thermal growth of the machine
- Excellent vibration absorption combined with precision alignment
- Can be used with non-machined or badly worn machinery bases (even a cast waffle bottom)

PHYSICAL PROPERTIES

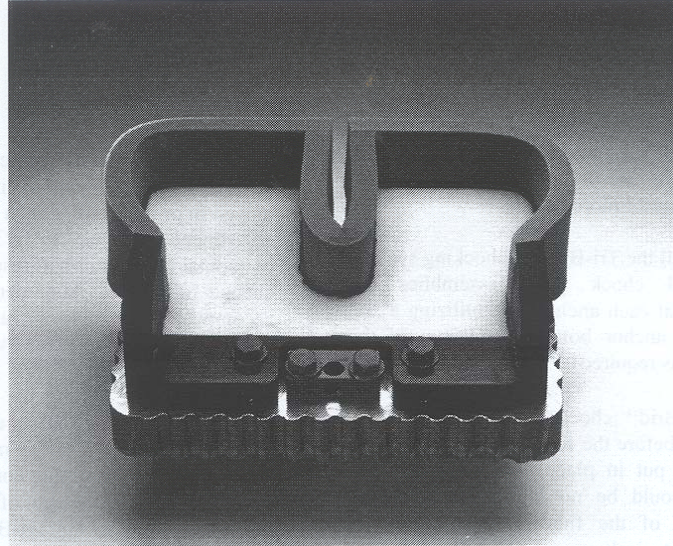
Compressive strength - 60,000psi

Machined tolerances - flat to $\pm .001$ ” over width of chock.



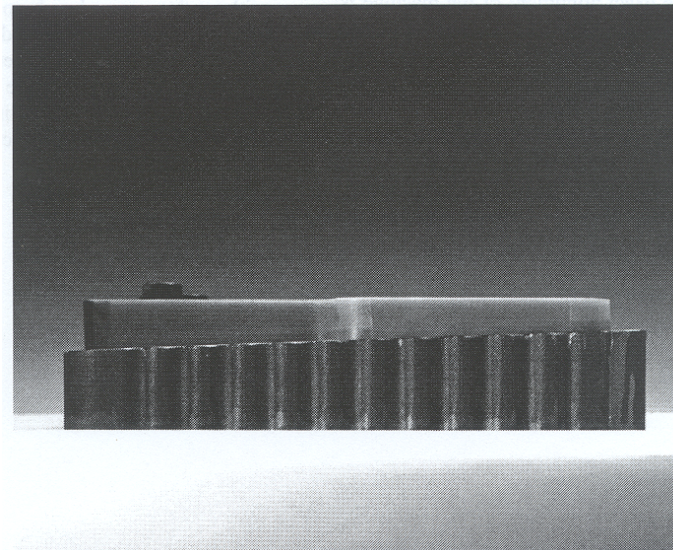
Rowan Tri-Brid™ System (Pat Pend.)
With Tapered Lock-Chock™
Steel/Composite Plates

Revised September 03



Above is a Tri-Brid™ assembly formed for an Epoxy Chock

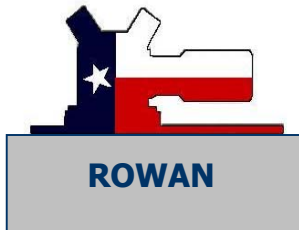
Below is a Tri-Brid™ Assembly ready for installation directly to machine bottom



Robt. L. Rowan & Assoc., Inc. · 3816 Dacoma · P.O. Box 920760 · Houston, Texas 77292-0760
Tel (713) 681-5811 · Toll Free (800) 231-2908 · Fax (713) 681-5815

Visit our website at www.rlrowan.com

© Copyright 1999 – Robt. L. Rowan & Assoc., Inc.



Rowan Tri-Brid™ System (Pat Pend.) **With Tapered Lock-Chock™** **Steel/Composite Plates**

Revised September 03

INSTALLATION – BRIEF DESCRIPTION

Complete installation procedures are found in Bulletin 366-2. Please refer to that publication for more details.

To install the Tri-Brid™ chocking system, individual chock plate assemblies are installed at each anchor bolt utilizing a slot for each anchor bolt. (No lifting of the machine is required)

The Tri-Brid™ chock assemblies should be installed before the forms for the final grout pour are put in place. The top of these forms should be no higher than the top elevation of the final grout pour. The equipment jackscrews, if provided, are passed through holes/slots in the plates and are used to align the machine. If the equipment does not have jackscrews, then jackscrews built into the Tri-Brid™ assemblies are used.

Next the exact alignment of the machine is done using procedures appropriate for the type machine being supported. With the plates in place under the machine, the bottom chock plate is grouted in place using Rowan Resin 427 foundation grout, which is allowed to harden. If required, after alignment, a high modulus epoxy chocking material, is poured into open cell foam dams. When an epoxy chock is not used, the machine frame rests directly on the high friction composite plate.

As installed originally, the composite plate is at the neutral point so it can be later moved in or out $\frac{3}{4}$ of an inch, if later vertical adjustment is required. $\frac{1}{32}$ of an inch horizontal movement will result in a vertical change of .001". Alignment changes are accomplished at any one anchor bolt by transferring the machine weight to the associated jackscrew, after loosening the anchor bolt nut. Using the jackscrew, the machine is lifted .010", thus freeing the adjusting chock so it can be moved in or out as required. Once the correct elevation change is made, the weight of the machine is transferred back to the Tri-Brid™ System and the anchor bolt retightened to its specified pre-load. After a final alignment, recheck to be sure the proper correction

has been made. The engine chock locking screws are used to securely fasten the chock bottom adjusting plate in place. All of these steps can be accomplished in a few minutes without the removal and replacement of the epoxy chock that was poured in place during installation. This eliminates the two days usually required to make an alignment adjustment with poured-in-place epoxy chocks set the old way directly on the grout cap.

Robt. L. Rowan & Assoc., Inc. · 3816 Dacoma · P.O. Box 920760 · Houston, Texas 77292-0760
Tel (713) 681-5811 · Toll Free (800) 231-2908 · Fax (713) 681-5815

Visit our website at www.rlrowan.com

© Copyright 1999 – Robt. L. Rowan & Assoc., Inc.