



## R4® MULTI-PURPOSE

PATENTED



- self-tapping
- countersunk head
- patented head & thread
- NO pre-drilling
- NO stripped heads

GRK's R4® Self-Countersinking screw has six self-contained cutting pockets which act like a router and transport the "drill dust" away from the edge of the screw hole. They also widen the countersink hole only around the head shape. The screw head top closes the hole exactly, leaving no damaged fibers around the wider area of the head.

The R4® has over 60 sizes available, 4 x 3/8" to 12 x 12".

Multi-use: wood, particleboard, plastic, sheet metal, cement fiber board, composite decking, wood decking.

### Shear Test Result for R4 Multipurpose Screws

#4	139 lb
#6	301 lb
#8	361 lb
#9	452 lb
#10	687 lb
#12	720 lb

\*\*test stopped after wood failure or 1/8" screw displacement

All tests were conducted at independent laboratories in the United States, Germany and Taiwan. Tests ASTM D 1761 Lateral Resistance Slip, Wood to Wood connections. Wood failed in majority of tests prior to screw failure. Tests conducted in SPF. Please note, the above stated values are ultimate loads. For construction design purposes, a safety margin of 40% should be applied unless otherwise stated by an architect or engineer.

**Screw penetration only with lengths of thread of R4® and RSS® screw as required by ASTM. All data are average ultimate load values.**



## RSS® STRUCTURAL

PATENTED



- sharp threads & points
- built-in washer
- Climatek® plated & hardened steel
- ICBO Report #5883

GRK's RSS® screw is made of specially hardened steel to provide you with high tensile, torque and shear strength. The sharp threads and points bite instantly into the material (including hardwood), reducing the splitting effect due to smaller shanks.

Our round head with built-in shield (washer type head) has no sharp edges such as on conventional lag screws. The added shoulder (nominal diameter) underneath the washer has the ability to center the screws in pre-drilled hardware like hinges and connector plates.

The #30 Star Drive will deliver approximately 650 lbs of energy, eliminating the need to drill a pilot hole.

Best of all, the RSS® screw may be used as a lag screw replacement.

### Shear Strength Test Results for RSS Structural Screws

5/16 x 2 1/2"	377 kg/829 lb
5/16 x 3 1/8"	385 kg/847 lb
5/16 x 4"	604 kg/1328 lb
5/16 x 5 1/8"	605 kg/1331 lb
5/16 x 6"	607 kg/1335 lb
3/8 x 7 1/4"	583 kg/1282 lb
3/8 x 8"	630 kg/1386 lb
3/8 x 10"	684 kg/1504 lb
3/8 x 12"	864 kg/1900 lb
3/8 x 14 1/8"	890 kg/1958 lb
3/8 x 16"	939 kg/2065 lb

\*\*test stopped after wood failure or 1/8" screw displacement

All tests were conducted at independent laboratories in the United States, Germany and Taiwan. Tests were conducted in accordance with ASTM and/or DIN norms. Testing is ongoing and is conducted on every production series. Laboratory accreditations include ICBO, ICC, CNLA, TÜV, Ü, ISO, DAR.

## TECHNICAL DATA

### Pull Out Test Results for RSS Structural Screws

	Sidegrain:	Endgrain:
5/16 x 2 1/2"	791 kg/1740 lb	556 kg/1223 lb
5/16 x 3 1/8"	934 kg/2054 lb	1055 kg/2321 lb
5/16 x 4"	1202 kg/2644 lb	1166 kg/2565 lb
5/16 x 5 1/8"	1248 kg/2745 lb	1286 kg/2829 lb
5/16 x 6"	1645 kg/3619 lb	1601 kg/3522 lb
3/8 x 7 1/4"	1801 kg/3962 lb	1782 kg/3920 lb
3/8 x 8"	1984 kg/4364 lb	2119 kg/4661 lb
3/8 x 10"	2200 kg/4840 lb	2320 kg/5104 lb
3/8 x 12"	2390 kg/5258 lb	2293 kg/5044 lb
3/8 x 14 1/8"	2412 kg/5306 lb	2351 kg/5172 lb
3/8 x 16"	2723 kg/5990 lb	2615 kg/5753 lb

\*\*test stopped after wood failure or 1/8" screw displacement

### Head Pull-Through Test Results for

#### RSS Structural Screws

5/16" screws:	avg. 825 lbs.
Shaft diameter:	0.198"
Head diameter:	0.616"

3/8" screws:	avg. 889 lbs.
Shaft diameter:	0.220"
Head diameter:	0.711"

\*\*test stopped after wood failure or 1/8" screw displacement

### Minimum Tensile Strength

GRK Spec:	139,000 PSI
Code Spec:	45,000 PSI

### Bending Yield Moment Test for

#### RSS Structural Screws

5/16":	159,073 PSI
3/8":	177,241 PSI

### Minimum Bending Angle

GRK Spec:	35 degrees
Industry Spec:	15 degrees

### GRK Certifications include

ISO 9001 - 2000  
ICBO / ICC

Ü - German Institute for Building Technology