

**TUFF-SEAL™**

**RSR SERIES ALUMINUM CORD GRIPS**



**RSR Series Straight Aluminum Cord Grips (CONTINUED FROM PAGE G-1)**

For applications known for their severe conditions – such as oil and gas, marine, food & chemical processing – RSR Cord Grips are

available in nickel-plated aluminum. Providing exceptional corrosion resistance and high wear resistance, nickel-plated connectors also feature an attractive finish similar to that of polished stainless steel.

Tuff Seal RSR Cord Grips protect cable from damage and pull-out and are used in conduit hubs or knock-outs at the point where the electrical cable is to be terminated.

**NOTES**

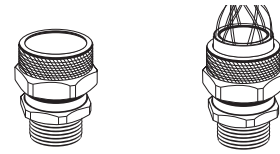
- Accessories
- Locknuts and O-Rings: Pages G-18
- Special Configurations
  - Special configurations and materials are available. Consult factory.
- All wire mesh is stainless steel.
- Dimension & certification information on pages G-34 & G-36 in Tuff-Seal Technical Reference.



Nickel-plated aluminum: Cord grips available in nickel-plated aluminum. Add "N" to end of prefix. (ex: RSR-309 becomes RSRN-309)

*For dimensions match the Form Size to the chart on page G-36*

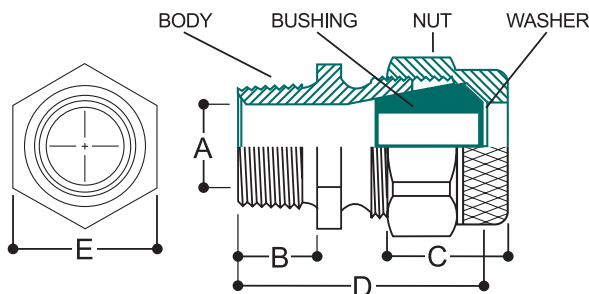
**COMPLETE ASSEMBLY PART NUMBERS**



Conduit Size (NPT)	Form Size	Cable Range	Cord Grip	Cord Grip With Mesh
<b>1"</b>				
	4	.438 – .562	RSR-309	RSR-309-E
	4	.562 – .625	RSR-310	RSR-310-E
	4	.562 – .688	RSR-311	RSR-311-E
	4	.625 – .750	RSR-312	RSR-312-E
	4	.688 – .812	RSR-313	RSR-313-E
	4	.750 – .875	RSR-314	RSR-314-E
	4	.812 – .938	RSR-315	RSR-315-E
	4	.875 – 1.000	RSR-316*	RSR-316-E
<b>1 1/8"</b>				
	5	.875 – 1.000	RSR-3516	RSR-3516-E
	5	1.000 – 1.125	RSR-3518*	RSR-3518-E
	5	1.125 – 1.250	RSR-3520*	RSR-3520-E
	5	1.250 – 1.375	RSR-3522*	RSR-3522-E
<b>1 1/4"</b>				
	5	.562 – .688	RSR-411	—
	5	.688 – .812	RSR-413	—
	5	.750 – .875	RSR-414	—
	5	.875 – 1.000	RSR-416	RSR-416-E
	5	1.000 – 1.125	RSR-418	RSR-418-E
	5	1.125 – 1.250	RSR-420*	RSR-420-E
	5	1.250 – 1.375	RSR-422*	RSR-422-E
<b>1 1/2"</b>				
	5	.562 – .688	RSR-511	—
	5	.688 – .812	RSR-513	—
	5	.750 – .875	RSR-514	—
	5	.875 – 1.000	RSR-516	RSR-516-E
	5	1.000 – 1.125	RSR-518	RSR-518-E
	5	1.125 – 1.250	RSR-520	RSR-520-E
	5	1.250 – 1.375	RSR-522	RSR-522-E
<b>1 1/2"</b>				
	6	1.250 – 1.375	RSR-5622	RSR-5622-E
	6	1.438 – 1.562	RSR-5625*	RSR-5625-E
	6	1.562 – 1.688	RSR-5627*	RSR-5627-E
	6	1.688 – 1.812	RSR-5629*	RSR-5629-E
<b>2"</b>				
	6	1.250 – 1.375	RSR-622	RSR-622-E
	6	1.312 – 1.437	RSR-623	RSR-623-E
	6	1.438 – 1.562	RSR-625	RSR-625-E
	6	1.562 – 1.688	RSR-627	RSR-627-E
	6	1.688 – 1.812	RSR-629	RSR-629-E
<b>2"</b>				
	7	1.688 – 1.812	RSR-6729	RSR-6729-E
	7	1.812 – 1.938	RSR-6731	RSR-6731-E
	7	1.938 – 2.062	RSR-6733*	RSR-6733-E
	7	2.062 – 2.188	RSR-6735*	RSR-6735-E
	7	2.188 – 2.312	RSR-6737*	RSR-6737-E
	7	2.312 – 2.438	RSR-6739*	RSR-6739-E
<b>2 1/2"</b>				
	7	1.688 – 1.812	RSR-729	RSR-729-E
	7	1.812 – 1.938	RSR-731	RSR-731-E
	7	1.938 – 2.062	RSR-733	RSR-733-E
	7	2.062 – 2.188	RSR-735	RSR-735-E
	7	2.188 – 2.312	RSR-737	RSR-737-E
	7	2.312 – 2.438	RSR-739*	RSR-739-E
<b>3"</b>				
	7	1.688 – 1.812	RSR-8729	RSR-8729-E
	7	1.812 – 1.938	RSR-8731	RSR-8731-E
	7	1.938 – 2.062	RSR-8733	RSR-8733-E
	7	2.062 – 2.188	RSR-8735	RSR-8735-E
	7	2.188 – 2.312	RSR-8737	RSR-8737-E
	7	2.312 – 2.438	RSR-8739*	RSR-8739-E
	7	2.437 – 2.625	RSR-901	RSR-901-E
	7	2.625 – 2.812	RSR-902	RSR-902-E
	7	2.812 – 3.000	RSR-903	RSR-903-E

\*Cable may have to be stripped to pass through the bore of the body

**RSR STRAIGHT CORD GRIP DIMENSIONS**



**ALUMINUM AND NICKEL-PLATED ALUMINUM**

Conduit Size	Form Size	A Body Bore	B	C	D Body Dia.	E Nut Dia.
1/4"	1	0.34	0.44	0.59	0.88	0.96
3/8"	1	0.46	0.44	0.59	0.88	0.96
1/2"	1	0.46	0.44	0.59	0.88	0.96
1/2"	2	0.62	0.56	0.72	1.00	1.26
1/2"	3	0.62	0.54	0.86	1.37	1.55
3/4"	2	0.62	0.56	0.72	1.12	1.26
3/4"	3	0.81	0.57	0.86	1.25	1.55
3/4"	4	0.81	0.57	0.97	1.37	1.74
1"	4	1.00	0.62	0.97	1.44	1.74
1"	5	1.10	0.70	1.25	2.00	2.47
1 1/4"	5	1.30	0.70	1.25	2.00	2.47
1 1/2"	5	1.43	0.70	1.25	2.47	2.47
1 1/2"	6	1.50	1.00	1.72	2.90	2.97
2"	6	1.90	0.81	1.72	2.83	2.97
2"	7	2.00	1.31	3.50	4.00	4.30
2 1/2"	7	2.36	1.31	3.50	4.00	4.30
3"	7	2.36	1.31	3.50	4.00	4.30

Dimension A is the minimum Body Bore. Other dimensions are nominal.

Dimension D is with the Nut snug but Bushing uncompressed.

Dimension E is across the Body Hex. corners.

**NYLON AND VALOX**

Conduit Size	Form Size	A Body Bore	B	C	D Body Hex	E Nut Dia.
3/8"	1	0.44	0.49	0.70	0.94	0.94
1/2"	2	0.50	0.88	1.12	1.25	
3/4"	3	0.56	0.88	1.38	1.50	

**STEEL**

Conduit Size	Form Size	A Body Bore	B	C	D Body Hex	E Nut Dia.
3/8"	1	0.47	0.44	0.56	0.88	0.88
1/2"	2	0.62	0.56	0.69	1.00	0.12
3/4"	3	0.81	0.56	0.85	1.25	1.37
1"	4	1.00	0.63	0.94	1.43	1.56

**STAINLESS STEEL**

Conduit Size	Form Size	A Body Bore	B	C	D Body Hex	E Nut Dia.
3/8"	1	0.47	0.44	0.56	0.94	0.88
1/2"	2	0.62	0.56	0.69	1.12	0.12
3/4"	3	0.81	0.56	0.85	1.37	1.37
1"	4	1.00	0.63	0.94	1.56	1.56

**TUFF-SEAL™**

**TUFF-SEAL TECHNICAL  
 REFERENCE SECTION**

**RoHS  STATEMENT**

Remke Industries supports the European Union's efforts to remove harmful chemicals from electrical products. In compliance with Directive 2002/95/EC of the European Parliament and the Council of the European Union regarding the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), Remke Industries certifies either:

1. The maximum concentration values of weight in homogenous materials for the substances referred to in Article 4(1) of directive 2002/95/EC that are contained in the products do not exceed the maximum concentration values of 0.1% in respect of lead, mercury, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers, and 0.01% in respect of cadmium. OR
2. The product supplied is exempt from this directive.

Remke Industries certifies that all products of our manufacture are fully compliant to the current RoHS Directive.



REMKE INDUSTRIES  
 REGISTERED TO ISO 9001:2000  
 FILE NUMBER A9208

**ISO CERTIFICATION**

On July 1st, 2003 Remke Industries received ISO 9001 : 2000 certification which certifies that Remke is compliant with current ISO standards.

**OPERATING TEMPERATURES**

Material	Temperature range
Aluminum	-40°F to +300°F (-40°C to +149°C)
Nylon	-40°F to +225°F (-40°C to +107°C)
Steel	-60°F to +1000°F (-51°C to +537°C)
Stainless Steel	-60°F to +1000°F (-51°C to +537°C)
Neoprene (bushings)	-40°F to +250°F (-40°C to +121°C)
Silicone (bushings)	-150°F to +450°F (-65°C to +232°C)
Valox	-40°F to +250°F (-40°C to +121°C)
Dome-Cap Connectors:	
Non-Metallic	-22°F to +176°F (-30°C to +80°C)
Metallic	-40°F to +212°F (-40°C to +100°C)

**FLAMMABILITY**

Component	Rating
Mesh Grip	UL 94HB
Fitting	UL 94V-2

Note: Non-metallic cord connectors will not support combustion.

**APPROVALS, CERTIFICATION & COMPLIANCES**

Agency	File Number	Product or Component
Underwriters Laboratories Inc. (UL)	E53599	RSR Series (Straight, 90°, 45°) RSP Series (Straight, 90°) RSM Cord Grips RSRS Cord Grips RSRF Series
Canadian Standards Association (CSA)	28985	RSR Series (Straight, 90°, 45°) RSP Series (Straight, 90°) RSRS Cord Grips RSRF Series RSSS Series RSPV Series Teck Cable Connectors
National Electrical Code (NEC)	Articles 400-10 Articles 400-14	RSR Series (Straight, 90°, 45°) RSP Series (Straight, 90°) RSM Cord Grips RSRS Cord Grips RSRF Series
	Articles 501-4(B) Articles 502-4(A) Articles 503-3(A)	WH Series Watertight Conduit Hubs WH Series Watertight Conduit Hubs WH Series Watertight Conduit Hubs
ROHS & WEE	All Tuff-Seal and Tuff-Link Products are Compliant	

**HAZARDOUS LOCATIONS**

Definition	Remke Products
The Remke products listed are suitable for use in hazardous locations per Class I, Div. 2, Class II, Div 1 & 2, and Class III, Div. 1 & 2	RSR Series (Straight, 90°, 45°) WH Series Watertight Conduit Hubs RSP Series (Straight, 90°) RSM Cord Grips, RSRS Cord Grips RSRF Series

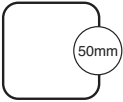

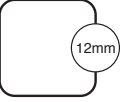
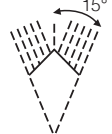
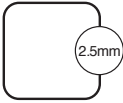
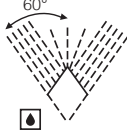
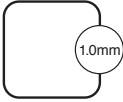

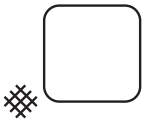
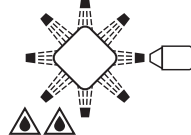
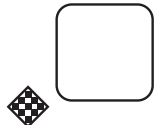

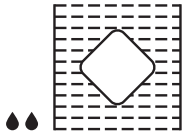
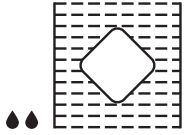
**KNOCKOUT DIMENSIONS**

N.P.T. Hub Size	Knockout Hole Recommended (Min to Max / Inches)
1/4"	.540 to .570
3/8"	.671 to .701
1/2"	.859 to .906
3/4"	1.094 to 1.141
1"	1.359 to 1.406
1 1/4"	1.719 to 1.766
1 1/2"	1.969 to 2.016
2"	2.453 to 2.500
2 1/2"	2.953 to 3.000
3"	3.578 to 3.625

**RATINGS/MATERIAL OF CONSTRUCTION**

Material	IP 54 and NEMA 3	IP 54 and NEMA 3R	IP 65 and NEMA 4	IP 56 and NEMA 4X	IP 67 and NEMA 6	IP 52 and NEMA 12
Aluminum	X	X	X	—	X	X
Nickel-Plated Aluminum	X	X	X	X	X	X
Steel	X	X	X	—	X	X
Stainless Steel	X	X	X	X	X	X
Nylon	X	X	X	—	X	X
Valox	X	X	X	X	X	X

**IP RATINGS DEFINITION**

First Digit	Protection From Solid Objects	Second Digit	Protection From Moisture
<b>0</b>	Non-Protected	<b>0</b>	Non-Protected
<b>1</b>	 <p>Protected against solid objects over 50mm e.g hands, large tools</p>	<b>1</b>	 <p>Protection against vertically falling drops of water</p>
<b>2</b>	 <p>Protected against solid objects over 12mm e.g hands, large tools</p>	<b>2</b>	 <p>Protection against direct sprays of water up to a 15° angle</p>
<b>3</b>	 <p>Protection from entry by solid objects over 2.5mm e.g. wire or small tools</p>	<b>3</b>	 <p>Protection against direct sprays of water up to a 60° angle</p>
<b>4</b>	 <p>Protection from entry by solid objects over 1.0mm e.g. wires or tools</p>	<b>4</b>	 <p>Protection against water sprayed from any direction. Limited ingress permitted.</p>
<b>5</b>	 <p>Protection against deposits of dust e.g. against equipment damage due to deposits</p>	<b>5</b>	 <p>Protection against low pressure water jets from any direction. Limited ingress permitted</p>
<b>6</b>	 <p>Total protection against dust ingress e.g. Dust-Tight</p>	<b>6</b>	 <p>Protection against high pressure water jets from any direction. Limited ingress permitted.</p>
<b>IP CODE EXAMPLE</b>		<b>7</b>	 <p>Protection against immersion between 15cm and 1M</p>
IP54 = IP (IP LETTER CODE), 5 (1st Digit), 4 (2nd Digit)		<b>8</b>	 <p>Protection against complete and continuous immersion in water under pressure e.g Water-Tight</p>

**THREAD SPECIFICATIONS**

**PG THREAD SPECIFICATIONS**

Thread Size	Thread Diameter (mm)	Pitch (mm)	Outside Diameter(mm)
Pg 7	12.5	1.27	11.3
Pg 9	15.2	1.41	13.9
Pg 11	18.6	1.41	17.3
Pg 13.5	20.4	1.41	19.1
Pg 16	22.5	1.41	21.2
Pg 21	28.3	1.56	26.8
Pg 29	37.0	1.56	35.5
Pg 36	47.0	1.56	45.5
Pg 42	54.0	1.56	52.5
Pg 48	59.3	1.56	57.8

**NPT THREAD SPECIFICATIONS**

Thread Size	Thread Diameter (mm)	Pitch (mm)
NPT 1/4"	13.7	1.41
NPT 3/8"	17.1	1.41
NPT 1/2"	21.3	1.81
NPT 3/4"	26.7	1.81
NPT 1"	33.4	2.21
NPT 1-1/4"	48.3	2.21
NPT 1-1/2"	47.0	2.21
NPT 2"	60.3	2.21

**METRIC THREAD SPECIFICATIONS**

Thread Size	Thread Diameter (mm)	Pitch (mm)	Outside Diameter(mm)
M12 x 1.5	12	1.50	10.6
M16 x 1.5	16	1.50	14.6
M20 x 1.5	20	1.50	18.6
M25 x 1.5	25	1.50	23.6
M32 x 1.5	32	1.50	30.6
M40 x 1.5	40	1.50	38.6
M50 x 1.5	50	1.50	48.6
M63 x 1.5	63	1.50	61.6

