

TUFF-SEAL™

RSR SERIES ALUMINUM CORD GRIPS



RSR Series Straight Aluminum Cord Grips

Tuff Seal™ RSR Series Aluminum Cord Grips are UL Listed and CSA Certified for use in both indoor and outdoor applications to prevent cable pullout, control arc of bend, and to provide a tight seal against environmental elements such as dirt, moisture and coolants.

The breadth of the line encompasses conduit sizes from 1/4" to 3" with fittings offered in machined aluminum, nickel-plated aluminum, steel, stainless steel, nylon and Valox®. Other features of the family of RSR Cord Grips include:

- A unique design with a combination tightening surface that includes both a hex area and a knurled surface
- Available with or without stainless steel wire mesh
- Optional embedded Viton® O-Ring ensures a watertight and corrosion-resistant seal
- Available in NPT, Pg/ISO or Metric threads
- Anti-friction washer that fits between the nut and bushing for easier compression.

NOTES

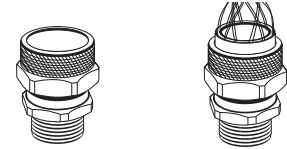
Accessories
 Locknuts and O-Rings: Pages G-18

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.

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
1/4"				
	1	.125 – .188	RSR-0003	—
	1	.188 – .250	RSR-0004	RSR-0004-E
	1	.250 – .312	RSR-0005	RSR-0005-E
	1	.312 – .375	RSR-0006	RSR-0006-E
	1	.375 – .438	RSR-0007*	RSR-0007-E
3/8"				
	1	.125 – .188	RSR-003	—
	1	.188 – .250	RSR-004	RSR-004-E
	1	.250 – .312	RSR-005	RSR-005-E
	1	.312 – .375	RSR-006	RSR-006-E
	1	.375 – .438	RSR-007*	RSR-007-E
1/2"				
	1	.125 – .188	RSR-1003	—
	1	.188 – .250	RSR-1004	RSR-1004-E
	1	.250 – .312	RSR-1005	RSR-1005-E
	1	.312 – .375	RSR-1006	RSR-1006-E
	1	.375 – .438	RSR-1007	RSR-1007-E
1/2"				
	2	.125 – .188	RSR-103	—
	2	.188 – .250	RSR-104	RSR-104-E
	2	.250 – .312	RSR-105	RSR-105-E
	2	.312 – .375	RSR-106	RSR-106-E
	2	.375 – .438	RSR-107	RSR-107-E
	2	.438 – .500	RSR-108	RSR-108-E
	2	.500 – .562	RSR-109	RSR-109-E
	2	.562 – .625	RSR-110	RSR-110-E
1/2"				
	3	.438 – .500	RSR-1208	RSR-1208-E
	3	.500 – .562	RSR-1209	RSR-1209-E
	3	.562 – .625	RSR-1210	RSR-1210-E
	3	.562 – .688	RSR-1211*	RSR-1211-E
	3	.625 – .750	RSR-1212*	RSR-1212-E
	3	.688 – .812	RSR-1213*	RSR-1213-E
3/4"				
	2	.125 – .188	RSR-2103	—
	2	.188 – .250	RSR-2104	RSR-2104-E
	2	.250 – .312	RSR-2105	RSR-2105-E
	2	.312 – .375	RSR-2106	RSR-2106-E
	2	.375 – .438	RSR-2107	RSR-2107-E
	2	.438 – .500	RSR-2108	RSR-2108-E
	2	.500 – .562	RSR-2109	RSR-2109-E
	2	.562 – .625	RSR-2110	RSR-2110-E
3/4"				
	3	.438 – .500	RSR-208	RSR-208-E
	3	.500 – .562	RSR-209	RSR-209-E
	3	.562 – .625	RSR-210	RSR-210-E
	3	.562 – .688	RSR-211	RSR-211-E
	3	.625 – .750	RSR-212	RSR-212-E
	3	.688 – .812	RSR-213	RSR-213-E
3/4"				
	4	.500 – .562	RSR-2309	RSR-2309-E
	4	.562 – .625	RSR-2310	RSR-2310-E
	4	.562 – .688	RSR-2311	RSR-2311-E
	4	.625 – .750	RSR-2312	RSR-2312-E
	4	.688 – .812	RSR-2313	RSR-2313-E
	4	.750 – .875	RSR-2314*	RSR-2314-E
	4	.812 – .938	RSR-2315*	RSR-2315-E
	4	.875 – 1.000	RSR-2316*	RSR-2316-E

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

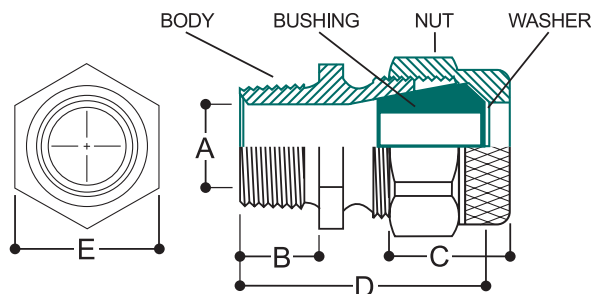


Nickel-plated aluminum:
 Cord grips available in nickel-plated aluminum. Add "N" to end of prefix.
 (ex: RSR-0003 becomes RSRN-0003)



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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.



ISO CERTIFICATION

REMKE INDUSTRIES
 REGISTERED TO ISO 9001:2000
 FILE NUMBER A9208

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

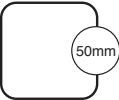

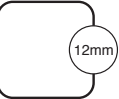
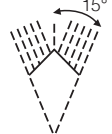
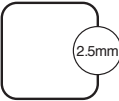
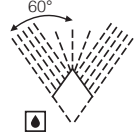
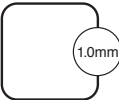

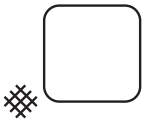
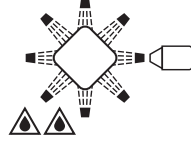
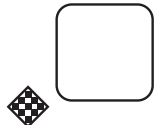

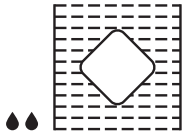
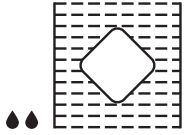
KNOCKOUT DIMENSIONS

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

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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