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 TECHNICAL DATA SHEET

# Steel grounding fittings - Series 5200GR/5300GR

## For liquid-tight flexible metallic conduit

### T&B Liquidtight Systems®



Revolver® steel liquid-tight fittings provide external grounding for the most demanding industrial and commercial installations.

#### Certifications / Standards:




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#### Features & Benefits:

- Meets UL 514B and CSA C22.2, No. 18.3 for liquid-tight fittings
- Full compliance to IEC 61386-1, -23 requirements, CE Certified
- Trade sizes from 3/8" to 6" (12mm to 153mm)
- Insulated and non-insulated versions
- Straight, 45° and 90° conduit bodies
- NPT Threads
- Coordinated performance with T&B Liquidtight Systems Flexible Metallic Conduits
- Ingress protection ratings aligned with industrial enclosures
- Safe Edge® ground cones provide superior bonding
- Double Bevel Sealing Ring eases assembly and insures seal tight performance
- Heat curled insulators protect wire sheathing from damage

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#### Applications:

- Used where liquid-tight flexible metallic raceway is installed in outdoor or indoor locations, and exposed to continuous or intermittent moisture
- Used where external bonding jumper is required around liquid-tight flexible metal conduit
- Typical applications include raceway for general purpose industrial and commercial construction, Machine OEMs, panel builders, indoor and outdoor installations
- Liquid-tight applications against water, oils, cutting fluids, mild acids
- For use in electrical circuits up to 1,000 V
- Suitable for use in Class 1 Division 2, Class 2 Division 1 & 2 Hazardous Locations per NEC® Section 500

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#### Construction / Material / Finish:

- Trade sizes 3/8" to 1 1/4" Steel with Zinc Chromate finish
- Trade sizes 1 1/2 to 6" malleable iron with Zinc Chromate finish
- Zinc plated steel ground cones
- Thermoplastic nylon seal rings
- Halogen Free seal rings, insulators and seal gaskets
- Tempered Cast Locknuts with teeth for vibration resistance

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#### Environment ratings:

##### Working Temperature:

- UL: Gen: -20 to +105°C (-4 to +221°F)
- CSA: Gen: -20 to +105°C (-4 to +221°F)
- IEC/CE: Gen: -25 to +105°C (-13 to +221°F)

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#### Chemical Resistance Guide:

- See Publication TDS000081 (Fittings: Steel, Iron & PA66 Polyamide)
- See Publication TDS000117 (Liquid-tight Flexible Metal Conduits)

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#### Conforms to:

- UL 514B, Fittings for Cable and Conduit
  - File: E23018, E3060
- CSA C22.2, No. 18.3, Outlet and Conduit Boxes, Fittings and Accessories
  - File: LR-4484
- IEC/EN 61386-1, -23, Conduit Systems for Cable Management
  - EU DoC: EC-012-7186
- RoHS (Restriction of Hazardous Substance directive)
- NEMA FB-1 (Fittings and Conduit Bodies)
- JIC EGP1 (Electrical standard for GP machine tools)
- JIC EMP1 (Electrical Standard for Mass Production Engineering)
- Federal Specification A-A 50552 (Fittings for flexible conduit)
- Federal Specification H-28 (Threads)

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#### Ingress Protection:

- Provides "Ingress Integrity" between enclosures, fittings, conduits & seals when using Series 5200GR/5300GR liquid-tight fittings and T&B Liquidtight Systems LFMC
- Covers all trade sizes from 3/8" to 6" (12mm to 153mm)
- Ingress ratings require use of Series 5260 Seal Gaskets

#### UL, CSA & NEMA system ingress ratings:

- UL Listed type ratings tested to UL 50E requirements with UL Listed LFMC
- UL File No.: E23018
  - Indoor: Type 4, 12, 13
  - Outdoor: Type 3, 3R, 4
- CSA C22.2, No. 94.2: Type 3, 3R, 4, 12, 13
- NEMA 250: Type 3, 3R, 4, 12, 13

#### IEC system ingress ratings:

- IP Ingress Protection per IEC 60529 requirements
- IEC Ingress Ratings: IP66, IP67

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#### Standards requirements:

##### Designed to UL 514B and CSA C22.2, No. 18.3 test requirements including:

- Assembly, Pull, Resistance, Oil spray, Polymer durability, Flammability Coating thickness, Current withstand

##### Meets all IEC/EN 61386-1, -23 standard requirements including:

- Impact resistance - Code 3 Medium; 6 Joules
- Tensile strength - Code 3 Medium; 500 N/2 min.
- Lower and upper temperatures
- IP protection against solid and liquids

**Product selection**

**Series 5200GR/5300GR Liquid-tight Fittings**

Trade size			Thread Type		Insulated			Non-Insulated			Seal Gaskets
Inches	Metric	ISO BS EN	Standard	Size	Straight Part no.	45° Part no.	90° Part no.	Straight Part no.	45° Part no.	90° Part no.	Part no.
3/8"	12mm	16mm	NPT	1/2"	5331GR	5341GR	5351GR	5231GR	5241GR	5251GR	5262
			ISO	M16	—	—	—	—	—	—	—
			PG	13.5	—	—	—	—	—	—	—
1/2"	16mm	20mm	NPT	1/2"	5332GR	5342GR	5352GR	5232GR	5242GR	5252GR	5262
			ISO	M20	—	—	—	—	—	—	—
			PG	16	—	—	—	—	—	—	—
3/4"	21mm	25mm	NPT	3/4"	5333GR	5343GR	5353GR	5233GR	5243GR	5253GR	5263
			ISO	M25	—	—	—	—	—	—	—
			PG	21	—	—	—	—	—	—	—
1"	27mm	32mm	NPT	1"	5334GR	5344GR	5354GR	5234GR	5244GR	5254GR	5264
			ISO	M32	—	—	—	—	—	—	—
			PG	29	—	—	—	—	—	—	—
1 1/4"	35mm	40mm	NPT	1 1/4"	5335GR	5345GR	5355GR	5235GR	5245GR	5255GR	5265
			ISO	M40	—	—	—	—	—	—	—
			PG	36	—	—	—	—	—	—	—
1 1/2"	41mm	50mm	NPT	1 1/2"	5336GR	5346GR	5356GR	5236GR	5246GR	5256GR	5266
			ISO	M50	—	—	—	—	—	—	—
			PG	42	—	—	—	—	—	—	—
2"	53mm	63mm	NPT	2"	5337GR	5347GR	5357GR	5237GR	5247GR	5257GR	5267
			ISO	M63	—	—	—	—	—	—	—
			PG	48	—	—	—	—	—	—	—
2 1/2"	63mm	70mm	NPT	2 1/2"	5338GR	5348GR	5358GR	5238GR	5248GR	5258GR	5268
3"	78mm	80mm	NPT	3"	5339GR	5349GR	5359GR	5239GR	5249GR	5259GR	5269
4"	103mm	100mm	NPT	4"	5340GR	5350GR	5360GR	5240GR	5250GR	5260GR	5270
5"	129mm	120mm	NPT	5"	5385GR	—	—	5285GR	—	—	—
6"	155mm	140mm	NPT	6"	5386GR	—	—	—	—	—	—

**Dimensions (approximate)**

Drawing	Trade size			Inches			Millimeters			Weight	
	Inches	Metric	ISO BS EN	A	B	C	A	B	C	lbs.	kg
<b>Series 5200GR/5300GR Straight LT Fittings</b>											
	3/8"	12mm	16mm	1 1/2"	1 1/16"	9/16"	29.4	23.8	14.3	0.13	0.06
	1/2"	16mm	20mm	1 3/8"	1"	9/16"	34.9	25.4	14.3	0.22	0.10
	3/4"	21mm	25mm	1 2 1/2"	1 1/16"	9/16"	42.1	27.0	14.3	0.25	0.11
	1"	27mm	32mm	1 7/8"	1 1/8"	3/4"	47.6	33.3	19.1	0.38	0.17
	1 1/4"	35mm	40mm	2 3/32"	1 1 1/16"	13/16"	53.2	42.9	20.6	0.50	0.23
	1 1/2"	41mm	50mm	2 2 3/32"	1 7/8"	13/16"	69.1	47.6	20.6	0.93	0.42
	2"	53mm	63mm	3 1/4"	2 1/16"	7/8"	82.6	55.6	22.2	1.38	0.62
	2 1/2"	63mm	70mm	3 3/4"	3 1/8"	1"	95.3	79.4	25.4	3.25	1.47
	3"	78mm	80mm	4 1/2"	3 3/4"	1 1/8"	114.3	82.6	25.4	4.38	1.98
	4"	103mm	100mm	5 1/2"	3 3/8"	1 1/8"	139.7	85.7	28.6	7.52	3.41
5"	129mm	120mm	8 3/4"	5 1/8"	1 7/8"	222.3	130.2	47.6	25.00	11.34	
6"	155mm	140mm	8 3/4"	6 1/2"	2"	222.3	165.1	50.8	27.00	12.25	
<b>Series 5200GR/5300GR 45° LT Fittings</b>											
	3/8"	12mm	16mm	1 1/2"	1 9/16"	9/16"	29.4	39.7	14.3	0.18	0.08
	1/2"	16mm	20mm	1 3/8"	1 7/8"	9/16"	34.9	73.0	14.3	0.33	0.15
	3/4"	21mm	25mm	1 2 1/2"	2 1/8"	9/16"	42.1	54.0	14.3	0.38	0.17
	1"	27mm	32mm	1 7/8"	2 1/4"	3/4"	47.6	57.2	19.1	0.54	0.24
	1 1/4"	35mm	40mm	2 3/32"	2 3/4"	13/16"	53.2	69.9	20.6	0.98	0.44
	1 1/2"	41mm	50mm	2 2 3/32"	3 3/8"	13/16"	69.1	85.7	20.6	1.21	0.55
	2"	53mm	63mm	3 1/4"	3 3/8"	7/8"	82.6	98.4	22.2	2.19	0.99
	2 1/2"	63mm	70mm	3 3/4"	4 1/4"	1"	95.3	108.0	25.4	5.95	2.70
	3"	78mm	80mm	4 1/2"	4 1/4"	1 1/8"	114.3	108.0	25.4	7.75	3.52
	4"	103mm	100mm	5 1/2"	4 1/2"	1 1/8"	139.7	114.3	28.6	11.00	4.99
<b>Series 5200GR/5300GR 90° LT Fittings</b>											
	3/8"	12mm	16mm	1 1/2"	1 1/8"	9/16"	29.4	34.9	14.3	0.21	0.10
	1/2"	16mm	20mm	1 3/8"	1 9/16"	9/16"	34.9	39.7	14.3	0.29	0.13
	3/4"	21mm	25mm	1 2 1/2"	1 3/4"	9/16"	42.1	44.5	14.3	0.37	0.17
	1"	27mm	32mm	1 7/8"	2 3/16"	3/4"	47.6	55.6	19.1	0.66	0.30
	1 1/4"	35mm	40mm	2 3/32"	2 3/4"	13/16"	53.2	69.9	20.6	1.19	0.54
	1 1/2"	41mm	50mm	2 2 3/32"	2 1 1/16"	13/16"	69.1	74.6	20.6	1.55	0.70
	2"	53mm	63mm	3 1/4"	3 1/4"	7/8"	82.6	87.3	22.2	2.77	1.26
	2 1/2"	63mm	70mm	3 3/4"	8 7/8"	1"	95.3	225.4	25.4	8.60	3.90
	3"	78mm	80mm	4 1/2"	10 1/4"	1"	114.3	260.4	25.4	12.86	5.83
	4"	103mm	100mm	5 1/2"	12 3/8"	1 1/8"	139.7	320.7	28.6	20.94	9.50

**Note:**

- Dimensions for reference only.
- Product must be installed in accordance with applicable national and local electrical codes.

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Revolver® steel liquid-tight fittings provide external grounding for the most demanding industrial and commercial installations.

#### Certifications / Standards:




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#### Features & Benefits:

- Meets UL 514B and CSA C22.2, No. 18.3 for liquid-tight fittings
- Full compliance to IEC 61386-1, -23 requirements, CE Certified
- Trade sizes from 3/8" to 6" (12mm to 153mm)
- Insulated and non-insulated versions
- Straight, 45° and 90° conduit bodies
- NPT Threads
- Coordinated performance with T&B Liquidtight Systems Flexible Metallic Conduits
- Ingress protection ratings aligned with industrial enclosures
- Safe Edge® ground cones provide superior bonding
- Double Bevel Sealing Ring eases assembly and insures seal tight performance
- Heat curled insulators protect wire sheathing from damage

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#### Applications:

- Used where liquid-tight flexible metallic raceway is installed in outdoor or indoor locations, and exposed to continuous or intermittent moisture
- Used where external bonding jumper is required around liquid-tight flexible metal conduit
- Typical applications include raceway for general purpose industrial and commercial construction, Machine OEMs, panel builders, indoor and outdoor installations
- Liquid-tight applications against water, oils, cutting fluids, mild acids
- For use in electrical circuits up to 1,000 V
- Suitable for use in Class 1 Division 2, Class 2 Division 1 & 2 Hazardous Locations per NEC® Section 500

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#### Construction / Material / Finish:

- Trade sizes 3/8" to 1 1/4" Steel with Zinc Chromate finish
- Trade sizes 1 1/2 to 6" malleable iron with Zinc Chromate finish
- Zinc plated steel ground cones
- Thermoplastic nylon seal rings
- Halogen Free seal rings, insulators and seal gaskets
- Tempered Cast Locknuts with teeth for vibration resistance

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#### Environment ratings:

##### Working Temperature:

- UL: Gen: -20 to +105°C (-4 to +221°F)
- CSA: Gen: -20 to +105°C (-4 to +221°F)
- IEC/CE: Gen: -25 to +105°C (-13 to +221°F)

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#### Chemical Resistance Guide:

- See Publication TDS000081 (Fittings: Steel, Iron & PA66 Polyamide)
- See Publication TDS000117 (Liquid-tight Flexible Metal Conduits)

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#### Conforms to:

- UL 514B, Fittings for Cable and Conduit
  - File: E23018, E3060
- CSA C22.2, No. 18.3, Outlet and Conduit Boxes, Fittings and Accessories
  - File: LR-4484
- IEC/EN 61386-1, -23, Conduit Systems for Cable Management
  - EU DoC: EC-012-7186
- RoHS (Restriction of Hazardous Substance directive)
- NEMA FB-1 (Fittings and Conduit Bodies)
- JIC EGP1 (Electrical standard for GP machine tools)
- JIC EMP1 (Electrical Standard for Mass Production Engineering)
- Federal Specification A-A 50552 (Fittings for flexible conduit)
- Federal Specification H-28 (Threads)

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#### Ingress Protection:

- Provides "Ingress Integrity" between enclosures, fittings, conduits & seals when using Series 5200GR/5300GR liquid-tight fittings and T&B Liquidtight Systems LFMC
- Covers all trade sizes from 3/8" to 6" (12mm to 153mm)
- Ingress ratings require use of Series 5260 Seal Gaskets

#### UL, CSA & NEMA system ingress ratings:

- UL Listed type ratings tested to UL 50E requirements with UL Listed LFMC
- UL File No.: E23018
  - Indoor: Type 4, 12, 13
  - Outdoor: Type 3, 3R, 4
- CSA C22.2, No. 94.2: Type 3, 3R, 4, 12, 13
- NEMA 250: Type 3, 3R, 4, 12, 13

#### IEC system ingress ratings:

- IP Ingress Protection per IEC 60529 requirements
- IEC Ingress Ratings: IP66, IP67

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#### Standards requirements:

##### Designed to UL 514B and CSA C22.2, No. 18.3 test requirements including:

- Assembly, Pull, Resistance, Oil spray, Polymer durability, Flammability Coating thickness, Current withstand

##### Meets all IEC/EN 61386-1, -23 standard requirements including:

- Impact resistance - Code 3 Medium; 6 Joules
- Tensile strength - Code 3 Medium; 500 N/2 min.
- Lower and upper temperatures
- IP protection against solid and liquids

**Product selection**

**Series 5200GR/5300GR Liquid-tight Fittings**

Trade size			Thread Type		Insulated			Non-Insulated			Seal Gaskets
Inches	Metric	ISO BS EN	Standard	Size	Straight Part no.	45° Part no.	90° Part no.	Straight Part no.	45° Part no.	90° Part no.	Part no.
3/8"	12mm	16mm	NPT	1/2"	5331GR	5341GR	5351GR	5231GR	5241GR	5251GR	5262
			ISO	M16	—	—	—	—	—	—	—
			PG	13.5	—	—	—	—	—	—	—
1/2"	16mm	20mm	NPT	1/2"	5332GR	5342GR	5352GR	5232GR	5242GR	5252GR	5262
			ISO	M20	—	—	—	—	—	—	—
			PG	16	—	—	—	—	—	—	—
3/4"	21mm	25mm	NPT	3/4"	5333GR	5343GR	5353GR	5233GR	5243GR	5253GR	5263
			ISO	M25	—	—	—	—	—	—	—
			PG	21	—	—	—	—	—	—	—
1"	27mm	32mm	NPT	1"	5334GR	5344GR	5354GR	5234GR	5244GR	5254GR	5264
			ISO	M32	—	—	—	—	—	—	—
			PG	29	—	—	—	—	—	—	—
1 1/4"	35mm	40mm	NPT	1 1/4"	5335GR	5345GR	5355GR	5235GR	5245GR	5255GR	5265
			ISO	M40	—	—	—	—	—	—	—
			PG	36	—	—	—	—	—	—	—
1 1/2"	41mm	50mm	NPT	1 1/2"	5336GR	5346GR	5356GR	5236GR	5246GR	5256GR	5266
			ISO	M50	—	—	—	—	—	—	—
			PG	42	—	—	—	—	—	—	—
2"	53mm	63mm	NPT	2"	5337GR	5347GR	5357GR	5237GR	5247GR	5257GR	5267
			ISO	M63	—	—	—	—	—	—	—
			PG	48	—	—	—	—	—	—	—
2 1/2"	63mm	70mm	NPT	2 1/2"	5338GR	5348GR	5358GR	5238GR	5248GR	5258GR	5268
3"	78mm	80mm	NPT	3"	5339GR	5349GR	5359GR	5239GR	5249GR	5259GR	5269
4"	103mm	100mm	NPT	4"	5340GR	5350GR	5360GR	5240GR	5250GR	5260GR	5270
5"	129mm	120mm	NPT	5"	5385GR	—	—	5285GR	—	—	—
6"	155mm	140mm	NPT	6"	5386GR	—	—	—	—	—	—

**Dimensions (approximate)**

Drawing	Trade size			Inches			Millimeters			Weight	
	Inches	Metric	ISO BS EN	A	B	C	A	B	C	lbs.	kg
<b>Series 5200GR/5300GR Straight LT Fittings</b>											
	3/8"	12mm	16mm	1 1/2"	1 1/16"	9/16"	29.4	23.8	14.3	0.13	0.06
	1/2"	16mm	20mm	1 3/8"	1"	9/16"	34.9	25.4	14.3	0.22	0.10
	3/4"	21mm	25mm	1 2 1/2"	1 1/16"	9/16"	42.1	27.0	14.3	0.25	0.11
	1"	27mm	32mm	1 7/8"	1 1/8"	3/4"	47.6	33.3	19.1	0.38	0.17
	1 1/4"	35mm	40mm	2 3/32"	1 1 1/16"	13/16"	53.2	42.9	20.6	0.50	0.23
	1 1/2"	41mm	50mm	2 2 3/32"	1 7/8"	13/16"	69.1	47.6	20.6	0.93	0.42
	2"	53mm	63mm	3 3/4"	2 1/16"	7/8"	82.6	55.6	22.2	1.38	0.62
	2 1/2"	63mm	70mm	3 3/4"	3 3/8"	1"	95.3	79.4	25.4	3.25	1.47
	3"	78mm	80mm	4 1/2"	3 3/4"	1"	114.3	82.6	25.4	4.38	1.98
	4"	103mm	100mm	5 1/2"	3 3/8"	1 1/8"	139.7	85.7	28.6	7.52	3.41
5"	129mm	120mm	8 3/4"	5 1/8"	1 7/8"	222.3	130.2	47.6	25.00	11.34	
6"	155mm	140mm	8 3/4"	6 1/2"	2"	222.3	165.1	50.8	27.00	12.25	
<b>Series 5200GR/5300GR 45° LT Fittings</b>											
	3/8"	12mm	16mm	1 1/2"	1 9/16"	9/16"	29.4	39.7	14.3	0.18	0.08
	1/2"	16mm	20mm	1 3/8"	1 7/8"	9/16"	34.9	73.0	14.3	0.33	0.15
	3/4"	21mm	25mm	1 2 1/2"	2 1/8"	9/16"	42.1	54.0	14.3	0.38	0.17
	1"	27mm	32mm	1 7/8"	2 1/4"	3/4"	47.6	57.2	19.1	0.54	0.24
	1 1/4"	35mm	40mm	2 3/32"	2 3/4"	13/16"	53.2	69.9	20.6	0.98	0.44
	1 1/2"	41mm	50mm	2 2 3/32"	3 3/8"	13/16"	69.1	85.7	20.6	1.21	0.55
	2"	53mm	63mm	3 3/4"	3 3/8"	7/8"	82.6	98.4	22.2	2.19	0.99
	2 1/2"	63mm	70mm	3 3/4"	4 1/4"	1"	95.3	108.0	25.4	5.95	2.70
	3"	78mm	80mm	4 1/2"	4 1/4"	1"	114.3	108.0	25.4	7.75	3.52
	4"	103mm	100mm	5 1/2"	4 1/2"	1 1/8"	139.7	114.3	28.6	11.00	4.99
<b>Series 5200GR/5300GR 90° LT Fittings</b>											
	3/8"	12mm	16mm	1 1/2"	1 1/8"	9/16"	29.4	34.9	14.3	0.21	0.10
	1/2"	16mm	20mm	1 3/8"	1 9/16"	9/16"	34.9	39.7	14.3	0.29	0.13
	3/4"	21mm	25mm	1 2 1/2"	1 3/4"	9/16"	42.1	44.5	14.3	0.37	0.17
	1"	27mm	32mm	1 7/8"	2 3/16"	3/4"	47.6	55.6	19.1	0.66	0.30
	1 1/4"	35mm	40mm	2 3/32"	2 3/4"	13/16"	53.2	69.9	20.6	1.19	0.54
	1 1/2"	41mm	50mm	2 2 3/32"	2 1 1/16"	13/16"	69.1	74.6	20.6	1.55	0.70
	2"	53mm	63mm	3 3/4"	3 1/4"	7/8"	82.6	87.3	22.2	2.77	1.26
	2 1/2"	63mm	70mm	3 3/4"	8 7/8"	1"	95.3	225.4	25.4	8.60	3.90
	3"	78mm	80mm	4 1/2"	10 1/4"	1"	114.3	260.4	25.4	12.86	5.83
	4"	103mm	100mm	5 1/2"	12 3/8"	1 1/8"	139.7	320.7	28.6	20.94	9.50

**Note:**

- Dimensions for reference only.
- Product must be installed in accordance with applicable national and local electrical codes.

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