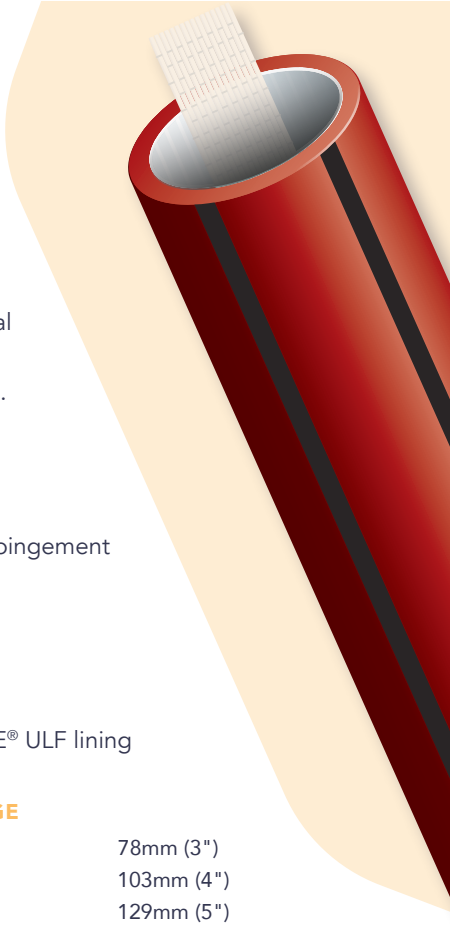
SPECIALTY

POWERGUARD®



- Available in 16mm (1⁄2") to 325mm (12"). Comes standard in long continuous lengths on reels (for 103mm (4") and below) 129mm (5") - 325mm (12") is available in trade length sticks 3.048m (10'), 6.096m (20').
- Manufactured from flexible CSA listed HDPE resin, makes gradual bends without special equipment or added accessories
- Internal longitudinal ribbing comes standard on sizes 16mm (1/2") through 155mm (6"). Sizes 203mm (8") through 305mm (12") will have a smooth interior.
- SILICORE® ULF inner wall eliminates the need for wet lubricants during cable pulling
- Excellent low-temperature properties allow installation in cold climates
- Outstanding long-term power cable protection from shifting ground, rock, and root impingement
- Provides a permanent pathway, simplifies future cable repairs or replacement
- Greatly reduces the number of coupled joints in a continuous installation, reducing the possibility of infiltration of native soil, backfill, and water
- Available with pre-installed Bull-Line Pull Tape from 500lb to 6,000lb strength
- Standard configuration is red with four black stripes, longitudinal ribbing, and SILICORE® ULF lining

INSTALLATION TYPES

Plow
Trench
Directional Bore
Open Trench

STANDARD COLOURS

OPTIONAL COLOURS

WALL TYPES

DR-9
DR-11
DR-13.5
SCH-40
SCH-80

SIZE RANGE

16mm (1/2")
21mm (3/4")
27mm (1")
35mm (1 1/4")
41mm (1 1/2")
53mm (2")
63mm (2 1/2")
78mm (3")
103mm (4")
129mm (5")
155mm (6")
203mm (8"
254mm (10")
305mm (12")

FEATURES

STANDARD

METER MARKINGS Sequential foot or meter markings. Custom print streams available.

SPECIFICATIONS PowerGuard® is certified to CSA C22.2 #327, conforms to UL-651A standards and aligns with the Canadian Electrical Code. This product is ideal for low and medium voltage buried cables as allowed by standard.

CO-EXTRUDED LINING SILICORE® ULF (Ultra-Low Friction) is co-extruded inside the HDPE wall creating a slick, permanent, interior lining. With a coefficient of friction 60% lower than standard HDPE conduit without the aid of wet lubricants, SILICORE® ULF exhibits no loss in performance over time or in extreme temperature conditions.

OPTIONS

PRE-INSTALLED TAPE Factory pre-installed Bull-Line™ Pull Tape with EVEN-LOAD™ ensures extra slack at any access point throughout the reel. Available 500lb - 6,000lb tensile strength or locatable.

PRE-INSTALLED CABLE Factory pre-installed cable, Cable-in-Conduit (CIC), provides one-step placement of the cable and duct in the field.

POWERGUARD® is available in custom colours, external stripe options, and special markings upon request.

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TL9000 ISO 9001 REGISTERED

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POWERGUARD TECHNICAL SPECIFICATIONS (IMPERIAL)

	WALL TYPE	NOM OD (IN)	OD TOLERANCE +/-	MIN WALL (IN)	WALL TOLERANCE +	AVG ID (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LBS)
1/2"	DR-9	0.840	0.004	0.093	0.020	0.634	0.098	8	16	525
	DR-11	0.840	0.004	0.076	0.020	0.688	0.084	8	16	440
	DR-13.5	0.840	0.004	0.062	0.020	0.696	0.072	8	16	365
	SCH-40	0.840	0.004	0.109	0.020	0.602	0.111	8	16	301
	SCH-80	0.840	0.004	0.147	0.020	0.526	0.139	8	16	768
3/4"	DR-9	1.050	0.005	0.117	0.020	0.796	0.152	11	21	821
	DR-11	1.050	0.005	0.095	0.020	0.840	0.128	11	21	687
	DR-13.5	1.050	0.005	0.078	0.020	0.874	0.110	11	21	570
	SCH-40	1.050	0.005	0.113	0.020	0.804	0.148	11	21	798
	SCH-80	1.050	0.005	0.154	0.020	0.722	0.188	11	21	1,040
1"	DR-9	1.315	0.007	0.146	0.020	1.003	0.234	13	26	1,288
	DR-11	1.315	0.007	0.120	0.020	1.055	0.199	13	26	1,078
	DR-13.5	1.315	0.007	0.097	0.020	1.101	0.167	13	26	894
	SCH-40	1.315	0.007	0.133	0.020	1.029	0.217	13	26	1,340
	SCH-80	1.315	0.007	0.179	0.021	0.936	0.276	13	26	1,533
1 1/4"	DR-9	1.660	0.008	0.184	0.022	1.270	0.370	17	34	2,052
	DR-11	1.660	0.008	0.151	0.020	1.338	0.312	17	34	1,717
	DR-13.5	1.660	0.008	0.123	0.020	1.394	0.263	17	34	1,425
	SCH-40	1.660	0.008	0.140	0.020	1.360	0.293	17	34	1,604
	SCH-80	1.660	0.008	0.191	0.023	1.255	0.382	17	34	2,116
1 1/2"	DR-9	1.900	0.010	0.211	0.025	1.453	0.485	19	38	2,688
	DR-11	1.900	0.010	0.173	0.021	1.533	0.408	19	38	2,249
	DR-13.5	1.900	0.010	0.141	0.020	1.598	0.342	19	38	1,867
	SCH-40	1.900	0.010	0.145	0.020	1.590	0.350	19	38	1,919
	SCH-80	1.900	0.010	0.200	0.024	1.476	0.463	19	38	2,654
2"	DR-9	2.375	0.012	0.264	0.032	1.815	0.759	24	48	4,200
	DR-11	2.375	0.012	0.216	0.026	1.917	0.636	24	48	3,515
	DR-13.5	2.375	0.012	0.176	0.021	2.002	0.528	24	48	2,917
	SCH-40	2.375	0.012	0.154	0.020	2.047	0.469	24	48	2,579
	SCH-80	2.375	0.012	0.218	0.026	1.913	0.641	24	48	2,545

POWERGUARD TECHNICAL SPECIFICATIONS (IMPERIAL)

	WALL TYPE	NOM OD (IN)	OD TOLERANCE +/-	MIN WALL (IN)	WALL TOLERANCE +	AVG ID (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LBS)
2 1/2″	DR-9	2.875	0.014	0.319	0.038	2.199	1.110	29	58	6,155
	DR-11	2.875	0.014	0.261	0.031	2.322	0.930	29	58	5,151
	DR-13.5	2.875	0.014	0.213	0.026	2.423	0.775	29	58	4,274
	SCH-40	2.875	0.014	0.203	0.024	2.445	0.740	29	58	4,090
	SCH-80	2.875	0.014	0.276	0.033	2.290	0.978	29	58	5,409
3″	DR-9	3.500	0.018	0.389	0.047	2.675	1.648	39	78	9,122
	DR-11	3.500	0.018	0.318	0.038	2.826	1.380	39	78	7,633
	DR-13.5	3.500	0.018	0.259	0.031	2.951	1.146	39	78	6,335
	SCH-40	3.500	0.018	0.216	0.026	3.042	0.969	39	78	5,348
	SCH-80	3.500	0.018	0.300	0.036	2.864	1.310	39	78	7,238
4″	DR-9	4.500	0.023	0.500	0.060	3.440	2.723	50	100	15,080
	DR-11	4.500	0.023	0.409	0.049	3.633	2.282	50	100	12,618
	DR-13.5	4.500	0.023	0.333	0.040	3.794	1.895	50	100	10,472
	SCH-40	4.500	0.023	0.237	0.028	3.998	1.380	50	100	7,618
	SCH-80	4.500	0.023	0.337	0.040	3.786	1.914	50	100	10,578
5″	DR-9	5.563	0.028	0.618	0.074	4.253	4.161	61	122	23,045
	DR-11	5.563	0.028	0.506	0.061	4.490	3.490	61	122	19,284
	DR-13.5	5.563	0.028	0.412	0.049	4.690	2.896	61	122	16,004
	SCH-40	5.563	0.028	0.258	0.031	5.016	1.872	61	122	10,320
	SCH-80	5.563	0.028	0.375	0.045	4.768	2.657	61	122	14,669
6″	DR-9	6.625	0.033	0.736	0.088	5.065	5.901	73	146	32,684
	DR-11	6.625	0.033	0.602	0.072	5.349	4.944	73	146	27,349
	DR-13.5	6.625	0.033	0.491	0.059	5.584	4.112	73	146	22,697
	SCH-40	6.625	0.033	0.280	0.034	6.031	2.432	73	146	13,395
	SCH-80	6.625	0.033	0.432	0.052	5.709	3.656	73	146	20,172
8″	DR-13.5	8.625	0.043	0.639	0.077	7.270	6.969	155	233	38,470
10″	DR-13.5	10.750	0.054	0.796	0.096	9.062	10.821	194	290	59,762
12″	DR-13.5	12.750	0.064	0.944	0.113	10.749	15.214	230	344	84,067

NOTES

1. Bend Radius
   ½″ through 2 ½" Supported Bend Radius 10 times the OD Unsupported Bend Radius 20 times the OD
   3″ through 6" Supported Bend Radius 11 times the OD Unsupported Bend Radius 22 times the OD
   8″ through 16" Supported Bend Radius 18 times the OD Unsupported Bend Radius 27 times the OD
2. During cable placement, large sweeping bends are recommended over tighter bends. Pre-formed sweeps are recommended for conduit sizes 8" through 16" diameters.
3. SWPS (Safe Working Pull Strength) is calculated using a 25% safety factor with the minimum resin tensile strength of 3,000 psi, the average OD and average wall thickness.
4. Average internal rib height is 0.020" in addition to the MIN and AVG ID's and have been calculated in the listed values.
5. Add 0.016 #/ft for ribbed products 1 1/2" and less. For ribbed products 2" and larger, add 0.025 #/ft.

POWERGUARD TECHNICAL SPECIFICATIONS (METRIC)

	WALL TYPE	NOM OD (MM)	OD TOLERANCE +/-	MIN WALL (MM)	WALL TOLERANCE +	AVG ID (MM)	WEIGHT (KG/M)	BEND RADIUS SUP (MM)	BEND RADIUS UNSUP (MM)	SWPS (KGS)
16mm	DR-9	21	0.10	2.36	0.51	16.10	0.146	203	406	238
	DR-11	21	0.10	1.93	0.51	17.48	0.125	203	406	200
	DR-13.5	21	0.10	1.57	0.51	17.68	0.107	203	406	166
	SCH-40	21	0.10	2.77	0.51	15.29	0.165	203	406	137
	SCH-80	21	0.10	3.73	0.51	13.36	0.207	203	406	348
21mm	DR-9	27	0.13	2.97	0.51	20.22	0.226	279	533	372
	DR-11	27	0.13	2.41	0.51	21.34	0.190	279	533	312
	DR-13.5	27	0.13	1.98	0.51	22.20	0.164	279	533	259
	SCH-40	27	0.13	2.87	0.51	20.42	0.220	279	533	362
	SCH-80	27	0.13	3.91	0.51	18.34	0.280	279	533	472
27mm	DR-9	33	0.18	3.71	0.51	25.48	0.348	330	660	584
	DR-11	33	0.18	3.05	0.51	26.80	0.296	330	660	489
	DR-13.5	33	0.18	2.46	0.51	27.97	0.249	330	660	406
	SCH-40	33	0.18	3.38	0.51	26.14	0.323	330	660	608
	SCH-80	33	0.18	4.55	0.53	23.77	0.411	330	660	695
35mm	DR-9	42	0.20	4.67	0.56	32.26	0.551	432	864	931
	DR-11	42	0.20	3.84	0.51	33.99	0.464	432	864	779
	DR-13.5	42	0.20	3.12	0.51	35.41	0.391	432	864	646
	SCH-40	42	0.20	3.56	0.51	34.54	0.436	432	864	728
	SCH-80	42	0.20	4.85	0.58	31.88	0.568	432	864	960
41mm	DR-9	48	0.25	5.36	0.64	36.91	0.722	483	965	1,219
	DR-11	48	0.25	4.39	0.53	38.94	0.607	483	965	1,020
	DR-13.5	48	0.25	3.58	0.51	40.59	0.509	483	965	847
		48	0.25	3.68	0.51	40.39	0.521	483	965	870
	SCH-80	48	0.25	5.08	0.61	37.49	0.689	483	965	1,204
53mm	DR-9	60	0.30	6.71	0.81	46.10	1.130	610	1,219	1,905
	DR-11	60	0.30	5.49	0.66	48.69	0.946	610	1,219	1,594
	DR-13.5	60	0.30	4.47	0.53	50.85	0.786	610	1,219	1,323
	SCH-40	60	0.30	3.91	0.51	51.99	0.698	610	1,219	1,170
	SCH-80	60	0.30	5.54	0.66	48.59	0.954	610	1,219	1,154

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POWERGUARD TECHNICAL SPECIFICATIONS (METRIC)

	WALL TYPE	NOM OD (MM)	OD TOLERANCE +/-	MIN WALL (MM)	WALL TOLERANCE +	AVG ID (MM)	WEIGHT (KG/M)	BEND RADIUS SUP (MM)	BEND RADIUS UNSUP (MM)	SWPS (KGS)
63mm	DR-9	73	0.36	8.10	0.97	55.85	1.652	737	1,473	2,792
	DR-11	73	0.36	6.63	0.79	58.98	1.384	737	1,473	2,336
	DR-13.5	73	0.36	5.41	0.66	61.54	1.153	737	1,473	1,939
	SCH-40	73	0.36	5.16	0.61	62.10	1.101	737	1,473	1,855
	SCH-80	73	0.36	7.01	0.84	58.17	1.455	737	1,473	2,453
78mm	DR-9	89	0.46	9.88	1.19	67.95	2.452	991	1,981	4,138
	DR-11	89	0.46	8.08	0.97	71.78	2.054	991	1,981	3,462
	DR-13.5	89	0.46	6.58	0.79	74.96	1.705	991	1,981	2,874
	SCH-40	89	0.46	5.49	0.66	77.27	1.442	991	1,981	2,426
	SCH-80	89	0.46	7.62	0.91	72.75	1.949	991	1,981	3,283
103mm	DR-9	114	0.58	12.70	1.52	87.38	4.052	1,270	2,540	6,840
	DR-11	114	0.58	10.39	1.24	92.28	3.396	1,270	2,540	5,723
	DR-13.5	114	0.58	8.46	1.02	96.37	2.820	1,270	2,540	4,750
	SCH-40	114	0.58	6.02	0.71	101.55	2.054	1,270	2,540	3,455
	SCH-80	114	0.58	8.56	1.02	96.16	2.848	1,270	2,540	4,798
129mm	DR-9	141	0.71	15.70	1.88	108.03	6.192	1,549	3,099	10,453
	DR-11	141	0.71	12.85	1.55	114.05	5.194	1,549	3,099	8,747
	DR-13.5	141	0.71	10.46	1.24	119.13	4.310	1,549	3,099	7,259
	SCH-40	141	0.71	6.55	0.79	127.41	2.786	1,549	3,099	4,681
	SCH-80	141	0.71	9.53	1.14	121.11	3.954	1,549	3,099	6,654
155mm	DR-9	168	0.84	18.69	2.24	128.65	8.782	1,854	3,708	14,825
	DR-11	168	0.84	15.29	1.83	135.86	7.357	1,854	3,708	12,405
	DR-13.5	168	0.84	12.47	1.50	141.83	6.119	1,854	3,708	10,295
	SCH-40	168	0.84	7.11	0.86	153.19	3.619	1,854	3,708	6,076
	SCH-80	168	0.84	10.97	1.32	145.01	5.441	1,854	3,708	9,150
203mm	DR-13.5	219	1.09	16.23	1.96	184.66	10.371	3,937	5,918	17,450
254mm	DR-13.5	273	1.37	20.22	2.44	230.17	16.103	4,928	7,366	27,108
305mm	DR-13.5	324	1.63	23.98	2.87	273.02	22.641	5,842	8,738	38,132

NOTES

1. Bend Radius
   16mm through 63mm Supported Bend Radius 10 times the OD Unsupported Bend Radius 20 times the OD
   78mm through 155mm Supported Bend Radius 11 times the OD Unsupported Bend Radius 22 times the OD
   203mm through 305mm Supported Bend Radius 18 times the OD Unsupported Bend Radius 27 times the OD
2. During cable placement, large sweeping bends are recommended over tighter bends. Pre-formed sweeps are recommended for conduit sizes 203mm through 305mm diameters.
3. SWPS (Safe Working Pull Strength) is calculated using a 25% safety factor with the minimum resin tensile strength of 3,000 psi, the average OD and average wall thickness.
4. Average internal rib height is 0.020" in addition to the MIN and AVG ID's and have been calculated in the listed values.
5. Add 0.016 #/ft for ribbed products 41mm and less. For ribbed products 53mm and larger, add 0.025 #/ft.