

Ethernet Cable Conduit Fill Chart Guideline

This information is intended as a guideline. Because conduit sizes may vary by manufacturer, please verify all dimensions prior to using this reference chart. This guideline is based on National Electrical Code (USA) recommendations for conduit fill of runs with no more than two 90° bends. For assistance in calculating conduit fill, refer to the “Resources” area of our site for the Technical Guides, [“How to Calculate Conduit Fill with Different Size Cables.”](#) Use only approved lubricants.

Conduit Trade Size	Designator*	1/2 (16)	3/4 (21)	1 (27)	1 1/4 (35)	1 1/2 (41)	2 (53)	2 1/2 (63)	3 (78)	3 1/2 (91)	4 (103)	5 (129)
Conduit English (Metric)												
Internal Diameter in (mm)	0.62 (15.7)	0.82 (20.9)	1.05 (26.6)	1.38 (35.1)	1.61 (40.9)	2.07 (52.5)	2.47 (62.7)	3.07 (77.9)	3.55 (90.1)	4.03 (102.3)	5.05 (128.2)	
Cross-Sectional Area in ² (mm ²)	0.30 (195)	0.53 (345)	0.87 (559)	1.51 (973)	2.05 (1,322)	3.39 (2,177)	482 (3,106)	7.45 (4,794)	9.96 (6,413)	12.83 (8,268)	20.15 (12,984)	
Cable Nominal Diameter in (mm)	Number of Cables at Maximum Recommended Conduit Fill (1 Cable @ 53% Maximum, 2 Cables @ 31% Maximum, 3 or More Cables @ 40% Maximum)											
		15	26	44	76	103	171	262	376	504	649	1020
0.10 (2.5)	15	26	44	76	103	171	262	376	504	649	1020	
0.13 (3.3)	9	15	26	45	61	101	155	223	298	384	603	
0.15 (3.8)	6	11	19	33	46	76	116	167	224	288	453	
0.18 (4.6)	4	8	13	23	32	52	80	116	155	200	314	
0.20 (5.1)	3	6	11	19	25	42	65	94	126	162	255	
0.21 (5.3)	3	6	10	17	23	38	59	85	114	147	231	
0.22 (5.6)	3	5	9	15	21	35	54	77	104	134	210	
0.23 (5.8)	2	5	8	14	19	32	49	71	95	122	192	
0.24 (6.1)	2	4	7	13	18	29	45	65	87	112	177	
0.25 (6.4)	1	4	7	12	16	27	41	60	80	103	163	
0.26 (6.6)	1	3	6	11	15	25	38	55	74	96	150	
0.27 (6.9)	1	3	6	10	14	23	35	51	69	89	139	
0.28 (7.1)	1	3	5	9	13	21	33	48	64	82	130	
0.29 (7.4)	1	3	5	9	12	20	31	44	59	77	121	
0.30 (7.6)	1	2	4	8	11	19	29	41	56	72	113	
0.31 (7.9)	1	2	4	7	10	17	27	39	52	67	106	
0.32 (8.1)	1	2	4	7	10	16	25	36	49	63	99	
0.33 (8.4)	1	1	4	6	9	15	24	34	46	59	93	
0.34 (8.6)	1	1	3	6	8	14	22	32	43	56	88	
0.35 (8.9)	1	1	3	6	8	13	21	30	41	53	83	
0.40 (10.2)	1	1	2	4	6	10	16	23	31	40	63	
0.45 (11.4)	1	1	1	3	5	8	12	18	24	32	50	
0.50 (12.7)	0	1	1	3	4	6	10	15	20	25	40	
0.55 (14.0)	0	1	1	3	5	8	12	18	24	32	50	
0.60 (15.2)	0	0	1	1	2	4	7	10	14	18	28	
0.65 (16.5)	0	0	1	1	1	4	6	8	11	15	24	
0.70 (17.8)	0	0	1	1	1	3	5	7	10	13	20	
0.75 (19.1)	0	0	1	1	1	3	4	6	8	11	18	
0.80 (20.3)	0	0	0	1	1	2	4	5	7	10	15	
0.85 (21.6)	0	0	0	1	1	1	3	5	6	8	14	
0.90 (22.9)	0	0	0	1	1	1	3	4	6	8	12	
0.95 (24.1)	0	0	0	1	1	1	2	4	5	7	11	
1.00 (25.4)	0	0	0	1	1	1	2	3	5	6	10	

*Identifier only; not an actual dimension

Use Conduit Fill Chart Guideline as a guide when attempting to estimate conduit fill. Consult the NEC (National Electrical Code) for specific information regarding conduit fill.

Please note: Although Syston Cable makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice.