

Intermediate Metal Conduit (IMC)

UL 1242 - ANSI C80.6

ELECMAN® Intermediate Metal Conduit (IMC) is a steel threadable raceway of circular cross section designed for the physical protection and routing of conductors and cables and for use as an equipment grounding conductor when installed with its integral or associated coupling and appropriate fittings.

Material:

Carbon steel

Surface Finish:

Hot-dip galvanized:

Involves dipping the steel conduit in molten zinc, which creates a thick, durable coating. This is the most common method for IMC.

Zinc coating:

1. Magnetic test in accordance with ASTM B 499.
2. Copper sulfate test (Preece Test) in accordance with ASTM A 239. Material will withstand four 1-minute immersions.
3. The zinc coating thickness is more than 40µm.

Certification & Standard

Certification:

Manufactured to Underwriters Laboratory Safety Standards UL 1242
UL File No.: E542214



Standard:

Manufactured in accordance with ANSI C80.6

Welding:

The welding of all seams is continuous and done in a workmanlike manner.



Thread and Chamfer:

1. Each length of conduit is threaded on both ends, the standard of the threads is NPT.
2. The number of threads per inch (threads per 25.4 mm), and the length of the threaded portion at each end of each length of conduit is as indicated in Table 1, and conform to ANSI/ASME B1.20.1. The thread is tapered for its entire length, and the taper is about 1 in 16.
3. Threads are treated with a protective coating to prevent corrosion.
4. Both ends are chamfered to remove burrs and sharp edges.

Table 1 - Dimensions of Threads for Intermediate Metal Conduit

Trade Size		Threads Per 25.4 mm.	Pitch diameter at end of thread E _o , taper 62.5 mm. per meter ^b	Length of Thread (mm)	
In.	Mm			Effective L ₂	Overall L ₃ ^a
1/2"	16	14	19.3	13.5	19.8
3/4"	21	14	24.6	14.0	20.1
1"	27	11-1/2	30.8	17.3	24.9
1 1/4"	35	11-1/2	39.5	18.0	25.7
1 1/2"	41	11-1/2	45.6	18.3	26.2
2"	53	11-1/2	57.6	19.3	26.9
2 1/2"	63	8	69.1	29.0	39.9
3"	78	8	84.9	30.5	41.4
3 1/2"	91	8	97.5	31.8	42.7
4"	103	8	110.1	33.0	43.9
5"	129	8	136.9	35.8	46.7
6"	155	8	163.7	38.4	49.5

Couplings:

1. The surface of coupling are protected against corrosion same as conduit.
2. Couplings are made that all threads on the conduit will be covered when the coupling is made up "wrench tight" on conduit threads.
3. Both ends of the couplings are chamfered to prevent damage to the starting thread.
4. Couplings are straight tapped.
5. The dimensions of IMC couplings are in accordance with Table 3.

Bending properties :

The conduit is capable of being bent by specific equipment, at ambient temperature, 90 degrees around a mandrel, without developing cracks at any portion of the bend and without opening the weld.

Dimensions:

The dimensions and weights of IMC are in accordance with Table 2.

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Table 2 - Dimensions for Intermediate Metal Conduit

Catalog Number	Trade Size		Outside Diameter		Wall Thickness		Reference Nominal Inside Diameter	Length Without Coupling
	in.	mm	Max (mm)	Min (mm)	Max (mm)	Mini (mm)	mm	mm
IMC050	1/2"	16	20.83	20.57	2.16	1.79	16.74	3030
IMC075	3/4"	21	26.26	26.01	2.29	1.90	21.94	3030
IMC100	1"	27	32.89	32.64	2.54	2.16	28.07	3025
IMC125	1 1/4"	35	41.78	41.40	2.67	2.16	36.75	3025
IMC150	1 1/2"	41	48.01	47.62	2.79	2.29	42.74	3025
IMC200	2"	53	60.12	59.74	2.92	2.41	54.59	3025
IMC250	2 1/2"	63	72.82	72.31	4.06	3.56	64.95	3010
IMC300	3"	78	88.54	88.04	4.06	3.56	80.67	3010
IMC350	3 1/2"	91	101.12	100.61	4.06	3.56	93.25	3005
IMC400	4"	103	113.69	113.18	4.06	3.56	105.82	3005

Applicable Tolerance:

Length (without coupling): ±1/4in. ±6.35mm.

Table 3 - Dimensions for Couplings

Catalog Number	Trade Size		Outside Diameter ¹	Minimum Length	Pitch Diameter		Chamfer Diameter	
	in.	mm	mm	mm	Min (mm)	Max (mm)	Min (mm)	Max (mm)
MRC050	1/2"	16	25.7	41.3	20.35	20.68	21.9	22.1
MRC075	3/4"	21	31.8	41.7	25.68	26.01	27.2	27.4
MRC100	1"	27	38.7	50	32.18	32.59	34.1	34.4
MRC125	1 1/4"	35	47.5	51.6	40.94	41.35	42.8	43.1
MRC150	1 1/2"	41	54.7	52.4	47.04	47.45	48.9	49.2
MRC200	2"	53	67.3	54	59.11	59.51	61	61.3
MRC250	2 1/2"	63	82.6	81	71.27	71.83	76.5	76.9
MRC300	3"	78	98.3	84.1	87.15	87.71	94.5	94.9
MRC350	3 1/2"	91	114.3	86.5	99.85	100.4	109	109.4
MRC400	4"	103	123.8	89.3	112.6	113.1	120	120.4

1. Outside diameter tolerances:

Plus tolerances: no requirements

Minus tolerances: for trade sizes smaller than 1-1/4 (35): -1/64 in. (-0.40 mm)

for trade sizes 1-1/4 (35) and larger: -1%

2. Chamfer angle shall be between 11 and 15 degrees.

3. All couplings shall have straight-tapped threads.