

CAPACITY OF PIPES FOR METHANE RICH GAS



Estimated maximum capacity of pipes in GJ/hr for methane rich gas
 Energy content = 0.03389 GJ/Sm³ P_{atm} = 101 kPa P₁ = 103 kPa 0.03389 204 P₂ = 95 kPa 196 Please note: Schedule 40 API 5L and straight pipe length assumed

Pipe size inches	I.D [mm]	Length of pipe in metres															
		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
1	26.6	4.7	3.2	2.6	2.2	2.0	1.8	1.6	1.5	1.4	1.4	1.3	1.2	1.2	1.1	1.1	1.1
2	52.5	28.1	19.3	15.5	13.3	11.8	10.7	9.8	9.1	8.6	8.1	7.7	7.3	7.0	6.7	6.5	6.3
3	77.9	79.2	54.4	43.7	37.4	33.1	30.0	27.6	25.7	24.1	22.8	21.6	20.6	19.8	19.0	18.3	17.7
4	102.3	161.8	111.2	89.3	76.4	67.7	61.4	56.5	52.5	49.3	46.6	44.2	42.2	40.4	38.8	37.4	36.1
5	128.1	291.8	200.6	161.1	137.8	122.2	110.7	101.8	94.7	88.9	84.0	79.7	76.1	72.9	70.0	67.4	65.1
6	154.1	473.8	325.7	261.5	223.8	198.4	179.7	165.4	153.8	144.3	136.3	129.5	123.5	118.3	113.6	109.5	105.7
8	202.7	972.5	668.4	536.8	459.4	407.1	368.9	339.4	315.7	296.2	279.8	265.8	253.5	242.8	233.3	224.7	217.0
10	254.5	1766.6	1214.2	975.0	834.5	739.6	670.1	616.5	573.5	538.1	508.3	482.8	460.6	441.1	423.7	408.2	394.2
12	304.9	2837.7	1950.3	1566.2	1340.4	1188.0	1076.4	990.3	921.3	864.4	816.5	775.5	739.8	708.5	680.6	655.7	633.2

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Pipe size inches	I.D [mm]	Length of pipe in metres																	
		170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320		
1	26.6	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7		
2	52.5	6.1	5.9	5.7	5.6	5.4	5.3	5.2	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3		
3	77.9	17.1	16.6	16.1	15.7	15.2	14.9	14.5	14.2	13.9	13.6	13.3	13.0	12.8	12.6	12.4	12.1		
4	102.3	34.9	33.9	32.9	32.0	31.2	30.4	29.7	29.0	28.4	27.8	27.2	26.7	26.2	25.7	25.2	24.8		
5	128.1	63.0	61.1	59.3	57.7	56.2	54.8	53.5	52.3	51.1	50.1	49.1	48.1	47.2	46.3	45.5	44.8		
6	154.1	102.3	99.2	96.3	93.7	91.3	89.0	86.9	84.9	83.0	81.3	79.7	78.1	76.6	75.2	73.9	72.7		
8	202.7	210.0	203.6	197.7	192.3	187.3	182.7	178.3	174.3	170.5	166.9	163.5	160.3	157.3	154.4	151.7	149.1		
10	254.5	381.5	369.9	359.2	349.4	340.3	331.8	323.9	316.5	309.6	303.1	297.0	291.2	285.7	280.6	275.6	270.9		
12	304.9	612.8	594.1	577.0	561.2	546.6	533.0	520.3	508.5	497.4	486.9	477.1	467.8	459.0	450.7	442.7	435.2		

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Pipe size inches	I.D [mm]	Length of pipe in metres															
		330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480
1	26.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
2	52.5	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5
3	77.9	11.9	11.7	11.6	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.3	10.2	10.1	10.0	9.9	9.7
4	102.3	24.4	24.0	23.6	23.3	22.9	22.6	22.3	22.0	21.7	21.4	21.1	20.9	20.6	20.4	20.2	19.9
5	128.1	44.0	43.3	42.6	42.0	41.4	40.8	40.2	39.7	39.1	38.6	38.1	37.7	37.2	36.8	36.4	35.9
6	154.1	71.5	70.3	69.2	68.2	67.2	66.2	65.3	64.4	63.5	62.7	61.9	61.2	60.4	59.7	59.0	58.4
8	202.7	146.7	144.3	142.1	139.9	137.9	135.9	134.0	132.2	130.4	128.7	127.1	125.5	124.0	122.6	121.1	119.8
10	254.5	266.5	262.2	258.1	254.2	250.5	246.9	243.4	240.1	236.9	233.9	230.9	228.0	225.3	222.6	220.1	217.6
12	304.9	428.0	421.1	414.6	408.3	402.3	396.6	391.0	385.7	380.6	375.7	370.9	366.3	361.9	357.6	353.5	349.5