



## JMM HIGH DENSITY POLYETHYLENE (HDPE) PE3408/PE3608 PRODUCT SPECIFICATION

### Description:

JMM manufactures High Density Polyethylene (HDPE) water pressure pipes for municipal and industrial transmission systems. Our pressure pipe is used in many types of applications such as: potable water, sewer, drain, mining, irrigation, slip lining, and reclaimed water.

### Materials:

JMM HDPE pressure pipes are manufactured with premium, highly engineered PE3408/PE3608 resin that provides maximum performance benefits to service today's municipal and industrial water needs. The PE3408/PE3608 material conforms to ASTM D3350 with the cell classification of 345464C/E and is listed with the Plastic Pipe Institute's (PPI) TR4. It is formulated with carbon black and/or ultraviolet stabilizer for maximum protection against UV rays for added assurance.

Size	Type	DR	Standard (If Applicable)
4" – 63"	IPS / DIPS	7 – 41	ASTM F714, AWWA C906, NSF
½" – 3"	IPS	7 – 32.5	ASTM D3035, AWWA C901, NSF

### Quality Assurance:

JMM takes great pride in the quality and workmanship of all of our products. JMM quality control programs encompass three critical aspects of the manufacturing process: the incoming raw material, pipe production, and the finished goods. Incoming material is inspected and tested to ensure the material meets all applicable requirements for production. During production, the pipe will be examined and pipe samples will be collected for physical verification and testing for compliance. The finished product is subjected to further visual inspection to ensure it has met all the appropriate specifications and packaging requirements. Without exception, our pipes are constantly monitored throughout the entire manufacturing process to validate that they are in accordance with all applicable specifications. Certificates of Compliance are available upon request.

### Lengths & Bending Radius:

Standard laying lengths of HDPE pressure water pipe is 40/50 foot lengths. Pipe sizes under 6" may be coiled at continuous longer lengths upon request.

### Marking:

Our standard markings printed on JMM pipes generally consist of the JMM logo, nominal size and OD base, material code, dimension ratio, pressure class, current AWWA C906 (if applicable), ASTM F714 (if applicable), and production date (day, month, & year).



Website:

Please visit our website at [www.jmm.com](http://www.jmm.com) for more information.

Note: Information provided here is a general guideline of JMM PE products. JMM reserves the right to modify any information as necessary. For more detailed information, please contact your JMM sales representative. Always follow project specifications and adhere to local rules, codes and regulations.

### HDPE IRON PIPE SIZE (IPS) PRESSURE PIPE PE3408/PE3608

Pipe Size	Avg OD	DR 7 (265 psi)			DR 7.3 (254 psi)			DR 9 (200 psi)			DR 9.3 (200 psi)			DR 11 (160 psi)			DR 13.5 (128 psi)		
		Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft
1/2	0.840	0.120	0.59	0.12	0.115	0.60	0.11	0.093	0.64	0.10	0.090	0.65	0.09	0.076	0.68	0.08	0.062	0.71	0.07
3/4	1.050	0.150	0.73	0.19	0.144	0.75	0.18	0.117	0.80	0.15	0.113	0.81	0.15	0.095	0.85	0.12	0.078	0.88	0.10
1	1.315	0.188	0.92	0.29	0.180	0.93	0.28	0.146	1.01	0.23	0.141	1.02	0.23	0.120	1.06	0.20	0.097	1.11	0.16
2	2.375	0.339	1.66	0.95	0.325	1.69	0.91	0.264	1.82	0.77	0.255	1.83	0.74	0.216	1.92	0.64	0.176	2.00	0.53
3	3.500	0.500	2.44	2.06	0.479	2.48	1.98	0.389	2.68	1.66	0.376	2.70	1.61	0.318	2.83	1.39	0.259	2.95	1.16
4	4.500	0.643	3.14	3.40	0.616	3.19	3.28	0.500	3.44	2.75	0.484	3.47	2.67	0.409	3.63	2.30	0.333	3.79	1.91
5 3/8	5.375	0.768	3.75	4.85	0.736	3.81	4.68	0.597	4.11	3.92	0.578	4.15	3.81	0.489	4.34	3.29	0.398	4.53	2.73
5	5.563	0.795	3.88	5.20	0.762	3.95	5.02	0.618	4.25	4.20	0.598	4.29	4.08	0.506	4.49	3.52	0.412	4.69	2.92
6	6.625	0.946	4.62	7.36	0.908	4.70	7.12	0.736	5.06	5.96	0.712	5.11	5.79	0.602	5.35	4.99	0.491	5.58	4.15
7	7.125	0.976	5.06	8.23	0.976	5.06	8.23	0.792	5.45	6.89	0.766	5.50	6.70	0.648	5.75	5.78	0.528	6.01	4.80
8	8.625	1.232	6.01	12.48	1.182	6.12	12.06	0.958	6.59	10.09	0.927	6.66	9.81	0.784	6.96	8.46	0.639	7.27	7.03
10	10.750	1.536	7.49	19.40	1.473	7.63	18.74	1.194	8.22	15.68	1.156	8.30	15.24	0.977	8.68	13.14	0.796	9.06	10.92
12	12.750	1.821	8.89	27.28	1.747	9.05	26.36	1.417	9.75	22.07	1.371	9.84	21.44	1.159	10.29	18.49	0.944	10.75	15.36
14	14.000	2.000	9.76	32.90	1.918	9.93	31.78	1.556	10.70	26.61	1.505	10.81	25.85	1.273	11.30	22.30	1.037	11.80	18.52
16	16.000	2.286	11.15	42.97	2.192	11.35	41.51	1.778	12.23	34.75	1.720	12.35	33.76	1.455	12.92	29.12	1.185	13.49	24.19
18	18.000	2.571	12.55	54.37	2.466	12.77	52.53	2.000	13.76	43.97	1.935	13.90	42.73	1.636	14.53	36.84	1.333	15.17	30.61
20	20.000	2.857	13.94	67.13	2.740	14.19	64.85	2.222	15.29	54.28	2.151	15.44	52.77	1.818	16.15	45.49	1.481	16.86	37.79
24	24.000	3.429	16.73	96.68	3.288	17.03	93.39	2.667	18.35	78.18	2.581	18.53	75.98	2.182	19.37	65.52	1.778	20.23	54.44
26	26.000							2.889	19.88	91.75	2.796	20.07	89.17	2.364	20.99	76.89	1.926	21.92	63.89
28	28.000							3.111	21.40	106.40	3.011	21.62	103.42	2.545	22.60	89.15	2.074	23.60	74.09
30	30.000							3.333	22.93	122.13	3.226	23.16	118.72	2.727	24.22	102.35	2.222	25.29	85.04
32	32.000													2.909	25.83	116.46	2.370	26.98	96.76
34	34.000													3.091	27.45	131.48	2.519	28.66	109.26
36	36.000													3.273	29.06	147.41	2.667	30.35	122.49



Pipe Size	Avg OD	DR 15.5 (110 psi)			DR 17 (100 psi)			DR 19 (90 psi)			DR 21 (80 psi)			DR 26 (64 psi)			DR 32.5 (50 psi)		
		Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft
1/2	0.840	0.054	0.73	0.07	0.062	0.71	0.07	0.044	0.75	0.05	0.062	0.71	0.07	0.062	0.71	0.07	0.062	0.71	0.07
3/4	1.050	0.068	0.91	0.09	0.062	0.92	0.08	0.055	0.93	0.08	0.062	0.92	0.08	0.062	0.92	0.08	0.062	0.92	0.08
1	1.315	0.085	1.14	0.14	0.077	1.15	0.13	0.069	1.17	0.12	0.063	1.18	0.11	0.062	1.18	0.11	0.062	1.18	0.11
2	2.375	0.153	2.05	0.47	0.140	2.08	0.43	0.125	2.11	0.39	0.113	2.14	0.35	0.091	2.18	0.29	0.073	2.22	0.23
3	3.500	0.226	3.02	1.02	0.206	3.06	0.93	0.184	3.11	0.84	0.167	3.15	0.77	0.135	3.21	0.63	0.108	3.27	0.50
4	4.500	0.290	3.88	1.68	0.265	3.94	1.54	0.237	4.00	1.39	0.214	4.05	1.26	0.173	4.13	1.03	0.138	4.21	0.83
5 3/8	5.375	0.347	4.64	2.40	0.316	4.71	2.20	0.283	4.78	1.98	0.256	4.83	1.80	0.207	4.94	1.47	0.165	5.03	1.18
5	5.563	0.359	4.80	2.57	0.327	4.87	2.35	0.293	4.94	2.12	0.265	5.00	1.93	0.214	5.11	1.57	0.171	5.20	1.27
6	6.625	0.427	5.72	3.63	0.390	5.80	3.34	0.349	5.89	3.01	0.315	5.96	2.73	0.255	6.08	2.23	0.204	6.19	1.80
7	7.125	0.460	6.15	4.21	0.419	6.24	3.86	0.375	6.33	3.48	0.340	6.40	3.16	0.274	6.54	2.58	0.219	6.66	2.08
8	8.625	0.556	7.45	6.16	0.507	7.55	5.65	0.454	7.66	5.10	0.411	7.75	4.64	0.332	7.92	3.79	0.265	8.06	3.05
10	10.750	0.694	9.28	9.58	0.632	9.41	8.88	0.566	9.55	7.92	0.512	9.66	7.21	0.413	9.87	5.87	0.331	10.05	4.75
12	12.750	0.823	11.01	13.48	0.750	11.16	12.36	0.671	11.33	11.14	0.607	11.46	10.13	0.490	11.71	8.26	0.392	11.92	6.67
14	14.000	0.903	12.09	16.24	0.824	12.25	14.91	0.737	12.44	13.43	0.667	12.59	12.22	0.538	12.86	9.96	0.431	13.09	8.05
16	16.000	1.032	13.81	21.21	0.941	14.01	19.46	0.842	14.21	17.54	0.762	14.38	15.96	0.615	14.70	13.01	0.492	14.96	10.50
18	18.000	1.161	15.54	26.84	1.059	15.75	24.64	0.947	15.99	22.20	0.857	16.18	20.20	0.692	16.53	16.47	0.554	16.83	13.30
20	20.000	1.290	17.26	33.14	1.176	17.51	30.41	1.053	17.77	27.41	0.952	17.98	24.93	0.769	18.37	20.34	0.615	18.70	16.41
24	24.000	1.548	20.72	47.72	1.412	21.01	43.81	1.263	21.32	39.47	1.143	21.58	35.91	0.923	22.04	29.30	0.738	22.44	23.62
26	26.000	1.677	22.44	56.00	1.529	22.76	51.39	1.368	23.10	46.32	1.238	23.38	42.14	1.000	23.88	34.39	0.800	24.30	27.74
28	28.000	1.806	24.17	64.95	1.647	24.51	59.62	1.474	24.88	53.72	1.333	25.17	48.86	1.077	25.72	39.88	0.862	26.17	32.19
30	30.000	1.935	25.90	74.56	1.765	26.26	68.45	1.579	26.65	61.66	1.429	26.97	56.12	1.154	27.55	45.79	0.923	28.04	36.93
32	32.000	2.065	27.62	84.87	1.882	28.01	77.86	1.684	28.43	70.16	1.542	28.73	63.84	1.231	29.39	52.10	0.985	29.91	42.04
34	34.000	2.194	29.35	95.81	2.000	29.76	87.91	1.790	30.21	79.20	1.619	30.57	72.06	1.308	31.23	58.81	1.046	31.78	47.43
36	36.000	2.323	31.08	107.41	2.118	31.51	98.57	1.895	31.98	88.80	1.714	32.37	80.78	1.385	33.06	65.94	1.108	33.65	53.20

**HDPE IRON PIPE SIZE (IPS) PRESSURE PIPE PE3408/PE3608**

Pipe Size	Avg OD	DR 17 (100 psi)			DR 19 (90 psi)			DR 21 (80 psi)			DR 26 (64 psi)			DR 32.5 (50 psi)			DR 41 (40 psi)		
		Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft
36	36.000	2.118	31.510	98.57	1.895	31.983	88.80	1.714	32.366	80.78	1.385	33.064	65.94	1.108	33.651	53.20	0.878	34.139	42.4517
42	42.000	2.471	36.761	134.16	2.211	37.314	120.86	2.000	37.760	109.97	1.615	38.576	89.71	1.292	39.261	72.37	1.024	39.830	57.7632
48	48.000	2.824	42.013	175.23	2.526	42.644	157.86	2.286	43.154	143.65	1.846	44.086	117.18	1.477	44.869	94.56	1.171	45.517	75.4906
54	54.000	3.177	47.265	221.71	2.842	47.975	199.79	2.571	48.549	181.75	2.077	49.597	148.33	1.622	50.477	119.70	1.317	51.208	95.5163
63	63.000							3.000	56.640	247.42	2.423	57.863	201.88	1.938	58.891	162.84	1.537	59.742	130.0154

**HDPE DUCTILE IRON PIPE SIZE (DIPS) PRESSURE PIPE PE3408/PE3608**

J-M Manufacturing Company, Inc.  
*building essentials for a better tomorrow™*



Pipe Size	DR 7 (265 psi)				DR 9 (200 psi)			DR 11 (160 psi)			DR 13.5 (128 psi)			DR 17 (128 psi)		
	Avg OD	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft
4	4.800	0.686	3.346	3.85	0.533	3.670	3.11	0.436	3.876	2.61	0.356	4.045	2.17	0.282	4.202	1.75
6	6.900	0.946	4.894	7.96	0.767	5.274	6.43	0.627	5.571	5.39	0.511	5.817	4.48	0.406	6.039	3.62
8	9.050	1.293	6.309	13.69	1.006	6.917	11.07	0.823	7.305	9.28	0.670	7.630	7.70	0.532	7.922	6.22
10	11.100	1.586	7.738	20.59	1.233	8.486	16.65	1.009	8.961	13.95	0.822	9.357	11.59	0.653	9.716	9.37
12	13.200	1.886	9.202	29.12	1.467	10.090	23.55	1.200	10.656	19.73	0.978	11.127	16.40	0.776	11.555	13.24
14	15.300	2.186	10.666	39.12	1.700	11.696	31.64	1.391	12.351	26.51	1.133	12.898	22.02	0.900	13.392	17.80
16	17.400	2.486	12.130	50.60	1.933	13.302	40.92	1.582	14.046	34.29	1.289	14.667	28.49	1.024	15.229	23.03
18	19.500	2.786	13.594	63.55	2.167	14.906	51.39	1.773	15.741	43.07	1.444	16.439	35.77	1.147	17.068	28.91
20	21.600				2.400	16.512	63.05	1.964	17.436	52.85	1.600	18.208	43.91	1.271	18.905	35.49
24	25.800				2.867	19.722	89.96	2.345	20.829	75.38	1.911	21.749	62.64	1.518	22.582	50.63
30	32.000							2.909	25.833	115.97	2.370	26.976	96.35	1.880	28.014	77.86
36	38.300										2.837	32.286	138.04	2.253	33.524	111.55
42	44.500													2.618	38.950	150.60
48	50.800													2.988	44.465	196.23

Pipe Size	DR 19 (90 psi)				DR 21 (80 psi)			DR 26 (64 psi)			DR 32.5 (50 psi)		
	Avg OD	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft	Min Wall	Avg ID	Weight lb/ft
4	4.800	0.253	4.264	1.58	0.229	4.315	1.44	0.185	4.408	1.17	0.148	4.486	0.95
6	6.900	0.363	6.130	3.26	0.329	6.203	2.97	0.265	6.338	2.42	0.212	6.451	1.95
8	9.050	0.476	8.041	5.61	0.431	8.136	5.11	0.348	8.312	4.17	0.278	8.461	3.36
10	11.100	0.584	9.862	8.44	0.529	9.979	7.69	0.427	10.195	6.27	0.342	10.375	5.06
12	13.200	0.695	11.727	11.94	0.629	11.867	10.87	0.508	12.123	8.87	0.406	12.339	7.15
14	15.300	0.805	13.593	16.04	0.729	13.755	14.60	0.588	14.053	11.90	0.471	14.301	9.61
16	17.400	0.916	15.458	20.74	0.829	15.643	18.88	0.669	15.982	15.39	0.536	16.264	12.44
18	19.500	1.026	17.325	26.05	0.929	17.531	23.71	0.750	17.910	19.34	0.600	18.228	15.60
20	21.600	1.137	19.190	31.97	1.029	19.419	29.10	0.831	19.838	23.74	0.665	20.190	19.16
24	25.800	1.358	22.921	45.61	1.229	23.195	41.51	0.992	23.697	33.85	0.794	24.117	27.32
30	32.000	1.684	28.430	70.16	1.524	28.769	63.84	1.231	29.390	52.10	0.985	29.912	42.04
36	38.300	2.016	34.026	100.50	1.824	34.433	91.45	1.473	35.177	74.61	1.179	35.801	60.18
42	44.500	2.342	39.535	135.68	2.119	40.008	123.44	1.712	40.871	100.75	1.370	41.596	81.25
48	50.800	2.674	45.131	176.81	2.419	45.672	160.87	1.954	46.658	131.28	1.563	47.486	105.90



## PE 3408/PE 3608 JMM HDPE Typical Primary Properties

Property	Unit	Test Procedure	Typical Value
Material Designation	---	PPI-TR4	PE 3408/PE3608
Cell Classification	---	ASTM D3350	** 345464C
Density [3]	g/cm <sup>3</sup>	ASTM D1505	0.955
Melt Index [4]	g/10 minutes	ASTM D1238	<0.15
Flexural Modulus [5]	psi	ASTM D790	110,000 to <160,000
Tensile Strength [4]	psi	ASTM D638	3,000 – 3,500
SCG (PENT) [6]	Hours	ASTM F1473	>100
HDB @ 73.4°F (23°C)[4]	psi	ASTM D2837	1600
HDB @ 140°F (60°C)	psi	ASTM D2837	800
Color; UV Stabilize [C]	---	---	Black with minimum 2% carbon black
Brittleness Temperature	°F	ASTM D746	<-130
Hardness	Shore D	ASTM D2240	> 60

\*\* Note: Cell Classification is 345464E for all Blue / Green / Gray Polyethylene Pipes.