

DriscoPlex® Piping Products for Municipal Applications

Table 1: Cell Classifications

Performance Pipe Product Series	Material Designation Code (MDC)		ASTM D3350 Cell Classification
	Present	Past	
DRISCOPEX® 4000/4100 Pipe	PE4710	PE3408	445574C

Table 2. DriscoPlex® Pipes

DriscoPlex® Municipal Water and Wastewater Pipe				
DriscoPlex® Pipe Series	Features	Size Range	Applicable Standards	Pipe Materials Designation Codes Available (PPI TR-4)
4000 (DIPS) Municipal potable water, raw water, process water, sewer	Black w/ blue stripes	4" through 42" DIPS	AWWA C906 & ASTM F714 (4" to 42") NSF/ANSI 61	PE4710
4100 (IPS) Municipal potable water, raw water, process water, sewer	Black pipe is standard	1-1/2" through 54" IPS	AWWA C901 & ASTM D3035 (3" & smaller) ASTM F714 & AWWA C906 (4" to 54") and NSF/ANSI 61	PE4710

For ¾" through 2" SIDR and CTS and for ¾" through 3" IPS for municipal potable water service lines consider 5100 Ultraline®. See PP410, "DriscoPlex® 5100 Series Ultraline® HDPE Water Service Pipe & Tubing".

Table 3 DriscoPlex® 4000 and 4100 Pipe Pressure Ratings per ASTM F714 at 80°F

PE4710 Pipe Pressure Ratings Per ASTM F714 ¹			
Dimension Ratio	Working Pressure Rating (psi)	Allowable Total Pressure During Recurring Surge (psi)	Allowable Total Pressure During Occasional Surge (psi)
9	250	375	500
11	200	300	400
13.5	160	240	320
14.3	150	225	300
17	125	185	250
21	100	150	200
26	80	120	160

¹For Pressure Class and Working Pressure Ratings per AWWA C906, see Appendix 1. Ratings are for water and can vary for other fluids and temperature. Table 3 Working Pressure Ratings may be used with AWWA C901 pipe.

Table 4: Service Temperature Design Factor

Service Temperature Design Factor, F_T ¹							
Service Temperature, °F (°C)	≤80 (27) ⁽¹⁾	≤90 (32)	≤100 (38)	≤110 (43)	≤120 (49)	≤130 (54)	≤140 (60)
	1.0	0.9	0.8	0.71	0.63	0.57	0.50

¹Use 80°F (27°C) service factor for service temperatures below 80°F (27°C). F_T for temperatures below 100°F are from AWWA M-55. F_T for temperatures above 100°F found by interpolation.

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Table 5 DriscoPlex® 4000 DIPS Pipe Sizing System

Common Dimension Ratio's for DriscoPlex® 4000 DIPS Pipe (Custom DR's available. Contact Performance Pipe)													
DIPS		DR 21			DR 14.3			DR 11			DR 9		
ASTM F714 PR		PR = 100 psi			PR = 150 psi			PR = 200 psi			PR = 250 psi		
AWWA C906 PC		PC = 80 psi			PC = 120 psi			PC = 160 psi			PC = 200 psi		
Pipe Size, in.	OD, in.	Min. Wall, in.	Avg. ID, in.	Wgt. lbs/ft	Min. Wall, in.	Avg. ID, in.	Wgt. lbs/ft	Min. Wall, in.	Avg. ID, in.	Wgt. lbs/ft	Min. Wall, in.	Avg. ID, in.	Wgt. lbs/ft
4	4.80	0.229	4.315	1.45	0.336	4.088	2.07	0.436	3.876	2.62	0.533	3.670	3.13
6	6.90	0.329	6.203	2.99	0.483	5.877	4.27	0.627	5.571	5.42	0.767	5.274	6.47
8	9.05	0.431	8.136	5.13	0.633	7.708	7.35	0.823	7.305	9.33	1.006	6.917	11.13
10	11.10	0.529	9.979	7.73	0.776	9.454	11.06	1.009	8.961	14.03	1.233	8.486	16.74
12	13.20	0.629	11.867	10.93	0.923	11.243	15.64	1.200	10.656	19.84	1.467	10.090	23.67
14	15.30	0.729	13.755	14.68	1.070	13.032	21.01	1.391	12.351	26.65	1.700	11.696	31.80
16	17.40	0.829	15.643	18.98	1.217	14.820	27.17	1.582	14.046	34.47	1.933	13.302	41.13
18	19.50	0.929	17.531	23.84	1.364	16.609	34.12	1.773	15.741	43.30	2.167	14.906	51.66
20	21.60	1.029	19.419	29.25	1.510	18.398	41.87	1.964	17.436	53.13	2.400	16.512	63.38
24	25.80	1.229	23.195	41.73	1.804	21.975	59.73	2.345	20.829	75.77	2.867	19.722	90.43
30	32.00	1.524	28.769	64.18	2.238	27.256	91.89	2.909	25.833	116.58			
†36	38.30	1.824	34.433	91.93	2.678	32.622	131.63	3.482	30.918	167.02			
†42	44.50	2.119	40.008	124.09	3.112	37.903	177.70						

Average inside diameter is calculated using Nominal OD and Minimum Wall plus 6% for use in estimating fluid flow. Actual ID will vary. When designing components to fit the pipe ID, refer to pipe dimensions and tolerances in the applicable pipe manufacturing specification. †OD available upon special request.

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Table 6 DriscoPlex® 4100 IPS Pipe Sizing System

Common Dimension Ratio's for DriscoPlex® 4100 IPS Pipe (Custom DR's available. Contact Performance Pipe)																
IPS		DR 21			DR 17			DR 13.5			DR 11			DR 9		
ASTM F714 PR		PR = 100 psi			PR = 125 psi			PR = 160 psi			PR = 200 psi			PR = 250 psi		
AWWA C906 PC		PC = 80 psi			PC = 100 psi			PC = 130 psi			PC = 160 psi			PC = 200 psi		
Pipe Size in.	OD, in.	Min. Wall, in.	Avg. ID, in.	Wgt. lbs/ft	Min. Wall, in.	Avg. ID, in.	Wgt. lbs/ft	Min. Wall, in.	Avg. ID, in.	Wgt. lbs/ft	Min. Wall, in.	Avg. ID, in.	Wgt. lbs/ft	Min. Wall, in.	Avg. ID, in.	Wgt. Lbs/ft
2	2.375				0.140	2.078	0.43	0.176	2.002	0.53	0.216	1.917	0.64	0.264	1.815	0.77
3	3.500				0.206	3.063	0.94	0.259	2.951	1.16	0.318	2.826	1.39	0.389	2.675	1.66
4	4.500	0.214	4.046	1.27	0.265	3.938	1.55	0.333	3.794	1.92	0.409	3.633	2.31	0.500	3.440	2.75
6	6.625	0.315	5.957	2.75	0.390	5.798	3.36	0.491	5.584	4.15	0.602	5.349	5.00	0.736	5.065	5.96
8	8.625	0.411	7.754	4.66	0.507	7.550	5.69	0.639	7.270	7.04	0.784	6.963	8.47	0.958	6.594	10.11
10	10.750	0.512	9.665	7.24	0.632	9.410	8.83	0.796	9.062	10.93	0.977	8.679	13.16	1.194	8.219	15.70
12	12.750	0.607	11.463	10.19	0.750	11.160	12.43	0.944	10.749	15.38	1.159	10.293	18.51	1.417	9.746	22.08
14	14.000	0.667	12.586	12.28	0.824	12.253	14.98	1.037	11.802	18.54	1.273	11.301	22.32	1.556	10.701	26.63
16	16.000	0.762	14.385	16.04	0.941	14.005	19.57	1.185	13.488	24.22	1.455	12.915	29.15	1.778	12.231	34.78
18	18.000	0.857	16.183	20.30	1.059	15.755	24.77	1.333	15.174	30.65	1.636	14.532	36.89	2.000	13.760	44.02
20	20.000	0.952	17.982	25.07	1.176	17.507	30.58	1.481	16.860	37.84	1.818	16.146	45.54	2.222	15.289	54.34
22	22.000	1.048	19.778	30.33	1.294	19.257	37.00	1.630	18.544	45.79	2.000	17.760	55.10	2.444	16.819	65.75
24	24.000	1.143	21.577	36.10	1.412	21.007	44.03	1.778	20.231	54.49	2.182	19.374	65.58	2.667	18.346	78.25
26	26.000	1.238	23.375	42.36	1.529	22.759	51.67	1.926	21.917	63.95	2.364	20.988	76.96	2.889	19.875	91.84
28	28.000	1.333	25.174	49.13	1.647	24.508	59.93	2.074	23.603	74.17	2.545	22.605	89.26	3.111	21.405	106.51
30	30.000	1.429	26.971	56.40	1.765	26.258	68.80	2.222	25.289	85.14	2.727	24.219	102.47	3.333	22.934	122.27
32	32.000	1.524	28.769	64.17	1.882	28.010	78.28	2.370	26.976	96.87	2.909	25.833	116.58	3.333	22.934	122.27
34	34.000	1.619	30.568	72.44	2.000	29.760	88.37	2.519	28.660	109.36	3.091	27.447	131.61			
36	36.000	1.714	32.366	81.21	2.118	31.510	99.07	2.667	30.346	122.60	3.273	29.061	147.55			
42	42.000	2.000	37.760	110.54	2.471	36.761	134.84	3.111	35.405	166.88						
48	48.000	2.286	43.154	144.38	2.824	42.013	176.12									
54	54.000	2.571	48.549	182.73	3.176	47.266	222.90									

For pipe smaller than 2" see PP415, DriscoPlex® 5100 Water Service Pipe and Tubing.

Average inside diameter is calculated using Nominal OD and Minimum Wall plus 6% for use in estimating fluid flow. Actual ID will vary. When designing components to fit the pipe ID, refer to pipe dimensions and tolerances in the applicable pipe manufacturing specification.