SAFETY AND BUILDINGS DIVISION
Plumbi½ng Product Review
P.O. Box 2658
Madison, Wisconsin 53701-2658
TTY: Contact Through Relay

Scott Walker, Governor
Dave Ross, Secretary

December 9, 2015

AQUATECHNIK NORTH AMERICA
STEVEN THOMAS
1815 SISMET ROAD
MISSISSAUGA ON L4W 1P9
CANADA

Re:	Description:	PIPES, POLYPROPYLENE
	Manufacturer:	AQUATECHNIK NORTH AMERICA
	Product Name:	AQUATECKNIK PP-RCT FUSION TECH (trans id xxxxxxx)
	Model Number(s):	FIBER-T RED STRIPED PIPE (HOT WATER) AND BLUE STRIPED PIPE (COLD WATER), ½", ¾", 1", 1¼", 1½", 2", 2½", 3", 3½", 4", 6", 8", 10" and 12"
	Product File No:	20150248

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an alternate approval to s. SPS 384.30 (4) (e) 1. based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of December 2020.

This alternate approval is contingent upon compliance with the following stipulation(s):

- This piping system may be used for the following:

  1. Water distribution piping:

     a. Red stripe = hot water distribution piping;
     b. Blue stripe = cold water distribution piping.

  2. Water services and private water mains.

- This piping system shall be installed in strict accordance with the manufacturer's published instructions and ch. SPS 382 Wis. Adm. Code. If there is a conflict, ch. SPS 382 Wis. Adm. Code shall take precedence.

- This piping system shall be sized in accordance with the attached tables.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter
Environmental Engineer - Plumbing Product Reviewer
Depart of Safety and Professional Services
Division of Industry Services
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aquatechnik®

Continuous pressure drop tables
SDR 7.4 (tested PN 20) at 68°F and 153°F

Q = Flowrate US gpm R = ft.hd/ 100ft
V = Velocity ft./s De = External diameter
Di = Internal Diameter ND = Nominal Diameter

Roughness	**0.00028"**	
Specific Weight	**62.30 lbs/ft³**	**61.38 lbs/ft³**
Temperature	**68°F**	**153°F**
Viscosity	**1.0979E-05 ft²/s**	**5.059E-06 ft²/s**

Q =	ND	1/2"		3/4"		1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		3 1/2"		4"	
	De	0.79 in		0.98 in		1.26 in		1.57 in		1.97 in		2.48 in		2.95 in		3.54 in		4.33 in		4.92 in	
US gpm	Di	0.57 in		0.71 in		0.91 in		1.14 in		1.43 in		1.80 in		2.14 in		2.57 in		3.14 in		3.57 in	
0.1	R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.13		0.08		0.05		0.03		0.02		0.01		0.01		0.01		0.00		0.00	
0.2	R	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.25		0.16		0.10		0.06		0.04		0.03		0.02		0.01		0.01		0.01	
0.3	R	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.38		0.24		0.15		0.09		0.06		0.04		0.03		0.02		0.01		0.01	
0.4	R	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.51		0.33		0.20		0.13		0.08		0.05		0.04		0.02		0.02		0.01	
0.5	R	0.6	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.64		0.41		0.24		0.16		0.10		0.06		0.04		0.03		0.02		0.02	
0.6	R	0.8	0.6	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.76		0.49		0.29		0.19		0.12		0.08		0.05		0.04		0.02		0.02	
0.7	R	1.0	0.8	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.89		0.57		0.34		0.22		0.14		0.09		0.06		0.04		0.03		0.02	
0.8	R	1.3	1.0	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	1.02		0.65		0.39		0.25		0.16		0.10		0.07		0.05		0.03		0.03	
0.9	R	1.6	1.2	0.6	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	1.14		0.73		0.44		0.28		0.18		0.11		0.08		0.06		0.04		0.03	
1.0	R	1.9	1.5	0.7	0.5	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	1.27		0.81		0.49		0.31		0.20		0.13		0.09		0.06		0.04		0.03	
2.0	R	6.5	4.9	2.3	1.7	0.7	0.5	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	2.54		1.63		0.98		0.63		0.40		0.25		0.18		0.12		0.08		0.06	
3.0	R	13.3	10.1	4.6	3.5	1.4	1.0	0.5	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	3.81		2.44		1.47		0.94		0.60		0.38		0.27		0.18		0.12		0.10	
4.0	R	22.0	16.6	7.6	5.8	2.3	1.7	0.8	0.6	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	5.09		3.26		1.96		1.25		0.80		0.50		0.36		0.25		0.17		0.13	
5.0	R	32.5	24.6	11.3	8.5	3.4	2.6	1.2	0.9	0.4	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	6.36		4.07		2.45		1.57		1.01		0.63		0.45		0.31		0.21		0.16	
6.0	R	44.8	33.8	15.5	11.7	4.6	3.5	1.6	1.2	0.6	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	V	7.63		4.88		2.94		1.88		1.21		0.75		0.53		0.37		0.25		0.19	
7.0	R			20.3	15.4	6.1	4.6	2.1	1.6	0.7	0.6	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	V			5.70		3.43		2.19		1.41		0.88		0.62		0.43		0.29		0.22	
8.0	R			25.7	19.4	7.7	5.8	2.7	2.0	0.9	0.7	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
	V			6.51		3.92		2.51		1.61		1.01		0.71		0.49		0.33		0.26	
9.0	R			31.5	23.8	9.4	7.1	3.3	2.5	1.1	0.9	0.4	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0
	V			7.32		4.41		2.82		1.81		1.13		0.80		0.55		0.37		0.29	
10.0	R					11.4	8.6	3.9	3.0	1.4	1.0	0.4	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0
	V					4.90		3.14		2.01		1.26		0.89		0.62		0.41		0.32	
11.0	R					13.4	10.1	4.7	3.5	1.6	1.2	0.5	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0
	V					5.39		3.45		2.21		1.38		0.98		0.68		0.46		0.35	
12.0	R					15.6	11.8	5.4	4.1	1.9	1.4	0.6	0.5	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0
	V					5.88		3.76		2.41		1.51		1.07		0.74		0.50		0.38	
13.0	R					18.0	13.6	6.2	4.7	2.2	1.6	0.7	0.5	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0
	V					6.37		4.08		2.62		1.63		1.16		0.80		0.54		0.42	
14.0	R					20.5	15.5	7.1	5.4	2.5	1.9	0.8	0.6	0.4	0.3	0.1	0.1	0.1	0.0	0.0	0.0
	V					6.86		4.39		2.82		1.76		1.25		0.86		0.58		0.45	
15.0	R					23.1	17.5	8.0	6.0	2.8	2.1	0.9	0.7	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0
	V					7.35		4.70		3.02		1.89		1.34		0.92		0.62		0.48	
16.0	R					25.9	19.5	9.0	6.8	3.1	2.4	1.0	0.8	0.5	0.3	0.2	0.1	0.1	0.1	0.0	0.0
	V					7.84		5.02		3.22		2.01		1.43		0.99		0.66		0.51	
17.0	R							10.0	7.5	3.5	2.6	1.1	0.9	0.5	0.4	0.2	0.2	0.1	0.1	0.0	0.0
	V							5.33		3.42		2.14		1.51		1.05		0.70		0.54	
18.0	R							11.0	8.3	3.8	2.9	1.3	0.9	0.6	0.4	0.2	0.2	0.1	0.1	0.0	0.0
	V							5.64		3.62		2.26		1.60		1.11		0.75		0.58	
19.0	R							12.1	9.1	4.2	3.2	1.4	1.0	0.6	0.5	0.3	0.2	0.1	0.1	0.1	0.0
	V							5.96		3.82		2.39		1.69		1.17		0.79		0.61	
20.0	R							13.2	10.0	4.6	3.5	1.5	1.1	0.7	0.5	0.3	0.2	0.1	0.1	0.1	0.0
	V							6.27		4.02		2.51		1.78		1.23		0.83		0.64	

Table 7

Continuous pressure drop tables
SDR 7.4 (tested PN 20) at 68°F and 153°F

Q = Flowrate US gpm R = ft.hd/ 100ft
V = Velocity ft./s De = External diameter
Di = Internal Diameter ND = Nominal Diameter

Roughness	**0.00028"**	
Specific Weight	**62.30 lbs/ft³**	**61.38 lbs/ft³**
Temperature	**68°F**	**153°F**
Viscosity	**1.0979E-05 ft²/s**	**5.059E-06 ft²/s**

Q =	ND	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
	De	0.79 in	0.98 in	1.26 in	1.57 in	1.97 in	2.48 in	2.95 in	3.54 in	4.33 in	4.92 in
US gpm	Di	0.57 in	0.71 in	0.91 in	1.14 in	1.43 in	1.80 in	2.14 in	2.57 in	3.14 in	3.57 in
22	R				15.6 11.8	5.5 4.1	1.8 1.3	0.8 0.6	0.3 0.2	0.1 0.1	0.1 0.1
	V				6.90	4.43	2.77	1.96	1.36	0.91	0.70
24	R				18.2 13.8	6.4 4.8	2.1 1.6	0.9 0.7	0.4 0.3	0.1 0.1	0.1 0.1
	V				7.52	4.83	3.02	2.14	1.48	0.99	0.77
26	R					7.3 5.5	2.4 1.8	1.1 0.8	0.4 0.3	0.2 0.1	0.1 0.1
	V					5.23	3.27	2.32	1.60	1.08	0.83
28	R					8.3 6.3	2.7 2.1	1.2 0.9	0.5 0.4	0.2 0.1	0.1 0.1
	V					5.63	3.52	2.49	1.73	1.16	0.90
30	R					9.4 7.1	3.1 2.3	1.4 1.0	0.6 0.4	0.2 0.2	0.1 0.1
	V					6.04	3.77	2.67	1.85	1.24	0.96
32	R					10.5 7.9	3.4 2.6	1.5 1.1	0.6 0.5	0.2 0.2	0.1 0.1
	V					6.44	4.02	2.85	1.97	1.33	1.02
34	R					11.7 8.8	3.8 2.9	1.7 1.3	0.7 0.5	0.3 0.2	0.1 0.1
	V					6.84	4.27	3.03	2.10	1.41	1.09
36	R					12.9 9.8	4.2 3.2	1.9 1.4	0.8 0.6	0.3 0.2	0.2 0.1
	V					7.24	4.53	3.21	2.22	1.49	1.15
38	R					14.2 10.7	4.6 3.5	2.1 1.6	0.9 0.6	0.3 0.3	0.2 0.1
	V					7.65	4.78	3.39	2.34	1.57	1.22
40	R						5.1 3.8	2.2 1.7	0.9 0.7	0.4 0.3	0.2 0.1
	V						5.03	3.56	2.47	1.66	1.28
45	R						6.2 4.7	2.8 2.1	1.1 0.9	0.4 0.3	0.2 0.2
	V						5.66	4.01	2.77	1.86	1.44
50	R						7.5 5.7	3.3 2.5	1.4 1.0	0.5 0.4	0.3 0.2
	V						6.29	4.46	3.08	2.07	1.60
55	R						8.9 6.7	3.9 3.0	1.6 1.2	0.6 0.5	0.3 0.3
	V						6.91	4.90	3.39	2.28	1.76
60	R						10.3 7.8	4.6 3.4	1.9 1.4	0.7 0.6	0.4 0.3
	V						7.54	5.35	3.70	2.48	1.92
65	R							5.2 4.0	2.2 1.7	0.9 0.6	0.5 0.3
	V							5.79	4.01	2.69	2.08
70	R							6.0 4.5	2.5 1.9	1.0 0.7	0.5 0.4
	V							6.24	4.32	2.90	2.24
75	R							6.7 5.1	2.8 2.1	1.1 0.8	0.6 0.4
	V							6.68	4.62	3.11	2.40
80	R							7.5 5.7	3.1 2.4	1.2 0.9	0.7 0.5
	V							7.13	4.93	3.31	2.56
85	R							8.4 6.3	3.5 2.6	1.4 1.0	0.7 0.6
	V							7.57	5.24	3.52	2.72
90	R								3.9 2.9	1.5 1.1	0.8 0.6
	V								5.55	3.73	2.88
95	R								4.3 3.2	1.7 1.2	0.9 0.7
	V								5.86	3.93	3.04
100	R								4.7 3.5	1.8 1.4	1.0 0.7
	V								6.16	4.14	3.20
110	R								5.5 4.2	2.1 1.6	1.2 0.9
	V								6.78	4.55	3.52
120	R								6.4 4.8	2.5 1.9	1.3 1.0
	V								7.40	4.97	3.84
130	R									2.9 2.2	1.5 1.2
	V									5.38	4.16
140	R									3.3 2.5	1.8 1.3
	V									5.80	4.48
150	R									3.7 2.8	2.0 1.5
	V									6.21	4.80
160	R									4.1 3.1	2.2 1.7
	V									6.63	5.12
170	R									4.6 3.5	2.5 1.9
	V									7.04	5.44

Table 8

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Continuous pressure drop tables
SDR 7.4 (tested PN 20) at 68°F and 153°F

Q = Flowrate US gpm R = ft.hd/ 100ft
V = Velocity ft./s De = External diameter
Di = Internal Diameter ND = Nominal Diameter

Roughness	**0.00028″**	
Specific Weight	**62.30 lbs/ft³**	**61.38 lbs/ft³**
Temperature	**68°F**	**153°F**
Viscosity	**1.0979E-05 ft²/s**	**5.059E-06 ft²/s**

Q = US gpm	ND / De / Di	1/2″ 0.79 in 0.57 in	3/4″ 0.98 in 0.71 in	1″ 1.26 in 0.91 in	1 1/4″ 1.57 in 1.14 in	1 1/2″ 1.97 in 1.43 in	2″ 2.48 in 1.80 in	2 1/2″ 2.95 in 2.14 in	3″ 3.54 in 2.57 in	3 1/2″ 4.33 in 3.14 in	4″ 4.92 in 3.57 in
180	R									5.1 3.8	2.7 2.1
	V									7.45	5.76
190	R									5.6 4.2	3.0 2.3
	V									7.87	6.08
200	R										3.3 2.5
	V										6.40
220	R										3.9 2.9
	V										7.04
240	R										4.5 3.4
	V										7.68
260	R										
	V										
280	R										
	V										
300	R										
	V										
320	R										
	V										
340	R										
	V										
360	R										
	V										
380	R										
	V										
400	R										
	V										
450	R										
	V										

Table 9

Continuous pressure drop tables
SDR 11 (tested PN 10) at 68°F and 153°F

Q = Flowrate US gpm R = ft.hd/ 100ft
V = Velocity ft./s De = External diameter
Di = Internal Diameter ND = Nominal Diameter

Roughness	**0.00028″**	
Specific Weight	**62.30 lbs/ft³**	**61.38 lbs/ft³**
Temperature	**68°F**	**153°F**
Viscosity	**1.0979E-05 ft²/s**	**5.059E-06 ft²/s**

Q =	ND	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″	2 1/2″	3″	3 1/2″	4″	6″	8″	10″	12″
	De	0.79 in	0.98 in	1.26 in	1.57 in	1.97 in	2.48 in	2.95 in	3.54 in	4.33 in	4.92 in	6.30 in	7.87 in	9.84 in	12.40 in
US gpm	Di	0.57 in	0.71 in	0.91 in	1.14 in	1.43 in	1.80 in	2.14 in	2.57 in	3.14 in	3.57 in	5.15 in	6.44 in	8.06 in	10.15 in
0.1	R	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	0.10	0.06	0.04	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.2	R	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	0.20	0.13	0.08	0.05	0.03	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.3	R	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	0.30	0.19	0.12	0.07	0.05	0.03	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.4	R	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	0.40	0.25	0.15	0.10	0.06	0.04	0.03	0.02	0.01	0.01	0.01	0.00	0.00	0.00
0.5	R	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	0.50	0.32	0.19	0.12	0.08	0.05	0.03	0.02	0.02	0.01	0.01	0.00	0.00	0.00
0.6	R	0.5 0.3	0.2 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	0.60	0.38	0.23	0.15	0.10	0.06	0.04	0.03	0.02	0.02	0.01	0.01	0.00	0.00
0.7	R	0.6 0.5	0.2 0.2	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	0.70	0.44	0.27	0.17	0.11	0.07	0.05	0.03	0.02	0.02	0.01	0.01	0.00	0.00
0.8	R	0.8 0.6	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	0.80	0.51	0.31	0.20	0.13	0.08	0.06	0.04	0.03	0.02	0.01	0.01	0.01	0.00
0.9	R	0.9 0.7	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	0.90	0.57	0.35	0.22	0.14	0.09	0.06	0.04	0.03	0.02	0.01	0.01	0.01	0.00
1	R	1.1 0.8	0.4 0.3	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	1.00	0.63	0.38	0.25	0.16	0.10	0.07	0.05	0.03	0.03	0.02	0.01	0.01	0.00
2	R	3.7 2.8	1.3 0.9	0.4 0.3	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	2.01	1.27	0.77	0.50	0.32	0.20	0.14	0.10	0.07	0.05	0.03	0.02	0.01	0.01
3	R	7.6 5.7	2.5 1.9	0.8 0.6	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	3.01	1.90	1.15	0.74	0.48	0.30	0.21	0.15	0.10	0.08	0.05	0.03	0.02	0.01
4	R	12.6 9.5	4.2 3.2	1.3 1.0	0.5 0.3	0.2 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	4.02	2.53	1.54	0.99	0.63	0.40	0.28	0.19	0.13	0.10	0.06	0.04	0.03	0.02
5	R	18.6 14.1	6.2 4.7	1.9 1.4	0.7 0.5	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	5.02	3.17	1.92	1.24	0.79	0.50	0.35	0.24	0.16	0.13	0.08	0.05	0.03	0.02
6	R	25.6 19.3	8.6 6.5	2.6 2.0	0.9 0.7	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	6.03	3.80	2.30	1.49	0.95	0.60	0.42	0.29	0.20	0.15	0.09	0.06	0.04	0.02
7	R	33.5 25.3	11.2 8.5	3.4 2.6	1.2 0.9	0.4 0.3	0.1 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V	7.03	4.44	2.69	1.74	1.11	0.70	0.49	0.34	0.23	0.18	0.11	0.07	0.04	0.03
8	R		14.2 10.7	4.3 3.3	1.5 1.2	0.5 0.4	0.2 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V		5.07	3.07	1.98	1.27	0.80	0.56	0.39	0.26	0.20	0.12	0.08	0.05	0.03
9	R		17.4 13.2	5.3 4.0	1.9 1.4	0.6 0.5	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V		5.70	3.46	2.23	1.43	0.90	0.63	0.44	0.29	0.23	0.14	0.09	0.06	0.04
10	R		20.9 15.8	6.4 4.8	2.3 1.7	0.8 0.6	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V		6.34	3.84	2.48	1.58	1.00	0.70	0.49	0.33	0.25	0.15	0.10	0.06	0.04
11	R		24.7 18.7	7.5 5.7	2.7 2.0	0.9 0.7	0.3 0.2	0.1 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V		6.97	4.23	2.73	1.74	1.10	0.77	0.54	0.36	0.28	0.17	0.11	0.07	0.04
12	R		28.8 21.8	8.8 6.6	3.1 2.3	1.1 0.8	0.4 0.3	0.2 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V		7.60	4.61	2.98	1.90	1.20	0.84	0.58	0.39	0.30	0.18	0.12	0.08	0.05
13	R			10.1 7.6	3.6 2.7	1.2 0.9	0.4 0.3	0.2 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V			4.99	3.23	2.06	1.30	0.91	0.63	0.42	0.33	0.20	0.13	0.08	0.05
14	R			11.5 8.7	4.1 3.1	1.4 1.1	0.5 0.4	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V			5.38	3.47	2.22	1.40	0.98	0.68	0.46	0.35	0.22	0.14	0.09	0.06
15	R			13.0 9.8	4.6 3.5	1.6 1.2	0.5 0.4	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V			5.76	3.72	2.38	1.50	1.05	0.73	0.49	0.38	0.23	0.15	0.09	0.06
16	R			14.5 11.0	5.1 3.9	1.8 1.3	0.6 0.4	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V			6.15	3.97	2.53	1.60	1.12	0.78	0.52	0.40	0.25	0.16	0.10	0.06
17	R			16.1 12.2	5.7 4.3	2.0 1.5	0.7 0.5	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V			6.53	4.22	2.69	1.70	1.19	0.83	0.55	0.43	0.26	0.17	0.11	0.07
18	R			17.8 13.5	6.3 4.8	2.2 1.6	0.7 0.5	0.3 0.2	0.1 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V			6.91	4.47	2.85	1.80	1.26	0.88	0.59	0.45	0.28	0.18	0.11	0.07
19	R			19.6 14.8	6.9 5.2	2.4 1.8	0.8 0.6	0.3 0.3	0.1 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V			7.30	4.71	3.01	1.90	1.33	0.92	0.62	0.48	0.29	0.19	0.12	0.08
20	R			21.4 16.2	7.6 5.7	2.6 2.0	0.9 0.7	0.4 0.3	0.2 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V			7.68	4.96	3.17	2.00	1.40	0.97	0.65	0.50	0.31	0.20	0.13	0.08

Table 10

aquatechnik®

Continuous pressure drop tables
SDR 11 (tested PN 10) at 68°F and 153°F

Q = Flowrate US gpm R = ft.hd/ 100ft
V = Velocity ft./s De = External diameter
Di = Internal Diameter ND = Nominal Diameter

Roughness	**0.00028″**	
Specific Weight	**62.30 lbs/ft³**	**61.38 lbs/ft³**
Temperature	**68°F**	**153°F**
Viscosity	**1.0979E-05 ft²/s**	**5.059E-06 ft²/s**

Q =	ND	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″	2 1/2″	3″	3 1/2″	4″	6″	8″	10″	12″
	De	0.79 in	0.98 in	1.26 in	1.57 in	1.97 in	2.48 in	2.95 in	3.54 in	4.33 in	4.92 in	6.30 in	7.87 in	9.84 in	12.40 in
US gpm	Di	0.57 in	0.71 in	0.91 in	1.14 in	1.43 in	1.80 in	2.14 in	2.57 in	3.14 in	3.57 in	5.15 in	6.44 in	8.06 in	10.15 in
22	R				9.0 6.8	3.1 2.3	1.0 0.8	0.4 0.3	0.2 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V				5.46	3.48	2.20	1.54	1.07	0.72	0.56	0.34	0.22	0.14	0.09
24	R				10.4 7.9	3.6 2.7	1.2 0.9	0.5 0.4	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V				5.95	3.80	2.40	1.68	1.17	0.78	0.61	0.37	0.24	0.15	0.10
26	R				12.0 9.1	4.1 3.1	1.4 1.0	0.6 0.4	0.3 0.2	0.1 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V				6.45	4.12	2.59	1.82	1.27	0.85	0.66	0.40	0.26	0.16	0.10
28	R				13.7 10.3	4.7 3.6	1.6 1.2	0.7 0.5	0.3 0.2	0.1 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V				6.95	4.44	2.79	1.96	1.36	0.91	0.71	0.43	0.28	0.18	0.11
30	R				15.4 11.7	5.3 4.0	1.8 1.3	0.8 0.6	0.3 0.2	0.1 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V				7.44	4.75	2.99	2.10	1.46	0.98	0.76	0.46	0.30	0.19	0.12
32	R				17.3 13.1	6.0 4.5	2.0 1.5	0.9 0.6	0.4 0.3	0.1 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V				7.94	5.07	3.19	2.24	1.56	1.04	0.81	0.49	0.32	0.20	0.13
34	R					6.6 5.0	2.2 1.7	1.0 0.7	0.4 0.3	0.2 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V					5.39	3.39	2.38	1.66	1.11	0.86	0.52	0.33	0.21	0.13
36	R					7.3 5.5	2.4 1.8	1.1 0.8	0.4 0.3	0.2 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V					5.70	3.59	2.52	1.75	1.17	0.91	0.55	0.35	0.23	0.14
38	R					8.0 6.1	2.7 2.0	1.2 0.9	0.5 0.4	0.2 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V					6.02	3.79	2.66	1.85	1.24	0.96	0.59	0.37	0.24	0.15
40	R					8.8 6.7	2.9 2.2	1.3 1.0	0.5 0.4	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V					6.34	3.99	2.80	1.95	1.30	1.01	0.62	0.39	0.25	0.16
45	R					10.8 8.2	3.6 2.7	1.6 1.2	0.7 0.5	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V					7.13	4.49	3.15	2.19	1.46	1.14	0.69	0.44	0.28	0.18
50	R					13.0 9.8	4.3 3.3	1.9 1.4	0.8 0.6	0.3 0.2	0.2 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V					7.92	4.99	3.50	2.43	1.63	1.26	0.77	0.49	0.31	0.20
55	R						5.1 3.9	2.2 1.7	0.9 0.7	0.4 0.3	0.2 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	V						5.49	3.85	2.68	1.79	1.39	0.85	0.54	0.35	0.22
60	R						6.0 4.5	2.6 1.9	1.1 0.8	0.4 0.3	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0
	V						5.99	4.20	2.92	1.95	1.51	0.92	0.59	0.38	0.24
65	R						6.9 5.2	3.0 2.2	1.2 0.9	0.5 0.4	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0
	V						6.49	4.55	3.16	2.12	1.64	1.00	0.64	0.41	0.26
70	R						7.8 5.9	3.4 2.5	1.4 1.1	0.5 0.4	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0
	V						6.99	4.90	3.41	2.28	1.77	1.08	0.69	0.44	0.28
75	R						8.8 6.7	3.8 2.9	1.6 1.2	0.6 0.5	0.3 0.3	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0
	V						7.49	5.25	3.65	2.44	1.89	1.16	0.74	0.47	0.30
80	R						9.9 7.5	4.2 3.2	1.8 1.4	0.7 0.5	0.4 0.3	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0
	V						7.98	5.60	3.89	2.60	2.02	1.23	0.79	0.50	0.32
85	R							4.7 3.6	2.0 1.5	0.8 0.6	0.4 0.3	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0
	V							5.95	4.14	2.77	2.15	1.31	0.84	0.54	0.34
90	R							5.2 3.9	2.2 1.7	0.8 0.6	0.5 0.4	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0
	V							6.29	4.38	2.93	2.27	1.39	0.89	0.57	0.36
95	R							5.7 4.3	2.4 1.8	0.9 0.7	0.5 0.4	0.2 0.1	0.1 0.0	0.0 0.0	0.0 0.0
	V							6.64	4.62	3.09	2.40	1.46	0.94	0.60	0.38
100	R							6.3 4.7	2.7 2.0	1.0 0.8	0.6 0.4	0.2 0.1	0.1 0.0	0.0 0.0	0.0 0.0
	V							6.99	4.87	3.26	2.52	1.54	0.99	0.63	0.40
110	R							7.4 5.6	3.1 2.4	1.2 0.9	0.7 0.5	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0
	V							7.69	5.35	3.58	2.78	1.70	1.08	0.69	0.44
120	R								3.7 2.8	1.4 1.1	0.8 0.6	0.2 0.2	0.1 0.1	0.0 0.0	0.0 0.0
	V								5.84	3.91	3.03	1.85	1.18	0.76	0.48
130	R								4.2 3.2	1.6 1.2	0.9 0.7	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0
	V								6.33	4.23	3.28	2.00	1.28	0.82	0.52
140	R								4.8 3.6	1.8 1.4	1.0 0.8	0.3 0.2	0.1 0.1	0.0 0.0	0.0 0.0
	V								6.81	4.56	3.53	2.16	1.38	0.88	0.56
150	R								5.4 4.1	2.1 1.6	1.1 0.9	0.4 0.3	0.1 0.1	0.0 0.0	0.0 0.0
	V								7.30	4.88	3.79	2.31	1.48	0.94	0.60
160	R								6.0 4.6	2.3 1.8	1.3 1.0	0.4 0.3	0.1 0.1	0.0 0.0	0.0 0.0
	V								7.79	5.21	4.04	2.47	1.58	1.01	0.63
170	R									2.6 2.0	1.4 1.1	0.4 0.3	0.2 0.1	0.1 0.0	0.0 0.0
	V									5.53	4.29	2.62	1.67	1.07	0.67

Table 11

Continuous pressure drop tables
SDR 11 (tested PN 10) at 68°F and 153°F

Q = Flowrate US gpm R = ft.hd/ 100ft
V = Velocity ft./s De = External diameter
Di = Internal Diameter ND = Nominal Diameter

Roughness	**0.00028″**	
Specific Weight	**62.30 lbs/ft³**	**61.38 lbs/ft³**
Temperature	**68°F**	**153°F**
Viscosity	**1.0979E-05 ft²/s**	**5.059E-06 ft²/s**

Q =	ND	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″	2 1/2″	3″	3 1/2″	4″	6″	8″	10″	12″
	De	0.79 in	0.98 in	1.26 in	1.57 in	1.97 in	2.48 in	2.95 in	3.54 in	4.33 in	4.92 in	6.30 in	7.87 in	9.84 in	12.40 in
US gpm	Di	0.57 in	0.71 in	0.91 in	1.14 in	1.43 in	1.80 in	2.14 in	2.57 in	3.14 in	3.57 in	5.15 in	6.44 in	8.06 in	10.15 in
180	R									2.9 2.2	1.6 1.2	0.5 0.4	0.2 0.1	0.1 0.0	0.0 0.0
	V									5.86	4.54	2.77	1.77	1.13	0.71
190	R									3.1 2.4	1.7 1.3	0.5 0.4	0.2 0.1	0.1 0.0	0.0 0.0
	V									6.19	4.80	2.93	1.87	1.20	0.75
200	R									3.4 2.6	1.9 1.4	0.6 0.4	0.2 0.2	0.1 0.1	0.0 0.0
	V									6.51	5.05	3.08	1.97	1.26	0.79
220	R									4.1 3.1	2.2 1.7	0.7 0.5	0.2 0.2	0.1 0.1	0.0 0.0
	V									7.16	5.55	3.39	2.17	1.39	0.87
240	R									4.7 3.6	2.6 2.0	0.8 0.6	0.3 0.2	0.1 0.1	0.0 0.0
	V									7.81	6.06	3.70	2.36	1.51	0.95
260	R										3.0 2.2	0.9 0.7	0.3 0.2	0.1 0.1	0.0 0.0
	V										6.56	4.01	2.56	1.64	1.03
280	R										3.4 2.6	1.0 0.8	0.4 0.3	0.1 0.1	0.0 0.0
	V										7.07	4.32	2.76	1.76	1.11
300	R										3.8 2.9	1.2 0.9	0.4 0.3	0.1 0.1	0.0 0.0
	V										7.57	4.62	2.96	1.89	1.19
320	R											1.3 1.0	0.5 0.3	0.2 0.1	0.1 0.0
	V											4.93	3.15	2.02	1.27
340	R											1.5 1.1	0.5 0.4	0.2 0.1	0.1 0.0
	V											5.24	3.35	2.14	1.35
360	R											1.6 1.2	0.6 0.4	0.2 0.1	0.1 0.0
	V											5.55	3.55	2.27	1.43
380	R											1.8 1.4	0.6 0.5	0.2 0.2	0.1 0.1
	V											5.86	3.74	2.39	1.51
400	R											2.0 1.5	0.7 0.5	0.2 0.2	0.1 0.1
	V											6.16	3.94	2.52	1.59
450	R											2.4 1.8	0.8 0.6	0.3 0.2	0.1 0.1
	V											6.94	4.43	2.83	1.79
500	R											2.9 2.2	1.0 0.8	0.3 0.3	0.1 0.1
	V											7.71	4.93	3.15	1.98
550	R												1.2 0.9	0.4 0.3	0.1 0.1
	V												5.42	3.46	2.18
600	R												1.4 1.0	0.5 0.4	0.2 0.1
	V												5.91	3.78	2.38
650	R												1.6 1.2	0.5 0.4	0.2 0.1
	V												6.40	4.09	2.58
700	R												1.8 1.4	0.6 0.5	0.2 0.2
	V												6.90	4.41	2.78
750	R												2.0 1.5	0.7 0.5	0.2 0.2
	V												7.39	4.72	2.98
800	R												2.3 1.7	0.8 0.6	0.3 0.2
	V												7.88	5.04	3.17
850	R													0.9 0.7	0.3 0.2
	V													5.35	3.37
900	R													1.0 0.7	0.3 0.2
	V													5.67	3.57
950	R													1.1 0.8	0.4 0.3
	V													5.98	3.77
1000	R													1.2 0.9	0.4 0.3
	V													6.30	3.97
1100	R													1.4 1.0	0.5 0.3
	V													6.93	4.36
1200	R													1.6 1.2	0.5 0.4
	V													7.56	4.76
1300	R														0.6 0.5
	V														5.16
1400	R														0.7 0.5
	V														5.55

Table 12

aquatechnik®

Continuous pressure drop tables
SDR 11 (tested PN 10) at 68°F and 153°F

Q = Flowrate US gpm R = ft.hd/ 100ft
V = Velocity ft./s De = External diameter
Di = Internal Diameter ND = Nominal Diameter

Roughness	**0.00028"**	
Specific Weight	**62.30 lbs/ft³**	**61.38 lbs/ft³**
Temperature	**68°F**	**153°F**
Viscosity	**1.0979E-05 ft²/s**	**5.059E-06 ft²/s**

Q =	ND	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	6"	8"	10"	12"
	De	0.79 in	0.98 in	1.26 in	1.57 in	1.97 in	2.48 in	2.95 in	3.54 in	4.33 in	4.92 in	6.30 in	7.87 in	9.84 in	12.40 in
US gpm	Di	0.57 in	0.71 in	0.91 in	1.14 in	1.43 in	1.80 in	2.14 in	2.57 in	3.14 in	3.57 in	5.15 in	6.44 in	8.06 in	10.15 in
1500	R														0.8 0.6
	V														5.95
1600	R														0.9 0.7
	V														6.35
1700	R														1.0 0.7
	V														6.74
1800	R														1.1 0.8
	V														7.14
1900	R														1.2 0.9
	V														7.54
2000	R														1.3 1.0
	V														7.93
2200	R														
	V														
2400	R														
	V														
2600	R														
	V														
2800	R														
	V														
3000	R														
	V														
3200	R														
	V														
3400	R														
	V														
3600	R														
	V														

Table 13