ABS & PVC-DWV Pipe & Fittings

NIBCO® ABS 5800 series fittings conform to the material and dimensions of ASTM D2661 and D3311. ABS pipe meets the material requirements of ASTM D3965 and the dimensions of ASTM D2661.

NIBCO® PVC 4800 series fittings are manufactured to meet the material and dimensional requirements of ASTM D2665 and D3311. PVC pipe is produced in compliance with ASTM D2665 and D1784.

NIBCO products have been designed to conform to the specifications listed above. Many of these products have been listed by and contain the certification mark of CSA, IAPMO, NSF, or any combination thereof. For a current listing contact NIBCO INC.

ABS & PVC Schedule 40 Pipe Dimensions

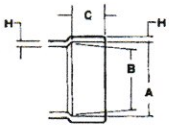
Nominal Size	Average O.D., in.	Average I.D., in.	Min. Wall Thickness, in.
1¼	1.660	1.380	0.140
1½	1.900	1.610	0.145
2	2.375	2.067	0.154
3	3.500	3.068	0.216
4	4.500	4.026	0.237
6	6.625	6.065	0.280
8*	8.625	7.981	0.322
10*	10.750	10.020	0.365
12*	12.750	11.938	0.406

*These sizes of ABS pipe are not currently covered in ASTM D2661.

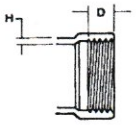
Pipe

Dimensions of NIBCO® ABS & PVC DWV Fitting Sockets, Threaded Ends and Male Ends

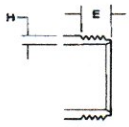
Solvent Socket (HUB)



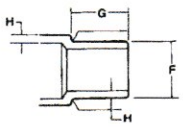
Internal (Female) Threads (FIPT)



External (Male) Threads (MIPT)



Spigot (Male) End (SPIG)



Nominal Size	A, avg.	B, avg.	C, min.	D	E	F	G, min.	H, min.
1¼	1.670	1.655	0.688	0.75	0.71	1.660	0.75	0.16
1½	1.910	1.895	0.688	0.75	0.72	1.900	0.75	0.16
2	2.385	2.370	0.750	0.75	0.75	2.375	0.81	0.16
3	3.515	3.495	1.500	1.20	1.20	3.500	1.56	0.22
4	4.515	4.495	1.750	1.30	1.30	4.500	1.81	0.25
6	6.647	6.614	3.000	1.50	1.51	6.625	3.06	0.28
8	8.655	8.610	4.000	2.00	1.72	8.625	4.06	0.33
10	10.780	10.737	5.000	2.20	N/A	10.750	5.06	0.36
12	12.780	12.736	6.000	2.38	N/A	12.750	6.06	0.41

Pressure Ratings (Continued)

Fittings Temperature Correction Factors

Operating Temperature, °F	FACTORS	
	PVC	CPVC-CTS
70	1.00	1.00
80	0.90	0.96
90	0.75	0.92
100	0.62	0.85
110	0.50	0.77
120	0.40	0.70
130	0.30	0.55
140	0.22	0.50
150	N.R.	0.47
160	N.R.	0.40
170	N.R.	0.32
180	N.R.	0.25
200	N.R.	0.18
210	N.R.	0.15

N.R. - Not Recommended.

Valves, Flanges, and Unions

The maximum pressure rating for NIBCO valves, flanges, and unions, regardless of size, is 150 psi at 73°F. As with all other thermoplastic piping components, the maximum non-shock operating pressure is related to temperature. Above 100°F refer to the chart below.

Temperature Correction Factors

Operating Temperature, °F	Maximum Non-Shock Operating Pressure, psi	
	PVC	CPVC
100	150	150
110	135	140
120	110	130
130	75	120
140	50	110
150	N.R.	100
160	N.R.	90
170	N.R.	80
180	N.R.	70
190	N.R.	60
200	N.R.	50

N.R. - Not Recommended

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Pressure Ratings

Pipe and Tube

[1]Based on water service, for more severe service, an additional correction factor may be required.

Maximum Non-Shock Operating Pressure (psi) AT 73°F[1]			
Nominal Size	Schedule 40 PVC	Schedule 80 PVC	CPVC-CTS SDR-11
3/8	620	920	400
1/2	600	850	400
3/4	480	690	400
1	450	630	400
1 1/4	370	520	400
1 1/2	330	470	400
2	280	400	400
2 1/2	300	425	N/A
3	260	375	N/A
4	220	325	N/A
6	180	280	N/A
8	160	250	N/A
10	140	230	N/A
12	130	230	N/A

NOTE: ABS & PVC DWV used for non-pressure applications only.
N. R. - Not Recommended.
N/A - Not Available.

Pipe and tube pressure ratings are based on non-shock service. As the severity of the service application increases, a service-correction factor should be considered. Specifically, for Schedule 40 applications that may experience severe cyclincal-pressure loading, such as in irrigation systems, the following maximum-suggested design pressures are suggested.

Systems with threaded Schedule 80 thermoplastic fittings shall have a maximum-suggested design pressure of 50% that of equivalent pipe size pressure rating. This reduction is because threads are formed by the removal of material. Refer to the following table for maximum-suggested design pressures.

Conversely, CPVC-CTS pipe and fittings do carry the same pressure rating, as defined by ASTM D2846. Refer to the following table for maximum-suggested design pressures.

Fittings with Service Correction Factors

NOTE: ABS & PVC DWV used for non-pressure applications only.

Maximum–Suggested Design Pressure (psi) AT 73°F[1]			
Nominal Size	Schedule 40 PVC	Schedule 80 PVC	CPVC-CTS SDR-11
	Socket End	Threaded End	Socket End
3/8	370	460	400
1/2	360	420	400
3/4	280	340	400
1	270	320	400
1 1/4	220	260	400
1 1/2	200	240	400
2	170	200	400
2 1/2	180	210	N/A
3	155	190	N/A
4	130	160	N/A
6	110	N.R.	N/A
8	95	N.R.	N/A
10	85	N.R.	N/A
12	80	N.R.	N/A

N. R. - Not Recommended.
N/A - Not Available.

The maximum-allowable non-shock pressure rating for PVC and CPVC-CTS thermoplastic piping is a function of temperature. For pipe and fitting applications above 73°F, refer to the table on the following page for temperature correction factors. To determine the maximum non-shock pressure rating at an elevated temperature, simply multiply the base pressure rating obtained from the appropriate table by the correction factor from the following table. Below 73°F the pressure rating will be the same as the base pressure in the tables above.