

# Figure 340N, 340NF, and 350N THERMOPLASTIC VALVES



## FULL PORT TRUE-UNION BALL VALVE

**Figure 340N - PVC with NPT and SW Ends\***

**Figure 340NF - PVC with 150# Flanges**

**Figure 350N - CPVC with NPT and SW Ends\***

SW only on sizes over 2". NPT is available upon request.

### Valve Features

- Full Port Design
- Pressure Rating: 150 PSI
- Temperature Range:
  - PVC: 41°F to 122°F (5°C to 50°C)
  - CPVC: 32°F to 194°F (0°C to 90°C)
- Certified to NSF 61 Annex G
- EPDM or FPM (Viton®) Seals
- O-ring Energized Seats (up to 2")
- Bidirectional Flow \*
- Adjustable Seat Tightness
- Easy Disassembly with Handle
- Easy Replacement Reduces Down Time
- Can Be Modified for Actuator Installation

\* Note that the valve has a preferred flow direction indicated by the embossed arrow on the body. The preferred flow direction orients the carrier upstream so that downstream piping can be removed with valve closed.

### Standards

Figure 340N Connections:

- Threaded: ASTM D-2464, ref. ANSI B1.20.1
- Socket: ASTM D-2467

Figure 340NF Connections:

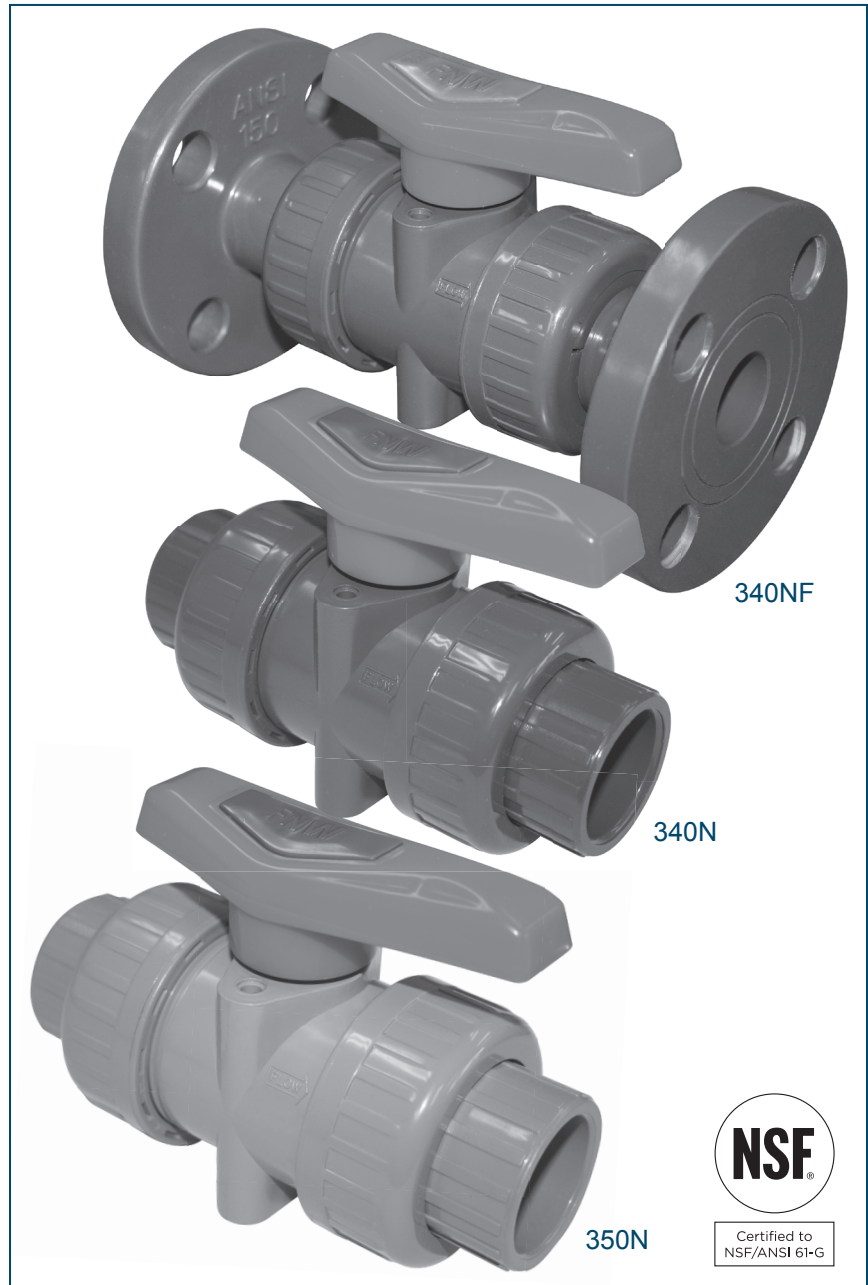
- Flanged: ANSI B16.5, Class 150

Figure 350N Connections:

- Threaded: ASTM F437
- Socket: ASTM F439

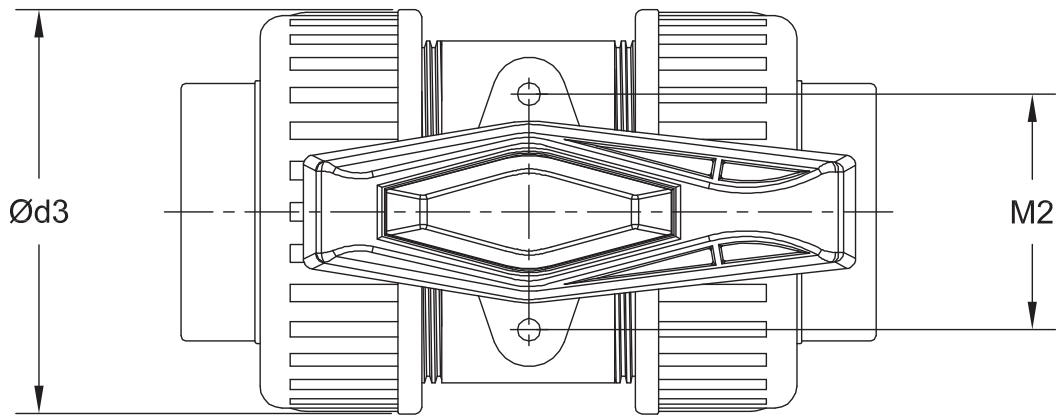
Materials:

- PVC: Cell Classification 12454 per ASTM D1784 (formerly Type I, Grade 1)
- CPVC: Cell Classification 23447 per ASTM D1784 (formerly Type IV, Grade 1)

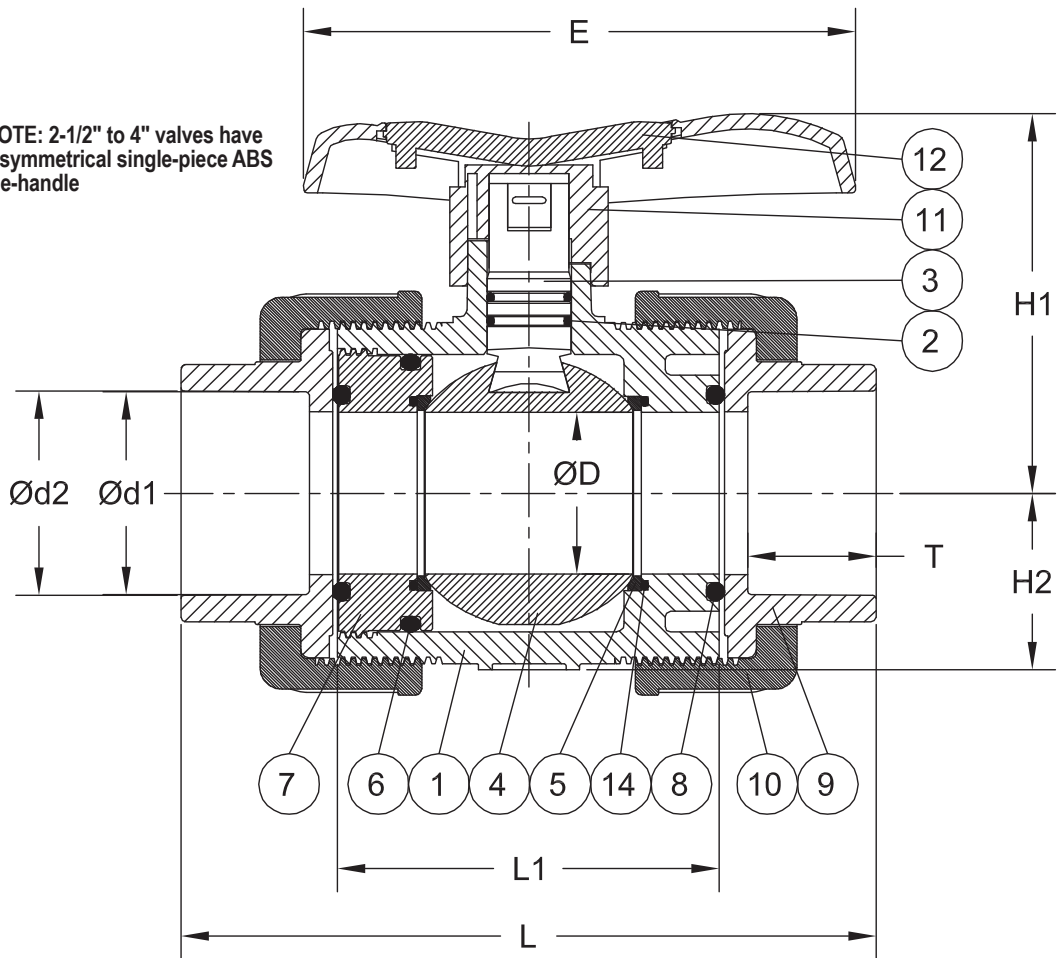


### Options

FNW offers many options and modifications for valves. These include, but are not limited to: Actuation including chain wheels, worm gear operators, pneumatic and electric operators, control accessories, stem extensions, and custom mounting hardware. Contact FNW with your specific application needs.



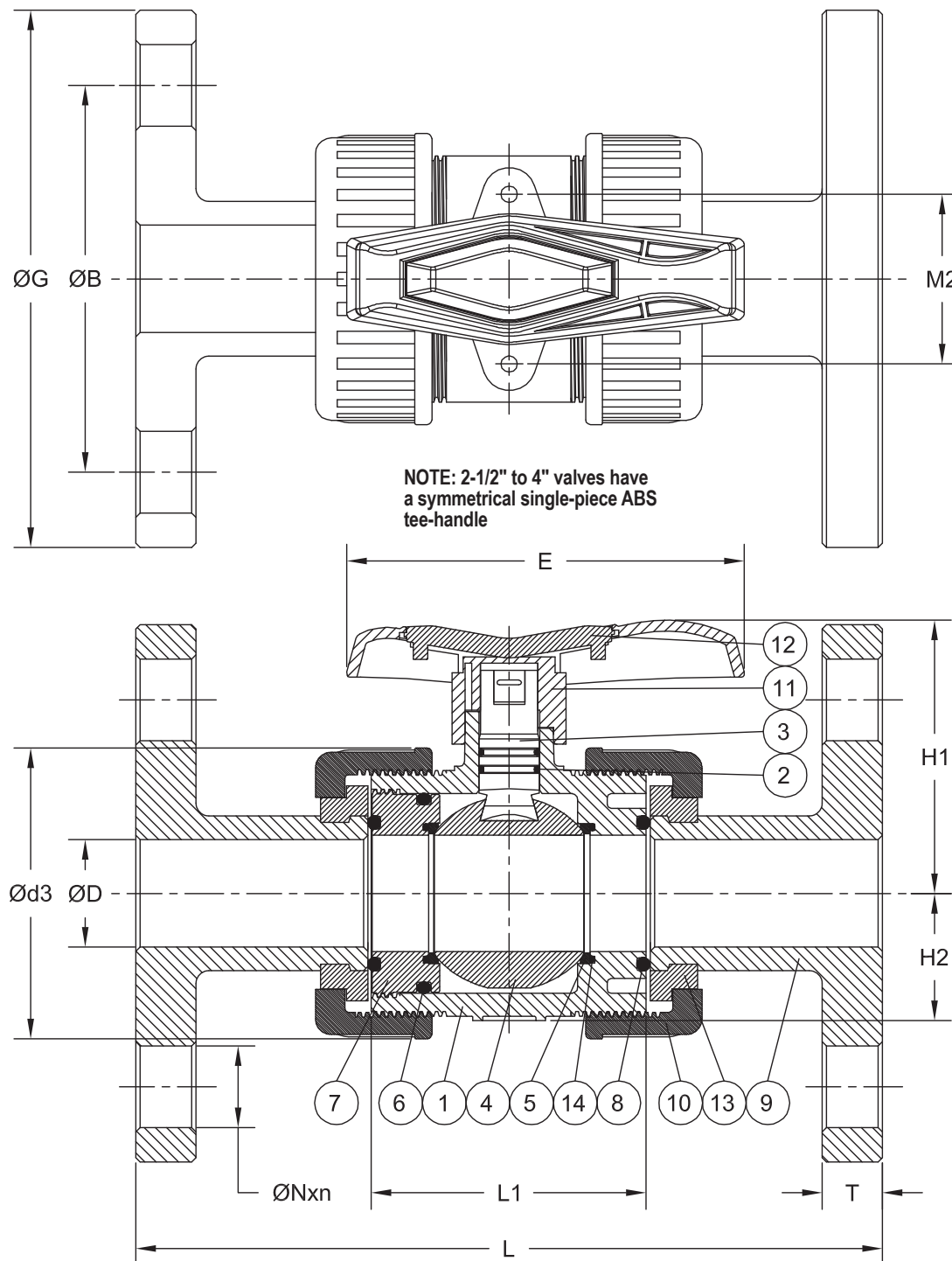
NOTE: 2-1/2" to 4" valves have a symmetrical single-piece ABS tee-handle



**Dimensions (inches) Figure 340N and 350N**

Size	ØD	E	L	L1	Ød1	Ød2	Ød3	T	H1	H2	M2
1/2	0.512	3.03	4.49	2.36	0.84	0.85	1.82	0.87	1.81	0.83	1.18
3/4	0.709	3.74	5.31	2.87	1.05	1.06	2.19	1.00	2.24	1.02	1.30
1	0.906	4.33	5.87	3.11	1.31	1.32	2.62	1.13	2.76	1.30	1.57
1-1/4	1.181	5.00	6.69	3.46	1.66	1.67	3.23	1.25	2.95	1.54	1.85
1-1/2	1.496	5.63	6.93	3.74	1.89	1.91	3.88	1.38	3.70	1.61	2.05
2	1.890	6.46	8.15	4.49	2.37	2.39	4.72	1.50	4.45	2.09	2.76
2-1/2	2.402	7.09	10.83	5.35	2.87	2.89	5.51	1.75	4.57	*	*
3	2.717	8.82	11.97	6.22	3.49	3.52	6.30	1.88	5.12	*	*
4	3.898	10.94	13.07	6.93	4.49	4.52	8.86	2.25	7.01	*	*

\* 2-1/2" to 4" valves do not have bosses for mounting pad. Saddle mounts, sold separately, are available for actuation purposes.



**Dimensions (inches) Figure 340NF**

Size	$\varnothing D$	E	L	L1	$\varnothing d1$	$\varnothing d2$	$\varnothing d3$	T	H1	H2	M2	$\varnothing N$	n
1/2	0.512	3.03	5.63	2.36	2.40	3.50	1.82	0.51	1.81	0.83	1.18	0.63	4
3/4	0.709	3.74	6.77	2.87	2.76	3.86	2.19	0.55	2.24	1.02	1.30	0.63	4
1	0.906	4.33	7.36	3.11	3.11	4.25	2.62	0.55	2.76	1.30	1.57	0.63	4
1-1/4	1.181	5.00	7.48	3.46	3.50	4.61	3.23	0.63	2.95	1.54	1.85	0.63	4
1-1/2	1.496	5.63	8.35	3.74	3.90	5.00	3.88	0.63	3.70	1.61	2.05	0.63	4
2	1.890	6.46	9.21	4.49	4.76	5.98	4.72	0.63	4.45	2.09	2.76	0.75	4
2-1/2	2.402	7.09	10.20	5.35	5.51	7.01	5.51	0.71	4.57	*	*	0.75	4
3	2.717	8.82	11.97	6.22	5.98	7.52	6.30	0.71	5.12	*	*	0.75	4
4	3.898	10.94	14.65	6.93	7.52	9.02	8.86	0.71	7.01	*	*	0.75	8

\* 2-1/2" to 4" valves do not have bosses for mounting pad. Saddle mounts, sold separately, are available for actuation purposes.

## About PVC

Unplasticised Polyvinyl Chloride, or PVC, is the most widely used of all plastics and commonly used for pressure pipes, fittings, and valves. It is rigid, suitable for above and below ground applications. PVC has good chemical resistance and is odorless and tasteless. It is for use with liquids and gases with temperatures +32°F to +140°F\* (for higher temperatures see CPVC) at a wide range of operating pressures. Some poorer quality PVC can leach chemicals into water which can build up in recirculation systems, however most modern pipe is built to specific standards (e.g. BS3505/6, ASTM D 1785, ASTM D2241, DIN 8061/2, KIWA 49, BS4346 PART 1, DIN 8063) to control this. ASTM D1784 controls the compounds for rigid PVC and CPVC.

\* **Note:** Other materials within valves besides PVC and CPVC can have an affect on the temperature limits of the valve. Temperatures noted above are for the thermoplastic material alone.

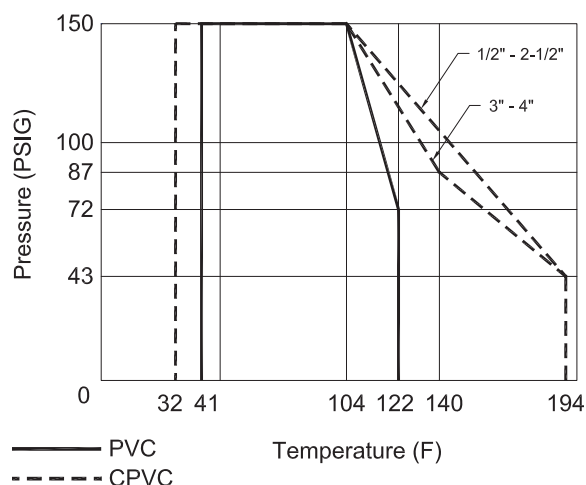
## About CPVC

Chlorinated Polyvinyl Chloride, or CPVC, has been offering the process industry superior corrosion resistance, mechanical strength, and excellent life-cycle economics in a single package. Conceptually, CPVC is a PVC homopolymer that has been subjected to a chlorination reaction. It is generally inert to most mineral acids, bases, salts, and paraffinic hydrocarbon solutions. CPVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or ketones. The upper temperature limit on CPVC is 200°F\*. There is no lower temperature limit on CPVC and the material will withstand pressure. However, at very cold temperatures, the material will become brittle and the impact strength will decline.

## Standard Materials

Ref. No.	Description	Material				Qty
		340N & 340NF		350N		
		EPDM Seals	Viton Seals	EPDM Seals	Viton Seals	
1	Body	PVC		CPVC		1
2	Stem O-ring	EPDM	FPM (Viton®)	EPDM	FPM (Viton®)	2
3	Stem	PVC		CPVC		1
4	Ball	PVC		CPVC		1
5	Seat	PTFE				2
6	Carrier O-ring	EPDM	FPM (Viton®)	EPDM	FPM (Viton®)	1
7	Carrier	PVC		CPVC		1
8	Union O-ring	EPDM	FPM (Viton®)	EPDM	FPM (Viton®)	2
9	End Connector/ Flange	PVC		CPVC		2
10	Union Nut	PVC		CPVC		2
11	Handle	ABS				1
12	Handle Insert	ABS				1
13	Set Ring (340F only)	PVC		CPVC		2
14	Seat O-ring (up to 2" only)	EPDM	FPM (Viton®)	EPDM	FPM (Viton®)	2

## Pressure/Temperature



## Torques, Cv & Weights

Size	Torque (in-lbs)	Cv	Wt. (Lbs.)
1/2	18	12.5	0.48
3/4	27	28	0.73
1	36	50.9	0.99
1-1/4	54	81	1.39
1-1/2	71	150	2.27
2	106	230	3.41
2-1/2	178	360	7.13
3	230	485	11.97
4	371	768	11.97

## Figure Number Matrix

F N W 340N E G			
BODY TYPE		SEALS	SIZE CODES
340N = PVC w/ NPT & SW ends to 2" (SW only over 2", NPT upon request)		E = EPDM	1/2 = D 2 = K
340NF = PVC w/ FLANGED ENDS		V = FPM (VITON®)	3/4 = F 2-1/2 = L
350N = CPVC w/ NPT & SW ends to 2" (SW only over 2", NPT upon request)			1 = G 3 = M
			1-1/4 = H 4 = P
			1-1/2 = J