



**HANLEY CONTROLS**

**CLONMEL**

[www.hccl.ie](http://www.hccl.ie)

## Section 1

### Schedule 80 PVC Piping System

Serviced by GF Little Rock

Effective July 1, 2008

### Pipe, Valves and Fittings Sizes 1/4" to 16"





# Specifications, Standards and Tolerances

## Specifications and Standards

NSF/ANSI Standard 14

NSF/ANSI Standard 61

ASTM D 1784 : Material PVC Type I, Grade I Gray (cell classification 12454-B)

ASTM D 1785 : PVC Schedule 80 Pipe

ASTM D 2467 : PVC Schedule 80 Socket & Threaded Fittings

ASTM D 2464 : PVC Schedule 80 Threaded Fittings

ASTM F 1498 : PVC Schedule 80 Taper Threads

ASTM D 2672 : PVC Schedule 80 Tapered Sockets for Bell End Pipe

ASTM F 1970 : PVC Schedule 80 Unions & Flanges

ANSI B16.5 : Outside Diameter & Flange Bolt Hole Patterns

ANSI B1.20.1 : PVC Schedule 80 NPT Threads

CSA B137.3 : PVC Schedule 80 Pipe

## Molded Dimension Tolerances

A Piston Position; Expansion Joints :  $\pm 0.03$

D Outside Diameter :  $\pm 0.06$

G, G1 Intersections of centerlines to bottom of socket; 90° Ells, Tees : up to 4"  $\pm 0.03$ ; 6" and above  $\pm 0.06$

GJ, GN Intersections of centerlines to bottom of socket; 45° Wyes : up to 4"  $\pm 0.03$ ; 6" and above  $\pm 0.06$

H, HJ, HN Intersections of centerlines to face of fitting; 90° Ells, 45° Ells, Tees, 45° Wyes : up to 4"  $\pm 0.03$ ; 6" and above  $\pm 0.06$

HL Socket Bottom to Face of Fitting : up to 4"  $\pm 0.03$ ; 6" and above  $\pm 0.06$

J Intersections of centerlines to bottom of socket; 45° & 30° Ells : up to 4"  $\pm 0.03$ ; 6" and above  $\pm 0.06$

L Overall Length of fitting :  $\pm 0.06$

N Socket Bottom to Socket Bottom; Couplings, Unions :  $\pm 0.06$

N1 Socket Bottom to Face of Flange :  $\pm 0.06$

R Thickness on Plugs, Flanges :  $\pm 0.03$

T, T1 Effective Thread Length : Reference Only

W Height of Cap :  $\pm 0.06$

## Fabricated Dimension Tolerances

D Outside Diameter :  $\pm 0.50$

E Drive Pin Diameter :  $\pm 0.50$

G, G1 Intersections of centerlines to bottom of socket; 90° Ells, Tees, Crosses :  $\pm 0.25$

GJ, GN Intersections of centerlines to bottom of socket; 45° Wyes :  $\pm 0.25$

H, HJ, HN Intersections of centerlines to face of fitting; 90° Ells, 45° Ells, Tees, 45° Wyes, True Wyes :  $\pm 0.50$

HL Socket Bottom to Face of Fitting :  $\pm 0.25$

J Intersections of centerlines to bottom of socket; 11¼°, 15°, 30°, 22½°, 45° Ells, True Wyes :  $\pm 0.25$

L Overall Length of fitting :  $\pm 0.50$

N Socket Bottom to Socket Bottom; Couplings :  $\pm 0.50$

N1 Socket Bottom to Face of Flange :  $\pm 0.50$

R Thickness on Plugs, Flanges :  $\pm 0.25$

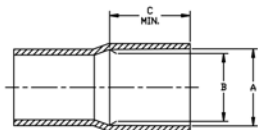
T, T1 Effective Thread Length : Reference Only

W Height of Cap :  $\pm 0.25$



# Pressure Pipe

## PVC Pressure Pipe - 20 ft. lengths



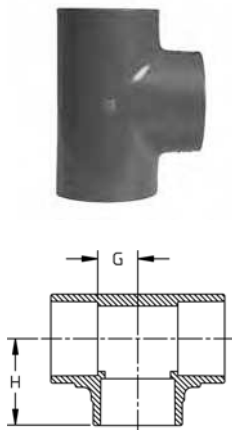
Size [inch]	Plain End (P/L 46) Part No.	Bell End (P/L 48) Part No.
1/2	8008-005AB *	8008-005BB *
3/4	8008-007AB *	8008-007BB *
1	8008-010AB *	8008-010BB *
1 1/4	8008-012AB *	8008-012BB *
1 1/2	8008-015AB *	8008-015BB *
2	8008-020AB *	8008-020BB *
2 1/2	8008-025AB *	8008-025BB *
3	8008-030AB *	8008-030BB *
4	8008-040AB *	8008-040BB *
6	8008-060AB *	8008-060BB *
8	8008-080AB *	8008-080BB *
10	8008-100AB *	8008-100BB *
12	8008-120AB *	8008-120BB *
14	8008-140AB *	8008-140BB *
16	8008-160AB *	8008-160BB *

Size [inch]	Lift Qty [ft]	Average O.D. [inch]	min. wall [inch]	psi at 73° F	A - Socket Entrance (Belled Pipe)	B - Socket Bottom (Belled Pipe)	C - Minimum (Belled Pipe)
1/2	5600	0.840	0.147	848	0.848±0.004	0.836±0.004	1.000
3/4	5000	1.050	0.154	688	1.058±0.004	1.046±0.004	1.250
1	2360	1.315	0.179	630	1.325±0.005	1.310±0.005	1.500
1 1/4	1960	1.660	0.191	520	1.670±0.005	1.655±0.005	1.750
1 1/2	1800	1.900	0.200	471	1.912±0.006	1.894±0.006	2.000
2	1060	2.375	0.218	404	2.387±0.006	2.363±0.006	2.250
2 1/2	880	2.875	0.276	425	2.889±0.007	2.861±0.007	2.500
3	700	3.500	0.300	375	3.516±0.008	3.484±0.008	3.250
4	520	4.500	0.337	324	4.518±0.009	4.482±0.009	4.000
6	220	6.625	0.432	279	6.647±0.011	6.603±0.011	6.000
8	100	8.625	0.500	246	8.655±0.015	8.598±0.015	6.000
10	80	10.750	0.593	230	10.776±0.015	10.722±0.015	7.500
12	60	12.750	0.687	230	12.778±0.015	12.721±0.015	8.500
14	60	14.000	0.750	220	14.035±0.015	13.985±0.015	9.000
16	60	16.000	0.843	220	16.045±0.015	15.980±0.015	10.000



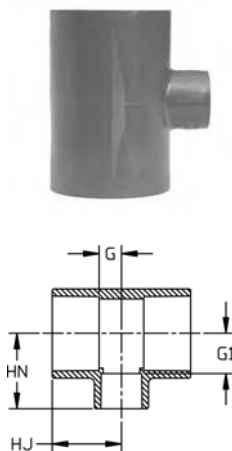
# Pressure Fittings

## Tee (S x S x S)



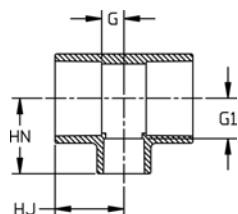
Size [inch]	P/L	Part No.	Minimum Order Qty	H [inch]	G [inch]	Design
¼	08	801-002	50	0.92	0.29	HS
⅜	08	801-003	50	1.16	0.40	HS
½	08	801-005	25	1.49	0.50	SL
¾	08	801-007	25	1.61	0.56	SL
1	08	801-010	20	1.86	0.72	SL
1 ¼	08	801-012	5	2.19	0.91	SL
1 ½	08	801-015	10	2.44	1.06	SL
2	08	801-020	10	2.78	1.29	SL
2 ½	08	801-025	5	3.33	1.50	SL
3	08	801-030	5	3.75	1.85	SL
4	08	801-040	5	4.63	2.38	SL
6	08	801-060	2	6.63	3.55	SL
8	08	801-080	1	8.70	4.59	SL
10	02	801-100	1	10.85	5.75	SL
12	02	801-120	1	13.39	6.89	SL
14	05	801-140H *	1	25.00	11.00	FAB
16	05	801-160H *	1	28.25	12.25	FAB

## Reducing Tee (S x S x S)

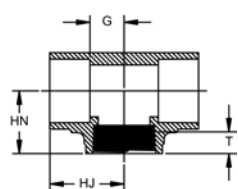


Size [inch]	P/L	Part No.	Minimum Order Qty	HJ [inch]	HN [inch]	G [inch]	G1 [inch]	Design
½ x ¼	08	801-072FB *	25	1.39	1.63	0.52	0.96	BUSH
¾ x ½	08	801-101	25	1.63	1.63	0.61	0.73	SL
1 x ½	08	801-130	25	1.88	1.63	0.73	0.75	SL
1 x ¾	08	801-131	20	1.88	1.87	0.73	0.86	SL
1 ¼ x 1	08	801-168	20	2.00	2.00	0.73	0.91	SL
1 ½ x ½	08	801-209	5	1.91	1.93	0.54	1.05	SL
1 ½ x ¾	08	801-210	5	2.00	2.00	0.61	1.05	SL
1 ½ x 1	08	801-211	5	2.13	2.20	0.73	0.81	SL
2 x ½	08	801-247	5	2.04	2.19	0.53	1.30	SL
2 x ¾	08	801-248	5	2.13	2.31	0.73	1.29	SL
2 x 1	08	801-249	5	2.25	2.44	0.73	1.26	SL
2 x 1 ¼	08	801-250FB *	5	2.78	3.11	1.29	1.85	BUSH
2 x 1 ½	08	801-251	5	2.56	2.69	1.05	1.29	SL
2 ½ x 2	08	801-292	5	3.04	3.03	1.28	1.53	SL
3 x 2	08	801-338	5	3.21	3.40	1.31	1.87	SL
4 x 2	08	801-420	5	3.52	3.88	1.26	2.37	SL
4 x 3	08	801-422	5	4.15	4.31	1.87	2.39	SL
6 x 2	08	801-528FB *	2	6.58	7.21	3.56	5.65	BUSH
6 x 3	08	801-530FB *	2	6.58	7.21	3.56	5.26	BUSH
6 x 4	08	801-532	2	6.58	6.81	3.49	4.50	HS
8 x 4	08	801-582FB *	1	7.63	8.09	3.59	5.84	BUSH
8 x 6	08	801-585	1	7.63	7.59	3.59	3.56	HS
10 x 4	05	801-623H *	1	10.75	10.13	5.75	13.25	FAB
10 x 6	05	801-626H *	1	11.81	11.13	6.81	13.19	FAB
10 x 8	02	801-628FB *	1	10.85	12.38	5.75	7.32	BUSH
12 x 4	05	801-663H *	1	11.75	11.13	5.75	15.25	FAB
12 x 6	05	801-666H *	1	12.81	12.13	6.81	15.19	FAB
12 x 8	05	801-668H *	1	13.81	13.38	7.81	15.44	FAB
12 x 10	02	801-670FB *	1	13.39	14.88	6.89	8.52	BUSH
14 x 4	05	801-696H *	1	13.25	11.75	6.25	16.50	FAB
14 x 6	05	801-698H *	1	14.31	12.75	7.31	16.44	FAB
14 x 8	05	801-700H *	1	15.31	14.00	8.31	16.69	FAB
14 x 10	05	801-702H *	1	16.38	15.50	9.38	17.13	FAB
14 x 12	05	801-704H *	1	17.38	16.50	10.38	17.13	FAB

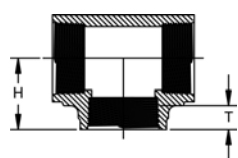
table continued next page



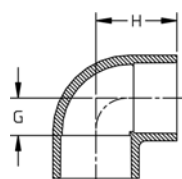
Size [inch]	P/L	Part No.	Minimum Order Qty	HJ [inch]	HN [inch]	G [inch]	G1 [inch]	Design
16 x 4	05	801-730H *	1	14.50	12.75	6.50	18.50	FAB
16 x 6	05	801-732H *	1	15.56	13.75	7.56	18.44	FAB
16 x 8	05	801-734H *	1	16.56	15.00	8.56	18.69	FAB
16 x 10	05	801-736H *	1	17.63	16.50	9.63	19.13	FAB
16 x 12	05	801-738H *	1	18.63	17.50	10.63	19.13	FAB
16 x 14	05	801-740H *	1	19.25	19.00	11.25	20.00	FAB

**Tee (S x S x FPT)**

Size [inch]	P/L	Part No.	Minimum Order Qty	HJ [inch]	HN [inch]	G [inch]	T [inch]	Design
1/2	08	802-005	25	1.39	1.39	0.52	0.53	HS
3/4	08	802-007	25	1.58	1.37	0.58	0.55	HS
1	08	802-010	15	1.83	1.70	0.70	0.68	HS
1 1/2	08	802-015	5	2.42	2.08	1.03	0.72	HS
2	08	802-020	5	2.79	2.35	1.28	0.76	HS

**Tee (FPT x FPT x FPT)**

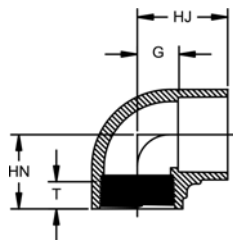
Size [inch]	P/L	Part No.	Minimum Order Qty	H [inch]	T [inch]	Design
1/4	08	805-002 ^	50	0.92	0.40	HS
3/8	08	805-003 ^	50	1.16	0.41	HS
1/2	08	805-005 ^	25	1.27	0.53	HS
3/4	08	805-007 ^	25	1.38	0.55	HS
1	08	805-010 ^	15	1.70	0.68	HS
1 1/4	08	805-012 ^	10	1.93	0.71	HS
1 1/2	08	805-015 ^	5	2.08	0.72	HS
2	08	805-020 ^	5	2.35	0.76	HS
2 1/2	08	805-025 ^	5	2.88	1.14	HS
3	08	805-030 ^	5	3.50	1.20	HS
4	08	805-040 ^	5	4.06	1.30	HS

**90° Ell (S x S)**

Size [inch]	P/L	Part No.	Minimum Order Qty	H [inch]	G [inch]	Design
1/4	08	806-002	50	0.95	0.33	HS
3/8	08	806-003	50	1.17	0.41	HS
1/2	08	806-005	25	1.41	0.50	SL
3/4	08	806-007	25	1.61	0.56	SL
1	08	806-010	10	1.86	0.69	SL
1 1/4	08	806-012	10	2.16	0.91	SL
1 1/2	08	806-015	10	2.41	1.03	SL
2	08	806-020	20	2.78	1.28	SL
2 1/2	08	806-025	5	3.29	1.53	SL
3	08	806-030	5	3.75	1.85	SL
4	08	806-040	5	4.60	2.34	SL
6	08	806-060	2	6.70	3.69	SL
8	08	806-080	1	8.67	4.59	SL
10	02	806-100	1	10.77	5.75	SL
12	02	806-120	1	12.64	6.06	SL
14	05	806-140H *	1	23.75	16.75	FAB
16	05	806-160H *	1	27.00	19.00	FAB

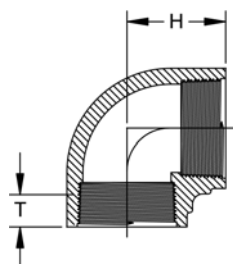


### 90° EII (S x FPT)



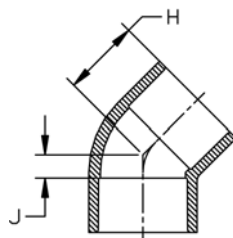
Size [inch]	P/L	Part No.	Minimum Order Qty	HJ [inch]	HN [inch]	G [inch]	T [inch]	Design
1/2	08	807-005	25	1.80	1.28	0.50	0.53	HS
3/4	08	807-007	25	1.57	1.38	0.56	0.55	HS
1	08	807-010	10	1.82	1.70	0.69	0.68	HS
1 1/4	08	807-012	10	2.16	1.93	0.91	0.71	HS
1 1/2	08	807-015	10	2.41	2.07	1.03	0.72	HS
2	08	807-020	5	2.78	2.35	1.28	0.76	HS
3	08	807-030	5	3.75	3.50	1.85	1.20	HS

### 90° EII (FPT x FPT)



Size [inch]	P/L	Part No.	Minimum Order Qty	H [inch]	T [inch]	Design
1/4	08	808-002 ^	50	0.92	0.40	HS
3/8	08	808-003 ^	50	1.00	0.41	HS
1/2	08	808-005 ^	25	1.29	0.53	HS
3/4	08	808-007 ^	25	1.38	0.55	HS
1	08	808-010 ^	10	1.70	0.68	HS
1 1/4	08	808-012 ^	10	1.93	0.71	HS
1 1/2	08	808-015 ^	10	2.06	0.72	HS
2	08	808-020 ^	5	2.36	0.76	HS
2 1/2	08	808-025 ^	5	3.00	1.14	HS
3	08	808-030 ^	5	3.50	1.20	HS
4	08	808-040 ^	5	4.13	1.30	HS

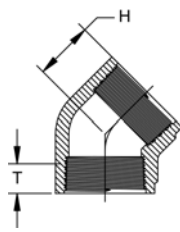
### 45° EII (S x S)



Size [inch]	P/L	Part No.	Minimum Order Qty	H [inch]	J [inch]	Design
1/4	08	817-002	50	0.81	0.13	HS
3/8	08	817-003	50	0.94	0.19	HS
1/2	08	817-005	25	1.21	0.25	SL
3/4	08	817-007	20	1.32	0.33	SL
1	08	817-010	25	1.47	0.29	SL
1 1/4	08	817-012	15	1.70	0.40	SL
1 1/2	08	817-015	10	1.88	0.44	SL
2	08	817-020	10	2.16	0.60	SL
2 1/2	08	817-025	5	2.53	0.76	SL
3	08	817-030	5	2.66	0.78	SL
4	08	817-040	5	3.24	0.95	SL
6	08	817-060	2	4.81	1.74	SL
8	08	817-080	2	6.08	1.98	HS
10	02	817-100	1	7.46	2.44	SL
12	02	817-120	1	9.58	3.08	SL
14	05	817-140H *	1	16.50	9.50	FAB
16	05	817-160H *	1	18.00	10.00	FAB

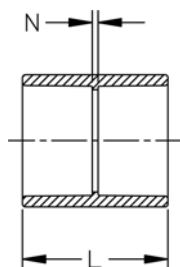


### 45° EII (FPT x FPT)



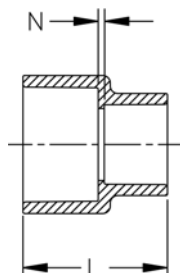
Size [inch]	P/L	Part No.	Minimum Order Qty	H [inch]	T [inch]	Design
1/4	08	819-002 ^	50	0.76	0.40	HS
3/8	08	819-003 ^	50	0.94	0.41	HS
1/2	08	819-005 ^	25	1.02	0.53	HS
3/4	08	819-007 ^	20	1.14	0.55	HS
1	08	819-010 ^	25	1.33	0.68	HS
1 1/4	08	819-012 ^	15	1.40	0.71	HS
1 1/2	08	819-015 ^	10	1.52	0.72	HS
2	08	819-020 ^	5	1.72	0.76	HS
3	08	819-030 ^	5	2.44	1.20	HS
4	08	819-040 ^	5	2.77	1.30	HS

### Coupling (S x S)



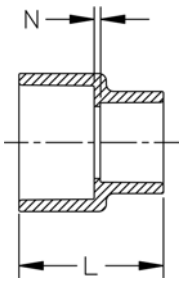
Size [inch]	P/L	Part No.	Minimum Order Qty	L [inch]	N [inch]	Design
1/4	08	829-002	50	1.39	0.14	HS
3/8	08	829-003	50	1.64	0.14	HS
1/2	08	829-005	25	1.93	0.13	SL
3/4	08	829-007	20	2.18	0.13	SL
1	08	829-010	25	2.41	0.13	SL
1 1/4	08	829-012	10	2.64	0.12	SL
1 1/2	08	829-015	10	2.90	0.13	SL
2	08	829-020	20	3.14	0.12	SL
2 1/2	08	829-025	5	3.75	0.16	SL
3	08	829-030	5	4.04	0.25	SL
4	08	829-040	5	4.79	0.25	SL
6	08	829-060	2	6.41	0.34	SL
8	08	829-080	2	8.40	0.34	SL
10	02	829-100	2	10.55	0.49	SL
12	02	829-120	1	12.54	0.50	SL
14	05	829-140H *	1	17.63	3.63	FAB
16	05	829-160H *	1	19.88	3.88	FAB

### Reducing Coupling (S x S)



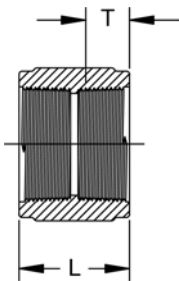
Size [inch]	P/L	Part No.	Minimum Order Qty	L [inch]	N [inch]	Design
3/4 x 1/2	08	829-101	25	2.16	0.14	HS
1 x 1/2	08	829-130	25	2.12	0.09	HS
1 x 3/4	08	829-131	25	2.26	0.12	HS
1 1/4 x 1	08	829-168	25	2.54	0.09	HS
1 1/2 x 1/2	08	829-209FB *	5	3.34	0.17	BUSH
1 1/2 x 3/4	08	829-210	5	3.34	0.17	BUSH
1 1/2 x 1	08	829-211	15	2.66	0.10	HS
1 1/2 x 1 1/4	08	829-212	20	2.82	0.10	HS
2 x 1/2	08	829-247FB *	1	3.35	0.88	BUSH
2 x 3/4	08	829-248FB *	1	3.36	0.77	BUSH
2 x 1	08	829-249	5	3.12	0.33	HS
2 x 1 1/4	08	829-250	5	3.00	0.13	HS
2 x 1 1/2	08	829-251	5	3.05	0.10	HS
2 1/2 x 1 1/2	08	829-291	5	3.30	0.13	HS
2 1/2 x 2	08	829-292FB *	1	4.00	0.65	BUSH
3 x 2	08	829-338	5	3.61	0.16	HS
4 x 2	08	829-420FB *	5	4.94	1.12	BUSH
4 x 3	08	829-422	5	4.39	0.26	HS
6 x 4	08	829-532	2	10.25	3.50	HS
8 x 6	08	829-585	2	9.12	2.07	HS
10 x 4	05	829-623H *	1	16.25	9.25	FAB

table continued next page



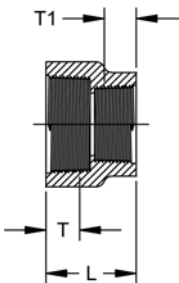
Size [inch]	P/L	Part No.	Minimum Order Qty	L [inch]	N [inch]	Design
10 x 6	05	829-626H *	1	15.75	7.75	FAB
10 x 8	02	829-628FB *	2	11.18	2.07	BUSH
12 x 8	05	829-668H *	1	17.00	7.00	FAB
12 x 10	02	829-670FB *	1	13.24	2.13	BUSH
14 x 10	05	829-702H *	1	19.00	7.00	FAB
14 x 12	05	829-704H *	1	17.00	4.00	FAB
16 x 12	05	829-738H *	1	22.00	8.00	FAB
16 x 14	05	829-740H *	1	20.00	5.00	FAB

### Coupling (FPT x FPT)



Size [inch]	P/L	Part No.	Minimum Order Qty	L [inch]	T [inch]	Design
1/4	08	830-002 ^	50	1.30	0.40	HS
3/8	08	830-003 ^	50	1.34	0.41	HS
1/2	08	830-005 ^	25	1.66	0.53	HS
3/4	08	830-007 ^	20	1.73	0.55	HS
1	08	830-010 ^	25	2.10	0.68	HS
1 1/4	08	830-012 ^	10	2.19	0.71	HS
1 1/2	08	830-015 ^	10	2.22	0.72	HS
2	08	830-020 ^	10	2.29	0.76	HS
2 1/2	08	830-025 ^	5	3.39	1.14	HS
3	08	830-030 ^	5	3.57	1.20	HS
4	08	830-040 ^	5	3.73	1.30	HS

### Reducing Coupling (FPT x FPT)

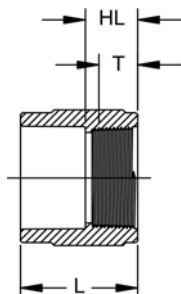


Size [inch]	P/L	Part No.	Minimum Order Qty	L [inch]	T [inch]	T1 [inch]	Design
3/8 x 1/4	08	830-052 ^	50	1.29	0.41	0.40	HS
1/2 x 1/4	08	830-072 ^	50	1.45	0.53	0.40	HS
1/2 x 3/8	08	830-073 ^	50	1.46	0.53	0.41	HS
3/4 x 1/2	08	830-101 ^	25	1.69	0.55	0.53	HS
1 x 1/2	08	830-130 ^	25	1.83	0.68	0.53	HS
1 x 3/4	08	830-131 ^	25	1.88	0.68	0.55	HS
1 1/4 x 3/4	08	830-167 ^	25	1.91	0.71	0.55	HS
1 1/2 x 1	08	830-211 ^	20	2.11	0.72	0.68	HS
2 x 1 1/2	08	830-251 ^	10	2.11	0.76	0.72	HS



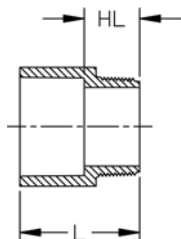


## Female Adapter (S x FPT)



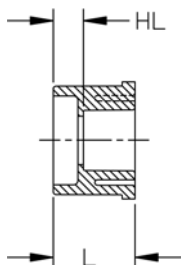
Size [inch]	P/L	Part No.	Minimum Order Qty	HL [inch]	L [inch]	T [inch]	Design
1/4	08	835-002	50	0.75	1.43	0.40	HS
3/8	08	835-003	50	0.75	1.55	0.41	HS
1/2	08	835-005	25	0.91	1.79	0.53	HS
3/4	08	835-007	25	0.95	1.96	0.55	HS
1	08	835-010	25	1.11	2.26	0.68	HS
1 1/4	08	835-012	10	1.16	2.44	0.71	HS
1 1/2	08	835-015	10	1.19	2.58	0.72	HS
2	08	835-020	10	1.23	2.74	0.76	HS
2 1/2	08	835-025	5	1.75	3.50	1.14	HS
3	08	835-030	5	1.91	3.82	1.20	HS
4	08	835-040	5	2.02	4.29	1.30	HS
6	05	835-060H *	1	4.50	7.50	1.51	FAB
8	05	835-080H *	1	4.25	8.50	1.71	FAB
10	05	835-100H *	1	5.00	10.00	1.93	FAB
12	05	835-120H *	1	5.00	11.00	2.13	FAB

## Male Adapter (S x MPT)



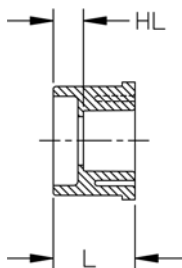
Size [inch]	P/L	Part No.	Minimum Order Qty	HL [inch]	L [inch]	Design
1/2	08	836-005	50	0.93	1.86	SL
3/4	08	836-007	25	1.00	2.04	HS
1	08	836-010	25	1.21	2.39	HS
1 1/4	08	836-012	15	1.29	2.56	HS
1 1/2	08	836-015	10	1.32	2.72	HS
2	08	836-020	5	1.35	2.88	HS
2 1/2	08	836-025	5	1.87	3.68	HS
3	08	836-030	5	2.02	3.92	HS
4	08	836-040	5	2.08	4.40	HS
6	05	836-060H *	1	3.50	7.00	FAB
8	05	836-080H *	1	4.00	8.00	FAB
10	05	836-100H *	1	4.50	9.50	FAB
12	05	836-120H *	1	5.50	11.50	FAB

## Flush Style Reducer Bushing (Spg x S)



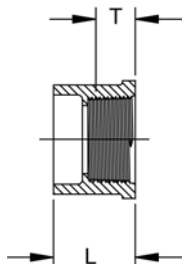
Size [inch]	P/L	Part No.	Minimum Order Qty	HL [inch]	L [inch]	Design
1/2 x 1/4	08	837-072	50	0.46	1.14	FLUSH
1/2 x 3/8	08	837-073	50	0.32	1.10	FLUSH
3/4 x 1/2	08	837-101	50	0.40	1.29	FLUSH
1 x 1/2	08	837-130	25	0.54	1.42	FLUSH
1 x 3/4	08	837-131	50	0.44	1.42	FLUSH
1 1/4 x 1/2	08	837-166 *	25	0.66	1.56	FLUSH
1 1/4 x 3/4	08	837-167	25	0.55	1.57	FLUSH
1 1/4 x 1	08	837-168	25	0.42	1.57	FLUSH
1 1/2 x 1/2	08	837-209	25	0.77	1.68	FLUSH
1 1/2 x 3/4	08	837-210	25	0.67	1.69	FLUSH
1 1/2 x 1	08	837-211	25	0.55	1.68	FLUSH
1 1/2 x 1 1/4	08	837-212	25	0.42	1.70	FLUSH
2 x 1/2	08	837-247	10	0.88	1.79	FLUSH
2 x 3/4	08	837-248	10	0.78	1.81	FLUSH
2 x 1	08	837-249	10	0.66	1.81	FLUSH
2 x 1 1/4	08	837-250	10	0.56	1.82	FLUSH
2 x 1 1/2	08	837-251	10	0.40	1.80	FLUSH
2 1/2 x 1 1/2	08	837-291	5	0.96	2.43	FLUSH
2 1/2 x 2	08	837-292	5	0.55	2.13	FLUSH
3 x 1	08	837-335FB *	5	1.53	3.09	BUSH
3 x 1 1/4	08	837-336FB *	5	1.45	2.72	BUSH
3 x 1 1/2	08	837-337	5	0.92	2.43	FLUSH

table continued next page



Size [inch]	P/L	Part No.	Minimum Order Qty	HL [inch]	L [inch]	Design
3 x 2	08	837-338	5	0.87	2.43	FLUSH
3 x 2 1/2	08	837-339	5	0.39	2.23	FLUSH
4 x 2	08	837-420	5	1.15	2.72	FLUSH
4 x 3	08	837-422	5	0.77	2.76	FLUSH
6 x 3	08	837-530	2	1.45	3.59	FLUSH
6 x 4	08	837-532	2	2.57	6.92	FLUSH
8 x 6	08	837-585	1	1.56	4.66	FLUSH
10 x 4	05	837-623H *	1	3.00	5.00	FAB
10 x 6	05	837-626H *	1	2.00	5.00	FAB
10 x 8	02	837-628	1	1.57	5.66	FLUSH
12 x 6	05	837-666H *	1	3.00	5.00	FAB
12 x 8	05	837-668H *	1	2.00	6.00	FAB
12 x 10	02	837-670	1	1.63	6.72	FLUSH
14 x 4	05	837-696H *	1	5.00	7.00	FAB
14 x 6	05	837-698H *	1	4.00	7.00	FAB
14 x 8	05	837-700H *	1	3.00	7.00	FAB
14 x 10	05	837-702H *	1	2.00	7.00	FAB
14 x 12	05	837-704H *	1	1.00	7.00	FAB
16 x 4	05	837-730H *	1	6.00	8.00	FAB
16 x 6	05	837-732H *	1	5.00	8.00	FAB
16 x 8	05	837-734H *	1	4.00	8.00	FAB
16 x 10	05	837-736H *	1	3.00	8.00	FAB
16 x 12	05	837-738H *	1	2.00	8.00	FAB
16 x 14	05	837-740H *	1	1.00	8.00	FAB

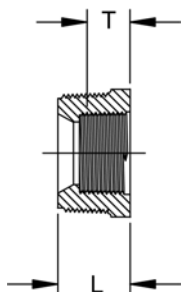
### Flush Style Reducer Bushing (Spg x FPT)



Size [inch]	P/L	Part No.	Minimum Order Qty	L [inch]	T [inch]	Design
3/8 x 1/4	08	838-052E *	50	0.98	0.40	Extended
1/2 x 1/4	08	838-072	50	1.14	0.40	FLUSH
1/2 x 3/8	08	838-073	50	1.12	0.41	FLUSH
3/4 x 1/4	08	838-098	50	1.21	0.40	FLUSH
3/4 x 1/2	08	838-101	50	1.28	0.53	FLUSH
1 x 1/2	08	838-130	50	1.42	0.53	FLUSH
1 x 3/4	08	838-131	50	1.41	0.55	FLUSH
1 1/4 x 1/2	08	838-166	15	1.53	0.53	FLUSH
1 1/4 x 3/4	08	838-167	15	1.56	0.55	FLUSH
1 1/4 x 1	08	838-168	15	1.55	0.68	FLUSH
1 1/2 x 1/2	08	838-209	15	1.68	0.53	FLUSH
1 1/2 x 3/4	08	838-210	15	1.68	0.55	FLUSH
1 1/2 x 1	08	838-211	15	1.69	0.68	FLUSH
1 1/2 x 1 1/4	08	838-212	25	1.68	0.71	FLUSH
2 x 1/2	08	838-247	10	1.80	0.53	FLUSH
2 x 3/4	08	838-248	25	1.80	0.55	FLUSH
2 x 1	08	838-249	25	1.79	0.68	FLUSH
2 x 1 1/4	08	838-250	10	1.78	0.71	FLUSH
2 x 1 1/2	08	838-251	10	1.79	0.72	FLUSH
2 1/2 x 1 1/2	08	838-291	5	2.11	0.72	FLUSH
2 1/2 x 2	08	838-292	5	2.20	0.76	FLUSH
3 x 2	08	838-338	5	2.44	0.76	FLUSH
3 x 2 1/2	08	838-339	5	2.20	1.14	FLUSH
4 x 2	08	838-420	5	2.73	0.76	FLUSH
4 x 3	08	838-422	5	2.69	1.20	FLUSH

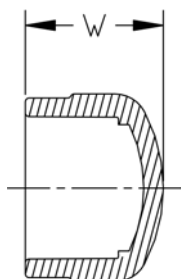


### Flush Style Reducer Bushing (MPT x FPT)



Size [inch]	P/L	Part No.	Minimum Order Qty	L [inch]	T [inch]	Style
3/8 x 1/4	08	839-052 ^	50	0.79	0.40	FLUSH
1/2 x 1/4	08	839-072 ^	50	0.96	0.40	FLUSH
1/2 x 3/8	08	839-073 ^	50	0.94	0.40	FLUSH
3/4 x 1/4	08	839-098 ^	50	1.02	0.40	FLUSH
3/4 x 3/8	08	839-099 ^	50	1.02	0.41	FLUSH
3/4 x 1/2	08	839-101 ^	50	1.08	0.53	FLUSH
1 x 1/4	08	839-128 ^	25	1.22	0.40	FLUSH
1 x 1/2	08	839-130 ^	25	1.24	0.53	FLUSH
1 x 3/4	08	839-131 ^	25	1.27	0.55	FLUSH
1 1/4 x 1/2	08	839-166 ^	25	12.83	0.53	FLUSH
1 1/4 x 3/4	08	839-167 ^	25	1.29	0.55	FLUSH
1 1/4 x 1	08	839-168 ^	25	1.30	0.68	FLUSH
1 1/2 x 3/4	08	839-210 ^	25	1.33	0.55	FLUSH
1 1/2 x 1	08	839-211 ^	25	1.34	0.68	FLUSH
1 1/2 x 1 1/4	08	839-212 ^	20	1.32	0.71	FLUSH
2 x 1/2	08	839-247 ^	25	1.43	0.53	FLUSH
2 x 3/4	08	839-248 ^	25	1.43	0.55	FLUSH
2 x 1	08	839-249 ^	10	1.43	0.68	FLUSH
2 x 1 1/4	08	839-250 ^	10	1.43	0.71	FLUSH
2 x 1 1/2	08	839-251 ^	10	1.35	0.72	FLUSH
3 x 2	08	839-338 ^	5	2.03	0.76	FLUSH
4 x 2	08	839-420 ^	5	2.06	0.76	FLUSH
4 x 3	08	839-422 ^	5	2.06	1.20	FLUSH

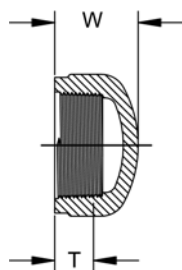
### Cap (S)



Size [inch]	P/L	Part No.	Minimum Order Qty	W [inch]	Design
1/4	08	847-002	50	0.95	HS
3/8	08	847-003	50	1.09	HS
1/2	08	847-005	50	1.29	HS
3/4	08	847-007	50	1.46	HS
1	08	847-010	25	1.67	HS
1 1/4	08	847-012	15	1.88	HS
1 1/2	08	847-015	10	2.09	HS
2	08	847-020	5	2.32	HS
2 1/2	08	847-025	5	2.73	HS
3	08	847-030	5	3.05	HS
4	08	847-040	5	3.67	HS
6	08	847-060	2	4.96	HS
8	08	847-080	2	7.02	HS
10	02	847-100	1	7.88	SL
12	02	847-120	1	9.38	SL
14	05	847-140H *	1	8.50	FAB
16	05	847-160H *	1	9.50	FAB

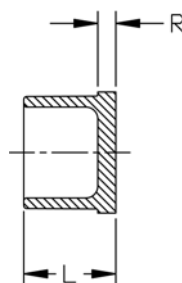


## Cap (FPT)



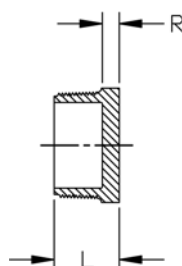
Size [inch]	P/L	Part No.	Minimum Order Qty	W [inch]	T [inch]	Design
1/4	08	848-002 ^	50	0.93	0.40	HS
3/8	08	848-003 ^	50	0.95	0.41	HS
1/2	08	848-005 ^	50	1.16	0.53	HS
3/4	08	848-007 ^	25	1.24	0.55	HS
1	08	848-010 ^	25	1.50	0.68	HS
1 1/4	08	848-012 ^	15	1.61	0.71	HS
1 1/2	08	848-015 ^	10	1.66	0.72	HS
2	08	848-020 ^	5	1.84	0.76	HS
2 1/2	08	848-025 ^	5	2.56	1.14	HS
3	08	848-030 ^	5	2.83	1.20	HS
4	08	848-040 ^	5	3.13	1.30	HS

## Plug (Spg)



Size [inch]	P/L	Part No.	Minimum Order Qty	L [inch]	R [inch]
1/2	08	849-005	50	1.09	0.20
3/4	08	849-007	50	1.26	0.23
1	08	849-010	25	1.41	0.25
1 1/2	08	849-015	10	1.71	0.31
2	08	849-020	5	1.90	0.38
4	08	849-040	5	2.64	0.39

## Plug (MPT)



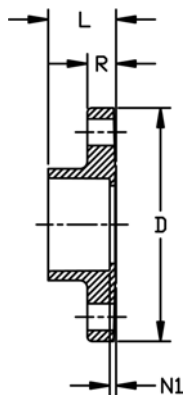
Size [inch]	P/L	Part No.	Minimum Order Qty	L [inch]	R [inch]
1/4	08	850-002	50	0.81	0.22
3/8	08	850-003	50	0.83	0.22
1/2	08	850-005	50	0.97	0.22
3/4	08	850-007	50	1.04	0.25
1	08	850-010	25	1.25	0.27
1 1/4	08	850-012	25	1.32	0.31
1 1/2	08	850-015	20	1.38	0.34
2	08	850-020	10	1.46	0.40
2 1/2	08	850-025	5	2.00	0.38
3	08	850-030	5	2.00	0.38
4	08	850-040	5	2.15	0.39
6	05	850-060H *	1	4.00	1.00
8	05	850-080H *	1	4.00	1.00
10	05	850-100H *	1	4.00	1.00
12	05	850-120H *	1	4.00	1.00



# Flange (S)

HC = Honeycomb (Front)

WEB = Webbed (Back)



Size [inch]	P/L	Part No.
1/2	08	851-005
3/4	08	851-007
1	08	851-010
1 1/4	08	851-012
1 1/2	08	851-015
2	08	851-020
2 1/2	08	851-025
3	08	851-030
4	08	851-040
6	08	851-060
8	08	851-080

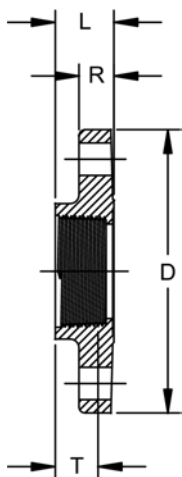
Size [inch]	Minimum Order Qty	# holes	Bolt Dia. [inch]	bolt cir. dia. [inch]	D [inch]	L [inch]	N1 [inch]	R [inch]	Design
1/2	5	4	1/2	2.38	3.50	1.03	0.15	0.44	SOLID
3/4	5	4	1/2	2.75	3.88	1.21	0.19	0.51	SOLID
1	5	4	1/2	3.13	4.25	1.39	0.13	0.55	HC
1 1/4	5	4	1/2	3.50	4.63	1.42	0.16	0.62	HC
1 1/2	5	4	1/2	3.88	5.00	1.54	0.16	0.72	HC
2	5	4	5/8	4.75	6.00	1.77	0.16	0.75	HC
2 1/2	5	4	5/8	5.50	7.00	2.01	0.19	0.80	HC
3	5	4	5/8	6.00	7.50	2.20	0.31	0.98	WEB
4	5	8	5/8	7.50	9.00	2.55	0.22	1.24	WEB
6	1	8	3/4	9.50	11.00	3.86	0.34	1.32	HC
8	1	8	3/4	11.75	13.50	4.85	0.35	1.37	HC



# Flange (FPT)

HC = Honeycomb (Front)

WEB = Webbed (Back)



Size [inch]	P/L	Part No.
1/2	08	852-005 ^
3/4	08	852-007 ^
1	08	852-010 ^
1 1/4	08	852-012 ^
1 1/2	08	852-015 ^
2	08	852-020 ^
2 1/2	08	852-025 ^
3	08	852-030 ^
4	08	852-040 ^

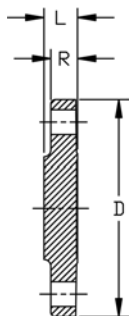
Size [inch]	Minimum Order Qty	# holes	Bolt Dia. [inch]	bolt cir. dia. [inch]	D [inch]	L [inch]	T [inch]	R [inch]	Design
1/2	5	4	1/2	2.38	3.50	0.94	0.53	0.44	SOLID
3/4	5	4	1/2	2.75	3.88	0.95	0.55	0.51	SOLID
1	5	4	1/2	3.13	4.25	1.13	0.68	0.55	HC
1 1/4	5	4	1/2	3.50	4.63	1.19	0.71	0.63	HC
1 1/2	5	4	1/2	3.88	5.00	1.21	0.72	0.72	HC
2	5	4	5/8	4.75	6.00	1.23	0.76	0.75	HC
2 1/2	5	4	5/8	5.50	7.00	1.23	1.14	0.80	HC
3	5	4	5/8	6.00	7.50	1.88	1.20	0.98	WEB
4	5	8	5/8	7.50	9.00	1.99	1.30	1.24	WEB



# Flange (Blind)

HC = Honeycomb (Front)

WEB = Webbed (Back)



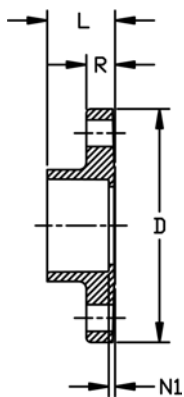
Size [inch]	P/L	Part No.	Minimum Order Qty	# holes	Bolt Dia. [inch]	bolt cir. dia. [inch]	D [inch]	L [inch]	R [inch]	Design
1/2	08	853-005	1	4	1/2	2.38	3.50	0.50	0.43	SOLID
3/4	08	853-007	1	4	1/2	2.75	3.88	0.50	0.44	HC
1	08	853-010	5	4	1/2	3.13	4.25	0.60	0.57	HC
1 1/4	08	853-012	5	4	1/2	3.50	4.63	0.63	0.56	HC
1 1/2	08	853-015	5	4	1/2	3.88	5.00	0.82	0.71	HC
2	08	853-020	5	4	5/8	4.75	6.00	0.92	0.74	HC
2 1/2	08	853-025	5	4	5/8	5.50	7.00	0.96	0.78	HC
3	08	853-030	5	4	5/8	6.00	7.50	1.03	0.89	HC
4	08	853-040	5	8	5/8	7.50	9.00	1.35	1.12	SOLID
6	08	853-060	1	8	3/4	9.50	11.00	1.49	1.27	HC
8	08	853-080	1	8	3/4	11.75	13.50	1.63	1.45	HC
10	05	853-100H *	1	12	7/8	14.25	16.00	1.00	1.00	SOLID
12	05	853-120H *	1	12	7/8	17.00	19.00	1.00	1.00	SOLID
14	05	853-140H *	1	12	7/8	18.75	21.00	1.00	1.00	SOLID
16	05	853-160H *	1	16	1	21.25	23.50	1.00	1.00	SOLID



# Van Stone Flange (S)

HC = Honeycomb (Front)

WEB = Webbed (Back)



Size [inch]	P/L	Part No.
1/2	08	854-005
3/4	08	854-007
1	08	854-010
1 1/4	08	854-012
1 1/2	08	854-015
2	08	854-020
2 1/2	08	854-025
3	08	854-030
4	08	854-040
6	08	854-060
8	08	854-080
10	02	854-100
12	02	854-120
14	05	854-140H *
16	05	854-160H *

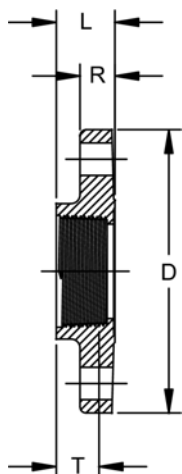
Size [inch]	Minimum Order Qty	# holes	Bolt Dia. [inch]	bolt cir. dia. [inch]	D [inch]	L [inch]	N1 [inch]	R [inch]	Design
1/2	5	4	1/2	2.38	3.50	1.03	0.11	0.57	HC
3/4	5	4	1/2	2.75	3.88	1.15	0.13	0.58	HC
1	5	4	1/2	3.13	4.25	1.38	0.11	0.66	HC
1 1/4	5	4	1/2	3.50	4.63	1.45	0.14	0.69	HC
1 1/2	5	4	1/2	3.88	5.00	1.59	0.15	0.76	HC
2	5	4	5/8	4.75	6.00	1.76	0.20	0.82	HC
2 1/2	5	4	5/8	5.50	7.00	2.05	0.22	0.98	HC
3	5	4	5/8	6.00	7.50	2.25	0.30	1.02	HC
4	5	8	5/8	7.50	9.00	2.65	0.34	1.11	HC
6	2	8	3/4	9.50	11.00	3.45	0.35	1.37	HC
8	2	8	3/4	11.75	13.50	4.50	0.40	1.73	HC
10	1	12	7/8	14.25	16.00	5.63	0.50	1.73	HC
12	1	12	7/8	17.00	19.00	6.69	0.56	1.73	HC
14	1	12	7/8	18.75	21.00	7.75	0.50	1.38	FAB
16	1	16	1	21.25	23.50	10.75	0.50	1.50	FAB





### Van Stone Flange (FPT)

HC = Honeycomb (Front)  
WEB = Webbed (Back)

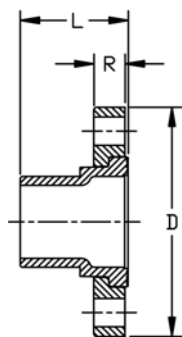


Size [inch]	P/L	Part No.	
1/2	08	855-005	^
3/4	08	855-007	^
1	08	855-010	^
1 1/4	08	855-012	^
1 1/2	08	855-015	^
2	08	855-020	^
2 1/2	08	855-025	^
3	08	855-030	^
4	08	855-040	^

Size [inch]	Minimum Order Qty	# holes	Bolt Dia. [inch]	bolt cir. dia. [inch]	D [inch]	L [inch]	T [inch]	R [inch]	Design
1/2	5	4	1/2	2.38	3.50	1.03	0.53	0.57	HC
3/4	5	4	1/2	2.75	3.88	1.15	0.55	0.58	HC
1	5	4	1/2	3.13	4.25	1.38	0.68	0.66	HC
1 1/4	5	4	1/2	3.50	4.63	1.45	0.71	0.69	HC
1 1/2	5	4	1/2	3.88	5.00	1.59	0.72	0.76	HC
2	5	4	5/8	4.75	6.00	1.76	0.76	0.82	HC
2 1/2	5	4	5/8	5.50	7.00	2.05	1.14	0.98	HC
3	5	4	5/8	6.00	7.50	2.25	1.20	1.02	HC
4	5	8	5/8	7.50	9.00	2.65	1.30	1.11	HC

### Van Stone Flange (Spg)

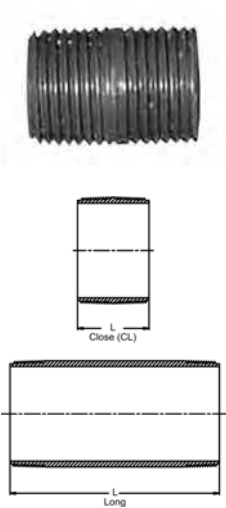
HC = Honeycomb (Front)  
WEB = Webbed (Back)



Size [inch]	P/L	Part No.	Minimum Order Qty	# holes	Bolt Dia. [inch]	bolt cir. dia. [inch]	D [inch]	L [inch]	R [inch]	Design
1/2	08	856-005	5	4	1/2	2.38	3.50	1.65	0.57	HC
3/4	08	856-007	5	4	1/2	2.75	3.88	1.78	0.58	HC
1	08	856-010	5	4	1/2	3.13	4.25	2.02	0.66	HC
1 1/4	08	856-012	5	4	1/2	3.50	4.63	2.20	0.69	HC
1 1/2	08	856-015	5	4	1/2	3.88	5.00	2.40	0.76	HC
2	08	856-020	5	4	5/8	4.75	6.00	2.72	0.82	HC
2 1/2	08	856-025	5	4	5/8	5.50	7.00	3.19	0.98	HC
3	08	856-030	5	4	5/8	6.00	7.50	3.52	1.02	HC
4	08	856-040	5	8	5/8	7.50	9.00	4.02	1.11	HC
6	08	856-060	1	8	3/4	9.50	11.00	5.00	1.37	HC
8	08	856-080	1	8	3/4	11.75	13.50	6.85	1.73	HC

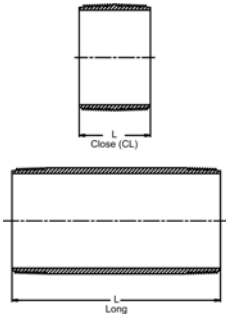


# Nipple (MPT x MPT)



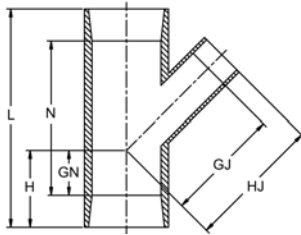
Size	P/L	Part No.	Minimum Order Qty	L [inch]
1/2 x CL	08	861-077 *	50	1.13
1/2 x 2	08	861-079 *	50	2.00
1/2 x 3	08	861-081 *	50	3.00
1/2 x 4	08	861-082 *	50	4.00
1/2 x 5	08	861-083 *	50	5.00
1/2 x 6	08	861-084 *	50	6.00
1/2 x 8	08	861-086 *	50	8.00
1/2 x 10	08	861-087 *	50	10.00
1/2 x 12	08	861-088 *	50	12.00
3/4 x CL	08	861-104 *	25	1.38
3/4 x 2	08	861-020 *	25	2.00
3/4 x 3	08	861-106 *	25	3.00
3/4 x 4	08	861-107 *	25	4.00
3/4 x 5	08	861-108 *	25	5.00
3/4 x 6	08	861-109 *	25	6.00
3/4 x 8	08	861-110 *	25	8.00
3/4 x 10	08	861-111 *	25	10.00
3/4 x 12	08	861-112 *	25	12.00
1 x CL	08	861-133 *	25	1.50
1 x 3	08	861-135 *	25	3.00
1 x 4	08	861-136 *	25	4.00
1 x 5	08	861-137 *	25	5.00
1 x 6	08	861-138 *	25	6.00
1 x 8	08	861-139 *	25	8.00
1 x 10	08	861-140 *	25	10.00
1 x 12	08	861-141 *	25	12.00
1 1/4 x CL	08	861-170 *	25	1.63
1 1/4 x 3	08	861-172 *	25	3.00
1 1/4 x 4	08	861-173 *	25	4.00
1 1/4 x 5	08	861-174 *	25	5.00
1 1/4 x 6	08	861-175 *	25	6.00
1 1/4 x 8	08	861-176 *	25	8.00
1 1/4 x 10	08	861-177 *	25	10.00
1 1/4 x 12	08	861-178 *	25	12.00
1 1/2 x CL	08	861-213 *	25	1.75
1 1/2 x 3	08	861-215 *	25	3.00
1 1/2 x 4	08	861-216 *	25	4.00
1 1/2 x 5	08	861-217 *	25	5.00
1 1/2 x 6	08	861-218 *	25	6.00
1 1/2 x 8	08	861-219 *	25	8.00
1 1/2 x 10	08	861-220 *	25	10.00
1 1/2 x 12	08	861-221 *	25	12.00
2 x CL	08	861-251 *	25	2.00
2 x 3	08	861-253 *	25	3.00
2 x 4	08	861-254 *	25	4.00
2 x 5	08	861-255 *	25	5.00
2 x 6	08	861-256 *	25	6.00
2 x 8	08	861-257 *	25	8.00
2 x 10	08	861-258 *	25	10.00
2 x 12	08	861-259 *	25	12.00
2 1/2 x CL	08	861-291 *	5	2.50
2 1/2 x 4	08	861-295 *	5	4.00
2 1/2 x 5	08	861-296 *	5	5.00
2 1/2 x 6	08	861-297 *	5	6.00
2 1/2 x 8	08	861-298 *	1	8.00
2 1/2 x 10	08	861-299 *	1	10.00
2 1/2 x 12	08	861-300 *	1	12.00
3 x CL	08	861-338 *	5	2.63
3 x 4	08	861-341 *	5	4.00
3 x 5	08	861-342 *	5	5.00
3 x 6	08	861-343 *	5	6.00
3 x 8	08	861-344 *	1	8.00
3 x 10	08	861-345 *	1	10.00
3 x 12	08	861-346 *	1	12.00

table continued next page



Size	P/L	Part No.	Minimum Order Qty	L [inch]
4 x CL	08	861-422 *	5	2.88
4 x 5	08	861-425 *	5	5.00
4 x 6	08	861-426 *	5	6.00
4 x 8	08	861-427 *	1	8.00
4 x 10	08	861-428 *	1	10.00
4 x 12	08	861-429 *	1	12.00

### 45° Wye (S x S x S)

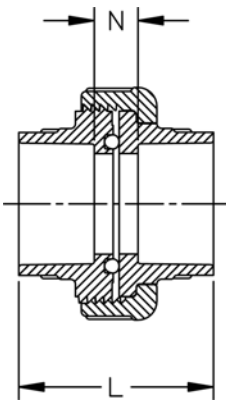


Size [inch]	P/L	Part No.	Minimum Order Qty	GJ [inch]	GN [inch]	H [inch]	HJ [inch]	L [inch]	N [inch]	Design
1 1/2	08	870-015 *	20	2.41	0.69	2.06	3.75	5.81	2.38	HS
2	08	870-020	10	3.61	1.38	2.89	5.16	8.05	5.00	SL
3	08	870-030	4	4.85	1.91	3.81	6.75	10.46	6.65	SL
4	08	870-040	4	6.38	1.84	4.20	8.75	12.96	8.25	SL
6	08	870-060	1	8.50	1.81	4.86	11.59	16.50	10.39	SL
8	08	870-080 *	1	15.88	5.06	9.31	20.13	27.25	13.69	HS
10	05	875-100H *	1	16.98	5.73	10.73	21.98	33.21	23.21	FAB
12	05	875-120H *	1	19.39	6.14	12.14	25.39	38.03	26.03	FAB
14	05	875-140H *	1	21.40	5.40	12.40	28.40	42.80	28.80	FAB
16	05	875-160H *	1	24.06	4.82	12.82	32.06	48.13	32.13	FAB

### 45° Reducing Wye (S x S x S)

Size [inch]	P/L	Part No.	Minimum Order Qty	GJ [inch]	GN [inch]	H [inch]	HJ [inch]	L [inch]	N [inch]	Design
6 x 4	08	870-532	1	7.18	1.87	4.91	9.45	16.50	10.39	HS

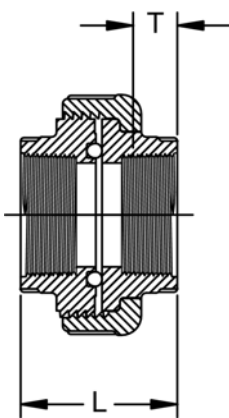
### Union (S x S)



Size [inch]	P/L	EPDM Part No.	FPM Part No.	Minimum Order Qty	L [inch]	N [inch]
1/4	08	897-002	857-002	25	1.61	0.76
3/8	08	897-003	857-003	25	1.91	0.77
1/2	08	897-005	857-005	25	2.31	0.95
3/4	08	897-007	857-007	10	2.58	1.08
1	08	897-010	857-010	10	2.89	1.25
1 1/4	08	897-012	857-012	5	3.23	1.32
1 1/2	08	897-015	857-015	10	3.44	1.32
2	08	897-020	857-020	2	3.77	1.51
3	08	897-030	857-030	1	4.74	2.00
4	08	897-040	857-040	1	5.62	2.05



## Union (FPT X FPT)



Size [inch]	P/L	EPDM Part No.	FPM Part No.	Minimum Order Qty	L [inch]	T [inch]	
1/4	08	898-002 ^	858-002 ^	25	1.63	0.40	
3/8	08	898-003 ^	858-003 ^	25	1.58	0.41	
1/2	08	898-005 ^	858-005 ^	25	2.03	0.53	
3/4	08	898-007 ^	858-007 ^	5	2.11	0.55	
1	08	898-010 ^	858-010 ^	5	2.56	0.68	
1 1/4	08	898-012 ^	858-012 ^	5	2.79	0.71	
1 1/2	08	898-015 ^	858-015 ^	5	2.72	0.72	
2	08	898-020 ^	858-020 ^	2	2.89	0.76	
3	08	898-030 ^	858-030 ^	1	4.69	1.20	
4	08	898-040 ^	858-040 ^	1	5.62	1.30	



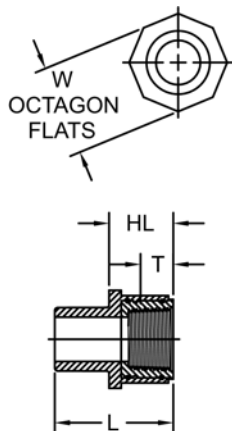
# Metal Transition Fittings

## PVC-to-Brass Transition Fittings (Spg x FPT)



Size [inch]	P/L	Part No.	Minimum Order Qty	HL [inch]	L [inch]	T [inch]	W [inch]
1/2	33	878-005BR	25	1.02	1.76	0.53	1.25
3/4	33	878-007BR	15	1.09	2.08	0.55	1.50
1	33	878-010BR	15	1.33	2.45	0.68	1.88
1 1/4	33	878-012BR	15	1.39	2.51	0.71	2.25
1 1/2	33	878-015BR	10	1.45	2.76	0.72	2.56
2	33	878-020BR	5	1.44	2.82	0.76	3.31

## PVC-to-316 SS Transition Fittings (Spg x FPT)



Size [inch]	P/L	Part No.	Minimum Order Qty	HL [inch]	L [inch]	T [inch]	W [inch]
1/2	33	878-005SS	25	1.02	1.76	0.53	1.25
3/4	33	878-007SS	15	1.09	2.08	0.55	1.50
1	33	878-010SS	15	1.33	2.45	0.68	1.88
1 1/4	33	878-012SS	15	1.39	2.51	0.71	2.25
1 1/2	33	878-015SS	10	1.45	2.76	0.72	2.56
2	33	878-020SS	5	1.44	2.82	0.76	3.31

## Metal Union End Connectors (316 SS)



Size [inch]	P/L	Part No.
1/2	33	1694-005
3/4	33	1694-007
1	33	1694-010
1 1/4	33	1694-012
1 1/2	33	1694-015
2	33	1694-020



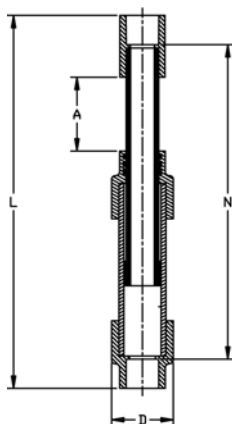
# Expansion Joints

## Expansion Joint 6" Travel (S x S)



Size [inch]	P/L	EPDM Part No.	FPM Part No.	A [inch]	D [inch]	L [inch]	N [inch]
1/2	34	826-005X6 *	836-005X6 *	3.00	1.85	13.93	12.06
3/4	34	826-007X6 *	836-007X6 *	3.00	2.23	14.40	12.46
1	34	826-010X6 *	836-010X6 *	3.00	2.50	15.02	12.58
1 1/4	34	826-012X6 *	836-012X6 *	3.00	2.50	15.81	13.05
1 1/2	34	826-015X6 *	836-015X6 *	3.00	3.50	16.08	13.13
2	34	826-020X6 *	836-020X6 *	3.00	4.39	18.10	14.88
3	34	826-030X6 *	836-030X6 *	3.00	5.53	19.83	15.79
4	34	826-040X6 *	836-040X6 *	3.00	7.93	27.56	23.01
6	34	826-060X6 *	836-060X6 *	3.00	9.97	27.88	21.75

## Expansion Joint 12" Travel (S x S)



Size [inch]	P/L	EPDM Part No.	FPM Part No.	A [inch]	D [inch]	L [inch]	N [inch]
1/2	34	826-005X12 *	836-005X12 *	6.00	1.85	22.93	21.06
3/4	34	826-007X12 *	836-007X12 *	6.00	2.23	23.40	21.46
1	34	826-010X12 *	836-010X12 *	6.00	2.50	24.02	21.58
1 1/4	34	826-012X12 *	836-012X12 *	6.00	2.50	24.81	22.05
1 1/2	34	826-015X12 *	836-015X12 *	6.00	3.50	25.08	22.13
2	34	826-020X12 *	836-020X12 *	6.00	4.39	27.10	23.88
3	34	826-030X12 *	836-030X12 *	6.00	5.53	28.83	24.79
4	34	826-040X12 *	836-040X12 *	6.00	7.93	36.56	32.01
6	34	826-060X12 *	836-060X12 *	6.00	9.97	36.88	30.75