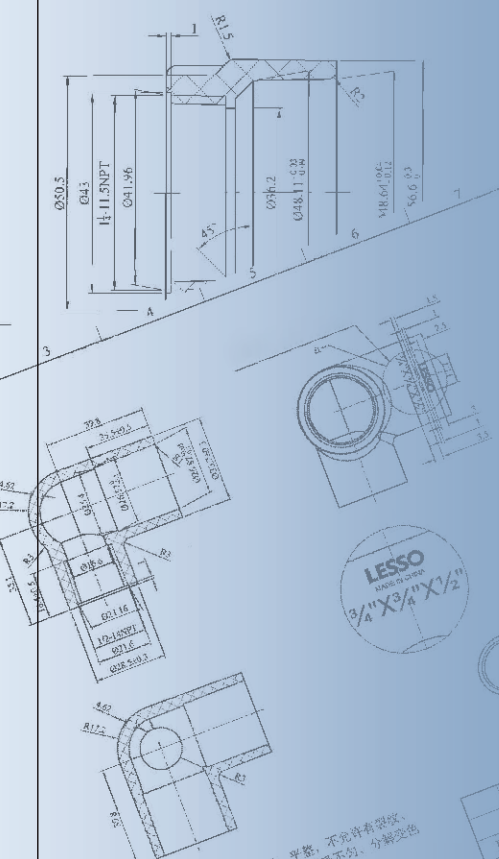


LESSO[®] America



PVC Schedule 40 Fittings and PVC DWV Fittings Technical Manual



LESSO AMERICA, INC.



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Column Header Information

Each product column header label identifies the following product particulars:

Part Number: the number used to order the part.

Size: nominal diameter of pipe with which the fitting is to be used.

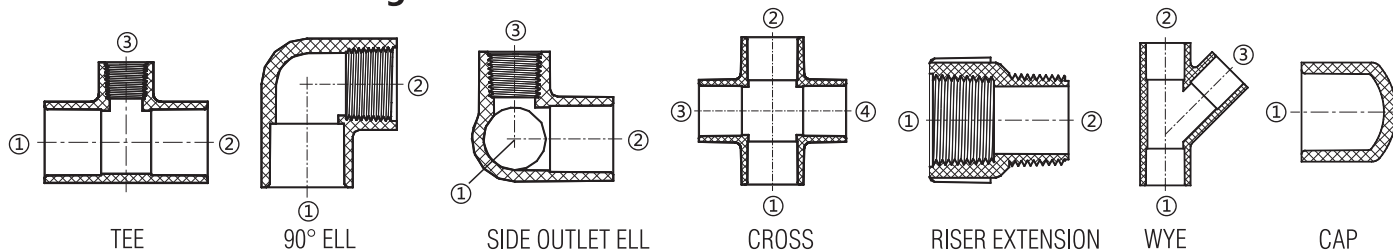
NOTE: Fittings may be same size (only one size designation) or reducing (multiple sizes designated).

Standard Pack (Std Pk) the quantity of parts packaged in an individual box or bag.

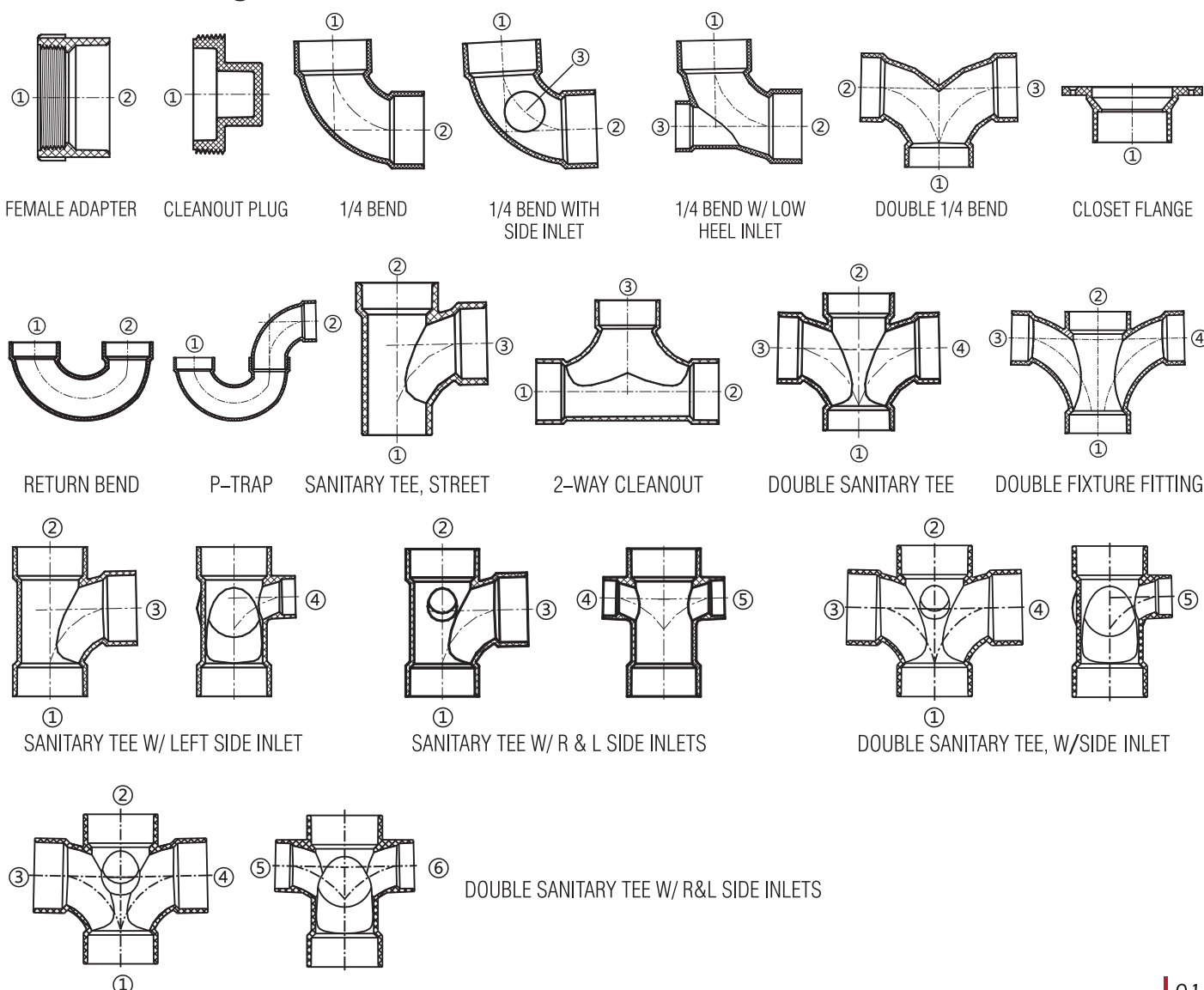
Master Carton (Mstr Ctn) the total quantity of parts contained in individual boxes or bags which are packaged together.

Methods of Designating Inlets of Fittings

PVC Schedule 40 Fittings



PVC DWV Fittings



TECHNICAL MANUAL

Introduction

The booklet presents technical informations referential to design, storage and installation of LESSO America PVC fittings.

The booklet just set out a referential advice or method of installation based on LESSO America's experiences and other publications such as Handbook of PVC Pipe Design and Construction (Issued by Uni-bell PVC Pipe Association).

Readers must decided by yourself whether any advice or recommended method or data should be taken or not. It is not our intention that the guide should assume the responsibility unless the engineer so directs the installer.

No representations, guarantees of warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical or additional information not contained herein, please contact LESSO America customer service departments.

Note: LESSO America PVC fittings are not for distribution or transportation of compressed air or gas, as well as not for test.

Standards

ASTM D2466

This specification covers poly(vinyl chloride) (PVC) Schedule 40 pipe fittings. Included are requirements for materials, workmanship, dimensions, and burst pressure.

ASTM D1784

This specification covers rigid PVC and CPVC compounds intended for general purpose use in extruded or molded form—including pressure piping applications and nonpressure piping applications—composed of poly(vinyl chloride), chlorinated poly(vinyl chloride), or vinyl chloride copolymers containing at least 80 % vinyl chloride, and the necessary compounding ingredients. The compounding ingredients shall be permitted to consist of lubricants, stabilizers, non-poly(vinyl chloride) resin modifiers, pigments, and inorganic fillers.

CSA B181.2

This standard covers thermoplastic nonpressure piping, including

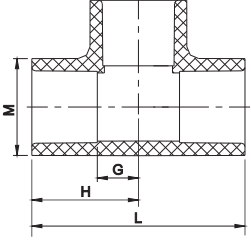
- (a) drain, waste, and vent pipe and pipe fittings;
- (b) sewer and storm pipe and pipe fittings;
- (c) accessories such as factory-assembled expansion joints, closet flanges, backwater valves, and cleanouts.

ASTM D2665

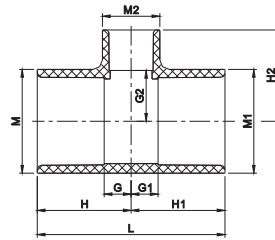
This specification covers requirements and test methods for materials, dimensions and tolerances, pipe stiffness, crush resistance, impact resistance, and solvent cement for poly(vinyl chloride) plastic drain, waste, and vent pipe and fittings. A form of marking is also included. Plastic which does not meet the material requirements specified in Section 5 is excluded. Installation procedures are given in the Appendix.

PVC SCH40 Fittings



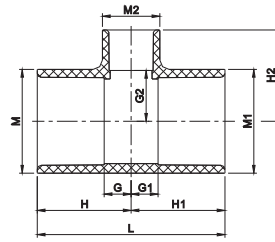
TEE (SOC × SOC× SOC)  	Part Number	Size(in)	G	H	L	M	Weight (Lbs)
	401-003	3/8	7/16	1-3/16	2-3/8	7/8	0.042
	401-005	1/2	15/32	1-1/4	2-1/2	1-1/8	0.062
	401-007	3/4	9/16	1-9/16	3-1/8	1-11/32	0.101
	401-010	1	23/32	1-27/32	3-11/16	1-5/8	0.179
	401-012	1-1/4	29/32	2-5/32	4-11/32	2	0.238
	401-015	1-1/2	1	2-5/16	4-21/32	2-1/4	0.313
	401-020	2	1-1/4	2-21/32	5-5/16	2-3/4	0.472
	401-025	2-1/2	1-9/16	3-11/32	6-11/16	3-11/32	0.915
	401-030	3	1-7/8	3-3/4	7-17/32	4	1.323
	401-040	4	2-11/32	4-3/8	8-25/32	5-1/16	2.191
	401-050	5	3-1/16	6-5/32	12-9/32	6-1/8	4.248
	401-060	6	3-1/2	6-31/32	13-15/16	7-5/16	5.864
	401-080	8	4-21/32	8-11/16	17-13/32	9-3/8	11.894
	401-100	10	5-13/16	10-7/8	21-23/32	11-11/16	22.728
	401-120	12	6-15/16	12-31/32	25-15/16	13-7/8	37.190

PVC SCH40 Fittings


**REDUCING TEE
(SOC × SOC × SOC)**


Part Number	Size(in)	G	G1	G2	H	H1	H2	L	M	M1	M2	Weight (Lbs)
401-053	3/8×3/8×1/2	9/16	9/16	1/2	1-5/16	1-5/16	1-1/4	2-19/32	7/8	7/8	1-3/32	0.053
401-074	1/2×1/2×3/4	9/16	9/16	9/16	1-5/16	1-5/16	1-9/16	2-5/8	1-1/16	1-1/16	1-5/16	0.075
401-075	1/2×1/2×1	25/32	25/32	17/32	1-17/32	1-17/32	1-11/16	3-1/16	1-1/8	1-1/8	1-21/32	0.112
401-094	3/4×1/2×1/2	9/16	1/2	21/32	1-9/16	1-9/32	1-13/32	2-27/32	1-5/16	1-3/32	1-3/32	0.077
401-095	3/4×1/2×3/4	11/16	11/16	5/8	1-11/16	1-15/32	1-5/8	3-5/32	1-5/16	1-3/32	1-5/16	0.106
401-101	3/4×3/4×1/2	1/2	1/2	21/32	1-1/2	1-1/2	1-7/16	2-31/32	1-5/16	1-5/16	1-1/8	0.090
401-102	3/4×3/4×1	21/32	21/32	19/32	1-11/16	1-11/16	1-25/32	3-11/32	1-5/16	1-5/16	1-21/32	0.148
401-122	1×1/2×1	25/32	3/4	3/4	1-29/32	1-17/32	1-7/8	3-7/16	1-5/8	1-3/32	1-5/8	0.146
401-124	1×3/4×1/2	17/32	17/32	25/32	1-21/32	1-17/32	1-9/16	3-3/16	1-5/8	1-5/16	1-3/32	0.119
401-125	1×3/4×3/4	21/32	5/8	25/32	1-25/32	1-5/8	1-25/32	3-13/32	1-5/8	1-5/16	1-5/16	0.148
401-126	1×3/4×1	3/4	25/32	3/4	1-7/8	1-25/32	1-7/8	3-21/32	1-5/8	1-5/16	1-5/8	0.152
401-130	1×1×1/2	17/32	17/32	3/4	1-21/32	1-21/32	1-17/32	3-11/32	1-5/8	1-5/8	1-3/32	0.132
401-131	1×1×3/4	11/16	11/16	25/32	1-13/16	1-13/16	1-25/32	3-5/8	1-21/32	1-21/32	1-11/32	0.161
401-132	1×1×1-1/4	1-1/32	1-1/32	13/16	2-5/32	2-5/32	2-3/32	4-11/32	1-5/8	1-5/8	1-31/32	0.221
401-133	1×1×1-1/2	1-1/8	1-1/8	27/32	2-1/4	2-1/4	2-5/32	4-1/2	1-5/8	1-5/8	2-7/32	0.244
401-134	1×1×2"	1-7/16	1-7/16	27/32	2-9/16	2-9/16	2-7/32	5-1/8	1-5/8	1-5/8	2-23/32	0.300
401-156	1-1/4×1×1/2	1/2	1/2	31/32	1-25/32	1-21/32	1-23/32	3-7/16	1-31/32	1-5/8	1-3/32	0.154
401-157	1-1/4×1×3/4	21/32	21/32	31/32	1-29/32	1-25/32	1-31/32	3-11/16	1-31/32	1-5/8	1-5/16	0.179
401-158	1-1/4×1×1	13/16	13/16	31/32	2-3/32	1-15/16	2-3/32	4-1/32	1-32/32	1-5/8	1-5/8	0.212
401-166	1-1/4×1-1/4×1/2	1/2	1/2	31/32	1-25/32	1-25/32	1-23/32	3-9/16	1-31/32	1-31/32	1-3/32	0.176
401-167	1-1/4×1-1/4×3/4	5/8	5/8	31/32	1-29/32	1-29/32	1-31/32	3-13/16	2	2	1-11/32	0.192
401-168	1-1/4×1-1/4×1	25/32	25/32	31/32	2-1/16	2-1/16	2-3/32	4-1/8	2	2	1-21/32	0.227
401-169	1-1/4×1-1/4×1-1/2	1-1/8	1-1/8	1	2-13/32	2-13/32	2-5/16	4-13/16	1-31/32	1-31/32	2-7/32	0.294
401-199	1-1/2×1-1/4×1/2	17/32	17/32	1-1/32	1-27/32	1-25/32	1-13/16	3-5/8	2-7/32	1-31/32	1-3/32	0.196
401-201	1-1/2×1-1/4×3/4	5/8	5/8	1-3/16	1-15/16	1-29/32	2-7/32	3-27/32	2-7/32	1-31/32	1-5/16	0.225

PVC SCH40 Fittings

REDUCING TEE
(SOC × SOC × SOC)

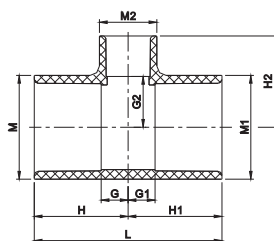
Part Number	Size(in)	G	G1	G2	H	H1	H2	L	M	M1	M2	Weight (Lbs)
401-202	1-1/2×1-1/4×1	23/32	23/32	1-5/32	2-1/32	2	2-9/32	4-1/32	2-7/32	1-31/32	1-5/8	0.247
401-203	1-1/2×1-1/4×1-1/4	1	1	1-1/8	2-1/4	2-5/16	2-3/8	4-9/16	1-31/32	2-7/32	1-31/32	0.290
401-209	1-1/2×1-1/2×1/2	17/32	17/32	1-1/16	1-27/32	1-27/32	1-27/32	3-11/16	2-7/32	2-7/32	1-3/32	0.212
401-210	1-1/2×1-1/2×3/4	21/32	21/32	1-1/16	1-31/32	1-31/32	2-3/32	3-29/32	2-7/32	2-7/32	1-5/16	0.240
401-211	1-1/2×1-1/2×1	13/16	13/16	1-5/32	2-1/8	2-1/8	2-9/32	4-1/4	2-7/32	2-7/32	1-5/8	0.276
401-212	1-1/2×1-1/2×1-1/4	1	1	1-1/16	2-5/16	2-5/16	2-5/16	4-19/32	2-9/32	2-9/32	2	0.348
401-213	1-1/2×1-1/2×2	1-3/8	1-3/8	1-1/8	2-11/16	2-11/16	2-1/2	5-11/32	2-7/32	2-7/32	2-23/32	0.396
401-233	2×1×2	1-3/8	1-3/8	1-11/32	2-25/32	2-1/2	2-3/4	5-9/32	2-23/32	1-5/8	2-23/32	0.456
401-238	2×1-1/2×3/4	21/32	21/32	1-13/32	2-1/32	1-31/32	2-13/32	4	2-23/32	2-7/32	1-5/16	0.278
401-239	2×1-1/2×1	25/32	25/32	1-11/32	2-3/16	2-3/32	2-15/32	4-9/32	2-23/32	2-7/32	1-5/8	0.313
401-241	2×1-1/2×1-1/2	1-1/16	1-1/16	1-3/8	2-7/16	1-1/16	2-11/16	4-13/16	2-23/32	2-7/32	2-7/32	0.373
401-247	2×2×1/2	17/32	17/32	1-5/16	1-29/32	1-29/32	2-3/32	3-27/32	2-23/32	2-23/32	1-3/32	0.282
401-248	2×2×3/4	5/8	5/8	1-5/16	2-1/32	2-1/32	2-5/16	4-1/32	2-23/32	2-23/32	1-5/16	0.311
401-249	2×2×1	25/32	25/32	1-5/16	2-5/32	2-5/32	2-7/16	4-11/32	2-23/32	2-23/32	1-5/8	0.342
401-250	2×2×1-1/4	31/32	31/32	1-9/32	2-3/8	2-3/8	2-9/16	4-3/4	2-23/32	2-23/32	1-31/32	0.392
401-251	2×2×1-1/2	1-1/16	1-1/16	1-9/32	2-7/16	2-7/16	2-19/32	4-29/32	2-23/32	2-23/32	2-7/32	0.401
401-287	2-1/2×2-1/2×1/2	9/16	9/16	1-11/16	2-11/32	2-11/32	2-7/16	4-11/16	3-5/16	3-5/16	1-3/32	0.531
401-288	2-1/2×2-1/2×3/4	21/32	21/32	1-11/16	2-7/16	2-7/16	2-11/16	4-7/8	3-5/16	3-5/16	1-5/16	0.562
401-289	2-1/2×2-1/2×1	13/16	13/16	1-19/32	2-19/32	2-19/32	2-23/32	5-3/16	3-5/16	3-5/16	1-5/8	0.608
401-290	2-1/2×2-1/2×1-1/4	31/32	31/32	1-9/16	2-3/4	2-3/4	2-27/32	5-1/2	3-5/16	3-5/16	1-31/32	0.653
401-291	2-1/2×2-1/2×1-1/2	1-1/8	1-1/8	1-19/32	2-29/32	2-29/32	2-29/32	5-25/32	3-5/16	3-5/16	2-7/32	0.694
401-292	2-1/2×2-1/2×2	1-11/32	1-11/32	1-19/32	3-1/8	3-1/8	2-31/32	6-1/4	3-5/16	3-5/16	2-23/32	0.786
401-333	3×3×1/2	5/8	5/8	1-29/32	2-17/32	2-17/32	2-11/16	5-1/16	3-31/32	3-31/32	1-3/32	0.754
401-334	3×3×3/4	3/4	3/4	1-15/16	2-5/8	2-5/8	2-15/16	5-9/32	3-31/32	3-31/32	1-5/6	0.802
401-335	3×3×1	7/8	7/8	1-15/16	2-25/32	2-25/32	3-1/16	5-9/16	3-31/32	3-31/32	1-5/8	0.847

NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES.
FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

PVC SCH40 Fittings



REDUCING TEE (SOC × SOC × SOC)

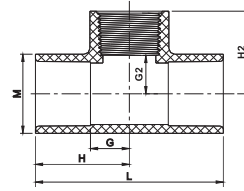


Part Number	Size(in)	G	G1	G2	H	H1	H2	L	M	M1	M2	Weight (Lbs)
401-336	3×3×1-1/4	1-1/16	1-1/16	1-15/16	2-15/16	2-15/16	3-7/32	5-29/32	3-31/32	3-31/32	1-31/32	0.932
401-337	3×3×1-1/2	1-3/16	1-3/16	1-29/32	3-3/32	3-3/32	3-7/32	6-3/16	3-31/32	3-31/32	2-7/32	0.944
401-338	3×3×2	1-11/32	1-11/32	2	3-1/4	3-1/4	3-3/8	6-1/2	3-31/32	3-31/32	2-23/32	1.036
401-339	3×3×2-1/2	1-11/16	1-11/16	2-1/32	3-19/32	3-19/32	3-13/16	7-7/32	3-31/32	3-31/32	3-5/16	1.275
401-416	4×4×3/4	21/32	21/32	2-11/32	2-23/32	2-23/32	3-11/32	5-13/32	5-1/32	5-1/32	1-5/16	1.124
401-417	4×4×1	13/16	13/16	2-3/8	2-27/32	2-27/32	3-1/2	5-23/32	5-1/32	5-1/32	1-5/8	1.168
401-418	4×4×1-1/4	1-1/32	1-1/32	2-13/32	3-1/16	3-1/16	3-11/16	6-1/8	5-1/32	5-1/32	1-31/32	1.279
401-419	4×4×1-1/2	1-5/32	1-5/32	2-13/32	3-1/16	3-1/16	3-23/32	6-3/8	5-1/32	5-1/32	2-7/32	1.349
401-420	4×4×2	1-11/32	1-11/32	2-17/32	3-3/8	3-3/8	3-29/32	6-3/4	5-1/32	5-1/32	2-23/32	1.499
401-422	4×4×3	1-32/32	1-31/32	2-1/2	4	4	4-13/32	8-1/32	5-1/32	5-1/32	3-31/32	1.936
401-486	5×5×2	1-11/32	1-11/32	3-1/16	4-7/16	4-7/16	4-15/32	8-27/32	6-1/8	6-1/8	2-23/32	2.546
401-488	5×5×3	2	2	3-1/16	5-1/16	5-1/16	4-31/32	10-1/8	6-1/8	6-1/8	3-31/32	3.086
401-490	5×5×4	2-17/32	2-17/32	3-1/16	5-19/32	5-19/32	5-1/8	11-3/16	6-1/8	6-1/8	5-1/32	3.510
401-528	6×6×2	1-3/8	1-3/8	3-15/32	4-27/32	4-27/32	4-7/8	9-11/16	7-5/16	7-5/16	2-25/32	3.825
401-530	6×6×3	2	2	3-9/16	5-15/32	5-15/32	5-7/16	10-15/16	7-5/16	7-5/16	4-1/16	4.653
401-532	6×6×4	2-17/32	2-17/32	3-5/8	6	6	5-21/32	12	7-5/16	7-5/16	5-3/32	5.124
401-582	8×8×4	2-17/32	2-17/32	4-21/32	6-9/16	6-9/16	6-11/16	13-1/8	9-3/8	9-3/8	5-3/32	7.780
401-585	8×8×6	3-5/8	3-5/8	4-21/32	7-21/32	7-21/32	7-3/4	15-5/16	9-3/8	9-3/8	7-5/16	9.709
401-624	10×10×4	2-17/32	2-17/32	5-25/32	7-9/16	7-9/16	7-27/32	15-1/8	11-11/16	11-11/16	5-3/32	13.445
401-626	10×10×6	3-5/8	3-5/8	5-13/16	8-21/32	8-21/32	8-7/8	17-5/16	11-11/16	11-11/16	7-5/16	15.997
401-628	10×10×8	4-21/32	4-21/32	5-13/16	9-23/32	9-23/32	9-27/32	19-13/32	11-11/16	11-11/16	9-13/32	18.698
401-664	12×12×4	2-17/32	2-17/32	6-29/32	8-17/32	8-17/32	8-15/16	17-3/32	13-7/8	13-7/8	5-3/32	20.741
401-666	12×12×6	3-5/8	3-5/8	6-7/8	9-21/32	9-21/32	9-31/32	19-9/32	13-7/8	13-7/8	7-5/16	23.821
401-668	12×12×8	4-21/32	4-21/32	6-7/8	10-11/16	10-11/16	10-15/16	21-3/8	13-7/8	13-7/8	9-13/32	27.104
401-670	12×12×10	5-13/16	5-13/16	6-7/8	11-27/32	11-27/32	11-15/16	23-21/32	13-7/8	13-7/8	11-11/16	31.526

PVC SCH40 Fittings

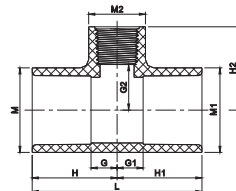


TEE (SOC × SOC × FIPT)



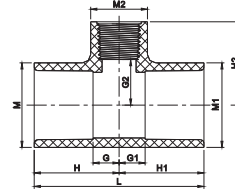
Part Number	Size(in)	G	G2	H	H2	L	M	Weight (lbs)
402-005	1/2	15/32	17/32	1-1/4	1-1/4	2-1/2	1-3/32	0.066
402-007	3/4	5/8	5/8	1-5/8	1-3/8	3-9/32	1-3/8	0.106
402-010	1	13/16	25/32	1-15/16	1-11/16	3-27/32	1-5/8	0.187
402-012	1-1/4	29/32	1-5/32	2-3/16	2-5/32	4-11/32	1-31/32	0.273
402-015	1-1/2	1-1/32	1-1/4	2-11/32	2-1/4	4-21/32	2-7/32	0.340
402-020	2	1-5/16	1-15/32	2-11/16	2-1/2	5-13/32	2-23/32	0.503
402-025	2-1/2	1-1/2	1-19/32	3-9/32	2-31/32	6-9/16	3-5/16	0.961
402-030	3	1-3/4	1-7/8	3-21/32	3-3/8	7-5/16	3-31/32	1.395
402-040	4	2-9/32	2-3/8	4-11/32	3-15/16	8-21/32	5-3/32	2.456

PVC SCH40 Fittings


REDUCING TEE
(SOC × SOC× FIPT)


Part Number	Size(in)	G	G1	G2	H	H1	H2	L	M	M1	M2	Weight (Lbs)
402-071	1/2×1/2×1/8	5/16	5/16	17/32	1-3/32	1-3/32	1-1/32	2-5/32	1-3/32	1-3/32	5/8	0.049
402-072	1/2×1/2×1/4	3/8	3/8	9/16	1-5/32	1-5/32	1-1/8	2-9/32	1-3/32	1-3/32	13/16	0.055
402-074	1/2×1/2×3/4	21/32	21/32	9/16	1-7/16	1-7/16	1-5/16	2-7/8	1-3/32	1-3/32	1-5/16	0.085
402-094	3/4×1/2×1/2	1/2	9/16	11/16	1-1/2	1-11/32	1-13/32	2-27/32	1-5/16	1-3/32	1-3/32	0.088
402-095	3/4×1/2×3/4	21/32	25/32	21/32	1-11/16	1-9/16	1-13/32	3-7/32	1-5/16	1-3/32	1-5/16	0.107
402-101	3/4×3/4×1/2	17/32	17/32	11/16	1-17/32	1-17/32	1-13/32	3-1/16	1-5/16	1-5/16	1-3/32	0.097
402-124	1×3/4×1/2	17/32	17/32	13/16	1-21/32	1-17/32	1-17/32	3-3/16	1-5/8	1-5/16	1-3/32	0.119
402-125	1×3/4×3/4	9/16	11/16	13/16	1-11/16	1-11/16	1-9/16	3-3/8	1-5/8	1-5/16	1-5/16	0.132
402-130	1×1×1/2	1/2	1/2	7/8	1-5/8	1-5/8	1-19/32	3-1/4	1-5/8	1-5/8	1-3/32	0.137
402-131	1×1×3/4	21/32	21/32	13/16	1-25/32	1-25/32	1-9/16	3-9/16	1-5/8	1-5/8	1-5/16	0.157
402-156	1-1/4×1×1/2	19/32	19/32	1	1-7/8	1-23/32	1-23/32	3-19/32	1-31/32	1-5/8	1-3/32	0.172
402-157	1-1/4×1×3/4	13/16	3/4	1-1/32	2-3/32	1-7/8	1-25/32	3-31/32	1-31/32	1-5/8	1-5/16	0.192
402-158	1-1/4×1×1	13/16	13/16	1	2-3/32	1-15/16	1-29/32	4-1/32	1-31/32	1-5/8	1-5/8	0.216
402-166	1-1/4×1-1/4×1/2	7/16	7/16	1-1/16	1-23/32	1-23/32	1-25/32	3-13/32	1-31/32	1-31/32	1-3/32	0.179
402-167	1-1/4×1-1/4×3/4	19/32	19/32	1-1/16	1-7/8	1-7/8	1-13/16	3-23/32	1-31/32	1-31/32	1-5/16	0.205
402-168	1-1/4×1-1/4×1	21/32	21/32	1-1/16	1-15/16	1-15/16	1-31/32	3-27/32	1-31/32	1-31/32	1-5/8	0.231
402-199	1-1/2×1-1/4×1/2	19/32	19/32	1-1/8	1-29/32	1-7/8	1-27/32	3-25/32	2-7/32	1-31/32	1-3/32	0.212
402-201	1-1/2×1-1/4×3/4	11/16	5/8	1-5/32	2	1-29/32	1-29/32	3-29/32	2-7/32	1-31/32	1-5/16	0.225
402-202	1-1/2×1-1/4×1	7/8	7/8	1-5/32	2-3/16	2-5/32	2-1/16	4-11/32	2-7/32	1-31/32	1-5/8	0.271
402-209	1-1/2×1-1/2×1/2	7/16	7/16	1-3/16	1-3/4	1-3/4	1-29/32	3-1/2	2-7/32	2-7/32	1-3/32	0.207
402-210	1-1/2×1-1/2×3/4	21/32	21/32	1-5/32	1-31/32	1-31/32	1-7/8	3-15/16	2-7/32	2-7/32	1-5/16	0.234
402-211	1-1/2×1-1/2×1	11/16	11/16	1-3/16	2	2	2-3/32	4	2-7/32	2-7/32	1-5/8	0.260
402-212	1-1/2×1-1/2×1-1/4	1	1	1-5/32	2-5/16	2-5/16	2-5/32	4-5/8	2-7/32	2-7/32	1-31/32	0.324
402-239	2×1-1/2×1	27/32	27/32	1-3/8	2-1/4	2-5/32	2-9/32	4-13/32	2-23/32	2-7/32	1-5/8	0.337
402-247	2×2×1/2	21/32	21/32	1-13/32	2-1/16	2-1/16	2-1/8	4-3/32	2-23/32	2-23/32	1-3/32	0.302
402-248	2×2×3/4	21/32	21/32	1-3/8	2-1/16	2-1/16	2-1/8	4-3/32	2-23/32	2-23/32	1-5/16	0.309
402-249	2×2×1	13/16	13/16	1-31/32	2-3/16	2-3/16	2-5/16	4-13/32	2-23/32	2-23/32	1-5/8	0.357

PVC SCH40 Fittings

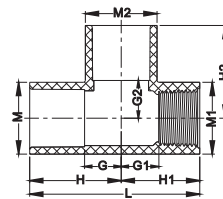
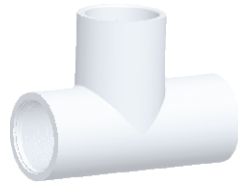

**REDUCING TEE
(SOC × SOC × FIPT)**


Part Number	Size(in)	G	G1	G2	H	H1	H2	L	M	M1	M2	Weight (Lbs)
402-250	2×2×1-1/4	1	1	1-3/8	2-3/8	2-3/8	2-3/8	4-25/32	2-23/32	2-23/32	1-31/32	0.414
402-251	2×2×1-1/2	1-1/16	1-1/16	1-3/8	2-7/16	2-7/16	2-3/8	4-29/32	2-23/32	2-23/32	2-7/32	0.437
402-287	2-1/2×2-1/2×1/2	1/2	1/2	1-11/16	2-9/32	2-9/32	2-13/32	4-9/16	3-5/16	3-5/16	1-3/32	0.520
402-288	2-1/2×2-1/2×3/4	13/16	13/16	1-11/16	2-19/32	2-19/32	2-7/16	5-3/16	3-5/16	3-5/16	1-5/16	0.595
402-289	2-1/2×2-1/2×1	1	1	1-23/32	2-25/32	2-25/32	2-5/8	5-9/16	3-5/16	3-5/16	1-5/8	0.664
402-290	2-1/2×2-1/2×1-1/4	1-1/32	1-1/32	1-25/32	2-13/16	2-13/16	2-25/32	5-5/8	3-5/16	3-5/16	1-31/32	0.699
402-291	2-1/2×2-1/2×1-1/2	1-1/16	1-1/16	1-25/32	2-27/32	2-27/32	2-25/32	5-11/16	3-5/16	3-5/16	2-7/32	0.705
402-292	2-1/2×2-1/2×2	1-1/2	1-1/2	1-27/32	3-9/32	3-9/32	2-7/8	6-9/16	3-5/16	3-5/16	2-23/32	0.873
402-333	3×3×1/2	19/32	19/32	2-1/16	2-1/2	2-1/2	2-25/32	5	3-31/32	3-31/32	1-3/32	0.763
402-334	3×3×3/4	13/16	13/16	2-1/32	2-23/32	2-23/32	2-25/32	5-7/16	3-31/32	3-31/32	1-5/16	0.841
402-335	3×3×1	31/32	31/32	2-1/32	2-7/8	2-7/8	2-15/16	5-3/4	3-31/32	3-31/32	1-5/8	0.899
402-336	3×3×1-1/4	1	1	2-1/32	2-29/32	2-29/32	3-1/32	5-13/16	3-31/32	3-31/32	1-31/32	0.922
402-337	3×3×1-1/2	1-7/32	1-7/32	2-1/8	3-1/8	3-1/8	3-1/8	6-1/4	3-31/32	3-31/32	2-7/32	1.034
402-338	3×3×2	1-1/2	1-1/2	2-1/8	3-13/32	3-13/32	3-5/32	6-13/16	4-1/32	4-1/32	2-25/32	1.138
402-416	4×4×3/4	11/16	11/16	2-9/16	2-23/32	2-23/32	3-5/16	5-7/16	5-1/32	5-1/32	1-5/16	1.157
402-417	4×4×1	27/32	27/32	2-5/8	2-7/8	2-7/8	3-17/32	5-25/32	5-1/32	5-1/32	1-5/8	1.226
402-418	4×4×1-1/4	1	1	2-17/32	3-1/16	3-1/16	3-17/32	6-3/32	5-1/32	5-1/32	1-31/32	1.345
402-419	4×4×1-1/2	1-1/8	1-1/8	2-1/2	3-5/32	3-5/32	3-1/2	6-11/32	5-1/32	5-1/32	2-7/32	1.401
402-420	4×4×2	1-3/8	1-3/8	2-3/4	3-13/32	3-13/32	3-25/32	6-13/16	5-1/32	5-1/32	2-23/32	1.554
402-422	4×4×3	2	2	2-17/32	4-1/32	4-1/32	4-1/32	8-3/32	5-1/32	5-1/32	3-31/32	1.958
402-490	5×5×4	2-17/32	2-17/32	3-1/16	5-19/32	5-19/32	4-21/32	11-3/16	6-1/8	6-1/8	5-1/32	3.574
402-525	6×6×1	1-3/8	1-3/8	3-5/8	4-27/32	4-27/32	4-17/32	9-11/16	7-5/16	7-5/16	1-25/32	4.045
402-528	6×6×2	1-3/8	1-3/8	3-5/8	4-27/32	4-27/32	4-21/32	9-11/16	7-5/16	7-5/16	2-7/8	3.985
402-530	6×6×3	1-31/32	1-31/32	3-21/32	5-7/16	5-7/16	5-5/32	10-7/8	7-5/16	7-5/16	4-1/16	4.636
402-532	6×6×4	2-1/2	2-1/2	3-21/32	5-31/32	5-31/32	5-1/4	11-15/16	7-5/16	7-5/16	5-3/32	5.221

PVC SCH40 Fittings

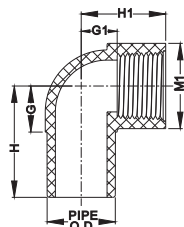


TEE (SOC × FIPT × SOC)



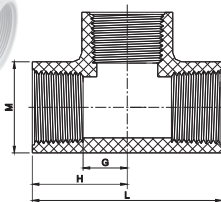
Part Number	Size(in)	G	G1	G2	H	H1	H2	L	M	M1	M2	Weight (Lbs)
403-005	1/2	9/16	5/8	9/16	1-11/32	1-11/32	1-11/32	2-11/16	1-3/32	1-3/32	1-3/32	0.074
403-007	3/4	21/32	11/16	11/16	1-11/16	1-7/16	1-11/16	3-1/8	1-5/16	1-5/16	1-5/16	0.111

90° STREET ELL (SPIG × FIPT)



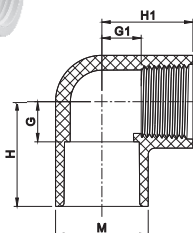
Part Number	Size (in)	G	G1	H	H1	M1	Weight (Lbs)
404-005	1/2	19/32	7/16	1-11/32	1-5/32	1-3/32	0.047
404-007	3/4	23/32	9/16	1-23/32	1-5/16	1-5/16	0.071

TEE (FIPT × FIPT × FIPT)



Part Number	Size (in)	G	H	L	M	Weight (Lbs)
405-005	1/2	17/32	1-1/4	2-1/2	1-3/32	0.082
405-007	3/4	5/8	1-3/8	2-3/4	1-5/16	0.112
405-010	1	25/32	1-11/16	3-3/8	1-5/8	0.205
405-012	1-1/4	31/32	1-31/32	3-15/16	1-31/32	0.304
405-015	1-1/2	1-3/32	2-3/32	4-7/32	2-7/32	0.381
405-020	2	1-11/32	2-3/8	4-23/32	2-23/32	0.547

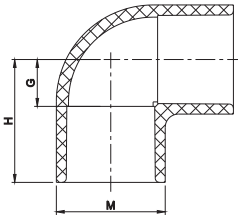
90° ELL (SOC × FIPT)

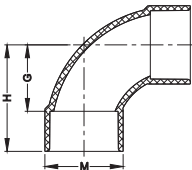


Part Number	Size(in)	G	G1	H	H1	M	Weight (Lbs)
407-005	1/2	1/2	9/16	1-1/4	1-5/16	1-3/32	0.057
407-007	3/4	9/16	9/16	1-9/16	1-5/16	1-5/16	0.086
407-010	1	11/16	11/16	1-27/32	1-19/32	1-5/8	0.152
407-012	1-1/4	15/16	1-1/4	2-7/32	2-1/4	1-31/32	0.250
407-015	1-1/2	1-1/32	1-1/4	2-11/32	2-1/4	2-7/32	0.291
407-020	2	1-5/16	1-15/32	2-11/16	2-1/2	2-23/32	0.434
407-025	2-1/2	1-11/16	1-21/32	3-15/32	3-1/32	3-5/16	0.882
407-030	3	1-7/8	2-1/16	3-25/32	3-17/32	3-31/32	1.272
407-040	4	2-11/32	2-9/16	4-3/8	4-1/8	5-1/32	2.156

PVC SCH40 Fittings



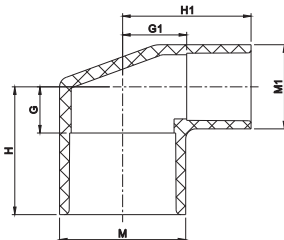
90° ELL (SOC × SOC)  	Part Number	Size (in)	G	H	M	Weight (Lbs)
	406-003	3/8	7/16	1-3/16	7/8	0.029
	406-005	1/2	7/16	1-7/32	1-3/32	0.042
	406-007	3/4	9/16	1-9/16	1-5/16	0.077
	406-010	1	11/16	1-13/16	1-5/8	0.128
	406-012	1-1/4	7/8	2-5/32	1-31/32	0.181
	406-015	1-1/2	1-1/32	2-11/32	2-7/32	0.243
	406-020	2	1-1/4	2-5/8	2-23/32	0.346
	406-025	2-1/2	1-17/32	3-5/16	3-5/16	0.690
	406-030	3	1-27/32	3-3/4	3-31/32	1.038
	406-040	4	2-11/32	4-13/32	5-1/32	1.687
	406-050	5	3-1/16	6-5/32	6-1/8	3.285
	406-060	6	3-15/32	6-15/16	7-1/4	4.579
	406-080	8	4-21/32	8-11/16	9-11/32	8.655
	406-100	10	5-13/16	10-7/8	11-5/8	15.915
	406-120	12	6-15/16	12-31/32	13-25/32	26.217

90° SWEEP ELL (SOC × SOC)  	Part Number	Size (in)	G	H	M	Weight (Lbs)
	406-015S	1-1/2	23/32	3-1/32	2-7/32	0.287
	406-020S	2	2-5/16	3-11/16	2-23/32	0.457

PVC SCH40 Fittings

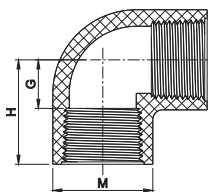


90°REDUCING ELL (SOC × SOC)



Part Number	Size (in)	G	G1	H	H1	M	M1	Weight (Lbs)
406-053	3/8×1/2	7/16	9/16	1-7/32	1-5/16	1-3/32	7/8	0.049
406-101	3/4×1/2	1/2	19/32	1-1/2	1-3/8	1-5/16	1-3/32	0.064
406-130	1×1/2	17/32	13/16	1-21/32	1-9/16	1-5/8	1-3/32	0.115
406-131	1×3/4	5/8	3/4	1-3/4	1-3/4	1-5/8	1-5/16	0.119
406-166	1-1/4×1/2	9/16	1	1-27/32	1-25/32	1-31/32	1-3/32	0.128
406-167	1-1/4×3/4	23/32	1	2	2	1-31/32	1-5/16	0.148
406-168	1-1/4×1	25/32	29/32	2-1/16	2-1/16	1-31/32	1-5/8	0.163
406-209	1-1/2×1/2	17/32	1-1/8	1-27/32	1-7/8	2-7/32	1-3/32	0.152
406-211	1-1/2×1	27/32	1-5/32	2-5/32	2-9/32	2-7/32	1-5/8	0.258
406-212	1-1/2×1-1/4	1	1-3/32	2-5/16	2-3/8	2-7/32	1-31/32	0.240
406-249	2×1	27/32	1-3/8	2-7/32	2-1/2	2-23/32	1-5/8	0.267
406-250	2×1-1/4	1-1/32	1-7/16	2-13/32	2-23/32	2-23/32	1-31/32	0.302
406-251	2×1-1/2	1-3/32	1-5/16	2-15/32	2-5/8	2-23/32	2-7/32	0.315
406-292	2-1/2×2	1-3/8	1-11/16	3-5/32	3-1/16	3-5/16	2-23/32	0.573

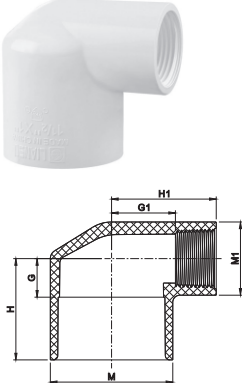
90°ELL (FIPT × FIPT)

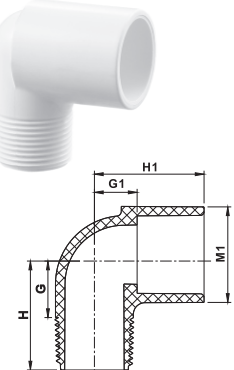


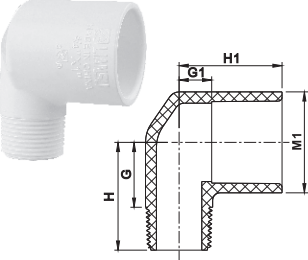
Part Number	Size (in)	G	H	M	Weight (Lbs)
408-005	1/2	17/32	1-1/4	1-3/32	0.062
408-007	3/4	5/8	1-3/8	1-5/16	0.086
408-010	1	25/32	1-11/16	1-5/8	0.154
408-012	1-1/4	31/32	1-31/32	1-31/32	0.227
408-015	1-1/2	1-3/32	2-3/32	2-7/32	0.299
408-020	2	1-11/32	2-3/8	2-23/32	0.425

PVC SCH40 Fittings



90°REDUCING ELL (SOC × FIPT) 	Part Number	Size (in)	G	G1	H	H1	M	M1	Weight (Lbs)
	407-053	3/8×1/2	17/32	7/16	1-9/32	1-5/32	7/8	1-3/32	0.049
	407-074	1/2×3/4	17/32	21/32	1-17/32	1-3/8	1-5/16	1-3/32	0.075
	407-101	3/4×1/2	21/32	9/16	1-7/16	1-5/16	1-3/32	1-5/16	0.075
	407-130	1×1/2	17/32	13/16	1-11/16	1-17/32	1-5/8	1-3/32	0.104
	407-131	1×3/4	11/16	7/8	1-13/16	1-5/8	1-5/8	1-5/16	0.123
	407-168	1-1/4×1	27/32	1-1/32	2-1/8	1-15/16	1-31/32	1-5/8	0.190
	407-211	1-1/2×1	25/32	1-5/32	2-3/32	2-1/16	2-7/32	1-5/8	0.214
	407-212	1-1/2×1-1/4	15/16	1-1/8	2-1/4	2-1/8	2-7/32	1-31/32	0.259
	407-249	2×1	27/32	1-13/32	2-1/4	2-5/16	2-23/32	1-5/8	0.294
	407-250	2×1-1/4	31/32	1-3/8	2-3/8	2-3/8	2-23/32	1-31/32	0.313
	407-251	2×1-1/2	1-3/32	1-15/32	2-15/32	2-15/32	2-23/32	2-7/32	0.374

90°STREET ELL (MIPT × SOC) 	Part Number	Size (in)	G	G1	H	H1	M1	Weight (Lbs)
	410-005	1/2	13/32	11/16	1-3/16	1-3/8	1-1/16	0.035
	410-007	3/4	15/32	27/32	1-15/32	1-17/32	1-9/32	0.068
	410-010	1	23/32	1-1/16	1-27/32	1-15/16	1-5/8	0.110
	410-012	1-1/4	23/32	1-3/16	2	2-7/32	1-31/32	0.179
	410-015	1-1/2	1	1-11/32	2-5/16	2-13/32	2-7/32	0.249
	410-020	2	1-9/32	1-9/16	2-21/32	2-17/32	2-23/32	0.379

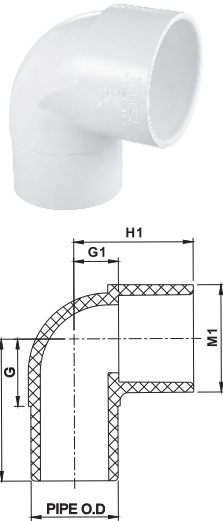
90° REDUCING STREET ELL (MIPT × SOC) 	Part Number	Size (in)	G	G1	H	H1	M1	Weight (Lbs)
	410-101	3/4×1/2	17/32	23/32	1-5/16	1-13/32	1-3/32	0.055
	410-102	3/4×1	17/32	1-1/32	1-21/32	1-23/32	1-5/8	0.099

NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

PVC SCH40 Fittings

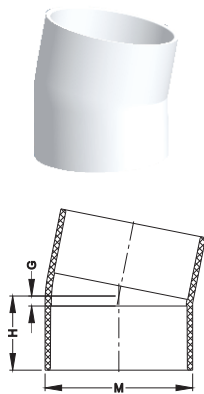


90° STREET ELL
(SPIG × SOC)



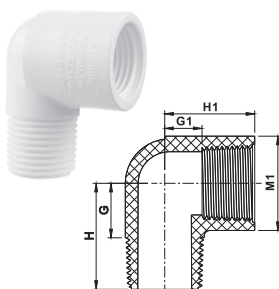
Part Number	Size (in)	G	G1	H	H1	M1	Weight (Lbs)
409-005	1/2	13/32	21/32	1-5/32	1-7/16	1-3/32	0.040
409-007	3/4	17/32	27/32	1-17/32	1-27/32	1-5/16	0.073
409-010	1	11/16	1-1/32	1-13/16	2-5/32	1-5/8	0.139
409-012	1-1/4	27/32	1-3/16	2-1/8	2-15/32	2	0.181
409-015	1-1/2	1-1/16	1-9/32	2-3/8	2-19/32	2-7/32	0.267
409-020	2	1-7/32	1-19/32	2-19/32	3	2-23/32	0.359
409-025	2-1/2	1-17/32	1-31/32	3-5/16	3-3/4	3-5/16	0.708
409-030	3	1-27/32	2-5/16	3-3/4	4-7/32	3-31/32	1.067
409-040	4	2-3/8	2-7/8	4-13/32	4-29/32	5-1/32	1.806
409-060	6	3-15/32	4	6-15/16	7-15/32	7-1/4	4.658
409-100	10	6-3/16	5-1/2	11-1/4	10-9/16	11-5/8	15.525
409-120	12	7-7/32	6-1/2	13-7/32	12-17/32	13-25/32	24.815

11-1/4° ELL (SOC × SOC)



Part Number	Size (in)	G	H	M	Weight (Lbs)
411-100	10	25/32	5-13/16	11-5/8	9.151
411-120	12	7/8	6-7/8	13-25/32	15.282

90° STREET ELL
(MIPT × FIPT)

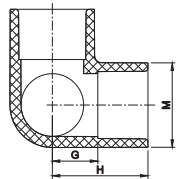


Part Number	Size (in)	G	G1	H	H1	M1	Weight (Lbs)
412-005	1/2	11/32	11/16	1-1/16	1-3/8	1-3/32	0.049
412-007	3/4	1/2	25/32	1-1/4	1-15/32	1-5/16	0.068
412-010	1	21/32	15/16	1-9/16	1-13/16	1-5/8	0.128
412-012	1-1/4	27/32	1-3/16	1-27/32	2-7/32	1-31/32	0.217
412-015	1-1/2	1-1/16	1-9/32	2-1/16	2-5/16	2-7/32	0.285
412-020	2	1-1/4	1-5/8	2-9/32	2-23/32	2-23/32	0.461

PVC SCH40 Fittings

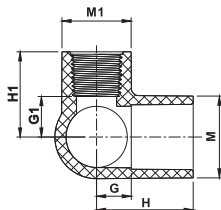


SIDE OUTLET ELL (SOC × SOC × SOC)



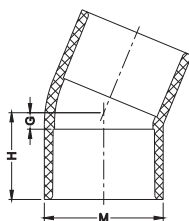
Part Number	Size (in)	G	H	M	Weight (Lbs)
413-005	1/2	15/32	1-1/4	1-5/32	0.084
413-007	3/4	19/32	1-19/32	1-5/16	0.110
413-010	1	29/32	1-7/8	1-21/32	0.194
413-015	1-1/2	1-1/8	2-7/16	2-1/4	0.331
413-020	2	1-3/8	2-13/16	2-11/16	0.494

SIDE OUTLET ELL (SOC × SOC × FIPT)



Part Number	Size (in)	G	G1	H	H1	M	M1	Weight (Lbs)
414-005	1/2	1/2	1/2	1-9/32	1-7/32	1-1/8	1-1/8	0.079
414-007	3/4	21/32	21/32	1-21/32	1-13/32	1-5/16	1-5/16	0.110
414-010	1	27/32	13/16	1-31/32	1-23/32	1-5/8	1-5/8	0.194
414-101	3/4×3/4×1/2	27/32	13/16	1-31/32	1-17/32	1-5/8	1-3/32	0.174
414-130	1×1×1/2	9/16	21/32	1-9/16	1-3/8	1-5/16	1-1/8	0.079

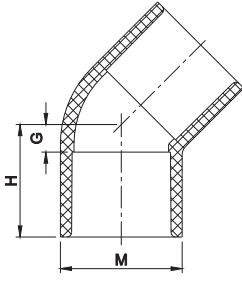
22-1/2° ELL (SOC × SOC)

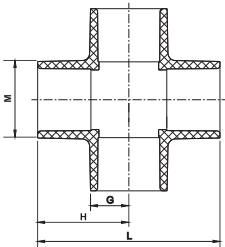


Part Number	Size (in)	G	H	M	Weight (Lbs)
416-015	1-1/2	5/16	1-5/8	2-7/32	0.175
416-020	2	3/8	1-3/4	2-23/32	0.251
416-025	2-1/2	7/16	2-7/32	3-5/16	0.501
416-030	3	17/32	2-7/16	3-31/32	0.722
416-040	4	21/32	2-11/16	5-1/32	1.121
416-060	6	7/8	4-11/32	7-1/4	3.062
416-100	10	1-5/16	6-11/32	11-5/8	10.037
416-120	12	1-17/32	7-9/16	13-25/32	16.828

PVC SCH40 Fittings



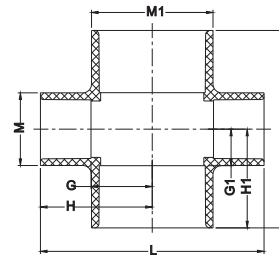
45°ELL (SOC × SOC)  	Part Number	Size (in)	G	H	M	Weight (Lbs)
	417-005	1/2	1/4	1	1-3/32	0.037
	417-007	3/4	11/32	1-11/32	1-5/16	0.073
	417-010	1	3/8	1-1/2	1-5/8	0.115
	417-012	1-1/4	3/8	1-21/32	1-31/32	0.152
	417-015	1-1/2	1/2	1-13/16	2-7/32	0.196
	417-020	2	5/8	2	2-23/32	0.289
	417-025	2-1/2	23/32	2-1/2	3-11/32	0.542
	417-030	3	27/32	2-3/4	3-31/32	0.800
	417-040	4	1-1/8	3-5/32	5-1/32	1.314
	417-050	5	1-3/8	4-7/16	6-1/8	2.492
	417-060	6	1-13/16	5-9/32	7-5/16	4.114
	417-080	8	2	6-1/32	9-11/32	6.437
	417-100	10	2-9/16	7-19/32	11-5/8	12.067
	417-120	12	3-1/16	9-3/32	13-25/32	20.132

CROSS (SOC × SOC × SOC × SOC)  	Part Number	Size (in)	G	H	L	M	Weight (Lbs)
	420-005	1/2	17/32	1-9/32	2-19/32	1-1/8	0.088
	420-007	3/4	21/32	1-21/32	3-5/16	1-5/16	0.148
	420-010	1	13/16	1-15/16	3-7/8	1-5/8	0.254
	420-012	1-1/4	1-3/32	2-3/8	4-23/32	1-31/32	0.364
	420-015	1-1/2	1-1/4	2-9/16	5-5/32	2-1/4	0.474
	420-020	2	1-9/16	2-15/16	5-7/8	2-23/32	0.683
	420-025	2-1/2	1-21/32	3-7/16	6-7/8	3-13/32	1.287
	420-030	3	2-1/32	3-15/16	7-7/8	4-1/16	1.942
	420-040	4	2-3/8	4-13/32	8-13/16	5-3/16	3.192
	420-060	6	3-1/2	6-31/32	13-31/32	7-13/32	8.256

PVC SCH40 Fittings

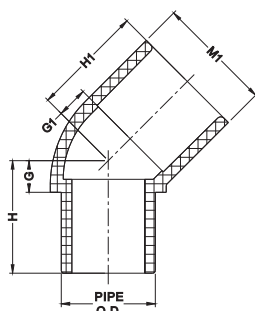


**REDUCING CROSS
(SOC × SOC × SOC × SOC)**



Part Number	Size(in)	G	G1	H	H1	L	L1	M	M1	Weight (Lbs)
420-101	3/4×3/4×1/2×1/2	11/16	19/32	1-15/32	1-19/32	2-29/32	3-3/16	1-3/32	1-5/16	0.115
420-249	2×2×1×1	1-3/8	13/16	2-1/2	2-7/32	5	4-13/32	1-5/8	2-23/32	0.390
420-251	2×2×1-1/2×1-1/2	1-13/32	1-5/32	2-23/32	2-17/32	5-7/16	5-3/32	2-5/16	2-25/32	0.591
420-335	3×3×1×1	2	27/32	6-9/32	5-15/32	3-31/32	1-5/8	3-5/32	2-23/32	0.881
420-337	3×3×1-1/2×1-1/2	2	1-3/32	6-21/32	6-1/16	3-31/32	2-7/32	3-5/16	3-31/32	1.009
420-338	3×3×2×2	2	1-3/8	6-13/16	6-9/16	3-31/32	2-23/32	3-13/32	3-9/32	1.120
420-419	4×4×1-1/2×1-1/2	2-9/16	1-5/32	7-3/4	6-13/32	5-1/32	2-7/32	3-7/8	3-7/32	1.455
420-420	4×4×2×2	2-9/16	1-3/8	3-15/16	3-13/32	7-7/8	6-13/16	6-13/16	7-7/8	1.858
420-422	4×4×3×3	2-17/32	2-1/32	4-7/16	4-1/16	8-27/32	8-1/8	4-1/16	5-3/32	2.438
420-528	6×6×2×2	3-21/32	1-13/32	5-1/16	4-7/8	10-1/8	9-3/4	2-7/8	7-5/16	4.070
420-532	6×6×4×4	3-21/32	2-9/16	5-23/32	6-1/32	11-13/32	12-1/16	5-3/32	7-5/16	5.528

**45° STREET ELL
(SPIG × SOC)**

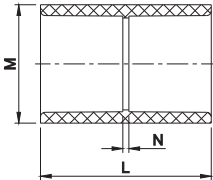


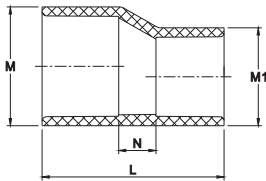
Part Number	Size (in)	G	H	M1	G1	H1	Weight (Lbs)
427-005	1/2	5/16	1-3/32	1-3/32	5/16	1-3/32	0.041
427-007	3/4	3/8	1-3/8	1-5/16	11/32	1-3/8	0.066
427-010	1	7/16	1-9/16	1-5/8	7/16	1-9/16	0.111
427-012	1-1/4	1/2	1-25/32	1-31/32	5/8	1-7/8	0.164
427-015	1-1/2	9/16	1-7/8	2-7/32	9/16	1-27/32	0.199
427-020	2	11/16	2-1/16	2-23/32	3/4	2-1/8	0.299
427-025	2-1/2	7/8	2-21/32	3-5/16	7/8	2-21/32	0.590
427-030	3	1	2-29/32	3-31/32	31/32	2-29/32	0.857
427-040	4	1-7/32	3-9/32	5-1/32	1-7/32	3-9/32	1.401
427-060	6	1-25/32	4-27/32	7-1/4	1-25/32	4-27/32	3.486
427-080	8	2-3/16	6-7/32	9-11/32	2-3/16	6-7/32	6.679
427-100	10	2-11/16	7-23/32	11-5/8	2-11/16	7-3/4	12.060
427-120	12	3-1/16	9-3/32	13-25/32	3-1/16	8-3/32	19.190

NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

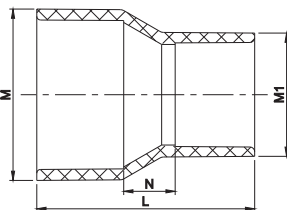
PVC SCH40 Fittings



COUPLING (SOC × SOC)  	Part Number	Size (in)	N	L	M	Weight (Lbs)
	429-003	3/8	1-5/8	7/8	1/8	0.020
	429-005	1/2	3/32	1-5/8	1-3/32	0.031
	429-007	3/4	3/32	2-3/32	1-5/16	0.051
	429-010	1	3/32	2-11/32	1-5/8	0.079
	429-012	1-1/4	3/32	2-5/8	1-31/32	0.117
	429-015	1-1/2	1/8	2-3/4	2-7/32	0.146
	429-020	2	1/8	2-29/32	2-23/32	0.198
	429-025	2-1/2	3/16	3-3/4	3-5/16	0.397
	429-030	3	7/32	4-1/32	3-31/32	0.573
	429-040	4	1/4	4-5/16	5-1/32	0.822
	429-050	5	3/16	6-11/32	6-1/8	1.698
	429-060	6	1/4	7-3/16	7-1/4	2.359
	429-080	8	9/32	8-11/32	9-11/32	4.235
	429-100	10	9/32	10-11/32	11-5/8	8.008
	429-120	12	9/32	12-5/6	13-25/32	13.573

ECCENTRIC REDUCER COUPLING (SOC × SOC)  	Part Number	Size (in)	N	L	M	M1	Weight (Lbs)
	429-168E	1-1/4×1	5/8	3-1/32	1-31/32	1-5/8	0.126
	429-212E	1-1/2×1-1/4	13/32	3	2-7/32	1-31/32	0.148
	429-251E	2×1-1/2	27/32	3-17/32	2-23/32	2-7/32	0.225
	429-292E	2-1/2×2	15/16	4-1/8	3-5/16	2-23/32	0.395
	429-338E	3×2	4-1/4	7-17/32	3-31/32	2-23/32	0.930
	429-420E	4×2	4-1/4	7-11/16	5-1/32	2-23/32	1.248
	429-421E	4×2-1/2	2-27/32	6-11/16	5-1/32	3-5/16	1.231
	429-422E	4×3	3-15/16	7-7/8	5-1/32	3-31/32	1.497
	429-528E	6×2	7-17/32	12-13/32	7-1/4	2-23/32	3.430
	429-530E	6×3	5-1/2	10-7/8	7-1/4	3-31/32	3.305
	429-532E	6×4	7-23/32	13-7/32	7-1/4	5-1/32	4.129

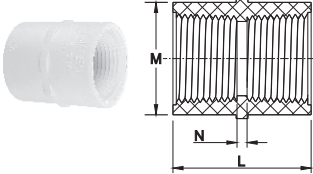
PVC SCH40 Fittings

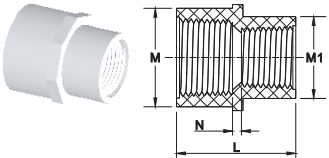
REDUCING COUPLING
(SOC × SOC)

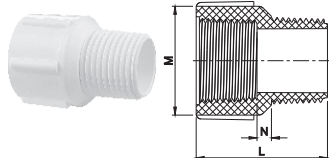
Part Number	Size (in)	N	L	M	M1	Weight (Lbs)
429-101	3/4×1/2	1/8	1-29/32	1-5/16	1-3/32	0.042
429-130	1×1/2	3/8	2-1/4	1-5/8	1-3/32	0.066
429-131	1×3/4	5/32	2-9/32	1-5/8	1-5/16	0.071
429-166	1-1/4×1/2	9/16	2-19/32	2	1-3/32	0.093
429-167	1-1/4×3/4	7/16	2-23/32	1-31/32	1-5/16	0.095
429-168	1-1/4×1	11/32	2-3/4	1-31/32	1-5/8	0.110
429-209	1-1/2×1/2	11/16	2-3/4	2-7/32	1-3/32	0.119
429-210	1-1/2×3/4	19/32	2-29/32	2-7/32	1-5/16	0.126
429-211	1-1/2×1	21/32	3-3/32	2-7/32	1-5/8	0.139
429-212	1-1/2×1-1/4	3/8	2-15/16	2-1/4	1-31/32	0.143
429-247	2×1/2	1-7/16	3-19/32	2-23/32	1-3/32	0.179
429-248	2×3/4	1-9/32	3-21/32	2-23/32	1-5/16	0.183
429-249	2×1	1-5/32	3-21/32	2-23/32	1-5/8	0.196
429-250	2×1-1/4	13/16	3-15/32	2-3/4	1-31/32	0.196
429-251	2×1-1/2	9/16	3-9/32	2-3/4	2-7/32	0.196
429-291	2-1/2×1-1/2	3/4	3-27/32	3-11/32	2-7/32	0.333
429-292	2-1/2×2	23/32	3-29/32	3-11/32	2-23/32	0.366
429-338	3×2	23/32	4	4	2-23/32	0.456
429-340	3×2-1/2	7/16	4-1/8	4	3-5/16	0.520
429-420	4×2	1-3/16	4-5/8	5-1/16	2-23/32	0.747
429-421	4×2-1/2	31/32	4-13/16	5-1/32	3-5/16	0.816
429-422	4×3	4-5/8	4-5/8	5-1/16	3-31/32	0.802
429-528	6×2	2-11/32	7-7/32	7-1/4	2-23/32	2.134
429-530	6×3	1-25/32	7-5/32	7-1/4	3-31/32	2.180
429-532	6×4	1-13/32	6-29/32	7-1/4	5-1/32	2.094
429-582	8×4	8-7/16	9-11/32	5-1/32	2-11/32	3.840
429-585	8×6	8-7/16	9-11/32	7-1/4	1-5/6	3.945
429-626	10×6	10-3/8	11-5/8	7-1/4	2-1/4	6.997
429-628	10×8	10-7/16	11-5/8	9-11/32	1-3/8	7.256
429-668	12×8	12-5/16	13-25/32	9-11/32	2-1/4	11.273
429-670	12×10	12-11/32	13-25/32	11-5/8	1-9/32	12.143

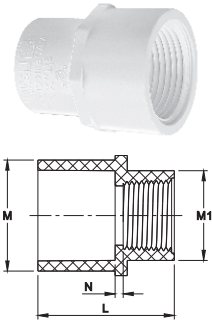
PVC SCH40 Fittings



COUPLING (FIPT × FIPT) 	Part Number	Size (in)	N	L	M	Weight (Lbs)
	430-005	1/2	1/8	1-9/16	1-3/32	0.037
	430-007	3/4	1/8	1-5/8	1-5/16	0.051
	430-010	1	1/8	1-15/16	1-5/8	0.088
	430-012	1-1/4	1/8	2-1/8	1-31/32	0.123
	430-020	2	2-5/16	2-23/32	1/4	0.215

REDUCING COUPLING (FIPT × FIPT) 	Part Number	Size (in)	N	L	M	M1	Weight (Lbs)
	430-101	3/4×1/2	1/8	1-19/32	1-5/16	1-3/32	0.046
	430-131	1×3/4	1-7/8	1-5/8	1-5/16	7/32	0.081

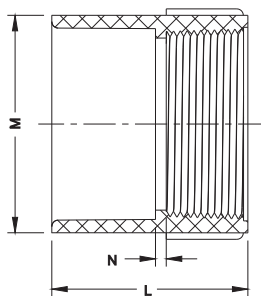
RISER EXTENSION (FIPT × MIPT) 	Part Number	Size (in)	N	L	M	Weight (Lbs)
	434-005	1/2	5/32	1-9/16	1-3/32	0.029
	434-007	3/4	3/16	1-5/8	1-5/16	0.042

REDUCING FEMALE ADAPTER(SOC × FIPT) 	Part Number	Size (in)	N	L	M	M1	Weight (Lbs)
	435-072	1/2×1/4	1/8	1-7/16	1-3/32	13/16	0.031
	435-073	1/2×3/8	1/8	1-17/32	1-3/32	7/8	0.029
	435-074	1/2×3/4	1/8	1-21/32	1-3/32	1-5/16	0.045
	435-101	3/4×1/2	1/8	1-27/32	1-5/16	1-3/32	0.050
	435-102	3/4×1	3/32	2	1-5/16	1-5/8	0.075
	435-130	1×1/2	1/8	1-31/32	1-5/8	1-3/32	0.071
	435-131	1×3/4	1/8	2	1-5/8	1-5/16	0.073
	435-133	1×1-1/2	3/16	2-5/16	1-5/8	2-7/32	0.134
	435-168	1-1/4×1	1/8	2-9/32	1-31/32	1-5/8	0.112

PVC SCH40 Fittings

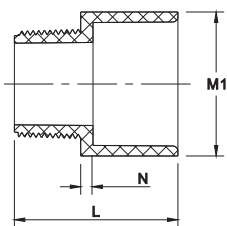


FEMALE ADAPTER (SOC × FIPT)



Part Number	Size (in)	N	L	M	Weight (Lbs)
435-003	3/8	3/32	1-15/32	7/8	0.022
435-005	1/2	0	1-9/16	1-3/32	0.035
435-007	3/4	0	1-27/32	1-5/16	0.051
435-010	1	0	2-7/32	1-5/8	0.090
435-012	1-1/4	0	2-9/32	1-31/32	0.115
435-015	1-1/2	0	2-11/32	2-7/32	0.139
435-020	2	0	2-1/2	2-23/32	0.194
435-025	2-1/2	3/16	3-11/32	3-5/16	0.431
435-030	3	3/16	3-19/32	3-31/32	0.578
435-040	4	7/32	3-27/32	5-3/32	0.926
435-050	5				
435-060	6	5/16	5-9/16	7-5/16	2.373
435-080	8				

MALE ADAPTER (MIPT × SOC)

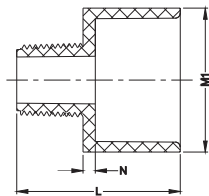


Part Number	Size (in)	N	L	M	Weight (Lbs)
436-003	3/8	1-1/2	7/8	5/32	0.020
436-005	1/2	5/32	1-9/16	1-3/32	0.031
436-007	3/4	5/32	1-27/32	1-5/16	0.044
436-010	1	7/32	2-1/4	1-5/8	0.079
436-012	1-1/4	5/32	2-5/16	1-31/32	0.104
436-015	1-1/2	3/16	2-1/2	2-7/32	0.121
436-020	2	1/8	2-15/32	2-23/32	0.181
436-025	2-1/2	3-15/32	3-5/16	9/32	0.394
436-030	3	9/32	3-11/16	3-31/32	0.545
436-040	4	9/32	4-1/32	5-3/32	0.919
436-060	6	5/16	5-23/32	7-1/4	2.094
436-080	8				

PVC SCH40 Fittings

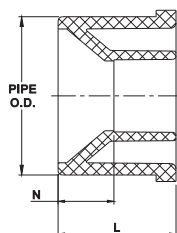


REDUCING MALE ADAPTER (MIPT × SOC)



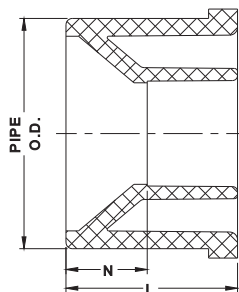
Part Number	Size (in)	N	L	M1	Weight (Lbs)
436-053	3/8×1/2	5/32	1-1/2	1-3/32	0.026
436-073	1/2×3/8	5/32	1-19/32	7/8	0.022
436-074	1/2×3/4	5/32	1-27/32	1-5/16	0.042
436-075	1/2×1	17/32	2-3/8	1-5/8	0.084
436-101	3/4×1/2	1/8	1-19/32	1-3/32	0.029
436-102	3/4×1	7/32	2-1/16	1-5/8	0.071
436-131	1×3/4	1/8	2-1/32	1-5/16	0.053
436-132	1×1-1/4	5/32	2-5/16	1-31/32	0.099
436-133	1×1-1/2	7/32	2-13/32	2-7/32	0.128
436-168	1-1/4×1	7/32	2-3/8	1-5/8	0.088
436-169	1-1/4×1-1/2	3/16	2-17/32	2-7/32	0.135
436-212	1-1/2×1-1/4	1/4	2-9/16	1-31/32	0.119
436-213	1-1/2×2	7/32	2-5/8	2-23/32	0.190
436-251	2×1-1/2	7/32	2-19/32	2-7/32	0.170
436-252	2×2-1/2	3-3/32	3-5/16	11/32	0.347
436-253	2×3	3-7/32	3-31/32	3/8	0.483
436-342	3×4	5/16	3-7/8	5-1/32	0.863

REDUCING BUSHING FLUSH STYLE (SPIG × SOC)



Part Number	Size (in)	N	L	Weight (Lbs)
437-072	1/2×1/4	9/32	31/32	0.018
437-073	1/2×3/8	7/32	31/32	0.013
437-101	3/4×1/2	7/16	1-7/32	0.022
437-130	1×1/2	5/8	1-3/8	0.060
437-131	1×3/4	3/8	1-3/8	0.042
437-166	1-1/4×1/2	23/32	1-15/32	0.108
437-167	1-1/4×3/4	1/2	1-1/2	0.097
437-168	1-1/4×1	3/8	1-1/2	0.062
437-209	1-1/2×1/2	27/32	1-5/8	0.130
437-210	1-1/2×3/4	5/8	1-5/8	0.117
437-211	1-1/2×1	15/32	1-5/8	0.130
437-212	1-1/2×1-1/4	11/32	1-5/8	0.066
437-247	2×1/2	15/16	1-23/32	0.209

PVC SCH40 Fittings


**REDUCING BUSHING
FLUSH STYLE
(SPIG × SOC)**


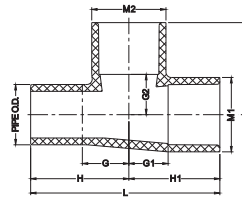
Part Number	Size (in)	N	L	Weight (Lbs)
437-248	2×3/4	23/32	1-23/32	0.203
437-249	2×1	19/32	1-23/32	0.203
437-250	2×1-1/4	7/16	1-23/32	0.194
437-251	2×1-1/2	13/32	1-23/32	0.141
437-287	2-1/2×1/2	1-3/8	2-5/32	0.370
437-288	2-1/2×3/4	1-5/32	2-5/32	0.357
437-289	2-1/2×1	1-1/32	2-5/32	0.348
437-290	2-1/2×1-1/4	7/8	2-5/32	0.353
437-291	2-1/2×1-1/2	27/32	2-5/32	0.337
437-292	2-1/2×2	3/4	2-5/32	0.267
437-334	3×3/4	2-7/32	1-7/32	0.478
437-335	3×1	2-7/32	1-3/32	0.480
437-336	3×1-1/4	2-7/32	15/16	0.476
437-337	3×1-1/2	2-7/32	29/32	0.469
437-338	3×2	13/16	2-7/32	0.452
437-339	3×2-1/2	7/16	2-7/32	0.375
437-420	4×2	1	2-13/32	0.765
437-421	4×2-1/2	2-13/32	5/8	0.789
437-422	4×3	1/2	2-13/32	0.834
437-488	5×3	1-17/32	3-7/16	1.420
437-490	5×4	29/32	2-15/16	1.380
437-528	6×2	2-9/16	3-15/16	2.571
437-530	6×3	2-1/32	3-15/16	2.511
437-532	6×4	1-13/16	3-7/8	2.099
437-534	6×5	13/32	3-15/32	1.918
437-582	8×4	4-1/2	2-15/32	3.828
437-585	8×6	4-1/2	1-7/16	3.770
437-623	10×3	5-1/2	3-5/8	6.631
437-624	10×4	5-1/2	3-15/32	6.494
437-626	10×6	5-1/2	2-7/16	6.577
437-628	10×8	5-1/2	1-15/32	6.587
437-663	12×3	6-1/2	4-19/32	10.348
437-664	12×4	6-1/2	4-15/32	10.151
437-666	12×6	6-1/2	3-7/16	10.213
437-668	12×8	6-1/2	2-15/32	10.361
437-670	12×10	6-1/2	1-15/32	12.734

NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES.
FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

PVC SCH40 Fittings

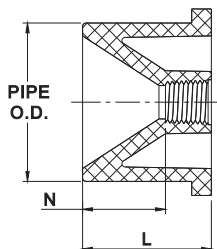


**STREET TEE
(SPIG × SOC × SOC)**



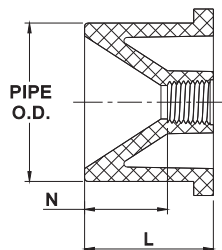
Part Number	Size (in)	G	G1	G2	H	H1	H2	L	M1	M2	Weight (Lbs)
444-005	1/2	23/32	5/8	9/16	1-1/2	1-13/32	1-11/32	2-29/32	1-5/32	1-5/32	0.082
444-007	3/4	29/32	23/32	11/16	1-29/32	1-23/32	1-11/16	3-5/8	1-3/8	1-3/8	0.134
444-010	1	1-1/32	27/32	7/8	2-5/32	2	2	4-1/8	1-5/8	1-5/8	0.187
444-012	1-1/4	1-3/16	1-1/32	1	2-15/32	2-5/16	2-9/32	4-3/4	2-1/16	2-1/16	0.319
444-015	1-1/2	1-5/16	1-5/32	1-5/32	2-19/32	2-15/32	2-15/32	5-3/32	2-11/32	2-11/32	0.419
444-020	2	1-9/16	1-13/32	1-13/32	2-15/16	2-25/32	2-25/32	5-3/4	2-25/32	2-25/32	0.560

**REDUCING BUSHING
FLUSH STYLE
(SPIG × FIPT)**



Part Number	Size (in)	N	L	Weight (Lbs)
438-052	3/8×1/4	13/32	15/16	0.013
438-071	1/2×1/8	1/2	31/32	0.024
438-072	1/2×1/4	13/32	31/32	0.020
438-073	1/2×3/8	31/32	11/32	0.016
438-098	3/4×1/4	21/32	1-3/16	0.042
438-101	3/4×1/2	15/32	1-3/16	0.024
438-128	1×1/4	13/16	1-3/8	0.112
438-129	1×3/8	3/4	1-3/8	0.079
438-130	1×1/2	5/8	1-11/32	0.071
438-131	1×3/4	5/8	1-11/32	0.073

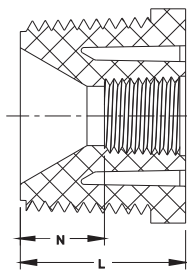
PVC SCH40 Fittings


**REDUCING BUSHING
FLUSH STYLE
(SPIG × FIPT)**


Part Number	Size (in)	N	L	Weight (Lbs)
438-166	1-1/4×1/2	13/16	1-17/32	0.057
438-167	1-1/4×3/4	25/32	1-17/32	0.046
438-168	1-1/4×1	5/8	1-17/32	0.093
438-207	1-1/2×1/4	1	1-9/16	0.132
438-209	1-1/2×1/2	7/8	1-5/8	0.134
438-210	1-1/2×3/4	7/8	1-5/8	0.121
438-211	1-1/2×1	23/32	1-5/8	0.134
438-212	1-1/2×1-1/4	5/8	1-5/8	0.082
438-245	2×1/4	1-1/8	1-21/32	0.197
438-247	2×1/2	15/16	1-21/32	0.196
438-248	2×3/4	29/32	1-21/32	0.194
438-249	2×1	3/4	1-21/32	0.203
438-250	2×1-1/4	5/8	1-5/8	0.201
438-251	2×1-1/2	21/32	1-21/32	0.161
438-288	2-1/2×3/4	2-1/16	1-5/16	0.355
438-289	2-1/2×1	2-1/16	1-5/32	0.358
438-290	2-1/2×1-1/4	2-1/16	1-1/16	0.355
438-291	2-1/2×1-1/2	2-1/16	1-1/16	0.351
438-292	2-1/2×2	2-1/16	1-1/32	0.277
438-335	3×1	2-7/32	1-5/16	0.480
438-336	3×1-1/4	2-7/32	1-7/32	0.479
438-337	3×1-1/2	2-7/32	1-7/32	0.471
438-338	3×2	1-3/16	2-7/32	0.511
438-339	3×2-1/2	2-7/32	27/32	0.450
438-420	4×2	1-3/8	2-13/32	0.851
438-421	4×2-1/2	2-13/32	1-1/32	0.815
438-422	4×3	29/32	2-13/32	0.842
438-490	5×4	1-3/8	2-15/16	1.224
438-528	6×2	2-29/32	3-15/16	2.605
438-530	6×3	2-7/16	3-15/16	2.617
438-532	6×4	2-3/8	3-15/16	2.460

NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES.
FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

PVC SCH40 Fittings

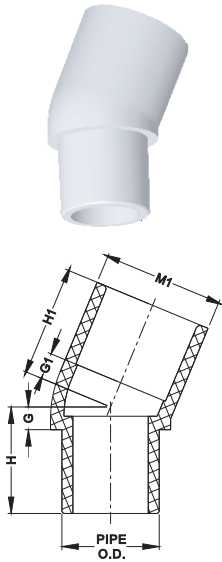

**REDUCING T.T.
BUSHING FLUSH STYLE
(MIPT × FIPT)**


Part Number	Size (in)	N	L	Weight (Lbs)
439-052	3/8×1/4	1/4	25/32	0.007
439-072	1/2×1/4	11/32	7/8	0.015
439-073	1/2×3/8	7/8	1/4	0.012
439-098	3/4×1/4	11/32	7/8	0.028
439-099	3/4×3/8	1/4	7/8	0.023
439-101	3/4×1/2	7/32	15/16	0.018
439-128	1×1/4	9/16	1-1/8	0.053
439-130	1×1/2	13/32	1-1/8	0.046
439-131	1×3/4	3/8	1-1/8	0.033
439-166	1-1/4×1/2	5/8	1-11/32	0.084
439-167	1-1/4×3/4	1/2	1-1/4	0.084
439-168	1-1/4×1	11/32	1-1/4	0.060
439-198	1-1/2×2	2-11/32	1-5/16	0.200
439-209	1-1/2×1/2	17/32	1-1/4	0.099
439-210	1-1/2×3/4	1/2	1-1/4	0.095
439-211	1-1/2×1	11/32	1-1/4	0.093
439-212	1-1/2×1-1/4	9/32	1-9/32	0.057
439-248	2×3/4	5/8	1-11/32	0.180
439-249	2×1	7/16	1-11/32	0.186
439-250	2×1-1/4	1-5/16	5/16	0.159
439-251	2×1-1/2	11/32	1-11/32	0.121
439-292	2-1/2×2	1-11/16	21/32	0.200
439-338	3×2	13/16	1-27/32	0.458
439-422	4×3	9/16	2-1/16	0.657

PVC SCH40 Fittings

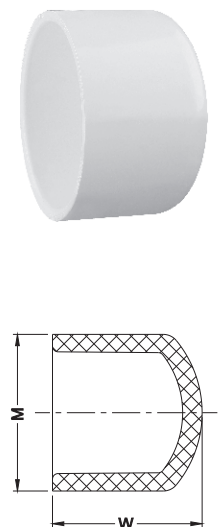


22-1/2° STREET ELL (SPIG × SOC)



Part Number	Size (in)	G	H	M1	G1	H1	Weight (Lbs)
442-005	1/2	5/32	1	1-3/32	1/4	1-1/32	0.038
442-007	3/4	5/32	1-1/4	1-5/16	9/32	1-9/32	0.061
442-010	1	5/16	1-7/16	1-5/8	11/32	1-15/32	0.104
442-012	1-1/4	11/32	1-5/8	1-31/32	7/16	1-23/32	0.148
442-015	1-1/2	3/8	1-11/16	2-7/32	3/8	1-11/16	0.178
442-020	2	15/32	1-13/32	2-1/16	15/32	1-13/32	0.262
442-025	2-1/2	9/16	1-25/32	2-17/32	9/16	1-25/32	0.517
442-030	3	19/32	1-29/32	3-1/32	19/32	1-29/32	0.746
442-040	4	25/32	2-13/16	5-1/32	25/32	2-13/16	1.183
442-060	6	1-1/32	4-1/2	7-1/4	1-1/16	4-17/32	3.148

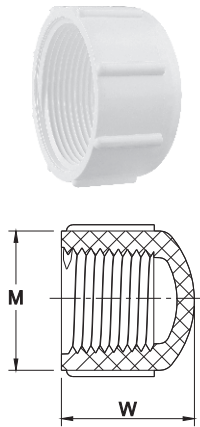
CAP (SOC)

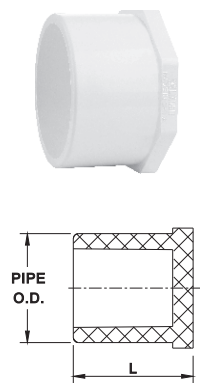


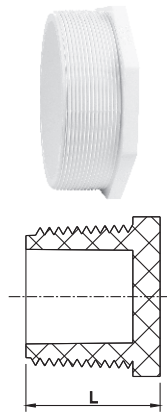
Part Number	Size (in)	W	M	Weight (Lbs)
447-003	3/8	7/8	1	0.014
447-005	1/2	1-1/32	1-3/32	0.018
447-007	3/4	1-5/16	1-5/16	0.031
447-010	1	1-17/32	1-5/8	0.055
447-012	1-1/4	1-3/4	1-31/32	0.082
447-015	1-1/2	1-7/8	2-7/32	0.106
447-020	2	2-1/16	2-23/32	0.150
447-025	2-1/2	2-9/16	3-5/16	0.295
447-030	3	2-29/32	3-31/32	0.454
447-040	4	3-5/32	5-1/32	0.750
447-050	5	4-7/32	6-1/8	1.389
447-060	6	4-11/32	7-1/4	1.722
447-080	8	9-11/32	5-25/32	3.770
447-100	10	11-5/8	7-1/8	6.924
447-120	12	13-25/32	8-3/8	11.452

PVC SCH40 Fittings



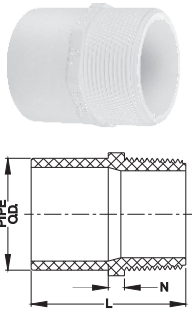
CAP (FIPT) 	Part Number	Size (in)	W	M	Weight (Lbs)
	448-003	3/8	7/8	15/16	0.016
	448-005	1/2	1-1/32	1-3/32	0.024
	448-007	3/4	1-1/16	1-5/16	0.031
	448-010	1	1-5/16	1-5/8	0.060
	448-012	1-1/4	1-15/32	1-31/32	0.084
	448-015	1-1/2	1-9/16	2-7/32	0.099
	448-020	2	1-11/16	2-23/32	0.152
	448-025	2-1/2	2-5/32	3-5/16	0.324
	448-030	3	2-13/32	3-31/32	0.463
	448-040	4	2-25/32	5-1/32	0.800
	448-060	6	3-5/32	7-1/4	1.585

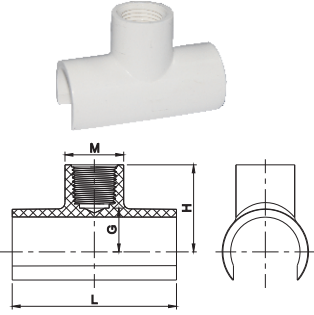
PLUG (SPIG) 	Part Number	Size (in)	L	Weight (Lbs)
	449-003	3/8	29/32	0.011
	449-005	1/2	15/16	0.015
	449-007	3/4	1-3/16	0.029
	449-010	1	1-3/8	0.053
	449-012	1-1/4	1-17/32	0.084
	449-015	1-1/2	1-5/8	0.115
	449-020	2	1-23/32	0.181
	449-025	2-1/2	2-5/32	0.324
	449-030	3	2-5/16	0.470
	449-040	4	2-15/32	0.736
	449-060	6	3-15/16	2.154

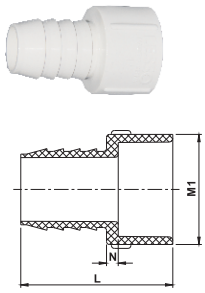
PLUG (MIPT) 	Part Number	Size (in)	L	Weight (Lbs)
	450-003	3/8	25/32	0.011
	450-005	1/2	7/8	0.015
	450-007	3/4	7/8	0.020
	450-010	1	1-1/4	0.051
	450-012	1-1/4	1-5/16	0.068
	450-015	1-1/2	1-11/32	0.106
	450-020	2	1-1/2	0.187
	450-025	2-1/2	1-25/32	0.271
	450-030	3	1-7/8	0.412
	450-040	4	2-1/8	0.714
	450-060	6	2-13/32	1.671

PVC SCH40 Fittings



MALE ADAPTER (TAKE OFF) (SPIG × MIPT) 	Part Number	Size (in)	N	L	Weight (Lbs)
	461-005	1/2	3/16	1-21/32	0.024
	461-007	3/4	1/4	1-15/16	0.038
	461-010	1	1/4	2-1/4	0.065
	461-015	1-1/2	9/32	2-5/8	0.119
	461-020	2	9/32	2-3/4	0.187

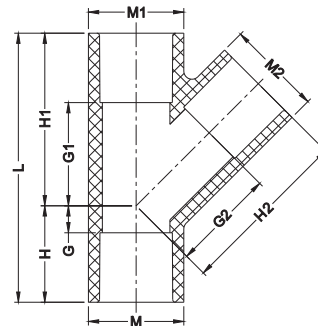
SNAP-ON SADDLE (IPS O.D. × FIPT) 	Part Number	Size (in)	G	H	L	M	Weight (Lbs)
	464-007	3/4	11/16	1-7/16	3-1/16	1-5/16	0.081
	464-101	3/4×1/2	23/32	1-7/16	2-13/16	1-3/32	0.070
	464-130	1×1/2	7/8	1-5/8	3-1/16	1-3/32	0.097
	464-131	1×3/4	7/8	1-5/8	3-5/16	1-5/16	0.112

INSERT ADAPTER (INSERT × SOC) 	Part Number	Size (in)	N	L	M1	Weight (Lbs)
	474-007	3/4	5/32	2-7/16	15/16	0.045
	474-010	1	5/32	2-9/16	1-5/8	0.071
	474-015	1-1/2	1/4	3-1/16	2-7/32	0.144
	474-020	2	3/16	3-9/16	2-23/32	0.218

PVC SCH40 Fittings

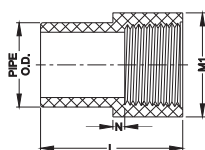


WYE
(SOC × SOC × SOC)



Part Number	Size (in)	G	G1	G2	H	H1	H2	L	M	M1	M2	Weight (Lbs)
475-005	1/2	5/16	1-3/16	1-3/16	1-3/32	1-15/16	1-15/16	3-1/16	1-5/32	1-5/32	1-5/32	0.110
475-007	3/4	3/8	1-1/2	1-1/2	1-13/32	2-1/2	2-1/2	3-7/8	1-3/8	1-3/8	1-3/8	0.185
475-010	1	15/32	1-27/32	1-27/32	1-19/32	2-31/32	2-31/32	4-19/32	1-11/16	1-11/16	1-11/16	0.309
475-012	1-1/4	3/8	2-3/16	2-7/32	1-21/32	3-15/32	3-1/2	5-1/8	2-1/16	2-1/16	2-1/16	0.441
475-015	1-1/2	5/8	2-9/16	2-19/32	1-15/16	3-7/8	3-29/32	5-13/16	2-5/16	2-5/16	2-5/16	0.604
475-020	2	3/4	3-7/32	3-7/32	2-1/8	4-19/32	4-19/32	6-3/4	2-27/32	2-27/32	2-27/32	1.036
475-025	2-1/2	27/32	3-27/32	3-15/16	2-5/8	5-5/8	5-23/32	8-9/32	3-15/32	3-15/32	3-15/32	1.817
475-030	3	1-3/32	4-21/32	4-21/32	2-31/32	6-9/16	6-9/16	9-17/32	4-1/8	4-1/8	4-1/8	2.948
475-040	4	1-11/32	6	6	3-3/8	8-1/32	8-1/32	11-7/16	5-7/32	5-7/32	5-7/32	4.956
475-060	6	1-21/32	8-1/4	8-15/32	5-1/8	11-23/32	11-15/16	16-27/32	7-15/32	7-15/32	7-15/32	11.815

**SPIGOT FEMALE
ADAPTER (SPIG × FIPT)**

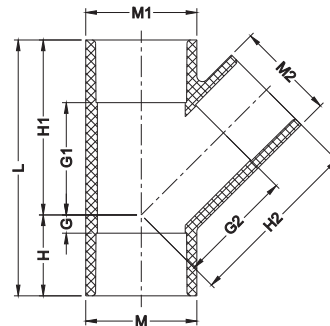


Part Number	Size (in)	L	M1	N	Weight (Lbs)
478-005	1/2	1-21/32	1-3/32	5/32	0.035
478-007	3/4	1-29/32	1-5/16	5/32	0.051
478-010	1	2-7/32	1-5/8	3/16	0.087
478-012	1-1/4	2-15/32	1-31/32	3/16	0.122
478-015	1-1/2	2-1/2	2-7/32	3/16	0.147
478-020	2	2-5/8	2-23/32	7/32	0.203

PVC SCH40 Fittings



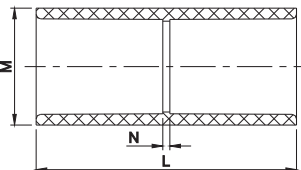
**REDUCING WYE
(SOC × SOC × SOC)**

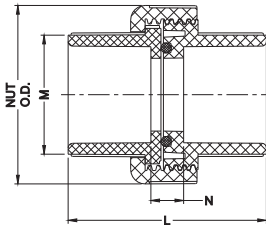


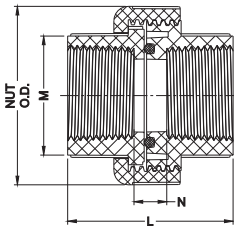
Part Number	Size (in)	G	G1	G2	H	H1	H2	L	M	M1	M2	Weight (Lbs)
475-101	3/4×3/4×1/2	3/16	1-5/16	1-11/32	1-3/16	2-5/16	2-1/8	3-15/32	1-3/8	1-3/8	1-5/32	0.145
475-131	1×1×3/4	5/32	1-21/32	1-23/32	1-5/16	2-25/32	2-3/4	4-1/16	1-11/16	1-11/16	1-3/8	0.241
475-210	1-1/2×1-1/2×3/4	-1/16	1-29/32	2-5/32	1-1/4	3-7/32	3-5/32	4-7/16	2-5/16	2-5/16	1-3/8	0.376
475-211	1-1/2×1-1/2×1	3/32	2-5/32	2-1/4	1-13/32	3-15/32	3-3/8	4-7/8	2-5/16	2-5/16	1-11/16	0.472
475-212	1-1/2×1-1/2×1-1/4	3/8	2-11/32	2-7/16	1-11/16	3-21/32	3-11/16	5-11/32	2-5/16	2-5/16	2-1/16	0.522
475-251	2×2×1-1/2	5/16	2-13/16	2-15/16	1-23/32	4-3/16	4-1/4	5-29/32	2-27/32	2-27/32	2-5/16	0.772
475-292	2-1/2×2-1/2×2	7/16	3-7/16	3-5/8	2-7/32	5-7/32	5	7-7/16	3-15/32	3-15/32	2-27/32	1.414
475-338	3×3×2	5/32	3-23/32	4-1/32	2-1/16	5-5/8	5-7/16	7-11/16	4-1/8	4-1/8	2-27/32	1.792
475-339	3×3×2-1/2	1/2	4-1/8	4-11/32	2-13/32	6-1/32	6-5/32	8-7/16	4-1/8	4-1/8	3-15/32	2.202
475-420	4×4×2	-9/32	4-1/2	4-27/32	1-25/32	6-17/32	6-7/32	8-5/16	5-7/32	5-7/32	2-27/32	2.718
475-422	4×4×3	17/32	5-5/32	5-3/8	2-9/16	7-7/32	7-9/32	9-3/4	5-7/32	5-7/32	4-1/8	3.635
475-528	6×6×2	-(1-11/32)	5-3/8	6-7/16	2-1/8	8-27/32	7-27/32	10-31/32	7-15/32	7-15/32	2-27/32	5.745
475-530	6×6×3	-9/16	6-3/16	6-31/32	2-29/32	9-21/32	8-27/32	12-9/16	7-15/32	7-15/32	4-1/8	6.975
475-532	6×6×4	5/32	7-1/32	7-13/32	3-5/8	10-1/2	9-7/16	14-1/8	7-15/32	7-15/32	5-7/32	8.276

PVC SCH40 Fittings



DEEP SOCKET COUPLING (SOC × SOC)  	Part Number	Size (in)	N	L	M	Weight (Lbs)
	479-005	1/2	2-13/32	1-3/32	3/32	0.047
	479-007	3/4	3/32	2-7/8	1-5/16	0.071
	479-010	1	3/32	3-5/8	1-5/8	0.131
	479-012	1-1/4	3/32	3-27/32	1-31/32	0.172
	479-015	1-1/2	1/8	4-19/32	2-7/32	0.243
	479-020	2	1/8	5-3/32	2-23/32	0.353
	479-025	2-1/2	6-31/32	3-5/16	3/16	0.761
	479-030	3	7-9/32	3-31/32	3/16	1.048
	479-040	4	7-17/32	5-1/32	3/16	1.501
	479-060	6	10-21/32	7-1/4	7/32	3.611

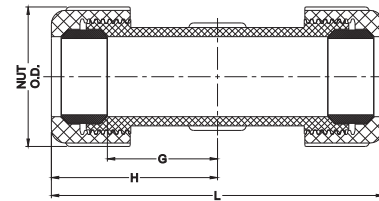
UNION W/O-RING SEAL (SOC × SOC)  	Part Number	Size (in)	N	L	M	NUT O.D.	Weight (Lbs)
	497-005	1/2	11/32	1-7/8	1-3/32	1-13/16	0.104
	497-007	3/4	13/32	2-7/16	1-5/16	2-1/16	0.147
	497-010	1	7/16	2-23/32	1-5/8	2-7/16	0.219
	497-012	1-1/4	15/32	3	1-31/32	2-27/32	0.299
	497-015	1-1/2	9/16	3-3/16	2-7/32	3-3/16	0.418
	497-020	2	5/8	3-13/32	2-23/32	3-27/32	0.604

UNION W/O-RING SEAL (FIPT × FIPT)  	Part Number	Size (in)	N	L	M	NUT O.D.	Weight (Lbs)
	498-005	1/2	1/2	1-15/16	1-3/32	1-13/16	0.116
	498-007	3/4	7/16	1-15/16	1-5/16	2-1/16	0.145
	498-010	1	7/16	2-1/4	1-5/8	2-7/16	0.220
	498-012	1-1/4	15/32	2-15/32	1-31/32	2-27/32	0.300
	498-015	1-1/2	9/16	2-9/16	2-7/32	3-3/16	0.415
	498-020	2	5/8	2-21/32	2-23/32	3-27/32	0.589

PVC SCH40 Fittings

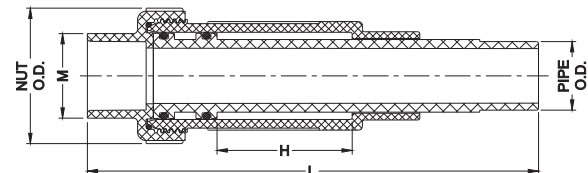


**COMPRESSION COUPLING
(GASKET × GASKET)**



Part Number	Size (in)	G	H	L	NUT O.D.	Weight (Lbs)
IR90-05	1/2	1-19/32	2-15/32	4-15/16	1-27/32	0.249
IR90-07	3/4	1-23/32	2-21/32	5-5/16	2-3/32	0.316
IR90-10	1	1-29/32	2-7/8	5-23/32	2-13/32	0.473
IR90-12	1-1/4	2-3/32	3-3/32	6-5/32	2-25/32	0.601
IR90-15	1-1/2	2-9/32	3-5/16	6-21/32	3-5/32	0.799
IR90-20	2	2-9/16	3-11/16	7-11/32	3-21/32	1.112
IR90-25	2-1/2	2-13/16	4-5/32	8-5/16	4-11/32	1.754
IR90-30	3	2-15/16	4-17/32	9-1/16	5	2.392
IR90-40	4	3-19/32	5-11/32	10-23/32	6-3/8	4.344
IR90-60	6	3-3/4	5-5/8	11-1/4	8-13/16	8.105

**EXPAND REPAIR COUPLING
(SOC × SPIG)**

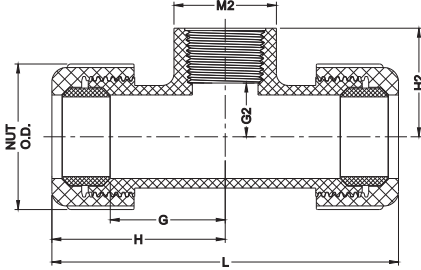


Part Number	Size (in)	H	L	M	NUT O.D.	Weight (Lbs)
FSF-050	1/2	2-3/32	6-5/8	1-3/32	1-15/16	0.302
FSF-075	3/4	2-7/32	7-1/2	1-5/16	2-3/32	0.386
FSF-100	1	2-19/32	8-21/32	1-5/8	2-19/32	0.649
FSF-125	1-1/4	3-1/32	9-1/4	1-31/32	3-1/16	0.918
FSF-150	1-1/2	3-1/32	9-7/32	2-7/32	3-1/4	1.071
FSF-200	2	3-1/6	10-1/2	2-23/32	3-27/32	1.544
FSF-250	2-1/2	5-7/8	14	3-5/16	4-19/32	3.282
FSF-300	3	5-29/32	14-1/2	3-31/32	5-15/32	4.693
FSF-400	4	5-31/32	15-23/32	5-1/32	6-23/32	7.121
FSF-600	6	6-3/32	18-3/16	7-1/4	9-1/32	12.965

NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

PVC SCH40 Fittings

COMPRESSION TEE
(GASKET × GASKET × FIPT)



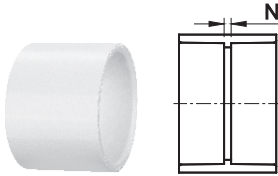
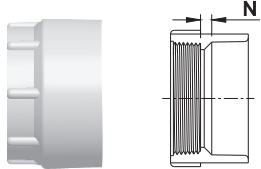
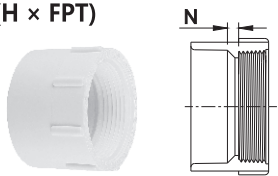
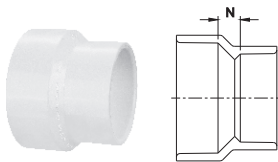
Part Number	Size(in)	G	G2	H	H2	L	M2	NUT O.D.	Weight (Lbs)
IR91-05	1/2	1-19/32	5/8	2-15/32	1-11/32	4-15/16	1-5/32	1-27/32	0.273
IR91-07	3/4	1-23/32	23/32	2-21/32	1-15/32	5-5/16	1-3/8	2-3/32	0.347
IR91-10	1	1-29/32	7/8	2-7/8	1-25/32	5-23/32	1-11/16	2-13/32	0.528

Fitting Terms and Abbreviations:
ELL: Elbow
SOC: Solvent Weld Socket
SPIG: Spigot End (pipe O.D. size)
MIPT: Male Iron Pipe Thread

FIPT: Female Iron Pipe Thread
INSERT: Barbed Insert End
GASKET: Elastomer Gasket Sealed Connection
IPS O.D.: Iron Pipe Size Outside Diameter
W/: with

PVC DWV Fittings

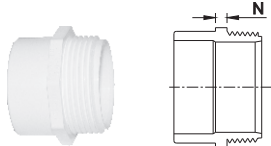


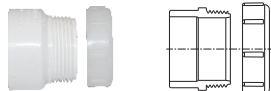
COUPLING (H×H) 	Part Number	Size (in)	N	Weight (Lbs)
	LP100-012	1-1/4	1/8	0.0794
	LP100-015	1-1/2	3/16	0.0904
	LP100-020	2	1/8	0.1367
	LP100-030	3	3/16	0.4497
	LP100-040	4	1/4	0.7738
	LP100-060	6	1/4	2.0701
	LP100-080	8	1/4	4.2811
	LP100-100	10	13/32	7.3084
	LP100-120	12	13/32	11.5218
FEMALE ADAPTER (FPT×H) 	Part Number	Size (in)	N	Weight (Lbs)
	LP101-012	1-1/4	1/4	0.0772
	LP101-015	1-1/2	1/4	0.1058
	LP101-020	2	1/4	0.1235
	LP101-030	3	5/16	0.3902
	LP101-040	4	11/32	0.6526
	LP101-060	6	3/8	1.5124
	LP101-080	8	1/2	3.5648
REDUCING FEMALE ADAPTER (H × FPT) 	Part Number	Size (in)	N	Weight (Lbs)
	LP101-212	1-1/2×1-1/4	1/4	0.0882
PIPE INCREASER-REDUCER (H×H) 	Part Number	Size (in)	N	Weight (Lbs)
	LP102-212	1-1/2×1-1/4	7/16	0.0992
	LP102-251	2×1-1/2	15/32	0.1389
	LP102-337	3×1-1/2	1-1/32	0.4012
	LP102-338	3×2	7/8	0.4012
	LP102-419	4×1-1/2	1-17/32	0.6570
	LP102-420	4×2	1-13/32	0.7055
	LP102-422	4×3	15/16	0.7959
	LP102-532	6×4	1-7/16	1.8254
	LP102-582	8×4	1-5/8	3.4187
	LP102-585	8×6	3/4	3.7165
	LP102-624	10×4	2-7/32	5.7033
	LP102-626	10×6	1-9/16	5.9744
	LP102-628	10×8	1-3/8	6.7197
	LP102-668	12×8	1-7/8	9.7762
	LP102-670	12×10	1-11/32	10.5258

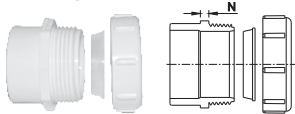
NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

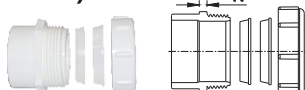
PVC DWV Fittings

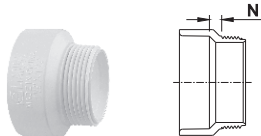


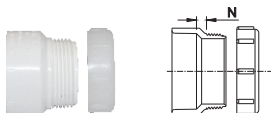
TRAP ADAPTER-MALE (S×SLIP) 	Part Number	Size (in)	N	Weight (Lbs)
	LP103-012	1-1/4	7/32	0.0604
	LP103-015	1-1/2	3/16	0.0750
	LP103-212	1-1/2×1-1/4	7/32	0.0705
	LP103-020	2	3/16	0.0860

TRAP ADAPTER-MALE W/PLASTIC NUT (S × SLIP) 	Part Number	Size (in)	N	Weight (Lbs)
	LP103P-012	1-1/4	7/32	0.1019
	LP103P-015	1-1/2	3/16	0.1036
	LP103P-212	1-1/2×1-1/4	7/32	0.0948
	LP103P-020	2	3/16	0.1301

TRAP ADAPTER-MALE W/PLASTIC NUT&WASHER (S × SLIP) 	Part Number	Size (in)	N	Weight (Lbs)
	LP103X-012	1-1/4	7/32	0.1036
	LP103X-015	1-1/2	3/16	0.1217
	LP103X-212	1-1/2×1-1/4	7/32	0.1235
	LP103X-020	2	3/16	0.1413

TRAP ADAPTER-MALE W/1-1/2 PLASTIC NUT & WASHER AND 1-1/2×1-1/4 WASHER (S × SLIP) 	Part Number	Size (in)	N	Weight (Lbs)
	LP103R-015	1-1/2	3/16	0.1283

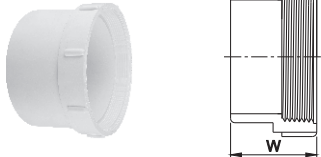
TRAP ADAPTER - FEMALE (H × SLIP) 	Part Number	Size (in)	N	Weight (Lbs)
	LP104-012	1-1/4	5/16	0.0679
	LP104-015	1-1/2	5/16	0.0750
	LP104-020	2	11/32	0.1027
	LP104-212	1-1/2×1-1/4	5/16	0.0794

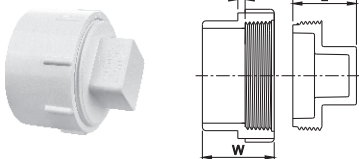
TRAP ADAPTER - FEMALE W/PLASTIC NUT(H × SLIP) 	Part Number	Size (in)	N	Weight (Lbs)
	LP104P-012	1-1/4	5/16	0.0944
	LP104P-015	1-1/2	5/16	0.1080
	LP104P-020	2	11/32	0.1493
	LP104P-212	1-1/2×1-1/4	5/16	0.0992

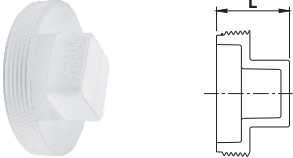
PVC DWV Fittings

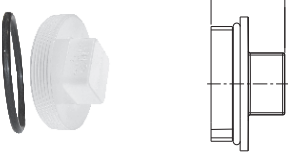


TRAP ADAPTER-FEMALE W/PLASTIC NUT & WASHER (H×SLIP) 	Part Number	Size (in)	N	Weight (Lbs)
	LP104X-012	1-1/4	5/16	0.1111
	LP104X-015	1-1/2	5/16	0.1146
	LP104X-020	2	11/32	0.1548
	LP104X-212	1-1/2×1-1/4	5/16	0.1279

FITTING CLEANOUT ADAPTER (S × FPT) 	Part Number	Size (in)	N	W	Weight (Lbs)
	LP105-012	1-1/4	5/32	1-3/8	0.0719
	LP105-015	1-1/2	5/32	1-1/2	0.0926
	LP105-020	2	5/32	1-9/16	0.1279
	LP105-030	3	1/4	2-17/32	0.3726
	LP105-040	4	1/4	2-7/8	0.5820
	LP105-060	6	3/8	4-3/8	1.6380

FITTING CLEANOUT ADAPTER W/ C.O. PLUG (S × FPT) 	Part Number	Size (in)	N	W	L	Weight (Lbs)
	LP105X-012	1-1/4	5/32	1-3/8	31/32	0.1135
	LP105X-015	1-1/2	5/32	1-1/2	1-3/8	0.1565
	LP105X-020	2	5/32	1-9/16	1-3/8	0.2315
	LP105X-030	3	1/4	2-17/32	1-23/32	0.6063
	LP105X-040	4	1/4	2-7/8	1-7/8	0.9722
	LP105X-060	6	3/8	4-3/8	2	2.4692

CLEANOUT PLUG (MPT) 	Part Number	Size (in)	L	Weight (Lbs)
	LP106-012	1-1/4	31/32	0.0419
	LP106-015	1-1/2	1-3/8	0.0639
	LP106-020	2	1-3/8	0.1036
	LP106-030	3	1-23/32	0.2337
	LP106-040	4	1-7/8	0.3902
	LP106-060	6	2	0.8311
	LP106-080	8	2-17/32	1.7879

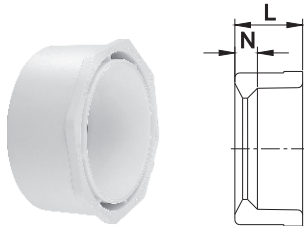
CLEANOUT PLUG W/GASKET (MPT) 	Part Number	Size (in)	L	Weight (Lbs)
	LP106R-015	1-1/2	1-1/2	0.0765
	LP106R-020	2	1-1/2	0.1235
	LP106R-030	3	1-29/32	0.3060
	LP106R-040	4	2-3/32	0.5181
	LP106R-060	6	2-1/4	1.0659

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PVC DWV Fittings

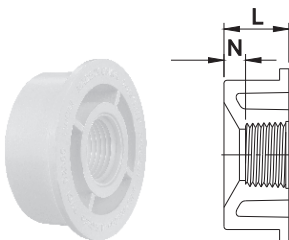


FLUSH BUSHING (S × H)



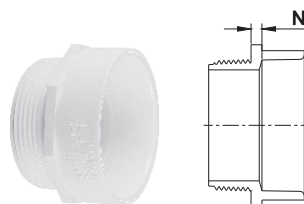
Part Number	Size (in)	N	L	Weight (Lbs)
LP107-212	1-1/2×1-1/4	1/4	15/16	0.0463
LP107-250	2×1-1/4	11/32	1-1/16	0.1389
LP107-251	2×1-1/2	11/32	1-1/16	0.0992
LP107-337	3×1-1/2	1	1-25/32	0.3770
LP107-338	3×2	7/8	1-25/32	0.3748
LP107-420	4×2	1-5/32	2-1/16	0.6239
LP107-422	4×3	17/32	2-1/16	0.5071
LP107-530	6×3	1-13/16	3-11/32	1.8805
LP107-532	6×4	1-23/32	3-1/2	2.0922
LP107-582	8×4	2-5/8	4-13/32	3.4965
LP107-585	8×6	1-3/8	4-13/32	3.5802
LP107-626	10×6	2-7/16	5-15/32	6.6580
LP107-628	10×8	1-9/16	5-19/32	6.4638
LP107-666	12×6	3-19/32	6-5/8	9.9517
LP107-668	12×8	2-5/8	6-21/32	10.0648
LP107-670	12×10	1-5/8	6-5/8	12.5904

REDUCER BUSHING
(DISHWASHER BUSHING)
(S×FPT)



Part Number	Size (in)	N	L	Weight (Lbs)
LP108-209	1-1/2×1/2	9/32	13/16	0.0750
LP108-210	1-1/2×3/4	9/32	13/16	0.0728
LP108-212	1-1/2×1-1/4	3/16	29/32	0.0465
LP108-251	2×1-1/2	1/4	31/32	0.0961
LP108-337	3×1-1/2	1-1/16	1-25/32	0.3397
LP108-338	3×2	1	1-25/32	0.3391
LP108-628	10×8	3-29/32	5-5/8	5.4938
LP108-668	12×8	4-29/32	6-21/32	8.3153

MALE ADAPTER (MPT × H)

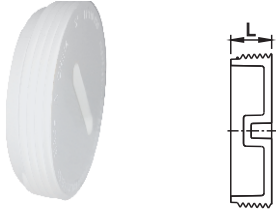


Part Number	Size (in)	N	Weight (Lbs)
LP109-012	1-1/4	3/16	0.0750
LP109-169	1-1/4×1-1/2	3/16	0.0816
LP109-015	1-1/2	3/16	0.1080
LP109-020	2	3/16	0.4431
LP109-030	3	13/32	0.7363
LP109-040	4	13/32	1.8232
LP109-060	6	13/32	0.0816

PVC DWV Fittings

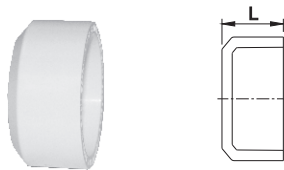


FLUSH C.O. PLUG (MPT)



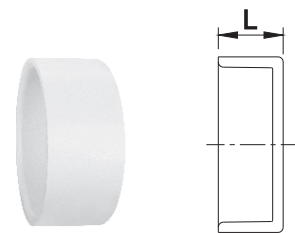
Part Number	Size (in)	L	Weight (Lbs)
LP110-020	2	5/8	0.0564
LP110-030	3	3/4	0.1411
LP110-040	4	7/8	0.2769

PLUG SLIP (S)



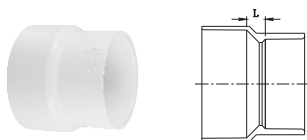
Part Number	Size (in)	L	Weight (Lbs)
LP110S-015	1-1/2	15/16	0.0549
LP110S-020	2	31/32	0.0831

CAP (SOC)

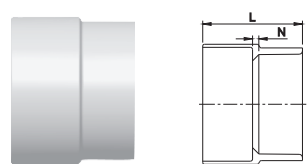


Part Number	Size (in)	L	Weight (Lbs)
LP116-015	1-1/2	15/16	0.0683
LP116-020	2	1	0.0970
LP116-030	3	1-3/4	0.3307
LP116-040	4	2-1/32	0.5732
LP116-060	6	3-5/16	1.4947
LP116-080	8	4-1/32	3.1920
LP116-100	10	5	5.4034
LP116-120	12	6-1/32	8.5494

ADAPTER COUPLING (H × H)



Part Number	Size (in)	L	Weight (Lbs)
LP117-030	3	13/32	0.3746
LP117-040	4	1/2	0.5975
LP117-422	4×3	23/32	0.4894

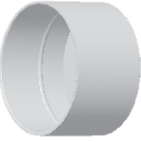
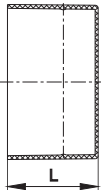
ADAPTER COUPLING
(S/D S×DWV H)

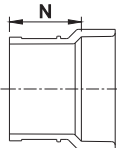
Part Number	Size (in)	N	L	Weight (Lbs)
LP117X-422	4×3	7/32	3-1/2	0.3948

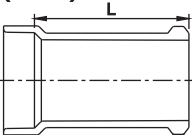
PVC DWV Fittings

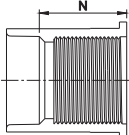


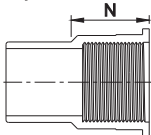
ADAPTER BUSHING (DWV SPIGOT × HUB)  	Part Number	Size (in)	N	L	Weight (Lbs)
	LP118-020	2	3/16	15/16	0.0243
	LP118-030	3	7/32	1-23/32	0.1168
	LP118-040	4	1/4	2	0.1896
	LP118-060	6	11/32	3-11/32	0.6085

TEST CAP, OUTSIDE DIAMETER (H)  	Part Number	Size (in)	L	Weight (Lbs)
	LN132-015	1-1/2	1-3/16	0.0174
	LN132-020	2	1-3/16	0.0262
	LN132-030	3	1-21/32	0.0547
	LN132-040	4	1-25/32	0.0816
	LN132-060	6	3-1/16	0.2630

NO-HUB ADAPTER (S × H)  	Part Number	Size (in)	N	Weight (Lbs)
	LP119-015	1-1/2	1-9/16	0.1058
	LP119-020	2	1-5/8	0.1389
	LP119-030	3	1-13/16	0.3880
	LP119-040	4	1-7/8	0.6239
	LP119-251	2×1-1/2	1-5/8	0.1367
	LP119-422	4×3	1-13/16	0.4630

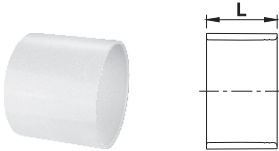
HUB ADAPTER (H×S)  	Part Number	Size (in)	L	Weight (Lbs)
	LP123-020	2	3-27/32	0.3086
	LP123-030	3	4-1/8	0.7165
	LP123-040	4	4-13/32	1.0737

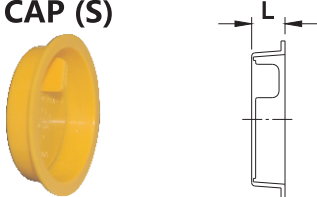
TRAP ADAPTER PLUG (H×NPSM THREAD)  	Part Number	Size (in)	N	Weight (Lbs)
	LP128-015	1-1/2	1-7/8	0.1938

TRAP ADAPTER PLUG (S×NPSM THREAD)  	Part Number	Size (in)	N	Weight (Lbs)
	LP129-015	1-1/2	3-3/8	0.2183

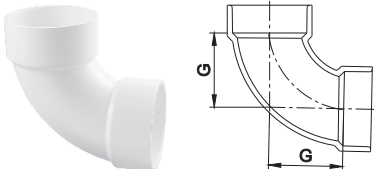
PVC DWV Fittings

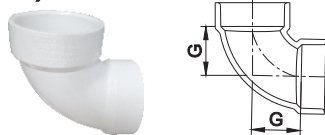


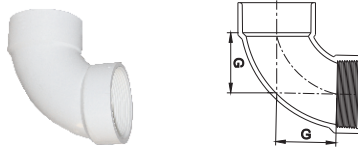
REPAIR COUPLING (H × H) 	Part Number	Size (in)	L	Weight (Lbs)
	LP130-015	1-1/2	1-17/32	0.0750
	LP130-020	2	1-21/32	0.1058
	LP130-030	3	3-7/32	0.4034
	LP130-040	4	3-25/32	0.6746
	LP130-060	6	6-11/32	2.0305

TEST CAP (S) 	Part Number	Size (in)	L	Weight (Lbs)
	LP131-015	1-1/2	13/32	0.0077
	LP131-020	2	13/32	0.0115
	LP131-030	3	7/36	0.0280
	LP131-040	4	13/32	0.0476

Threaded Cap (FPT) 	Part Number	Size (in)	L	Weight (Lbs)
	LP135-015	1-1/2	7/8	0.0794
	LP135-020	2	15/16	0.1168
	LP135-030	3	1-7/16	0.3732

1/4 BEND (H × H) 	Part Number	Size (in)	G	Weight (Lbs)
	LP300-012	1-1/4	1-9/16	0.1653
	LP300-015	1-1/2	1-25/32	0.2403
	LP300-020	2	2-3/8	0.3483
	LP300-030	3	3-1/16	0.9855
	LP300-040	4	3-7/8	1.7328
	LP300-060	6	5	4.2196
	LP300-080	8	6	4.3009
	LP300-100	10	9-1/4	15.7582
	LP300-120	12	10-7/10	24.6047

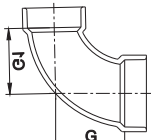
90° ELBOW-SHORT TURN (H×H) 	Part Number	Size (in)	G	Weight (Lbs)
	LP300-015S	1-1/2	1-15/32	0.1830
	LP300-020S	2	1-9/16	0.2601
	LP300-030S	3	2-3/8	0.9061

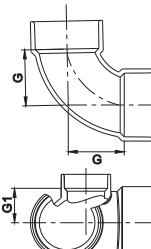
1/4 BEND (H X FIPT) 	Part Number	Size (in)	G	Weight (Lbs)
	LP301-030	3	3-1/16	1.0240

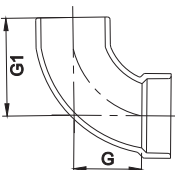
NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

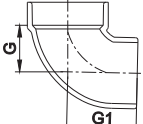
PVC DWV Fittings

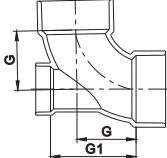


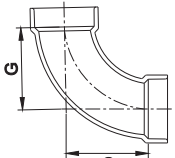
1/4 BEND, REDUCING (H×H)  	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP300R-251	2×1-1/2	2-7/16	2-5/16	0.2908

1/4 BEND WITH SIDE INLET (ALL HUB)  	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP300S-337	3×3×1-1/2	3-1/16	1-31/32	1.0582
	LP300S-338	3×3×2	3-1/16	1-7/8	1.0296

1/4 BEND, STREET (S×H)  	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP302-012	1-1/4	1-9/16	2-9/32	0.1543
	LP302-015	1-1/2	1-3/4	2-5/16	0.1808
	LP302-020	2	2-5/16	3-1/8	0.3064
	LP302-030	3	3-1/16	4-19/32	0.9921
	LP302-040	4	3-15/16	5-23/32	1.7593
	LP302-060	6	5	8-11/32	4.1888
	LP302-080	8	6	10	8.2143

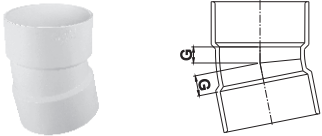
90° ELBOW-SHORT TURN (H×S)  	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP302-020S	2	1-9/16	2-5/16	0.2447

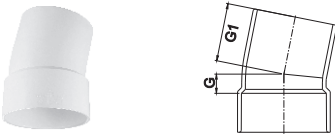
1/4 BEND W/ LOW HEEL INLET (H × H × H)  	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP303-337	3×3×1-1/2	3-1/16	4-3/16	1.0591
	LP303-338	3×3×2	3-1/16	4-7/16	1.0714
	LP303-420	4×4×2	3-7/8	5-7/16	1.7549

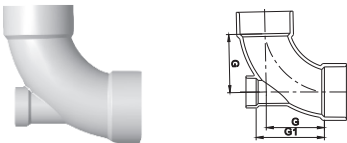
LONG SWEEP 1/4 BEND (H × H)  	Part Number	Size (in)	G	Weight (Lbs)
	LP304-015	1-1/2	2-3/4	0.2866
	LP304-020	2	3-1/4	0.4101
	LP304-030	3	4-1/16	1.1662
	LP304-040	4	4-15/16	2.0349
	LP304-060	6	6-23/32	4.8700

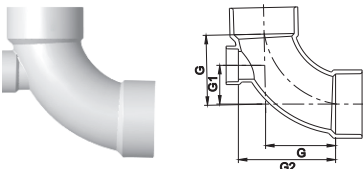
PVC DWV Fittings

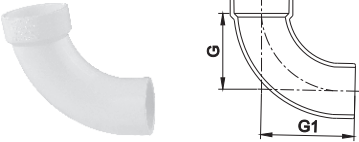


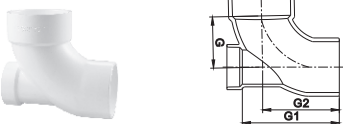
11-1/4° ELBOW (H×H) 	Part Number	Size (in)	G	Weight (Lbs)
	LP305-060	6	1-1/2	2.8616

11-1/4° ELBOW (S×H) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP306-060	6	1-1/2	4-17/32	2.7999

LONG SWEEP 1/4 BEND W/LOW HEEL INLET (ALL HUB) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP307-337	3×3×1-1/2	4-1/16	4-3/4	1.2531
	LP307-338	3×3×2	4-1/16	4-15/16	1.2787

LONG SWEEP 1/4 BEND W/HIGH HEEL INLET (ALL HUB) 	Part Number	Size (in)	G	G1	G2	Weight (Lbs)
	LP308-337	3×3×1-1/2	4-1/16	2-1/4	5-5/8	1.2167
	LP308-338	3×3×2	4-1/16	2-1/4	5-5/8	1.2257

LONG SWEEP 1/4 BEND, STREET (H × S) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP309-015	1-1/2	2-3/4	3-15/32	0.2668
	LP309-020	2	3-1/4	4-1/32	0.3968
	LP309-030	3	4-1/16	5-19/32	1.1729
	LP309-040	4	4-15/16	6-11/16	2.0216

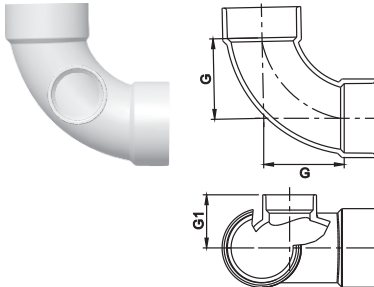
1/4 BEND, STREET W/ LOW HEEL INLET (H × S × H) 	Part Number	Size (in)	G	G1	G2	Weight (Lbs)
	LP310-338	3×3×2	3-1/16	5-31/32	4-19/32	1.0053

NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

PVC DWV Fittings

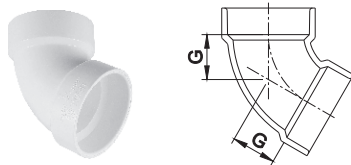


**LONG SWEEP 1/4 BEND W/
SIDE INLET (ALL×HUB)**



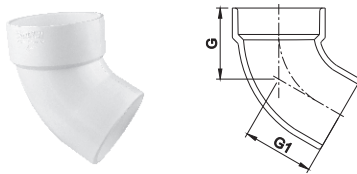
Part Number	Size (in)	G	G1	Weight (Lbs)
LP311-338	3×3×2	4-1/16	1-29/32	1.2522

1/6 BEND (H × H)



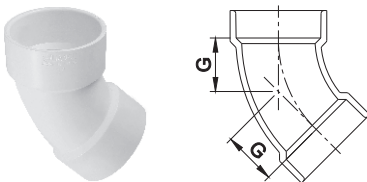
Part Number	Size (in)	G	Weight (Lbs)
LP319-015	1-1/2	1	0.1631
LP319-020	2	1-5/16	0.2579
LP319-030	3	1-11/16	0.8179
LP319-040	4	2-1/16	1.3514
LP319-060	6	3-3/8	3.8669

1/6 BEND, STREET (H × S)



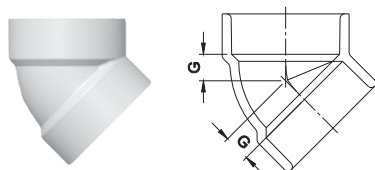
Part Number	Size (in)	G	G1	Weight (Lbs)
LP320-015	1-1/2	1	1-11/16	0.1521
LP320-020	2	1-5/16	2-1/16	0.2403
LP320-030	3	1-11/16	3-7/32	0.7606
LP320-040	4	2-1/16	3-13/36	1.3536

1/8 BEND (H × H)



Part Number	Size (in)	G	Weight (Lbs)
LP321-012	1-1/4	1	0.1433
LP321-015	1-1/2	1-1/8	0.1852
LP321-020	2	1-1/2	0.2844
LP321-030	3	1-3/4	0.8201
LP321-040	4	2-3/16	1.5168
LP321-060	6	2	3.1306
LP321-080	8	2-1/16	6.0146

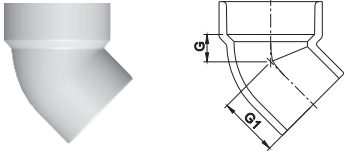
45° ELBOW-SHORT TURN (H×H)

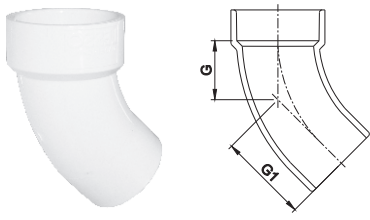


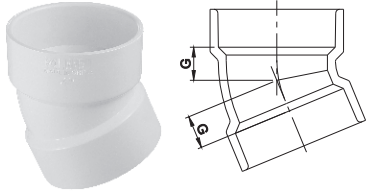
Part Number	Size (in)	G	Weight (Lbs)
LP321-015S	1-1/2	15/32	0.1235

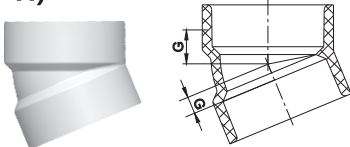
PVC DWV Fittings

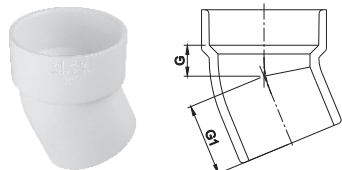


45° ELBOW-SHORT TURN (H×S) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP323-015S	1-1/2	19/32	1-5/16	0.1257

1/8 BEND, STREET (H × S) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP323-012	1-1/4	1	1-13/16	0.1323
	LP323-015	1-1/2	1-1/8	1-29/32	0.1852
	LP323-020	2	1-11/16	2-19/32	0.2976
	LP323-030	3	1-25/32	3-5/16	0.8157
	LP323-040	4	2-3/16	3-15/16	1.3669
	LP323-060	6	2	5-5/32	3.1306
	LP323-080	8	2-1/16	6-5/32	5.7493
	LP323-100	10	2-5/8	7-5/8	9.8882

1/16 BEND (H × H) 	Part Number	Size (in)	G	Weight (Lbs)
	LP324-015	1-1/2	1/2	0.1323
	LP324-020	2	11/16	0.1874
	LP324-030	3	13/16	0.6437
	LP324-040	4	1	1.0670
	LP324-060	6	1-1/2	2.9255
	LP324-080	8	1-1/2	5.5864
	LP324-100	10	2-3/16	9.8391
	LP324-120	12	2-3/8	15.2072

22-1/2" ELBOW-SHORT TURN (H×H) 	Part Number	Size (in)	G	Weight (Lbs)
	LP324-015S	1-1/2	9/32	0.1102

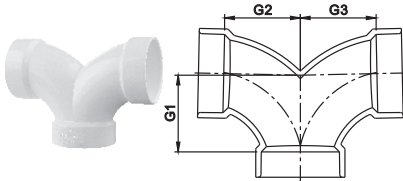
1/16 BEND, STREET (H × S) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP326-015	1-1/2	1/2	1-5/16	0.1235
	LP326-020	2	11/16	1-9/16	0.2050
	LP326-030	3	13/16	2-7/32	0.6085
	LP326-040	4	1	2-3/4	0.9877
	LP326-060	6	1-1/2	4-17/32	2.8638

NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

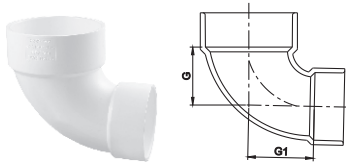
PVC DWV Fittings



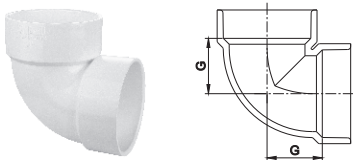
DOUBLE 1/4 BEND (H × H × H)	Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
	LP327-015	1-1/2	1-3/4	1-3/4	1-3/4	0.2932
	LP327-020	2	2-5/16	2-5/16	2-5/16	0.4762
	LP327-030	3	3-1/16	3-1/16	3-1/16	1.4418
	LP327-040	4	3-7/8	3-7/8	3-7/8	2.5507
	LP327-241	2×1-1/2×1-1/2	1-15/16	2-7/32	2-7/32	0.3836



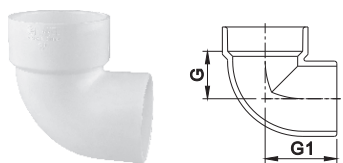
CLOSET BEND, REDUCING (H × H)	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP329-342	3×4	3	3-3/8	1.3162



VENT ELL (H × H)	Part Number	Size (in)	G	Weight (Lbs)
	LP331-012	1-1/4	1	0.1338
	LP331-015	1-1/2	1-3/16	0.1720
	LP331-020	2	1-1/2	0.2601
	LP331-030	3	2	0.8400
	LP331-040	4	2-5/8	1.3867
	LP331-060	6	3-1/2	3.7126

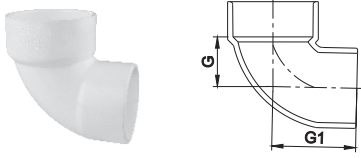


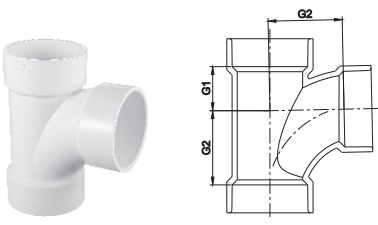
VENT ELL, STREET (H × S)	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP333-012	1-1/4	1	1-25/32	0.1303
	LP333-015	1-1/2	1-3/16	1-7/8	0.1720
	LP333-020	2	1-1/2	2-1/4	0.2756
	LP333-030	3	2-5/16	3-9/16	0.8620
	LP333-040	4	2-15/32	4-3/8	1.3382
	LP333-060	6	3-15/16	4-19/32	3.9948
	LP333-080	8	4-1/2	8-27/32	7.4799
	LP333-100	10	5-13/16	10-15/16	12.9458
	LP333-120	12	6-22/25	13	20.4171

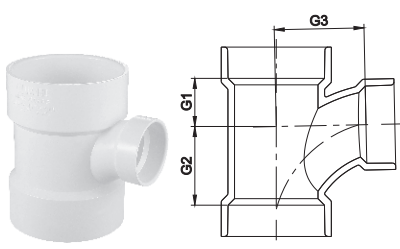


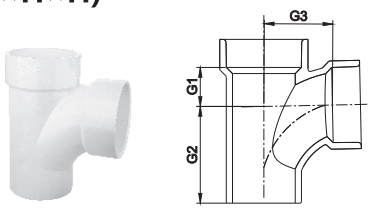
PVC DWV Fittings



TRAP ELBOW (FOR USE WITH TRAPS ONLY)(H × S) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP335-030	3	2-5/32	3-21/32	0.7716
	LP335-040	4	2-3/4	4-7/16	1.3779

SANITARY TEE (ALL HUB) 	Part Number	Size (in)	G1	G2	Weight (Lbs)
	LP400-012	1-1/4	3/4	1-9/16	0.2183
	LP400-015	1-1/2	1	1-3/4	0.2954
	LP400-020	2	1-13/32	2-5/16	0.4718
	LP400-030	3	1-13/16	3-1/16	1.3977
	LP400-040	4	2-1/4	3-7/8	2.5618
	LP400-060	6	3-1/2	5	5.6086
	LP400-080	8	4-1/2	6	11.4960

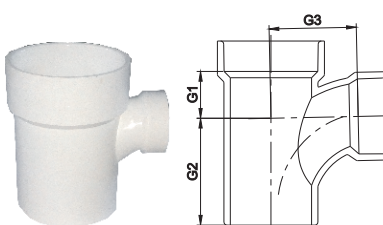
REDUCING SANITARY TEE (ALL HUB) 	Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
	LP401-212	1-1/2×1-1/2×1-1/4	13/16	1-11/16	1-13/16	0.2615
	LP401-241	2×1-1/2×1-1/2	1-3/16	1-15/16	2-3/16	0.3527
	LP401-251	2×2×1-1/2	1-3/16	1-15/16	2-3/16	0.3594
	LP401-257	2×1-1/2×2	1-3/8	2-5/16	1-31/32	0.4034
	LP401-337	3×3×1-1/2	15/16	1-3/4	2-9/16	0.8113
	LP401-338	3×3×2	1-3/16	2-1/8	2-7/8	0.9105
	LP401-419	4×4×1-1/2	1-1/16	2	3-1/4	1.3338
	LP401-420	4×4×2	1-1/8	2-1/16	3-5/16	1.3095
	LP401-422	4×4×3	1-3/4	3	3-9/16	1.8012
	LP401-528	6×6×2	1-11/16	2-1/4	3-15/16	3.2584
	LP401-530	6×6×3	2-1/16	3-9/32	4-23/32	3.8449
	LP401-532	6×6×4	2-3/16	3-5/8	4-5/16	4.0124

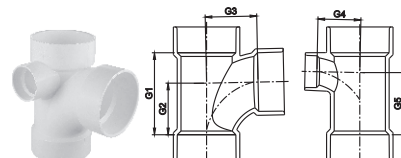
SANITARY TEE, STREET (S×H×H) 	Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
	LP403-015	1-1/2	1	2-7/16	1-3/4	0.2646
	LP403-020	2	1-3/8	3-3/32	2-5/16	0.4431
	LP403-030	3	1-13/16	4-19/32	3-1/16	1.3801
	LP403-040	4	2-1/4	5-5/8	3-7/8	2.2267

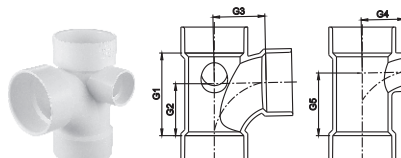
NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

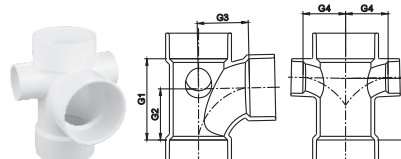
PVC DWV Fittings

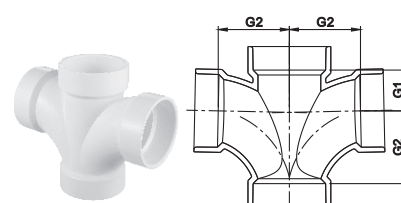


SANITARY TEE, STREET REDUCING (S×H×H) 	Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
	LP404-241	2 × 1-1/2 × 1-1/2	1-3/16	2-11/16	2-3/16	0.3441
	LP404-251	2 × 2 × 1-1/2	1-3/16	2-11/16	2-3/16	0.3613
	LP404-257	2 × 1-1/2 × 2	1-3/8	3-3/32	2-5/16	0.4136
	LP404-337	3 × 3 × 1-1/2	15/16	3-9/32	2-3/16	0.7562
	LP404-338	3 × 3 × 2	1-3/16	3-21/32	2-7/8	0.8898
	LP404-420	4 × 4 × 2	1-1/8	3-13/16	3-5/16	1.3106

SANITARY TEE W/ LEFT SIDE INLET (ALL HUB) 	Part Number	Size (in)	G1	G2	G3	G4	G5	Weight (Lbs)
	LP416-337	3 × 3 × 3 × 1-1/2	4-7/8	3-1/16	3-1/16	2-9/16	3-11/16	1.4484
	LP416-338	3 × 3 × 3 × 2	4-7/8	3-1/16	3-1/16	2-7/8	3-11/16	1.5498
	LP416-420	4 × 4 × 4 × 2	6-1/8	3-7/8	3-7/8	3-5/16	5	2.5133

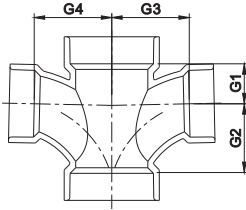
SANITARY TEE W/ RIGHT SIDE INLET (ALL HUB) 	Part Number	Size (in)	G1	G2	G3	G4	G5	Weight (Lbs)
	LP417-337	3 × 3 × 3 × 1-1/2	4-7/8	3-1/16	3-1/16	2-9/16	3-11/16	1.4551
	LP417-338	3 × 3 × 3 × 2	4-7/8	3-1/16	3-1/16	2-7/8	3-11/16	1.6094
	LP417-420	4 × 4 × 4 × 2	6-1/8	3-7/8	3-7/8	3-5/16	5	2.5670

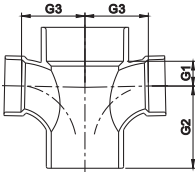
SANITARY TEE W/ R & L SIDE INLETS (ALL HUB) 	Part Number	Size (in)	G1	G2	G3	G4	G5	Weight (Lbs)
	LP418-337	3 × 3 × 3 × 1-1/2 × 1-1/2	4-7/8	3-1/16	3-1/16	2-9/16	3-11/16	1.5631
	LP418-338	3 × 3 × 3 × 2 × 2	4-7/8	3-1/16	3-1/16	2-7/8	3-11/16	1.7417
	LP418-420	4 × 4 × 4 × 2 × 2	6-1/8	3-7/8	3-7/8	3-5/16	5	2.7339

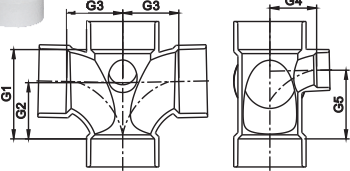
DOUBLE SANITARY TEE (ALL HUB) 	Part Number	Size (in)	G1	G1	Weight (Lbs)
	LP428-015	1-1/2	1	1-3/4	0.3483
	LP428-020	2	1-3/8	2-5/16	0.5556
	LP428-030	3	1-13/16	3-1/16	1.6799
	LP428-040	4	2-1/4	3-7/8	2.9476
	LP428-060	6	3-1/2	5	7.1805

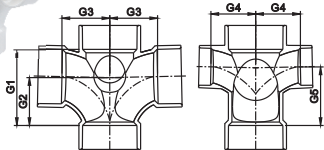
PVC DWV Fittings



DOUBLE SANITARY TEE, REDUCING (ALL HUB)  	Part Number	Size (in)	G1	G2	G3	G4	Weight (Lbs)
	LP429-251	2×2×1-1/2×1-1/2	1-3/16	1-15/16	2-3/16	2-3/16	0.4475
	LP429-323	3×3×2×1-1/2	1-3/16	2-1/16	2-7/16	2-1/2	0.9577
	LP429-337	3×3×1-1/2×1-1/2	15/16	1-3/4	2-9/16	2-9/16	0.8686
	LP429-338	3×3×2×2	1-3/16	2-1/8	2-7/8	2-7/8	1.0031
	LP429-419	4×4×1-1/2×1-1/2	1-1/16	2	3-1/4	3-1/4	1.4176
	LP429-420	4×4×2×2	1-1/8	2-1/16	3-5/16	3-5/16	1.4198
	LP429-422	4×4×3×3	1-3/4	3	3-9/16	3-9/16	2.1539
	LP429-528	6×6×2×2	1-11/16	2-1/4	4-11/32	4-11/32	3.3069
	LP429-530	6×6×3×3	2-1/16	3-9/32	4-23/32	4-23/32	4.0984
	LP429-532	6×6×4×4	2-3/16	3-5/8	4-5/16	4-5/16	4.4996

DOUBLE SANITARY TEE, STREET, REDUCING (S × H × H)  	Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
	LP431-338	3×3×2×2	1-3/16	3-21/32	2-7/8	0.9795

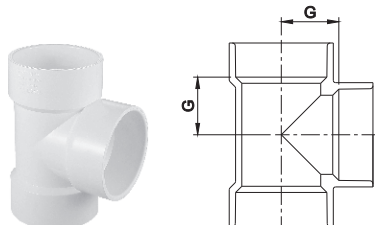
DOUBLE SANITARY TEE, W/SIDE INLET (ALL HUB)  	Part Number	Size (in)	G1	G2	G3	G4	G5	Weight (Lbs)
	LP438-337	3×3×3×3×1-1/2	4-7/8	3-1/16	3-1/16	2-9/16	3-11/16	1.8644
	LP438-338	3 × 3 × 3 × 3 × 2	4-7/8	3-1/16	3-1/16	2-7/8	3-11/16	1.9083
	LP438-420	4×4×4×4×2	6-1/8	3-7/8	3-7/8	3-5/16	3-7/8	3.1702

DOUBLE SANITARY TEE W/R&L SIDE INLETS (ALL HUB)  	Part Number	Size (in)	G1	G2	G3	G4	G5	Weight (Lbs)
	LP439-338	3×3 ×3×3 ×2×2	4-7/8	3-1/16	3-1/16	2-7/8	3-11/16	2.0866
	LP439-420	4×4 ×4×4 ×2×2	6-1/8	3-7/8	3-7/8	3-5/16	5	3.3166

PVC DWV Fittings

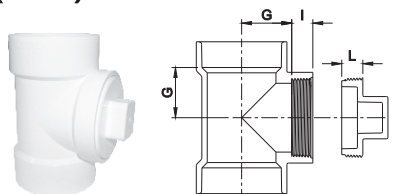


VENT TEE (ALL HUB)



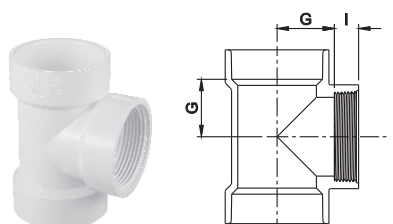
Part Number	Size (in)	G	Weight (Lbs)
LP441-015	1-1/2	1-3/16	0.2491
LP441-020	2	1-1/2	0.3836
LP441-030	3	2	1.1420
LP441-040	4	2-1/2	2.0305
LP441-060	6	3-5/8	5.0883
LP441-080	8	4-1/2	10.0044
LP441-100	10	5-4/5	17.4284
LP441-120	12	6-17/20	27.4612

CLEANOUT TEE W/C.O.PLUG (H×H)



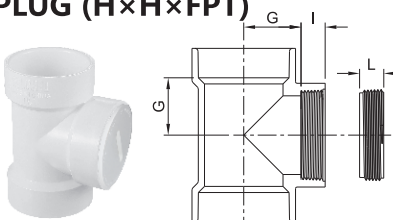
Part Number	Size (in)	G	I	L	Weight (Lbs)
LP444X-015	1-1/2	1-3/16	5/8	1-3/8	0.2976
LP444X-020	2	1-1/2	5/8	1-3/8	0.4497
LP444X-030	3	1-7/8	3/4	1-23/32	1.2125
LP444X-040	4	2-1/2	7/8	1-7/8	2.1517
LP444X-060	6	3-1/2	31/32	2	5.2404
LP444X-080	8	4-1/2	1-1/2	2-17/32	10.7628

FLUSH C.O. TEE (H×H×FPT)



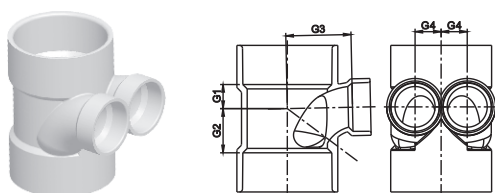
Part Number	Size (in)	G	I	Weight (Lbs)
LP445-015	1-1/2	1-3/16	5/8	0.2337
LP445-020	2	1-1/2	5/8	0.3461
LP445-030	3	1-7/8	3/4	0.9789
LP445-040	4	2-1/2	7/8	1.7615
LP445-060	6	3-1/2	31/32	4.4092
LP445-080	8	4-1/2	1-1/2	8.9748

FLUSH C.O. TEE W/C.O. PLUG (H×H×FPT)



Part Number	Size (in)	G	I	L	Weight (Lbs)
LP445X-020	2	1-1/2	5/8	5/8	0.4158
LP445X-030	3	1-7/8	3/4	3/4	1.1711
LP445X-040	4	2-1/2	7/8	7/8	2.1272

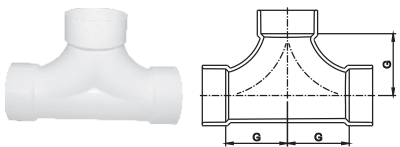
HORIZONTAL TWIN TEE (ALL HUB)

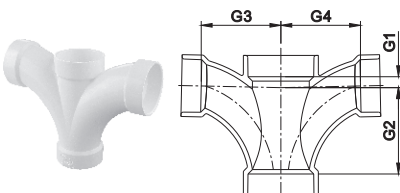


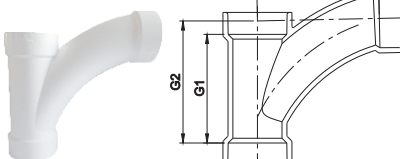
Part Number	Size (in)	G1	G2	G3	G4	Weight (Lbs)
LP447-337	3×3×1-1/2×1-1/2	15/16	1-23/32	2-9/16	1-1/32	0.9217

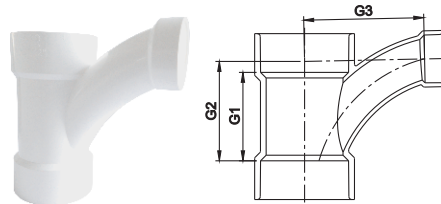
PVC DWV Fittings

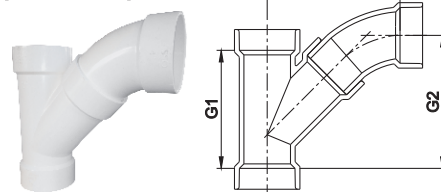


2-WAY CLEANOUT (ALL HUB) 	Part Number	Size (in)	G	Weight (Lbs)
	LP448-030	3	4-1/16	1.9952
	LP448-040	4	4-15/16	3.5362

DOUBLE FIXTURE FITTING (ALL HUB) 	Part Number	Size (in)	G1	G2	G3	G4	Weight (Lbs)
	LP500-020	2×2×2×2	3/8	4-1/4	3-1/2	3-1/2	0.7782
	LP500-030	3×3×3×3	1/2	6-1/4	4-15/16	4-15/16	2.5155
	LP500-241	2×1-1/2×1-1/2×1-1/2	3/8	3-1/8	2-7/8	2-7/8	0.5291
	LP500-251	2×2×1-1/2×1-1/2	3/8	3-1/8	2-7/8	2-7/8	0.5512
	LP500-257	2×1-1/2×2×2	3/8	4-1/4	3-1/2	3-1/2	0.7731
	LP500-338	3×2×3×3	1/2	6-1/4	4-15/16	4-15/16	2.2730

COMBINATION WYE AND 1/8 BEND (ONE PIECE) (ALL HUB) 	Part Number	Size (in)	G1	G2	Weight (Lbs)
	LP501-015	1-1/2	3-1/2	13-15/16	0.4321
	LP501-020	2	4-7/16	5-1/8	0.7077
	LP501-030	3	6-1/2	7-9/16	2.3369
	LP501-040	4	8-1/2	10	4.2792

COMBINATION WYE AND 1/8 BEND, REDUCING (ONE PIECE) (ALL HUB) 	Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
	LP502-241	2×1-1/2×1-1/2	3-1/2	3-15/16	4-3/16	0.5071
	LP502-251	2×2×1-1/2	3-1/2	3-15/16	4-3/16	0.5071
	LP502-257	2×1-1/2×2	4-7/16	5-1/8	5-1/8	0.6923
	LP502-337	3×3×1-1/2	3-1/2	3-15/16	4-3/4	1.0472
	LP502-338	3×3×2	4-7/16	5-1/8	5-11/16	1.2390
	LP502-420	4×4×2	4-1/2	5-1/8	6-1/8	1.8409
	LP502-422	4×4×3	6-1/2	7-9/16	8-1/16	2.9189

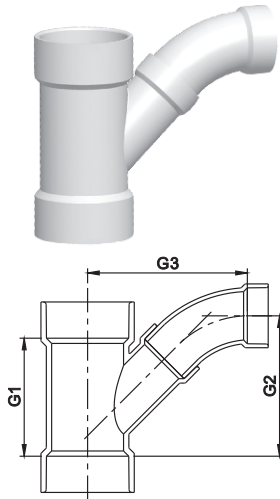
COMBINATION WYE AND 1/8 BEND (TWO PIECE) (ALL HUB) 	Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
	LP503-015	1-1/2	4-1/32	4-17/32	4-17/32	0.5467
	LP503-020	2	5	5-3/4	6-3/32	0.8598
	LP503-030	3	6-5/8	7-1/2	7-21/32	2.5045
	LP503-040	4	8-9/32	9-3/16	9-1/2	4.3431
	LP503-060	6	10-5/32	11-11/32	11-5/8	9.6562
	LP503-080	8	14-3/32	15	14-11/16	20.3455
	LP503-100	10	16	17-3/5	17-16/25	33.1140
	LP503-120	12	19-1/5	20-19/20	20-17/20	52.4427

NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

PVC DWV Fittings

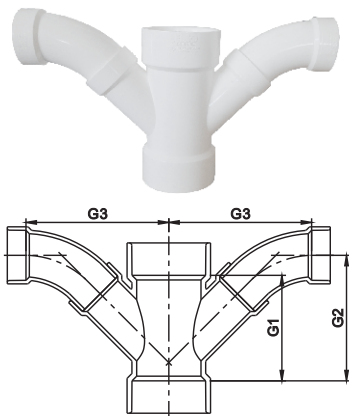


**COMBINATION WYE AND
1/8 BEND,REDUCING
(TWO PIECE) (ALL HUB)**



Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
LP504-338	3×3×2	5	5-15/16	6-25/32	1.4639
LP504-422	4×4×3	6-5/8	7-5/8	8-11/32	3.1592
LP504-532	6×6×4	7-9/32	8-5/8	10-1/4	6.1796
LP504-582	8×8×4	8-1/32	9-9/32	11-3/32	9.7846
LP504-585	8×8×6	10-15/32	11-9/16	12-19/32	13.7983
LP504-624	10×10×4	7-7/32	8-5/8	12-11/32	13.5379
LP504-626	10×10×6	10-1/5	11-3/4	13-3/4	18.2231
LP504-628	10×10×8	12-3/4	14-2/5	15-9/50	24.1576
LP504-664	12×12×4	7-8/25	8-13/20	13-3/10	19.2654
LP504-666	12×12×6	10-21/50	11-22/25	14-13/20	24.5348
LP504-668	12×12×8	13-13/50	14-13/20	16-9/50	31.1682
LP504-670	12×12×10	15-7/10	19-11/50	18-29/50	39.3239

**COMBINATION WYE AND
1/8 BEND DOUBLE ASSEMBLY
(ALL HUB)**

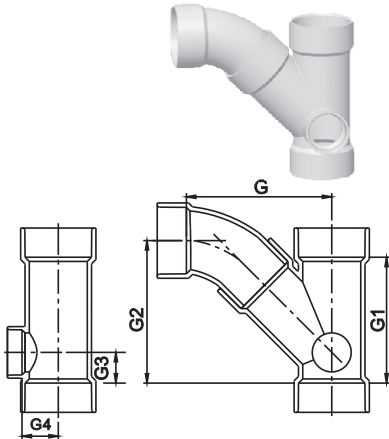


Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
LP507-015	1-1/2	4	4-13/25	4-13/25	0.6367
LP507-020	2	5	5-19/25	6-2/25	1.0121
LP507-030	3	6-5/8	7-15/32	7-5/8	3.7743
LP507-040	4	8-9/32	9-3/16	9-1/2	6.4199
LP507-251	2×1-1/2	4-3/8	4-27/32	4-29/32	0.9436
LP507-338	3×2	5	5-15/16	6-25/32	1.9004
LP507-420	4×2	5-3/32	6-5/32	7-7/16	2.4780
LP507-422	4×3	6-5/8	7-5/8	8-11/32	4.4114

PVC DWV Fittings

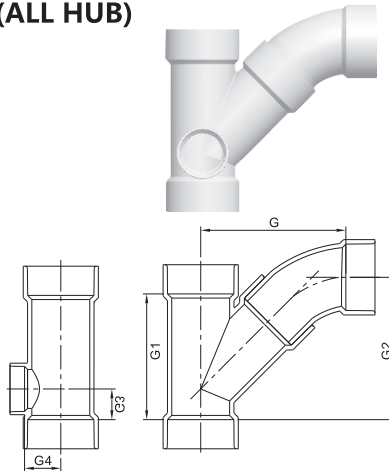


COMBINATION WYE AND 1/8 BEND W/LEFT SIDE INLET (ALL HUB)



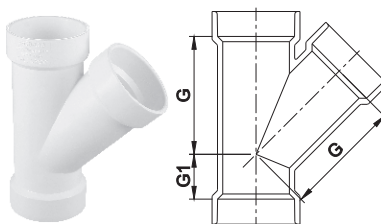
Part Number	Size (in)	G	G1	G2	G3	G4	Weight (Lbs)
LP515-338	3×3×3×2	7-21/32	6-5/8	7-1/2	1-5/8	1-29/32	2.5650

COMBINATION WYE AND 1/8 BEND W/RIGHT SIDE INLET (ALL HUB)



Part Number	Size (in)	G	G1	G2	G3	G4	Weight (Lbs)
LP516-338	3×3×3×2	7-21/32	6-5/8	7-1/2	1-5/8	1-29/32	2.5650

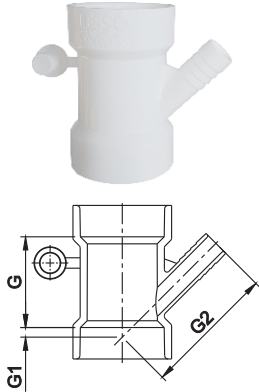
WYE (ALL HUB)

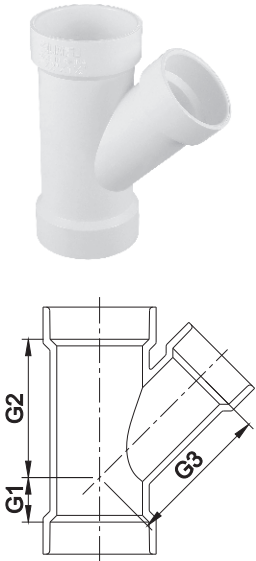


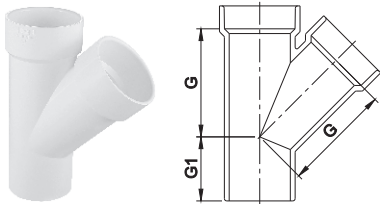
Part Number	Size (in)	G	G1	Weight (Lbs)
LP600-012	1-1/4	1-1/16	2-9/16	0.2690
LP600-015	1-1/2	1-1/8	2-7/8	0.3616
LP600-020	2	1-3/8	3-5/8	0.5622
LP600-030	3	1-5/8	5	1.6887
LP600-040	4	1-7/8	6-3/8	2.9762
LP600-060	6	1-3/4	8-7/16	6.5257
LP600-080	8	2-3/8	11-3/4	14.5961
LP600-100	10	13-29/50	2-3/5	23.2257

PVC DWV Fittings



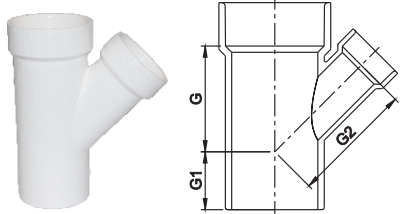
DISHWASHER WYE (H × H × HOSE BARB) 	Part Number	Size (in)	G	G1	G2	Weight (Lbs)
	LP601-209	1-1/2×1-1/2×1/2	2-1/16	7/32	3	0.1918

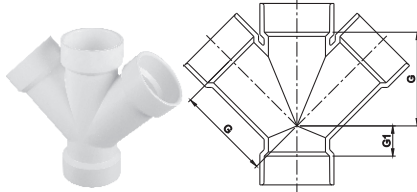
REDUCING WYE (ALL HUB) 	Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
	LP601-241	2×1-1/2×1-1/2	3/4	2-13/16	2-15/16	0.3902
	LP601-251	2×2×1-1/2	1-1/16	3-5/16	3-7/16	0.4740
	LP601-257	2×1-1/2×2	1	3-1/2	3-3/8	0.4894
	LP601-337	3×3×1-1/2	1/2	3-3/4	4-5/16	1.0472
	LP601-338	3×3×2	7/8	4-1/8	4-5/8	1.1662
	LP601-419	4×4×1-1/2	0	3-7/8	4-9/16	1.4969
	LP601-420	4×4×2	3/8	4-11/16	5-9/16	1.7813
	LP601-422	4×4×3	1-1/16	5-9/16	6	2.3435
	LP601-528	6×6×2	3/8	6-9/16	8-5/16	4.2748
	LP601-530	6×6×3	3/16	6-15/16	7-7/16	4.5195
	LP601-532	6×6×4	19/32	6-11/16	7-7/16	4.8127
	LP601-582	8×8×4	13/32	7-5/8	8-5/8	8.3962
	LP601-585	8×8×6	1	9-1/2	9-13/16	10.5972
	LP601-624	10×10×4	1-1/2	8-11/16	10-3/8	12.1495

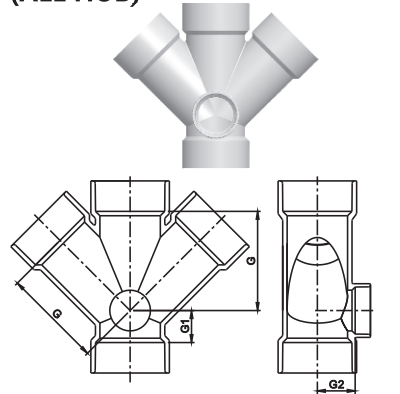
WYE, STREET (S×H×H) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP602-015	1-1/2	2-7/8	1-27/32	0.3510
	LP602-020	2	3-5/8	2-5/32	0.5600
	LP602-030	3	5	3-5/32	1.6094
	LP602-040	4	6-3/8	3-21/32	2.9281

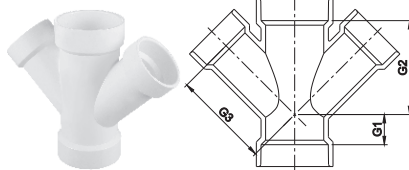
PVC DWV Fittings



WYE, STREET, REDUCING (S×H×H) 	Part Number	Size (in)	G	G1	G2	Weight (Lbs)
	LP603-251	2×2×1-1/2	3-3/10	1-4/5	4-3/20	0.4702
	LP603-337	3×3×1-1/2	3-3/4	2-1/16	4-5/16	1.0185
	LP603-338	3×3×2	4-1/8	2-13/32	4-5/8	1.1413
	LP603-420	4×4×2	4-11/16	2-5/132	5-9/16	1.7196
	LP603-422	4×4×3	5-9/16	2-27/32	6	2.2961

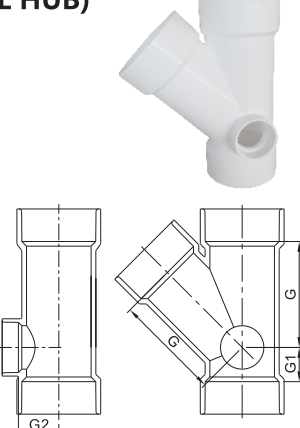
DOUBLE WYE (ALL HUB) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP611-015	1-1/2	2-7/8	1-1/8	0.4696
	LP611-020	2	3-5/8	1-3/8	0.7077
	LP611-030	3	5	1-5/8	2.1429
	LP611-040	4	6-3/8	1-7/8	3.6861
	LP611-060	6	8-7/16	1-3/4	8.6840

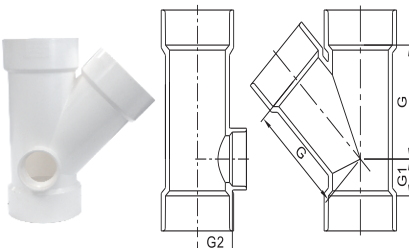
DOUBLE WYE, W/2" SIDE INLET (ALL HUB) 	Part Number	Size (in)	G	G1	G2	Weight (Lbs)
	LP611S-030	3×3×3×3×2	5	1-5/8	1-29/32	2.2227

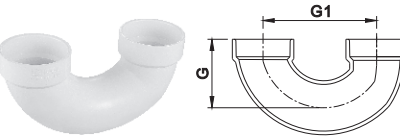
REDUCING DOUBLE WYE (ALL HUB) 	Part Number	Size (in)	G1	G2	G3	Weight (Lbs)
	LP612-251	2×2×1-1/2×1-1/2	1-1/16	3-5/16	3-7/16	0.5732
	LP612-337	3×3×1-1/2×1-1/2	1/2	3-3/4	4-5/16	1.1420
	LP612-338	3×3×2×2	7/8	4-1/8	4-5/8	1.3051
	LP612-420	4×4×2×2	3/8	4-11/16	5-9/16	1.8827
	LP612-422	4×4×3×3	1-1/16	5-9/16	6	2.7800
	LP612-528	6×6×2×2	3/8	6-9/16	8-5/16	4.3607
	LP612-530	6×6×3×3	3/16	6-15/16	7-7/16	4.8854
	LP612-532	6×6×4×4	3/16	6-11/16	7-7/16	5.3418

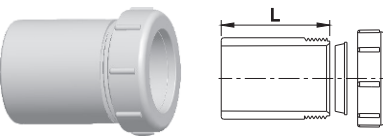
PVC DWV Fittings



WYE W/LEFT SIDE INLET (ALL HUB) 	Part Number	Size (in)	G	G1	G2	Weight (Lbs)
	LP625-338	3×3×3×2	5	1-5/8	1-29/32	1.7595
	LP625-420	4×4×4×2	6-3/8	1-7/8	2-13/32	3.0443

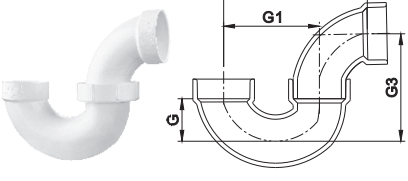
WYE W/RIGHT SIDE INLET (ALL HUB) 	Part Number	Size (in)	G	G1	G2	Weight (Lbs)
	LP626-338	3×3×3×2	5	1-5/8	1-29/32	1.7595
	LP626-420	4×4×4×2	6-3/8	1-7/8	2-13/32	3.0997

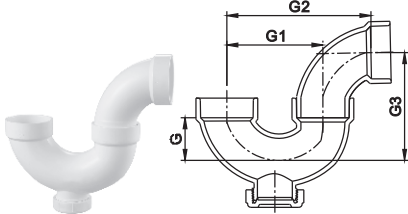
RETURN BEND (H × H) 	Part Number	Size (in)	G	G1	Weight (Lbs)
	LP700-015	1-1/2	1-17/32	3-15/32	0.3197
	LP700-020	2	2-1/4	5	0.5776
	LP700-030	3	2-5/8	6-1/4	1.5013
	LP700-040	4	3-7/16	8-1/16	2.6874
	LP700-060	6	5	11-13/32	7.2268

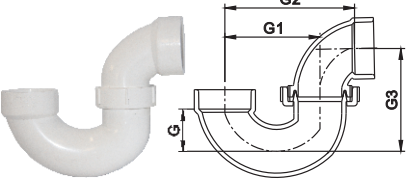
ADAPTER, TAIL PIECE W/PLASTIC NUT (S X SLIP) 	Part Number	Size (in)	L	Weight (Lbs)
	LP704P-015	1-1/2×1-1/2	2-9/16	0.1759
	LP704P-212	1-1/2×1-1/4	2-9/16	0.1801

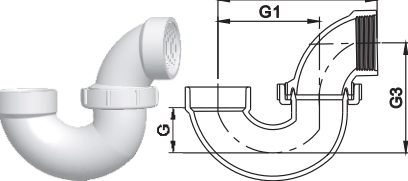
PVC DWV Fittings

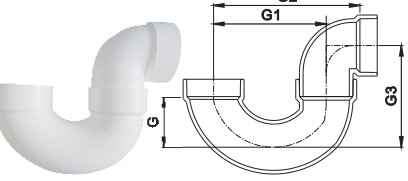


P-TRAP (H × H) 	Part Number	Size (in)	G	G1	G2	G3	Weight (Lbs)
	LP706X-015	1-1/2	1-17/32	3-15/32	5-3/16	3-7/8	0.5004
	LP706X-020	2	2-1/4	5	7-5/16	5-13/32	0.8841
	LP706X-030	3	2-5/8	6-1/4	8-7/16	6-11/32	2.2730
	LP706X-040	4	3-7/16	8-1/16	10-13/16	7-15/16	4.0653
	LP706X-060	6	5	11-13/32	16-13/32	13-7/16	11.4155

P-TRAP W/ CLEANOUT (H × H) 	Part Number	Size (in)	G	G1	G2	G3	Weight (Lbs)
	LP707X-015	1-1/2	1-17/32	3-15/32	5-3/16	3-7/8	0.5710
	LP707X-020	2	2-1/4	5	7-5/16	5-13/32	0.9524

ADJUSTABLE P-TRAP W/ PLASTIC NUT (H × H) 	Part Number	Size (in)	G	G1	G2	G3	Weight (Lbs)
	LP708P-012	1-1/4	1-17/32	3-11/32	4-21/32	3-5/8	0.4253
	LP708P-015	1-1/2	1-17/32	3-15/32	4-23/32	3-3/4	0.5357
	LP708P-020	2	2-1/4	5	7-5/16	5-13/32	0.9502

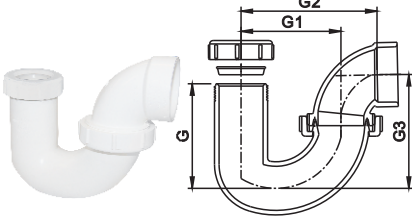
P-TRAP W/ UNION JOINT (H X FPT) 	Part Number	Size (in)	G	G1	G2	G3	Weight (Lbs)
	LP709-015	1-1/2	1-17/32	3-15/32	5-7/16	3-3/4	0.5355

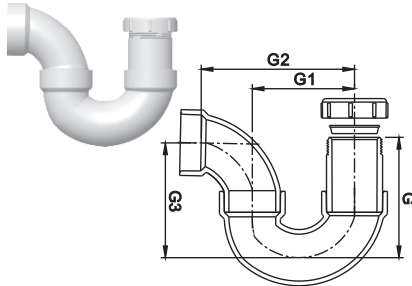
P-TRAP, LOW PROFILE (H X H) 	Part Number	Size (in)	G	G1	G2	G3	Weight (Lbs)
	LP710-015	1-1/2	1-27/50	3-23/50	4-13/20	3-21/50	0.4755
	LP710-020	2	2-6/25	5	6-1/2	4-1/2	0.7978
	LP710-030	3	2-16/25	6-13/50	8-16/25	6-1/2	2.3801
	LP710-040	4	3-21/50	8-3/50	10-11/20	7-4/5	4.2191
	LP710-060	6	5	11-21/50	15-7/20	11-24/25	11.1836

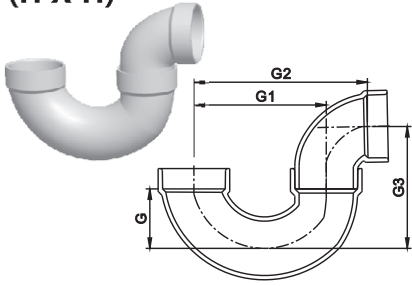
NOTE: DO NOT USE OR TEST THE PRODUCTS IN THIS CATALOG WITH COMPRESSED AIR OR OTHER GASES. FAILURE TO FOLLOW THIS WARNING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO PROPERTY.

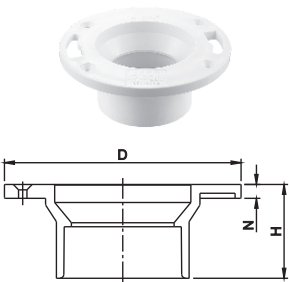
PVC DWV Fittings



L.A. PATTERN P-TRAP, W/UNION & 1-1/2 & 1-1/4 SLIP WASHERS , W/PLASTIC NUT (SLIP×H) 	Part Number	Size (in)	G	G1	G2	G3	Weight (Lbs)
	LP711P-015	1-1/2	3-5/8	3-15/32	4-23/32	3-15/16	0.6290
	LP711P-169	1-1/4×1-1/2	3-5/8	3-15/32	4-23/32	3-15/16	0.6332

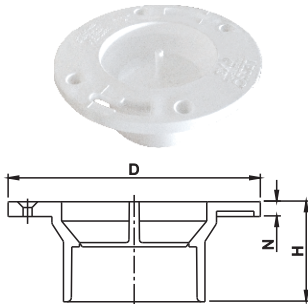
P-TRAP(H X SLIP) 	Part Number	Size (in)	G	G1	G2	G3	Weight (Lbs)
	LP713-015	1-1/2	4-3/32	3-15/32	5-3/16	3-7/8	0.6720

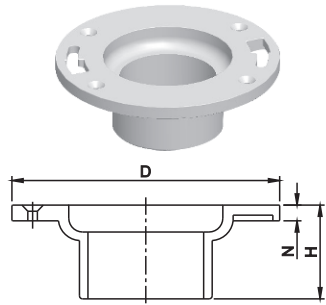
WASHER BOX P-TRAP (H X H) 	Part Number	Size (in)	G	G1	G2	G3	Weight (Lbs)
	LP716-020	2	2-1/4	5	6-9/16	4-19/32	0.7901

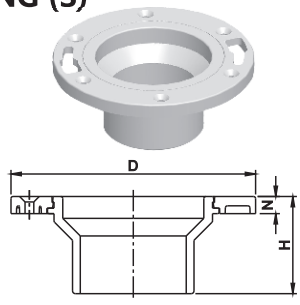
CLOSET FLANGE (H) 	Part Number	Size (in)	N	H	D	Weight (Lbs)
	LP800-422	4×3	13/32	2-25/32	7-1/16	0.5842
	LP800-040	4×4	13/32	2	7-1/16	0.6967

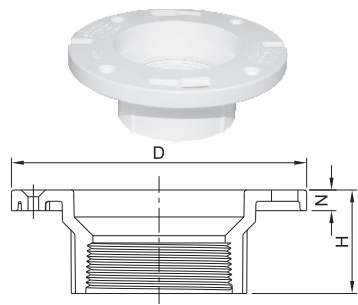
PVC DWV Fittings



CLOSET FLANGE W/TEST PLATE (H) 	Part Number	Size (in)	N	H	D	Weight (Lbs)
	LP800T-422	4×3	13/32	2-25/32	7-1/16	0.8642

CLOSET FLANGE, REDUCING (SPIGOT) 	Part Number	Size (in)	N	H	D	Weight (Lbs)
	LP801-422	4×3	13/32	2-15/32	7-1/16	0.7319

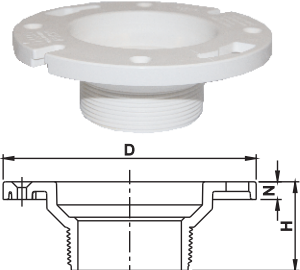
CLOSET FLANGE W/ ADJUSTABLE PLASTIC RING (S) 	Part Number	Size (in)	N	H	D	Weight (Lbs)
	LP812P-422	4×3	1/2	2-25/32	7-1/16	0.7853

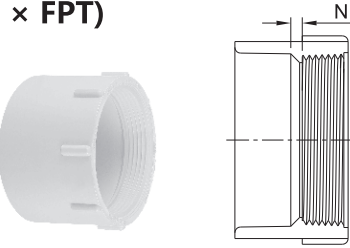
CLOSET FLANGE (FPT) 	Part Number	Size (in)	N	H	D	Weight (Lbs)
	LP830-422	4×3	1/2	2-15/32	7-1/32	0.8170

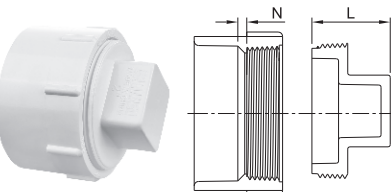
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PVC DWV Fittings



CLOSET FLANGE (MPT) 	Part Number	Size (in)	N	H	D	Weight (Lbs)
	LP831-422	4×3	1/2	2-15/32	7-1/32	0.7458

TUBE END CLEANOUT (H × FPT) 	Part Number	Size (in)	N	Weight (Lbs)
	LP905-015	1-1/4	5/32	0.0950
	LP905-020	2	5/32	0.1210
	LP905-030	3	1/4	0.3893
	LP905-040	4	1/4	0.6354

TUBE END CLEANOUT (H×GASKET PLUG) 	Part Number	Size (in)	N	N	Weight (Lbs)
	LP905X-015	1-1/2	5/32	1-3/8	0.1578
	LP905X-020	2	5/32	1-3/8	0.2176
	LP905X-030	3	1/4	1-23/32	0.6228
	LP905X-040	4	1/4	1-7/8	1.0430

Fitting Terms and Abbreviations:
H/HUB: Solvent Weld Socket
S: Spigot End (pipe O.D. size)
FPT: Female Iron Pipe Thread

MPT: Male Iron Pipe Thread
NPSM: Straight Thread for Mechanical Joint
SLIP: Trap End for Receiving Drain Tail Piece
W/: with

C.O.: Cleanout
S/D: Sewer&Drain
L.A.: Los Angeles

TECHNICAL MANUAL

Materials

LESSO PVC fittings are made from PVC compounds which conforms ASTM D1784, Classification 12454 B, early designated Type I, Grade 1. PVC is popular thermoplastic piping materials and has been used successfully for over 45 years in many industrial applications such as sanitary sewers and water transmission and distribution, also including sewer forcemains, reclaimed water, storm sewer, land and highway drainage, etc. The maximum work temperature of PVC is 1400F(600C). Main joint method contains solvent cementing, threading, flanging, gasketed joint.

MSDS

SECTION I PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: LESSO America Inc.

Address: 1010 Railroad Street, Corona, CA, 92882

Phone: (888)988-8839 or (951)547-6888

Fax: (951)547-6886

Trade Name: PVC, Polyvinyl Chloride

Chemical Name: PVC/Acrylic Copolymer

SECTION II HAZARDOUS INGREDIENTS

Ingredient	CAS Reg. No.	Max. Percent	15 mg/m ³ (total)*	ACGIH
Limestone	1317-65-3	17.5%	5 mg/m ³ (respirable)*	10 mg/m ³ *
Crystalline Silica	14808-60-7	0.4%	10 mg/m ³ ÷ (2+%SiO ₂) -as respirable dust 30 mg/m ³ ÷ (2+%SiO ₂) -as total dust	0.05 mg/m ³
Calcium Stearate	1592-23-0	1.1%	NE	(respirable)
Titanium Dioxide	13463-67-7	7.8%	15 mg/m ³	10 mg/m ³

Ingredients are considered hazardous under OSHA Hazard Communication Criteria, but are generally bound in the polymer matrix of the profile. Some release of ingredients may occur when subjected to processes such as sawing, sanding, or abrading. Release of silica particles by physical methods such as sawing during installations would not be expected to present significant exposures compared to established exposure limits, as airborne concentrations of total product dust would have to exceed 10 m³/m to exceed the TLV for crystalline silica. This also presumes all of the silica dust particles would be in the respirable dust size range.

* Exposure limits for calcium carbonate, the main constituent of limestone.

SECTION III HAZARDS IDENTIFICATION

Emergency Overview: None identified for product as purchased in plastic profiles in various colors.

Symptoms of Overexposure: None identified for product as purchased. Processing such as sawing, sanding, and abrasive applications that could release dust, or heating the product, could result in dust, vapor, or gas emissions that may cause eye, skin, or respiratory tract irritation.

Potential Health Effects: Dust from product may contain crystalline silica, a cause of silicosis and a substance identified as an occupational carcinogen; and linked to other health effects. Heating of the product could result in release of methacrylate monomer, which may also cause health effects such as skin sensitization in susceptible individuals, and with methyl sufficient exposure may affect kidneys, central nervous system, and liver. (See Section XI for additional health information).

Potential Environmental Effects: None identified. Material is not a RCRA Hazardous Waste.

TECHNICAL MANUAL

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SECTION IV FIRST AID MEASURES

- Eyes:** Flush eyes with water for at least 15 minutes while lifting upper and lower eyelids. Seek medical attention if irritation or discomfort persists.
- Skin Contact:** Remove dust with soap and water. Obtain medical attention if irritation persists or allergic skin reaction occurs.
- Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Obtain immediate medical attention.
- Ingestion:** Treat supportively and obtain medical attention as needed in the unlikely event ingestion is accomplished.
- Medical Conditions Aggravated by Exposure:
Breathing process emissions may aggravate existing lung disease.

SECTION V FIRE FIGHTING INFORMATION

- Flammable Properties:** Flashpoint: Not Applicable
- Flammable Limits:** Not Applicable
- Flammability:** Product is a combustible plastic
- Auto Ignition Temperature:** 840°F
- Fire Fighting Guidelines:**
- Extinguishing Media:** Water, Foam, or Dry Chemical ABC Extinguisher

Special Fire Fighting Procedures:

Firefighters should wear pressure demand self-contained breathing devices due to potentially hazardous thermal decomposition products.

Unusual Fire and Explosion Hazards:

In fire conditions may produce irritating or toxic vapors including hydrochloric acid, carbon monoxide, carbon dioxide, methyl methacrylate monomer, aldehydes, ammonia, hydrogen cyanide, hydrocarbons and other potential toxics dependent on specific conditions.

SECTION VI ACCIDENTAL RELEASE MEASURES**Spill and Clean up Procedure:**

Not applicable to profile product. Dispose of waste in accordance with all federal, state/provincial, and local regulations.

MSDS

SECTION VII HANDLING AND STORAGE

No specific safety precautions are necessary for the storage of materials. Keep product clear of walkways and floors to prevent tripping hazards.

Other Protective Measures:

Should dusting occur from material handling or processing, dust accumulation and potential sources of ignition such as static discharge should be addressed by the user, to prevent fire or explosion from suspended, finely divided particles.

SECTION VIII EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Effective local exhaust ventilation should be provided to capture dust generated during processes such as sanding or cutting, and to remove gas or vapor emissions from the work area should polymer breakdown begin from elevated temperatures.

Respiratory Protection: Select respirators based on potential exposures if engineering controls are not sufficient to maintain airborne concentrations below applicable exposure limits. Utilize only NIOSH approved respirators, selected and used in accordance with the OSHA Respiratory Protection Standard (29 CFR 1910.134).

Eye/Skin Protection: When cutting, sanding, or processing with dust generation, wear safety glasses with side shields or goggles. General purpose work gloves are acceptable. Select personal protective equipment (PPE) based on adherence to PPE Hazard Assessment Certification as required by 29 CFR 1910.132 (d)(2).

SECTION IX PHYSICAL AND CHEMICAL DATA

Appearance: Solid plastic profiles in various colors Melting Point: Not Determined

Odor: No Specific Odor

Specific Gravity: .50 - .80 g/cm³

Water Solubility: Not Applicable

Vapor Density: Not Determined

Percent Volatile: Not Determined

SECTION X STABILITY AND REACTIVITY

Stability: Stable under normal conditions. Decomposition products under high heat or fire conditions may include hydrochloric acid, carbon monoxide, carbon dioxide, methyl methacrylate monomer, aldehydes, ammonia, hydrogen cyanide, hydrocarbons and other potential toxics dependent on specific conditions.

Conditions to Avoid: Temperatures above 350 degrees F.

Materials to Avoid: Oxidizers

Hazardous Polymerization: Will not occur.

TECHNICAL MANUAL

MSDS

SECTION XI TOXICOLOGICAL INFORMATION

No product specific toxicological or environmental data available. Individual hazardous component information is provided as follows:

Crystalline Silica: Overexposure to respirable crystalline silica can cause silicosis, a fibrosis (scarring) of the lung, and possibly other lung disease. Carcinogen Status: Yes - IARC Group 1, NTP known human carcinogen, ACGIH suspected human carcinogen, State of California as a substance (airborne particles of respirable size) known to cause cancer. Some studies have shown increased risk of autoimmune system, kidney, and liver disease in silica-exposed workers.

Titanium Dioxide: May cause skin or respiratory irritation in some individuals; and may cause exacerbation of symptoms due to its irritant properties in persons with impaired pulmonary function, especially those with obstructive airway disease. Carcinogen Status: No.

Limestone: Composition is mainly calcium carbonate, a substance with ACGIH-TLV[?] and OSHA PEL exposure limits that are the same as for particulates without inherent toxicity concerns (i.e.- particulates not otherwise regulated, or specified). May cause eye, nose, throat, respiratory irritation; and may aggravate pre-existing respiratory conditions. Skin contact may aggravate existing dermatitis. Carcinogen Status: No.

Calcium Stearate: Individuals with hypercalcemia may be more susceptible to effects from excessive exposure to calcium compounds such as calcium carbonate and stearate. Carcinogen Status: No.

SECTION XII: ECOLOGICAL INFORMATION

None identified for this polymer product. Product is expected to decompose very slowly in the natural environment.

SECTION XIII: DISPOSAL CONSIDERATIONS

Dispose or recycle this material in accordance with applicable federal, state/provincial, and local regulations. (See Section II for hazardous components). Identified components of product are not known to be hazardous waste in this profiling. Product has not been subjected to the RCRA EP Toxicity test.

SECTION XIV: TRANSPORTATION INFORMATION

This product is not a hazardous material for purposes of transportation under the U.S. Department of Transportation Table of Hazardous Materials, 49 CFR 172.101.

SECTION XV: REGULATORY INFORMATION

SARA Title III Information: SEC 311/312: An article as shipped and stored.

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TECHNICAL MANUAL

Product Physical Characters

PVC COMPOUND CHARACTERS

Property	Requirement	Test Method
Impact Resistance (izod)	34.7 J/m	ASTM D1784
Tensile Strength	41.4 Mpa	
Module of Elasticity in Tensile	2758 Mpa	
Deflection Temperature Under Load , Min ,	70 °C	

PVC SCH40 FITTING PHYSICAL CHARACTERS (ASTM D2466)

Property	Requirement	Test Method
Burst Pressure	the Minimum Allowable	ASTM D 1599

PVC DWV FITTING PHYSICAL CHARACTERS (ASTM D2665)

Property	Requirement	Test Method
Flattening Strength	the Minimum Allowable	ASTM D 2412
Impact Resistance	15ft-lbf (20 J)	ASTM D 2444

TECHNICAL MANUAL

Product Chemical Resistance Information

LESSO PVC fittings resist attack from a large amount of typical chemical. However, care must be taken to avoid contact with chemicals that are harmful to PVC, which will weaken or damage the system. Please consult with LESSO before using these PVC product with any questionable materials that are not listed in table

Chemical	73°F (23°C)	140°F (60°C)	Chemical	73°F (23°C)	140°F (60°C)
Acetaldehyde	N	N	Alcohol, methyl (methanol)	R	R
Acetaldehyde, aq 40%	C	N	Alcohol, propyl (1-propanol)	R	R
Acetic Acid, 25%	R	R	Alcohol, propargyl	R	R
Acetic Acid, 60%	R	N	Allyl Chloride	N	N
Acetic Acid, 85%	R	N	Aluminum Fluoride	R	N
Acetic Acid, glacial	R	N	Alums (except Aluminum Fluoride)	R	R
Acetic Acid, vapor	R	R	Ammonia, gas	R	R
Acetic Anhydride	N	N	Ammonia, liquid	N	N
Acetone	N	N	Ammonium Dichromate	R	N
Acetylene	N	N	Ammonium Salts (except Ammonium Dichromate)	R	R
Acetyl Chloride	N	N	Ammonium Fluoride, 10%	R	R
Acetylnitrile	N	N	Ammonium Fluoride, 25%	R	C
Acrylonitrile	N	N	Amyl Acetate	N	N
Acrylic Acid	N	N	Amyl Chloride	N	N
Adipic Acid	R	R	Aniline	N	N
Alcohol, allyl	R	C	Aniline Chlorohydrate	N	N
Alcohol, amyl	N	N	Aniline Hydrochloride	N	N
Alcohol, benzyl	N	N	Anthraquinone	R	R
Alcohol, butyl (n-butanol)	R	R	Anthraquinone Sulfonic Acid	R	R
Alcohol, diacetone	N	N	Antimony Trichloride	R	R
Alcohol, ethyl (ethanol)	R	R	Aqua Regia	C	N
Alcohol, hexyl (hexanol)	R	R	Arsenic Acid, 80%	R	R
Alcohol, isopropyl (2-propanol)	R	R	Aryl-sulfonic Acid	R	R

TECHNICAL MANUAL

Chemical	73°F (23°C)	140°F (60°C)	Chemical	73°F (23°C)	140°F (60°C)
Barium Nitrate	R	N	Butyl Phenol	R	N
Barium Salts (except Barium Nitrate)	R	R	Butylene, Liquid	R	R
Beer	R	R	Butynediol	R	N
Beer Sugar Liquor	R	R	Butyric Acid	R	N
Benzaldehyde, 10%	R	N	Cadmium Cyanide	R	R
Benzene (benzol)	N	N	Calcium Bisulfide	N	N
Benzene Sulfonic Acid, 10%	R	R	Calcium Salts (except Calcium Bisulfide)	R	R
Benzene Sulfonic Acid, >10%	N	N	Calcium Hypochlorite, 30%	R	R
Benzoic Acid	R	R	Calcium Hydroxide	R	R
Black Liquor-paper	R	R	Calcium Nitrate	R	R
Bleach, 12% Active Chlorine	R	R	Calcium Oxide	R	R
Bleach, 5% Active Chlorine	R	R	Calcium Sulfate	R	R
Borax	R	R	Camphor	R	N
Boric Acid	R	R	Cane Sugar Liquors	R	R
Brine	R	R	Carbon Dioxide	R	R
Bromic Acid	R	R	Carbon Dioxide, aq	R	R
Bromine, Aq	R	R	Carbon Disulfide	N	N
Bromine, Liquid	N	N	Carbon Monoxide	R	R
Bromine, Gas, 25%	R	R	Carbitol	R	N
Bromobenzene	N	N	Carbon Tetrachloride	R	N
Bromotoluene	N	N	Carbonic Acid	R	R
Butadiene	R	R	Castor Oil	R	R
Butane	R	R	Caustic Potash (potassium Hydroxide), 50%	R	R
Butyl Acetate	N	N	Caustic Soda (sodium Hydroxide), <40%	R	R
Butyl Stearate	R	N	Cellosolve	R	N

TECHNICAL MANUAL

Chemical	73°F (23°C)	140°F (60°C)	Chemical	73°F (23°C)	140°F (60°C)
Cellosolve acetate	R	N	Corn syrup	R	R
Chloral hydrate	R	R	Cottonseed oil	R	R
Chloramine, dilute	R	N	Creosote	N	N
Chloric acid, 20%	R	R	Cresol, 90%	N	N
Chlorine, gas, dry	C	N	Cresylic acid, 50%	R	R
Chlorine, gas, wet	N	N	Croton aldehyde	N	N
Chlorine, liquid	N	N	Crude oil, sour	R	R
Chlorine water	R	R	Cupric salts, aq	R	R
Chloroacetic acid, 50%	R	R	Cyclohexane	N	N
Chloroacetyl chloride	R	N	Cyclohexanol	N	N
Chlorobenzene	N	N	Cyclohexanone	N	N
Chlorobenzyl chloride	N	N	Detergents, aq	R	R
Chloroform	N	N	Dextrin	R	R
Chloropicrin	N	N	Dextrose	R	R
Chlorosulfonic acid	R	N	Dibutoxyethyl phthalate	N	N
Chromic acid, 10%	R	R	Dibutyl phthalate	N	N
Chromic acid, 30%	R	R	Dibutyl sebacate	R	N
Chromic acid, 40%	R	C	Dichlorobenzene	N	N
Chromic acid, 50%	N	N	Dichloroethylene	N	N
Chromium potassium sulfate	R	N	Diesel fuels	R	R
Citric acid	R	R	Diethylamine	N	N
Coconut oil	R	R	Diethyl ether	R	N
Coffee	R	R	Diglycolic acid	R	R
Coke oven gas	R	R	Dimethyl formamide	N	N
Copper acetate	R	N	Dimethylamine	R	R
Copper salts, aq	R	R	Disodium phosphate	R	R
Corn oil	R	R	Dioxane-1,4	N	N

TECHNICAL MANUAL

Chemical	73°F (23°C)	140°F (60°C)	Chemical	73°F (23°C)	140°F (60°C)
Ether	N	N	Glycerine (glycerol)	R	R
Ethyl ether	N	N	Glycolic acid	R	R
Ethyl halides	N	N	Grape sugar	R	R
Ethylene glycol	R	R	Green liquor, paper	R	R
Ethylene halides	N	N	Heptane	R	R
Ethylene oxide	N	N	Hexane	R	N
Fatty acids	R	R	Hexanol	R	R
Ferric salts	R	R	Hydraulic oil	R	N
Fish oil	R	R	Hydrazine	N	N
Fluorine, dry gas	R	N	Hydrobromic acid,20%	R	R
Fluorine, wet gas	R	N	Hydrochloric acid	R	R
Fluoroboric acid	R	R	Hydrocyanic acid	R	R
Fluorosilicic acid, 50%	R	R	Hydrofluoric acid,30%	R	N
Formaldehyde	R	R	Hydrofluoric acid,50%	R	N
Formic acid	R	N	Hydrofluoric acid,100%	N	N
Freon-F11, F12, F130, F14	R	R	Hydrofluorosilicic acid	R	R
Freon-F21, F22	N	N	Hydrogen	R	R
Fructose	R	R	Hydrogen cyanide	R	R
Furfural	N	N	Hydrogen fluoride	N	N
Gallic acid	R	R	Hydrogen peroxide.50%	R	R
Gas, coal, manufactured	N	N	Hydrogen peroxide,90%	R	R
Gas, natural, methane	R	R	Hydrogen phosphide	R	R
Gasoline	R	R	Hydrogen sulfide,aq	R	R
Gelatin	R	R	Hydrogen sulfide,dry	R	R
Glucose	R	R	Hydroquinone	R	R
Glue, animal	R	R	Hydroxylamine sulfate	R	R

TECHNICAL MANUAL

Chemical	73°F (23°C)	140°F (60°C)	Chemical	73°F (23°C)	140°F (60°C)
Hypochlorous acid	R	R	Mercury	R	R
Iodine,aq,10%	N	N	Methane	R	R
Jet fuels,JP-4 and JP-5	R	R	Methoxyethyl oleate	R	N
Kerosene	R	R	Methyl acetate	N	N
Ketchup	R	N	Methyl amine	N	N
Ketones	N	N	Methyl bromide	N	N
Kraft paper liquor	R	R	Methyl cellosolve	N	N
Lactic acid,25%	R	R	Methyl chloride	N	N
Lactic acid,80%	R	N	Methyl chloroform	N	N
Lard oil	R	R	Methyl ethyl ketone	N	N
Lauric acid	R	R	Methyl isobutyl carbinol	N	N
Lauryl acetate	R	R	Methyl isobutyl ketone	N	N
Lauryl chloride	R	R	Methyl isopropyl ketone	N	N
Lead salts	R	R	Methyl methacrylate	R	N
Lime sulfur	R	N	Methyl sulfate	R	N
Linoleic acid	R	R	Methyl sulfauric acid	R	R
Linoleic oil	R	R	Methylene bromide	N	N
Linseed oil	R	R	Methylene chloride	N	N
Liqueurs	R	R	Methylene iodide	N	N
Lithium salts	R	R	Milk	R	R
Lubricating oils	R	R	Mineral oil	R	R
Magnesium salts	R	R	Molasses	R	R
Maleic acid	R	R	Monochloroacetic acid	R	R
Malic acid	R	R	Monochlorobenzene	N	N
Manganese sulfate	R	R	Monoethanolamine	N	N
Mercuric salts	R	R	Motor oil	R	R

TECHNICAL MANUAL

Chemical	73°F (23°C)	140°F (60°C)	Chemical	73°F (23°C)	140°F (60°C)
Naphtha	R	R	Paraffin	R	R
Naphthalene	N	N	Pentane	C	C
Natural gas	R	R	Peracetic acid,40%	R	N
Nickel acetate	R	N	Perchloric acid,15%	R	N
Nickel salts	R	R	Perchloric acid,70%	R	N
Nicotine	R	R	Perchloroethylene	C	C
Nicotinic acid	R	R	Perphosphate	R	N
Nitric acid,0 to 40%	R	R	Phenol	R	N
Nitric acid,50%	R	C	Phenylhydrazine	N	N
Nitric acid,70%	R	N	Phosphoric acid	R	R
Nitric acid,100%	N	N	Phosphoric anhydride	R	N
Nitrobenzene	N	N	Phosphorus,red	R	N
Nitroglycerine	N	N	Phosphorus,yellow	R	N
Nitroglycol	N	N	Phosphorus pentoxide	R	N
Nitrous acid,10%	R	R	Phosphorus trichloride	N	N
Nitrous oxide,gas	R	N	Photographic chemicals,aq	R	R
Oleic acid	R	R	Phthalic acid	C	C
Oleum	N	N	Picric acid	N	N
Olive oil	R	R	Plating solutions,metal	R	R
Oxalic acid	R	R	Potash	R	R
Oxygen,gas	R	R	Potassium amyl xanthate	R	N
Ozone,gas	R	R	Potassium iodide	R	N
Palmitic acid,10%	R	R	Potassium salts (except potassium iodide)	R	R
Palmitic acid,70%	R	N	Potassium permanganate	R	R

TECHNICAL MANUAL

Chemical	73°F (23°C)	140°F (60°C)	Chemical	73°F (23°C)	140°F (60°C)
Potassium permanganate,25%	R	N	Sulfamic acid	N	N
Propane	R	R	Sulfate&sulfire liquors	R	R
Propylene dichloride	N	N	Sulfur	R	R
Propylene oxide	N	N	Sulfur dioxide,dry	R	R
Pyridine	N	N	Sulfur dioxide,wet	R	N
Pyrogalllic acid	R	N	Sulfur trioxide,gas,dry	R	R
Rayon coagulating bath	R	R	Sulfur trioxide,wet	R	N
Salicylic acid	R	R	Sulfuric acid,up to 80%	R	R
Salicylaldehyde	N	N	Sulfuric acid,90 to 93%	R	N
Selenic acid,aq.	R	R	Sulfuric acid,94 to 100%	N	N
Silicic acid	R	R	Sulfurous acid	R	R
Silicone oil	R	N	Tall oil	R	R
Silver salts	R	R	Tannic acid	R	R
Soaps	R	R	Tanning liquors	R	R
Sodium chlorate	R	N	Tar	N	N
Sodium chlorite	N	N	Tartaric acid	R	R
Sodium hypochlorite	R	N	Terpineol	C	C
Sodium salts,aq (except sodium chlorate, sodium chlorite,and sodium hypochlorite)	R	R	Tetrachloroethane	C	C
Stannic chloride	R	R	Tetraethyl lead	R	N
Stannous chloride	R	R	Tetrahydrofuran	N	N
Starch	R	R	Tetralin	N	N
Stearic acid	R	R	Tetrasodium	R	R
Stoddard solvent	N	N	Thionyl chloride	N	N
Succinic acid	R	R	Thread cutting oils	R	N
Sugars,aq	R	R	Titanium tetrachloride	C	N

TECHNICAL MANUAL

Chemical	73°F (23°C)	140°F (60°C)	Chemical	73°F (23°C)	140°F (60°C)
Tetralin	N	N	Urea	R	R
Tetrasodium	R	R	Urine	R	R
Thionyl chloride	N	N	Vaseline	N	N
Thread cutting oils	R	N	Vegetable oils	R	R
Titanium tetrachloride	C	N	Vinegar	R	R
Toluene	N	N	Vinyl acetate	N	N
Tomato juice	R	R	Water,deionized	R	R
Transformer oil	R	R	Water,distilled	R	R
Tributyl citrate	R	N	Water,salt	R	R
Tributyl phosphate	N	N	Whiskey	R	R
Trichloroacetic acid	R	R	White liquor	R	R
Trichloroethylene	N	N	Wines	R	R
Triethanolamine	R	N	Xylene	N	N
Triethylamine	R	R	Zinc salts	R	R
Trimethyl propane	R	N			
Trisodium phosphate	R	R			
Turpentine	R	R			

*R=generally resistant;C=less resistant than R but still suitable for some conditions; N=not resistant

This table is meant to aid the designer in decisions as to transporting/conveyance of undiluted chemicals. Chemical resistance data are provided as a guide only. Information is based primarily on immersion of unstressed strips in chemicals and to a lesser degree on field experience.

Designing, Operating and Maintaining Piping Systems Using PVC Fittings Ron Bliesner, February 3, 1987

Handling and Storage

HANDLING

PVC fittings has excellent impact resistance under normal condition, but there is a slightly reduction on impact resistance when the ambient temperature fall below freezing. Attention must be paid to local insulating techniques and codes that require a particular method.

fittings must not fall or be thrown off the truck or into the trench, which perhaps leads to damage such as rupture, scatches, splits. Any damaged fittings must be discarded.

STORAGE

LESSO recommends that PVC fittings should be store in their original carton avoiding dirt or other potential damage and the carton have better be placed indoors. If storing outdoors, these products must be covered with a opaque materials such as canvas. At the same time, if package of fittings are covered, keep the air circulated against heat buildup in hot summer weather. Care should be taken that package of PVC fittings should be away from heat sources or moisture attack. If PVC fittings are subject to direct sunlight after installation, protection should be adopt with chemically compatible paint, uch as water based Latex.

Solvent cement has a definite shelf life. Each can or carton is clearly marked with a date of manufacture. Stock should be rotated that the oldest material must be used firstly. Do not allow solvent cement to be stored near the source of ignition, heat, sparks or open flame due to its flammability.

Solvent Cement Joint Procedure

1. PREPARATION

Prepare the necessary tools. Expose the pipe and fittings to the open air on the construction site for at least one hour. Take protective measurements on the connecting parts if the environments is extremely hot or extremely cold.

2. CUT THE PIPE

Use saw and miter box, wheel cutter or pipe cutter to cut the PVC pipe. These tools can make sure the cut is square. Protect pipe and fittings from serrated holding devices and abrasion.

3. REMOVE THE BURRS AND CHAMFER THE EDGES

Chamfer the cut ends to 10° to 15° and remove all the burrs from inside and outside of the pipe with a knife-edge, file, or deburring tool.

4. CLEAN THE PIPE AND FITTINGS

Wipe the joining surfaces by using clean, dry cloth or pager towel. Make sure all joining surfaces are free from dirt, dust, water and oil.

5. CHECK THE CLEANNES OF THE JOINING SURFACES

Check the cleanness of the joining surfaces. Then mark the pipe end with a socket depth line.

6. USE THE APPROPRIATE APPLICATOR SIZE FOR THE JOINT

Use an applicator with at least ½ the size of pipe. Keep applicator in can when not in use.

7. APPLY SOLVENT CEMENT

Apply a moderate even coating of cement in the fittings socket completely covering the pipe joining surfaces only. Heavy or excessive applications of cement may become an obstruction inside of the piping. Quickly apply a heavy even coat of cement to the outside of the pipe. Make sure that the coated distance on the pipe is equal to the depth of the fittings socket.

Note: Don't let cement puddle inside fittings or run down inside the pipe.

Acceptable Solvent Cement Type

Pipe and Fitting System	Diameter (in.)	Solvent Cement Standard	Cement Color (common usage, check local code)	Description	Primer (common usage, check local code)
PVC DWV or SCH.40 Pressure	1/2—4	ASTM D 2564	Clear	Regular or Medium-Bodied	Required ASTM F 656
PVC DWV or SCH.40 Pressure	6—16	ASTM D 2564	Clear or Grey	Medium or Heavy-Bodied	Required ASTM F 656
SCH.80 Pressure	1/4—2	ASTM D 2564	Grey	Medium or Heavy-Bodied	Required ASTM F 656
SCH.80 Pressure	2 1/2—16	ASTM D 2564	Grey	Medium or Heavy-Bodied	IPS P-70 or Oatey Industrial Grade

Solvent Cement Joint Procedure

Estimates for usage of solvent cements special for PVC fittings are given in the list below. The column is just for reference. Actual usage in the field could vary due to wide ranges of installation conditions. You may follow accurate dosage according to solvent cement suppliers.

Nominal Pipe Size	Pint	Quart	Gallon
1/2"	130	260	1040
3/4"	80	160	640
1"	70	140	560
1-1/4"	50	100	400
1-1/2"	35	70	280
2"	20	40	160
3"	15	30	120
4"	10	20	80
6"	N/R	8	32

8. ASSEMBLE IMMEDIATELY

Make the joint as quickly as possible after application of the cement and before the cement dries. While cement is still wet, insert the pipe into the fitting socket and twist 1/4 turn. Make sure that the pipe is inserted to the full depth of the socket and hold it for at least 30 seconds to avoid push-out.

9. REMOVE EXCESS CEMENT

Remove excess solvent cement from the exterior of the joint with a clean, dry cloth. Otherwise, the excessive solvent cement could permanently distort or weaken pipe.

10. DO NOT DISTURB DURING INITIAL SET PERIOD.

Do not attempt to disturb the pipe-fittings joint until after the cement has set; damage to joint and loss of fit may result. Should the cement dry partially before joint is made up, reapply cement before assembling.

Notes:

1. In case of conflicting solvent cementing instructions, the instruction of the cement manufacturer should be followed.
2. Some cements are not "one-step" and require prime before applied. The performance of applying prime is similar to procedure of applying cement. Please refers to the instructions from prime suppliers for detail.

TECHNICAL MANUAL

Solvent Cement Joint Procedure

RECOMMENDED INITIAL SET TIME

Nominal Pipe Size	600-1000F/160-380C	400-600/50-160C	00-400F/-180-50C
1/2" — 1-1/4"	15min	1hr	3hrs
1-1/2" — 2"	30min	2hrs	6hrs
3" — 6"	1hr	4hrs	12hrs

Note: Initial set schedule is the necessary time to allow before the joint can be carefully handled.
In damp or humid weather allow 50% more set time.

RECOMMENDED JOINT CURING TIME

Relative humidity 60% or less	Pipe size 1/2" to 1-1/4" (20 to 40mm)		Pipe size 1-1/2" to 2" (50 to 63mm)		Pipe size 3" to 6" (75 to 150mm)	
Temperature range during assembly and cure periods	Up to 160psi/ 11bar	160 to 370psi/ 11 to 26 bar	Up to 160psi/ 11bar	160 to 370psi/ 11 to 26 bar	Up to 160psi/ 11bar	160 to 370psi/ 11 to 26 bar
600-1000F/ 160-380C	1hr	6hrs	2hrs	12hrs	6hrs	24hrs
400-600/ 50-160C	2hrs	12hrs	4hrs	24hrs	12hrs	48hrs
00-400F/ -180-50C	8hrs	48hrs	16hrs	96hrs	48hrs	8days

Note: Joint cure schedule is the necessary time to allow before pressurizing system.
In damp or humid weather allow 50% more cure time.

The above data are based on laboratory tests and are intended as guidelines. For more specific information, contact should be made with cement manufacturer.

Special Consideration in Installation

TEMPERATURE CORRECTION FACTORS

Corrections must be made to derate all PVC fittings when operating temperatures are expected to exceed 73 degrees Fahrenheit. The working pressure is directly affected by temperature changes. The drop in pressure capacity can be calculated using table 3. Multiply the maximum working pressure by the temperature correction factor for a known temperature.

The chart below is to be used to determine recommended pressures. If you have any questions regarding your system, contact your architect or designer for proper system operations.

TEMPERATURE CORRECTION FACTORS:

Maximum Operation Temperature 0f(0c)	Derate Factor for Actual Working Pressure
73(23)	1
80(27)	0.88
90(32)	0.75
100(38)	0.62
110(43)	0.50
120(49)	0.40
130(54)	0.30
140(60)	0.22

Note: Maximum service temperature for PVC pipe is 140°F.

EXAMPLE

The nominal operation pressure for 2" SCH40 fittings is 280 psi in 73°F, if the ambient temperature for practical installation of PVC piping system is 110°F, then the maximum operation pressure is original value multiplied by correction factors, i.e, the value is equal to $280 \times 0.5 = 140$ psi.

PRESSURE SURGES

Definition:

Few piping systems are operated under "static" conditions for long periods of time. Hydraulic transient conditions or "surges" occur in every irrigation system. A pressure surge or "water hammer" is created any time the flowrate changes in a piping system. This may be caused by valve operation, pumps starting or stopping, line breaks or rapid escape of entrapped air.

Prevention Tips:

To limit the magnitude and frequency of pressure surges, system operators should use the following guidelines:

1. Operate the system to maintain pump flowrate as uniformly as possible. This will not only reduce hydraulic transient problems but will increase the life of the pumping unit.
2. Attempt to balance system flows so the sprinkler set changes are systematic within system subunits. Avoid changing from one main area of the system and back again in the operating program. Maintain sub-unit flows uniformly, if possible.
3. Run fewer sets for longer times. Hydraulically, it is easier on the system to run a given set as long as possible, provided runoff does not occur, or the moisture holding capacity of the soil is not exceeded. This will allow for fewer sets and, thereby, fewer opportunities for surges to occur.
4. Avoid operating too many sprinklers in one area of the system and elevating the operating velocities. Use the design guidelines to govern the number of sprinklers that may operate simultaneously on a given pipe segment or loop.

Designing, Operating and Maintaining Piping Systems Using PVC Fittings Ron Bliesner, February 3, 1987

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Limited Warranty

Except as otherwise mandated by law, LESSO America warrants to Buyer only that the Products directly manufactured by LESSO America will be free from defects in material and workmanship for a period of three years from the date of installation. Buyer agrees that this warranty shall be effective so long as the Products are used solely for the normal purposes for which they are intended and in conformity with industry established engineering, installation, operating, and maintenance specifications, recommendations and instructions. Violation thereof shall void this warranty and relieve LESSO America from any obligation under this warranty.

LESSO America may modify at any time design of products or materials used therein or discontinue their manufacture without any liability.

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Buyer shall notify LESSO America of any alleged defects within 48 hours of discovery of any alleged defect and within three years' warranty period. LESSO America is not liable for any warranty claim if such notice is not provided. After the examination of the returned products, if the goods are determined to be defective in materials or workmanship directly provided by LESSO America, LESSO America will, at its sole option, may either repair or replace the defective Products, or reimburse Buyer for the cost of such Products. This shall be Buyer's only remedy. All costs of shipping such questionable Products and any replacements thereof to and from LESSO America's facility shall be borne by Buyer.

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LESSO

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