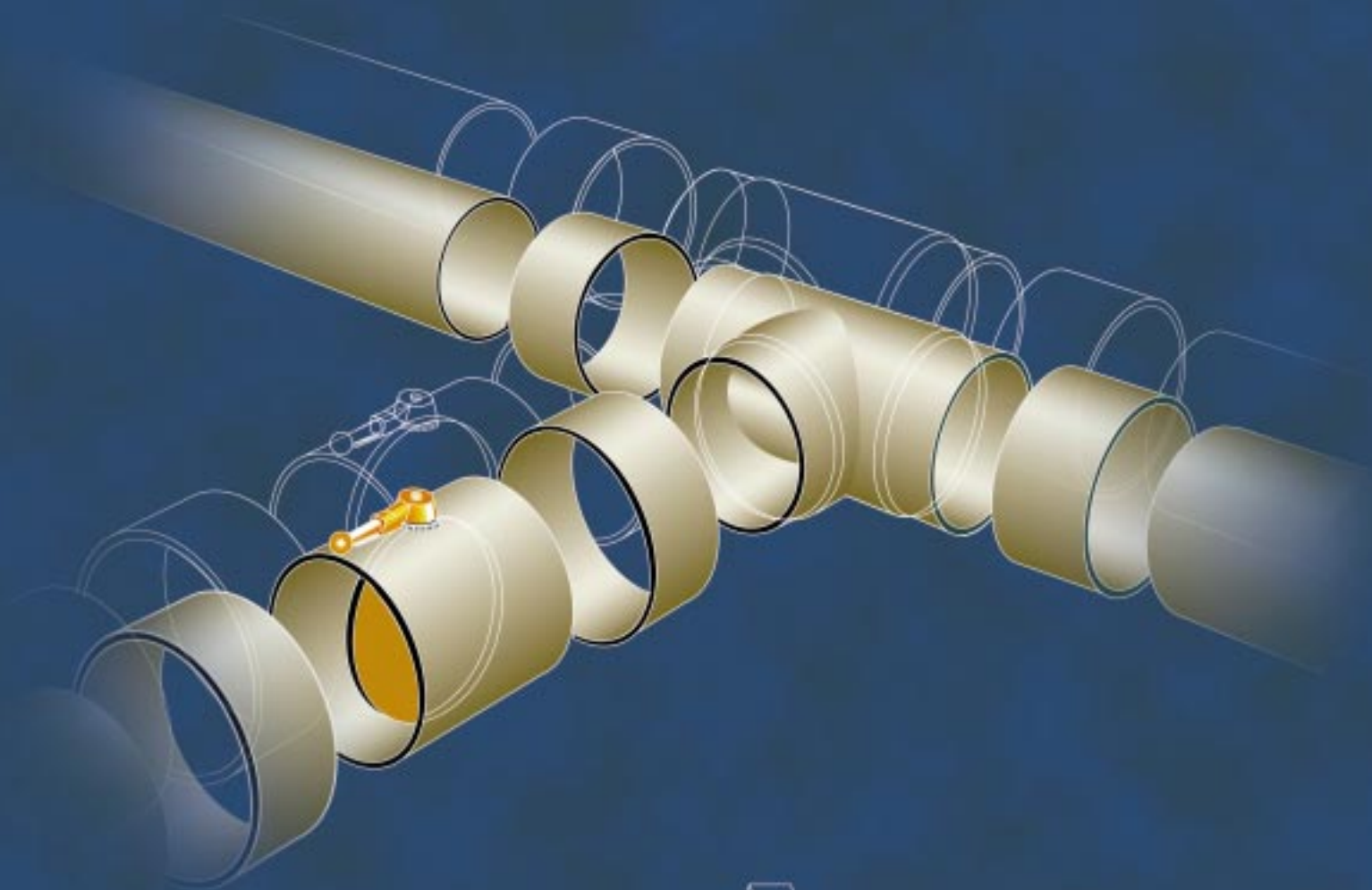


Pro-Vent™ Thermoplastic Ventilation and Exhaust Systems for Corrosive Gas Transport



CORROSION RESISTANCE

Pro-Vent piping is specifically designed and manufactured for ventilation and exhaust systems that transport corrosive fumes. It is superior in performance to PVC, fiberglass and sheet metal systems due to its chemical resistance, mechanical properties, solid construction, and ease of installation. It is perfect for applications as diverse as water treatment facilities, electroplating shops, semiconductor wet stations, and pharmaceutical processing.

Pro-Vent polypropylene is chemically resistant to many strong and weak acids, alkalis, organic solvents, and aggressive gases. PVC systems are limited in their exposure to fumes containing solvents, as PVC softens under contact with this media. The chemical resistance of fiberglass is determined by the resin selected and can be applied to many applications, but the resin liner in many systems is only 40 to 60 mil thick.

For Pro-Vent, minimum wall thickness of .25" is provided, eliminating the risk of delamination, corrosion or pitting in appropriate applications. The Pro-Vent operating temperature range is 15° F – 200° F, exceeding that of PVC, which is 32° F – 140° F. Pro-Vent polypropylene is a ductile material that maintains its mechanical properties to 15° F without becoming brittle. This is not true of PVC and fiberglass. Pro-Vent pipe also has superior impact strength. It is offered in three SDR ratings to meet specific job requirements. SDR 32, 45 psi (PRO 45) and SDR 41, 35 psi (PRO 30) are available in 4" through 54"; ventilation grade is available in 16" through 54".

MATERIAL GRADE

The Pro-Vent system is offered in two grades of polypropylene, each designed to meet specific ventilation requirements. Random copolymer polypropylene (PPR) is a ductile material with superior impact strength at lower temperatures. It has a lower modulus of elasticity for reduced stress in ventilation piping systems. Random copolymer PPR-s-el combines the mechanical properties of random copolymer PPR with the additional bene-

fits of being self extinguishing and electroconductive. This combination makes it ideal for transporting ignitable media.

TEMPERATURE RANGE

The system is able to withstand continuous operating temperatures that range from 15° F – 200° F.

PRESSURE RATINGS

All plastic pipe is designed to have a designated pressure rating at a temperature of 73.4° F (23° C) for water. Pro-Vent pipe and fittings are inventoried in two

pressure rated systems, both designed according to a Standard Dimension Ratio (SDR) which expresses the relationship between outside diameter and wall thickness. A consistent SDR will result in consistent pipe pressure rating through different size ranges. Please consult with Asahi/America Engineering Staff concerning allowable operating pressures.

JOINING METHODS

Pro-Vent piping systems can be quickly and easily assembled with thermal butt fusion, extrusion welding, or hot gas welding.

PRO-VENT PROPERTIES TABLE

| | Property | Test Method | Units | PPR Values | PPR-s-el Values |
|-----------------------|--|--------------------------|-------------------|------------------------|------------------------|
| Physical Properties | Density at 23° C | DIN 53 479 ISO/R 1183 | g/cm ³ | 0.908 | 1.12 |
| | Melt Flow Index MFI 190/5 Code T MFI 230/5 Code V MFI Range | DIN 53 735 ISO 1133 | g/10 min | 0.50 1.50 M 003 | 0.5 |
| Mechanical Properties | Tensile Stress at Yield | ISO/R 527 | N/mm ² | 25 | 29 |
| | Elongation at Yield | ISO/R 527 | % | 12 | 25 |
| | Tensile Stress at Break | ISO/R 527 | N/mm ² | 40 | 20 |
| | Elongation at Break | ISO/R 527 | % | > 50 | > 50 |
| | Flexural Stress at 3.5% Strain | ISO 178 | N/mm ² | 22 | — |
| | Modulus of Elasticity (tensile test) | ISO 178 | N/mm ² | 750 | 1000 |
| | Modulus in Shear | ISO/R 537 | N/mm ² | 400 | — |
| | Ball Indentation Hardness | ISO 9039 | N/mm ² | 45 | — |
| | Charpy Impact Strength at 23° C (notched) (acc IZOD) | ISO 179/2C | kJ/m ² | 20 | 4 |
| Thermal Properties | Charpy Impact Strength at -30° C | ISO 179/2D | kJ/m ² | 50 | — |
| | Crystallinity Melting Temperature | DIN 53 736 | ° C | 150–154 | 148 |
| | Vicat Softening Point VST-A/50 VST-B/50 | ISO/R 306 | ° C | — 60 | 135 80 |
| | Deflection Temperature under Load Method A Method B | ISO 75 | ° C | 45 68 | — — |
| | Thermal Conductivity (at 20° C) | DIN 52 612 | W/mK | 0.24 | — |
| | Thermal Expansion Coefficient | DIN 53 752 | ° C ⁻¹ | 1.5 x 10 ⁻⁴ | 1.5 x 10 ⁻⁴ |
| Electrical Properties | Flammability | DIN 4102 part 1 UL 94 | — | B2 94 HB | — V-O |
| | Specific Volume Resistivity | IEC Publ 93 | 0hm•cm | > 10 ¹⁶ | 3 x 10 ² |
| | Dielectric Strength | IEC Publ 243 | kV/mm | 75 | — |
| Resin Prop. | Surface Resistivity | IEC Publ 167 | Ohm | > 10 ¹³ | 3 x 10 ² |
| | Color | RAL | — | RAL 7032 grey | black |

1.0 SCOPE:

All requirements for polypropylene ventilation pipe, fittings, and dampers.

2.0 MATERIALS:

Pipe and fittings shall meet the requirements of a Type II copolymer polypropylene per ASTM D4101.

Alternative: All pipe and fittings shall be self extinguishing and electroconductive Type II copolymer per ASTM D4101.

3.0 PIPE:

All pipe shall be extruded in one continuous profile. Rolling of sheet to form pipe is not acceptable.

4.0 PRESSURE RATING:

All pipe and fittings shall be SDR32 for sizes 4" through 54".

Alternative: All pipe and fittings shall be SDR 41 for sizes 4" through 54".

Alternative: All pipe fittings shall be sized as SDR ventilation pipe with a minimum wall thickness of .236" on sizes 16" through 54".

4.1 Pipe shall be provided by Asahi/America, Inc. of Malden, MA with no approved equals. Manufacturer must be ISO-9001 certified.

5.0 DAMPERS:

All dampers shall be manufactured from materials compatible with the pipe and fittings as specified. All dampers shall have a multiple position handle that is fixed at each position.

6.0 FLANGES:

All flanges shall be per ANSI bolt hole pattern B16.5.

Alternative: All flanges shall be per NBS PS 15-69.

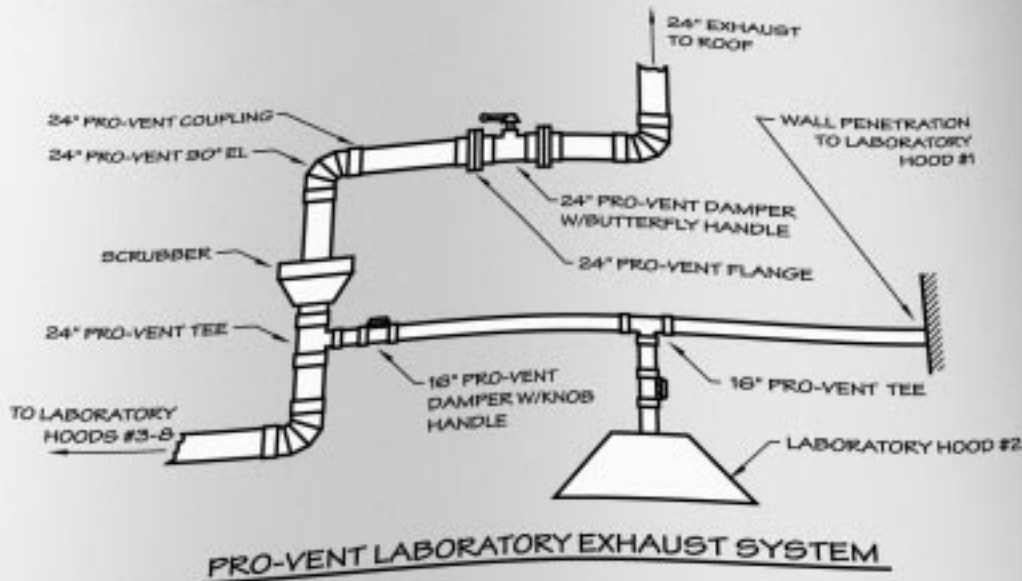
7.0 PIPE JOINING PROCEDURES:

All pipe and fitting joints shall be prepared using butt fusion. The temperatures, times, and pressure of fusion shall be according to Asahi/America, Inc. of Malden, MA printed literature.

Alternative: All pipe and fitting joints shall be accomplished using couplings and either hot gas welding or extrusion welding.

7.1 PIPE JOINING EQUIPMENT:

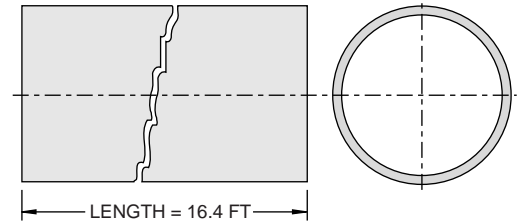
Pipe joining equipment shall be Proweld fusion equipment as supplied by Asahi/America, Inc. of Malden, MA.



PRO-VENT™ PIPE

PRO-VENT PIPE

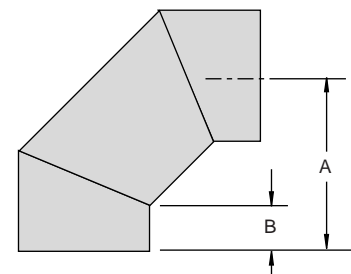
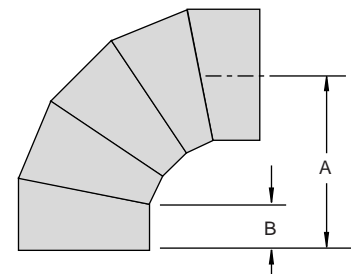
| Nominal Size (size code) | Outer Diameter | | Wall Thickness (in) | | |
|-----------------------------|----------------|-------|---------------------|------------------|----------------------|
| | (mm) | (in) | PRO 45 (7501) | PRO 30 (7601) | Vent Grade (7701) |
| 4 (040) | 110 | 4.33 | 0.138 | 0.106 | NA |
| 6 (060) | 160 | 6.30 | 0.197 | 0.154 | NA |
| 8 (080) | 200 | 7.87 | 0.244 | 0.193 | NA |
| 10 (100) | 250 | 9.84 | 0.307 | 0.240 | NA |
| 12 (120) | 315 | 12.40 | 0.386 | 0.303 | NA |
| 14 (140) | 355 | 13.98 | 0.437 | 0.343 | NA |
| 16 (160) | 400 | 15.75 | 0.488 | 0.386 | 0.236 |
| 18 (180) | 450 | 17.72 | 0.551 | 0.433 | 0.236 |
| 20 (200) | 500 | 19.69 | 0.610 | 0.480 | 0.315 |
| 22 (220) | 560 | 22.05 | 0.685 | 0.539 | 0.394 |
| 24 (240) | 630 | 24.80 | 0.772 | 0.606 | 0.394 |
| 28 (280) | 710 | 27.95 | 0.870 | 0.685 | 0.472 |
| 32 (320) | 800 | 31.50 | 0.980 | 0.772 | 0.472 |
| 36 (360) | 900 | 35.43 | 1.102 | 0.866 | 0.591 |
| 40 (400) | 1000 | 39.37 | 1.224 | 0.961 | 0.591 |
| 48 (480) | 1200 | 47.24 | 1.469 | 1.154 | 0.709 |
| 54 (540) | 1400 | 55.12 | 1.713 | 1.346 | 0.787 |



PRO-VENT™ 90° ELBOWS

PRO-VENT 90° ELBOWS

| Nominal Size (size code) | A (in) | B (in) |
|-----------------------------|-----------|-----------|
| 4 (040) | 4.72 | — |
| 6 (060) | 6.97 | — |
| 8 (080) | 8.66 | — |
| 10 (100) | 11.42 | — |
| 12 (120) | 13.39 | — |
| 14 (140) | 21 | 4 |
| 16 (160) | 24 | 4 |
| 18 (180) | 27 | 6 |
| 20 (200) | 30 | 6 |
| 22 (220) | 33 | 6 |
| 24 (240) | 36 | 8 |
| 28 (280) | 45 | 8 |
| 32 (320) | 48 | 8 |
| 36 (360) | 54 | 10 |
| 40 (400) | 63 | 10 |
| 48 (480) | 72 | 12 |
| 54 (540) | 81 | 12 |



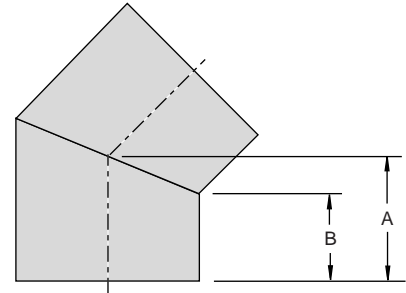
NOTES:

- Sizes 4-12" 90° elbows only available in molded PRO 45.
part #: (7502) + size code
- 5-piece 90° elbow part #:
PRO 45: (7503) + size code
PRO 30: (7603) + size code
Vent Grade: (7703) + size code
- 3-piece 90° elbow part #:
PRO 45: (7504) + size code
PRO 30: (7604) + size code
Vent Grade: (7704) + size code

PRO-VENT™ 45° ELBOWS

PRO-VENT 45° ELBOWS

| Nominal Size (size code) | A (in) | B (in) |
|-----------------------------|-----------|-----------|
| 4 (040) | 5 | 4.10 |
| 6 (060) | 6 | 4.70 |
| 8 (080) | 6 | 4.37 |
| 10 (100) | 6 | 3.96 |
| 12 (120) | 8 | 5.43 |
| 14 (140) | 10 | 7.11 |
| 16 (160) | 12 | 8.74 |
| 18 (180) | 12 | 8.33 |
| 20 (200) | 14 | 9.92 |
| 22 (220) | 16 | 11.43 |
| 24 (240) | 18 | 12.86 |
| 28 (280) | 22 | 16.21 |
| 32 (320) | 24 | 17.48 |
| 36 (360) | 27 | 19.66 |
| 40 (400) | 32 | 23.85 |
| 48 (480) | 36 | 26.22 |
| 54 (540) | 40 | 28.58 |



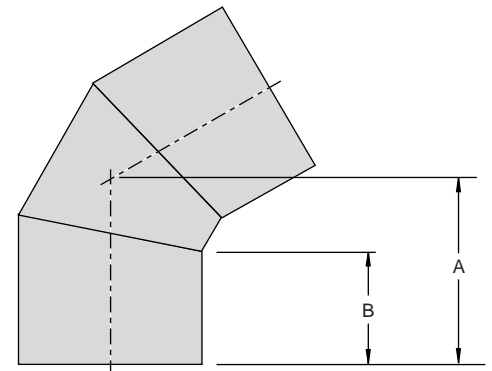
NOTES:

2-piece 45° elbow part #:
 PRO 45: (7505) + size code
 PRO 30: (7605) + size code
 Vent Grade: (7705) + size code

PRO-VENT™ 60° ELBOWS

PRO-VENT 60° ELBOWS

| Nominal Size (size code) | A (in) | B (in) |
|-----------------------------|-----------|-----------|
| 4 (040) | 5 | 3 |
| 6 (060) | 6 | 3 |
| 8 (080) | 7 | 4 |
| 10 (100) | 8 | 4 |
| 12 (120) | 9 | 4 |
| 14 (140) | 10 | 4 |
| 16 (160) | 12 | 4 |
| 18 (180) | 12 | 6 |
| 20 (200) | 14 | 6 |
| 22 (220) | 16 | 6 |
| 24 (240) | 18 | 8 |
| 28 (280) | 22 | 8 |
| 32 (320) | 24 | 8 |
| 36 (360) | 27 | 10 |
| 40 (400) | 32 | 10 |
| 48 (480) | 36 | 12 |
| 54 (540) | 40 | 12 |



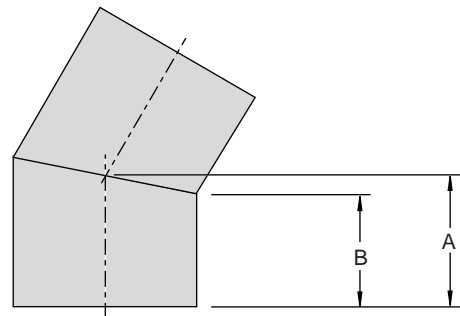
NOTES:

3-piece 60° elbow part #:
 PRO 45: (7506) + size code
 PRO 30: (7606) + size code
 Vent Grade: (7706) + size code

PRO-VENT™ 30° ELBOWS

PRO-VENT 30° ELBOWS

| Nominal Size (size code) | A (in) | B (in) |
|-----------------------------|-----------|-----------|
| 4 (040) | 5 | 4.42 |
| 6 (060) | 6 | 5.16 |
| 8 (080) | 6 | 4.95 |
| 10 (100) | 6 | 4.68 |
| 12 (120) | 8 | 6.34 |
| 14 (140) | 10 | 8.13 |
| 16 (160) | 12 | 9.89 |
| 18 (180) | 12 | 9.63 |
| 20 (200) | 14 | 11.36 |
| 22 (220) | 16 | 13.05 |
| 24 (240) | 18 | 14.68 |
| 28 (280) | 22 | 18.26 |
| 32 (320) | 24 | 19.78 |
| 36 (360) | 27 | 22.25 |
| 40 (400) | 32 | 26.73 |
| 48 (480) | 36 | 29.67 |
| 54 (540) | 40 | 32.62 |



NOTES:

2-piece 30° elbow part #:

PRO 45: (7507) + size code

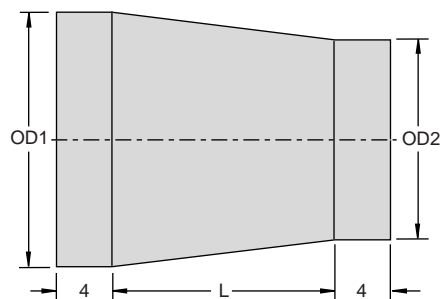
PRO 30: (7607) + size code

Vent Grade: (7707) + size code

PRO-VENT™ CONCENTRIC REDUCERS

PRO-VENT CONCENTRIC REDUCERS

| Nominal Size | Nominal OD2 (size code) | | | | | | L (in) |
|--------------|----------------------------|-------|----|-------|----|-------|------------------|
| | 3 | (422) | — | NA | — | NA | |
| 4 x OD2 | 3 | (422) | — | NA | — | NA | 1.22 |
| 6 x OD2 | 4 | (532) | 3 | (531) | — | NA | = (6 - OD2) x 5 |
| 8 x OD2 | 6 | (585) | 4 | (583) | — | NA | = (8 - OD2) x 5 |
| 10 x OD2 | 8 | (628) | 6 | (627) | 4 | (626) | = (10 - OD2) x 5 |
| 12 x OD2 | 10 | (673) | 8 | (660) | 6 | (659) | = (12 - OD2) x 5 |
| 14 x OD2 | 12 | (705) | 10 | (702) | 8 | (701) | = (14 - OD2) x 5 |
| 16 x OD2 | 14 | (724) | 12 | (721) | 10 | (719) | = (16 - OD2) x 5 |
| 18 x OD2 | 16 | (713) | 14 | (712) | 12 | (711) | = (18 - OD2) x 5 |
| 20 x OD2 | 18 | (734) | 16 | (726) | 14 | (717) | = (20 - OD2) x 5 |
| 22 x OD2 | 20 | ** | 18 | ** | 16 | ** | = (22 - OD2) x 5 |
| 24 x OD2 | 22 | ** | 20 | ** | 18 | ** | = (24 - OD2) x 5 |
| 28 x OD2 | 24 | ** | 22 | ** | 20 | ** | = (28 - OD2) x 5 |
| 32 x OD2 | 28 | ** | 24 | ** | 22 | ** | = (32 - OD2) x 5 |
| 36 x OD2 | 32 | ** | 28 | ** | 24 | ** | = (36 - OD2) x 5 |
| 40 x OD2 | 36 | ** | 32 | ** | 28 | ** | = (40 - OD2) x 5 |
| 48 x OD2 | 40 | ** | 36 | ** | 32 | ** | = (48 - OD2) x 5 |
| 54 x OD2 | 48 | ** | 40 | ** | 36 | ** | = (54 - OD2) x 5 |



NOTES:

1. Concentric reducer (sizes 4-20") part #:

PRO 45: (7516) + size code

PRO 30: (7616) + size code

Vent Grade: (7716) + size code

** Consult factory for part numbers of 22" and larger

2. Sizing example:

20 x 14 concentric reducer

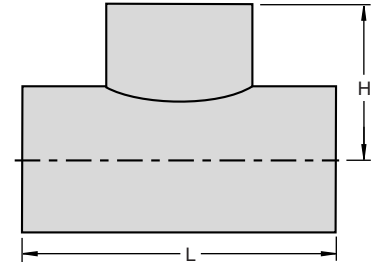
OD1 = 20, OD2 = 14

$L = (OD1 - OD2) \times 5 = (20 - 14) \times 5 = 30"$

Overall length = $30 + 4 + 4 = 38"$

PRO-VENT TEES

| Nominal Size (size code) | A (in) | B (in) |
|-----------------------------|-----------|-----------|
| 4 (040) | 4.14 | 8.47 |
| 6 (060) | 5.52 | 10.64 |
| 8 (080) | 6.70 | 13.40 |
| 10 (100) | 8.47 | 17.26 |
| 12 (120) | 11 | 22 |
| 14 (140) | 13 | 26 |
| 16 (160) | 14 | 28 |
| 18 (180) | 19 | 38 |
| 20 (200) | 20 | 40 |
| 22 (220) | 21 | 42 |
| 24 (240) | 24 | 48 |
| 28 (280) | 26 | 52 |
| 32 (320) | 28 | 56 |
| 36 (360) | 32 | 64 |
| 40 (400) | 34 | 68 |
| 48 (480) | 36 | 72 |
| 54 (540) | 37 | 74 |



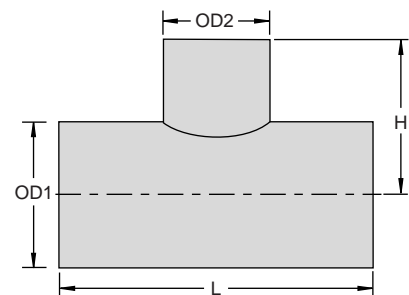
NOTES:

- Sizes 4-10" tees only available in molded
PRO 45: part # (7508) + size code
- Fabricated tee part #:
PRO 30: (7509) + size code
PRO 30: (7609) + size code
Vent Grade: (7709) + size code

PRO-VENT™ REDUCING TEES

PRO-VENT REDUCING TEES

| Nominal Size (size code) | H (in) | L (in) | Nominal Size (size code) | H (in) | L (in) |
|-----------------------------|-----------|-----------|-----------------------------|-----------|-----------|
| 6 x 4 (532) | 8 | 16 | 16 x 10 (719) | 14 | 28 |
| 8 x 4 (583) | 8 | 16 | 16 x 12 (721) | 14 | 28 |
| 8 x 6 (585) | 8 | 16 | 16 x 14 (724) | 14 | 28 |
| 10 x 4 (626) | 9 | 18 | 18 x 4 (706) | 19 | 38 |
| 10 x 6 (627) | 9 | 18 | 18 x 6 (707) | 19 | 38 |
| 10 x 8 (628) | 9 | 18 | 18 x 8 (708) | 19 | 38 |
| 12 x 4 (657) | 11 | 22 | 18 x 10 (709) | 19 | 38 |
| 12 x 6 (659) | 11 | 22 | 18 x 12 (711) | 19 | 38 |
| 12 x 8 (660) | 11 | 22 | 18 x 14 (712) | 19 | 38 |
| 12 x 10 (673) | 11 | 22 | 18 x 16 (713) | 19 | 38 |
| 14 x 4 (698) | 13 | 26 | 20 x 4 (729) | 20 | 40 |
| 14 x 6 (699) | 13 | 26 | 20 x 6 (730) | 20 | 40 |
| 14 x 8 (701) | 13 | 26 | 20 x 8 (731) | 20 | 40 |
| 14 x 10 (702) | 13 | 26 | 20 x 10 (732) | 20 | 40 |
| 14 x 12 (705) | 13 | 26 | 20 x 12 (733) | 20 | 40 |
| 16 x 4 (714) | 14 | 28 | 20 x 14 (717) | 20 | 40 |
| 16 x 6 (715) | 14 | 28 | 20 x 16 (726) | 20 | 40 |
| 16 x 8 (716) | 14 | 28 | | | |



NOTES:

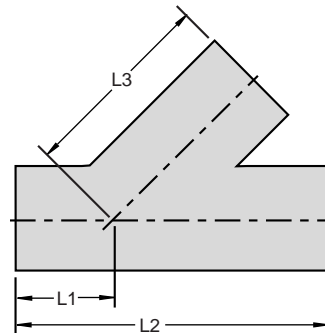
- Reducing tees (sizes 4-20") part #:
PRO 30: (7529) + size code
PRO 30: (7629) + size code
Vent Grade: not available

** Consult factory for part numbers 22" and larger

PRO-VENT™ LATERALS

PRO-VENT LATERALS

| Nominal Size (size code) | L1 (in) | L2 (in) | L3 (in) |
|-----------------------------|------------|------------|------------|
| 4 (040) | 6 | 18 | 12 |
| 6 (060) | 8 | 24 | 16 |
| 8 (080) | 10 | 30 | 20 |
| 10 (100) | 12 | 36 | 24 |
| 12 (120) | 14 | 42 | 28 |
| 14 (140) | 16 | 48 | 32 |
| 16 (160) | 18 | 54 | 36 |
| 18 (180) | 20 | 60 | 40 |
| 20 (200) | 22 | 64 | 44 |
| 22 (220) | 24 | 72 | 48 |
| 24 (240) | 26 | 78 | 52 |
| 28 (280) | — | — | — |
| 32 (320) | — | — | — |
| 36 (360) | — | — | — |
| 40 (400) | — | — | — |
| 48 (480) | — | — | — |
| 54 (540) | — | — | — |



NOTES:

Lateral part #:

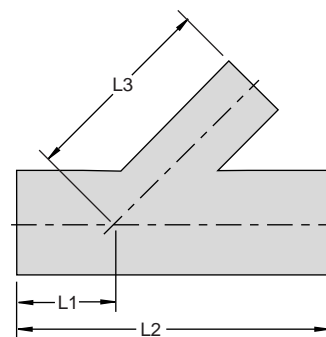
PRO 45: (7526) + size code

PRO 30: (7626) + size code

PRO-VENT™ REDUCING LATERALS

PRO-VENT REDUCING LATERALS

| Nominal Size (size code) | L1 (in) | L2 (in) | L3 (in) | Nominal Size (size code) | L1 (in) | L2 (in) | L3 (in) |
|-----------------------------|------------|------------|------------|-----------------------------|------------|------------|------------|
| 6 x 4 (532) | 8 | 24 | 16 | 16 x 10 (719) | 18 | 54 | 36 |
| 8 x 4 (583) | 10 | 30 | 20 | 16 x 12 (721) | 18 | 54 | 36 |
| 8 x 6 (585) | 10 | 30 | 20 | 16 x 14 (724) | 18 | 54 | 36 |
| 10 x 4 (626) | 12 | 36 | 24 | 18 x 4 (706) | 20 | 60 | 40 |
| 10 x 6 (627) | 12 | 36 | 24 | 18 x 6 (707) | 20 | 60 | 40 |
| 10 x 8 (628) | 12 | 36 | 24 | 18 x 8 (708) | 20 | 60 | 40 |
| 12 x 4 (657) | 14 | 42 | 28 | 18 x 10 (709) | 20 | 60 | 40 |
| 12 x 6 (659) | 14 | 42 | 28 | 18 x 12 (711) | 20 | 60 | 40 |
| 12 x 8 (660) | 14 | 42 | 28 | 18 x 14 (712) | 20 | 60 | 40 |
| 12 x 10 (673) | 14 | 42 | 28 | 18 x 16 (713) | 20 | 60 | 40 |
| 14 x 4 (698) | 16 | 48 | 32 | 20 x 4 (729) | 22 | 64 | 44 |
| 14 x 6 (699) | 16 | 48 | 32 | 20 x 6 (730) | 22 | 64 | 44 |
| 14 x 8 (701) | 16 | 48 | 32 | 20 x 8 (731) | 22 | 64 | 44 |
| 14 x 10 (702) | 16 | 48 | 32 | 20 x 10 (732) | 22 | 64 | 44 |
| 14 x 12 (705) | 16 | 48 | 32 | 20 x 12 (733) | 22 | 64 | 44 |
| 16 x 4 (714) | 18 | 54 | 36 | 20 x 14 (717) | 22 | 64 | 44 |
| 16 x 6 (715) | 18 | 54 | 36 | 20 x 16 (726) | 22 | 64 | 44 |
| 16 x 8 (716) | 18 | 54 | 36 | | | | |



NOTES:

1. Reducing laterals (sizes 4-20") part #:

PRO 45: (7528) + size code

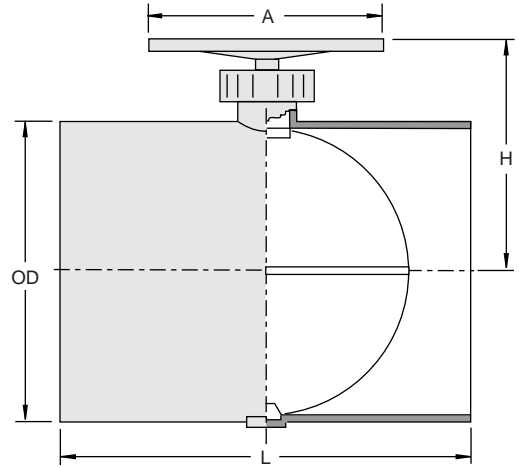
PRO 30: (7628) + size code

Vent Grade: not available

** Consult factory for part numbers 22" or larger

PRO-VENT DAMPER KNOB HANDLES

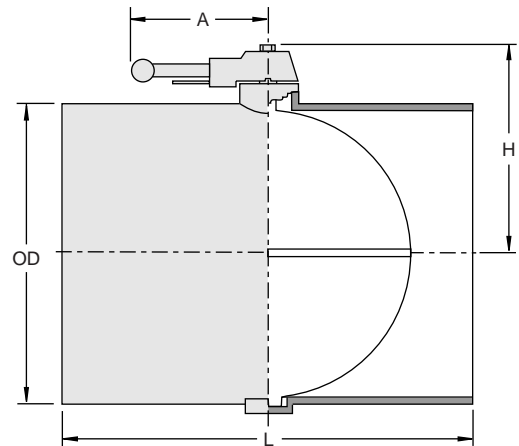
| Nominal Size (size code) | A (in) | H (in) | L (in) |
|-----------------------------|-----------|-----------|-----------|
| 4 (040) | 4.72 | 4.13 | 5.12 |
| 6 (060) | 4.72 | 5.12 | 6.93 |
| 8 (080) | 4.72 | 5.91 | 7.68 |
| 10 (100) | NA | NA | NA |
| 12 (120) | NA | NA | NA |
| 14 (140) | NA | NA | NA |
| 16 (160) | NA | NA | NA |
| 18 (180) | NA | NA | NA |
| 20 (200) | NA | NA | NA |
| 22 (220) | NA | NA | NA |
| 24 (240) | NA | NA | NA |
| 28 (280) | NA | NA | NA |
| 32 (320) | NA | NA | NA |
| 36 (360) | NA | NA | NA |
| 40 (400) | NA | NA | NA |
| 48 (480) | NA | NA | NA |
| 54 (540) | NA | NA | NA |



- NOTES:**
1. Knob handles only available for sizes 8" and smaller
 2. Plain end damper part #: (7510) + size code

PRO-VENT DAMPER BUTTERFLY HANDLES

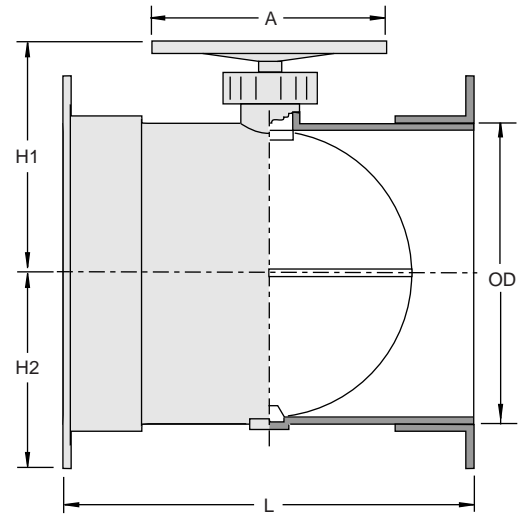
| Nominal Size (size code) | A (in) | H (in) | L (in) |
|-----------------------------|-----------|-----------|-----------|
| 4 (040) | NA | NA | NA |
| 6 (060) | NA | NA | NA |
| 8 (080) | NA | NA | NA |
| 10 (100) | 9.80 | 10.53 | 21 |
| 12 (120) | 9.80 | 11.81 | 21 |
| 14 (140) | 9.80 | 12.60 | 21 |
| 16 (160) | 9.80 | 13.48 | 21 |
| 18 (180) | 9.80 | 14.47 | 21 |
| 20 (200) | 9.80 | 15.45 | 24 |
| 22 (220) | 9.80 | 16.63 | 24 |
| 24 (240) | 9.80 | 18.01 | 24 |
| 28 (280) | 9.80 | 19.59 | 30 |
| 32 (320) | 9.80 | 21.36 | 32 |
| 36 (360) | 9.80 | 23.33 | 38 |
| 40 (400) | 9.80 | 25.30 | 44 |
| 48 (480) | 9.80 | 29.23 | 50 |
| 54 (540) | 9.80 | 33.17 | 56 |



- NOTES:**
1. Butterfly handles only available for sizes 10" and up
 2. Plain end damper part #: (7510) + size code

PRO-VENT DAMPER FLANGED KNOB HANDLES

| Nominal Size (size code) | A (in) | H1 (in) | H2 (in) | L (in) |
|-----------------------------|-----------|------------|------------|-----------|
| 4 (040) | 4.72 | 4.13 | 4.19 | 9.12 |
| 6 (060) | 4.72 | 5.12 | 5.19 | 6.93 |
| 8 (080) | 4.72 | 5.91 | 6.19 | 7.68 |
| 10 (100) | NA | NA | NA | NA |
| 12 (120) | NA | NA | NA | NA |
| 14 (140) | NA | NA | NA | NA |
| 16 (160) | NA | NA | NA | NA |
| 18 (180) | NA | NA | NA | NA |
| 20 (200) | NA | NA | NA | NA |
| 22 (220) | NA | NA | NA | NA |
| 24 (240) | NA | NA | NA | NA |
| 28 (280) | NA | NA | NA | NA |
| 32 (320) | NA | NA | NA | NA |
| 36 (360) | NA | NA | NA | NA |
| 40 (400) | NA | NA | NA | NA |
| 48 (480) | NA | NA | NA | NA |
| 54 (540) | NA | NA | NA | NA |

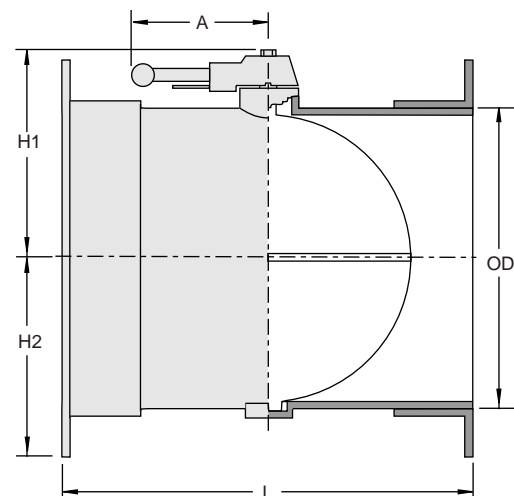


NOTES:

1. Knob handles only available in sizes 8" and smaller
2. Flanges are sized to PS 1569 standards and come without bolt holes
3. Flanges damper part #: (7512) + size code

PRO-VENT DAMPER FLANGED BUTTERFLY HANDLES

| Nominal Size (size code) | A (in) | H1 (in) | H2 (in) | L (in) |
|-----------------------------|-----------|------------|------------|-----------|
| 4 (040) | NA | NA | NA | NA |
| 6 (060) | NA | NA | NA | NA |
| 8 (080) | NA | NA | NA | NA |
| 10 (100) | 9.80 | 10.53 | 7.19 | 21 |
| 12 (120) | 9.80 | 11.81 | 8.19 | 21 |
| 14 (140) | 9.80 | 12.60 | 9.19 | 21 |
| 16 (160) | 9.80 | 13.48 | 10.19 | 21 |
| 18 (180) | 9.80 | 14.47 | 11.19 | 21 |
| 20 (200) | 9.80 | 15.45 | 12.19 | 24 |
| 22 (220) | 9.80 | 16.63 | 13.19 | 24 |
| 24 (240) | 9.80 | 18.01 | 14.19 | 24 |
| 28 (280) | 9.80 | 19.59 | 16.19 | 30 |
| 32 (320) | 9.80 | 21.36 | 18.19 | 32 |
| 36 (360) | 9.80 | 23.33 | 20.19 | 38 |
| 40 (400) | 9.80 | 25.30 | 22.19 | 44 |
| 48 (480) | 9.80 | 29.23 | 27.19 | 50 |
| 54 (540) | 9.80 | 33.17 | 30.19 | 56 |



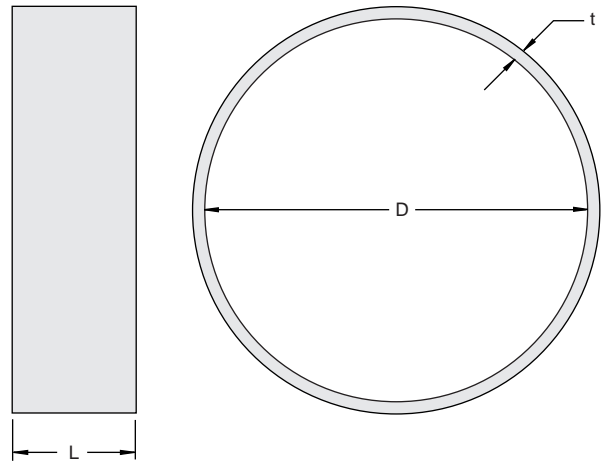
NOTES:

1. Butterfly handles only available in sizes 10" and up
2. Flanges are sized to PS 1569 standards and come without bolt holes
3. Flanged damper part #: (7512) + size code

PRO-VENT™ COUPLINGS

PRO-VENT COUPLINGS

| Nominal Size (size code) | D (in) | L (in) | t (in) |
|-----------------------------|-----------|-----------|-----------|
| 4 (040) | 4.46 | 6 | 1/8 |
| 6 (060) | 6.42 | 6 | 1/8 |
| 8 (080) | 8.00 | 6 | 3/16 |
| 10 (100) | 9.97 | 6 | 1/4 |
| 12 (120) | 12.53 | 6 | 1/4 |
| 14 (140) | 14.10 | 6 | 1/4 |
| 16 (160) | 15.87 | 6 | 1/4 |
| 18 (180) | 17.84 | 6 | 1/4 |
| 20 (200) | 19.81 | 6 | 1/4 |
| 22 (220) | 22.17 | 6 | 1/4 |
| 24 (240) | 24.93 | 6 | 1/4 |
| 28 (280) | 28.08 | 6 | 1/4 |
| 32 (320) | 31.62 | 6 | 1/4 |
| 36 (360) | 35.56 | 6 | 1/4 |
| 40 (400) | 39.50 | 6 | 1/4 |
| 48 (480) | 47.37 | 6 | 1/4 |
| 54 (540) | 55.24 | 6 | 1/4 |



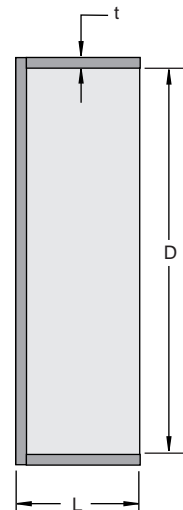
NOTES:

Coupling part #: (7515) + size code

PRO-VENT™ SLIP CAPS

PRO-VENT SLIP CAPS

| Nominal Size (size code) | D (in) | L (in) | t (in) |
|-----------------------------|-----------|-----------|-----------|
| 4 (040) | 4.46 | 3 | 1/8 |
| 6 (060) | 6.42 | 3 | 1/8 |
| 8 (080) | 8.00 | 3 | 3/16 |
| 10 (100) | 9.97 | 3 | 1/4 |
| 12 (120) | 12.53 | 3 | 1/4 |
| 14 (140) | 14.10 | 3 | 1/4 |
| 16 (160) | 15.87 | 3 | 1/4 |
| 18 (180) | 17.84 | 3 | 1/4 |
| 20 (200) | 19.81 | 3 | 1/4 |
| 22 (220) | 22.17 | 3 | 1/4 |
| 24 (240) | 24.93 | 3 | 1/4 |
| 28 (280) | 28.08 | 3 | 1/4 |
| 32 (320) | 31.62 | 3 | 1/4 |
| 36 (360) | 35.56 | 3 | 1/4 |
| 40 (400) | 39.50 | 3 | 1/4 |
| 48 (480) | 47.37 | 3 | 1/4 |
| 54 (540) | 55.24 | 3 | 1/4 |



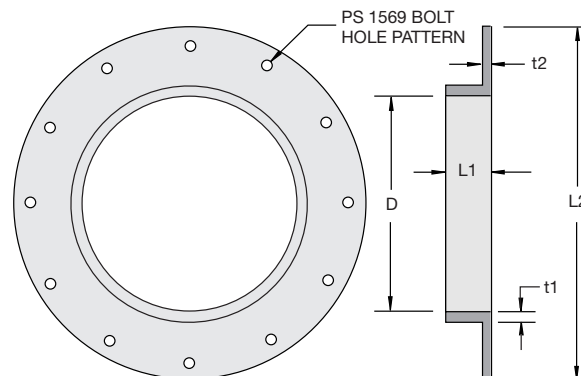
NOTES:

Slip cap part #: (7525) + size code

PRO-VENT™ SLIP FLANGES

PRO-VENT SLIP FLANGES

| Nominal Size (size code) | D (in) | t1 (in) | L1 (in) | t2 (in) | L2 (in) | BH Cir φ (in) | # Holes (in) | Hole φ (in) |
|-----------------------------|-----------|------------|------------|------------|--------------------------------|------------------|-----------------|----------------|
| 4 (040) | 4.46 | 1/8 | 3 | 1/4 | 8 ³ / ₈ | 7 | 4 | 7/16 |
| 6 (060) | 6.42 | 1/8 | 3 | 1/4 | 10 ³ / ₈ | 9 | 8 | 7/16 |
| 8 (080) | 8.00 | 3/16 | 3 | 1/4 | 12 ³ / ₈ | 11 | 8 | 7/16 |
| 10 (100) | 9.97 | 1/4 | 3 | 1/4 | 14 ³ / ₈ | 13 | 12 | 7/16 |
| 12 (120) | 12.53 | 1/4 | 3 | 1/4 | 16 ³ / ₈ | 15 | 12 | 7/16 |
| 14 (140) | 14.10 | 1/4 | 3 | 1/4 | 18 ³ / ₈ | 17 | 12 | 7/16 |
| 16 (160) | 15.87 | 1/4 | 3 | 1/2 | 20 ³ / ₈ | 19 | 16 | 7/16 |
| 18 (180) | 17.84 | 1/4 | 3 | 1/2 | 22 ³ / ₈ | 21 | 16 | 7/16 |
| 20 (200) | 19.81 | 1/4 | 3 | 1/2 | 24 ³ / ₈ | 23 | 20 | 7/16 |
| 22 (220) | 22.17 | 1/4 | 3 | 1/2 | 26 ³ / ₈ | 25 | 20 | 7/16 |
| 24 (240) | 24.93 | 1/4 | 3 | 1/2 | 28 ³ / ₈ | 27 | 20 | 7/16 |
| 28 (280) | 28.08 | 1/4 | 3 | 1/2 | 32 ³ / ₈ | 31 | 28 | 7/16 |
| 32 (320) | 31.62 | 1/4 | 3 | 1/2 | 36 ³ / ₈ | 35 | 28 | 7/16 |
| 36 (360) | 35.56 | 1/4 | 3 | 1/2 | 40 ³ / ₈ | 39 | 32 | 7/16 |
| 40 (400) | 39.50 | 1/4 | 3 | 5/8 | 44 ³ / ₈ | 43 | 36 | 7/16 |
| 48 (480) | 47.37 | 1/4 | 3 | 5/8 | 54 ³ / ₈ | 52 | 44 | 9/16 |
| 54 (540) | 55.24 | 1/4 | 3 | 5/8 | 60 ³ / ₈ | 58 | 44 | 9/16 |



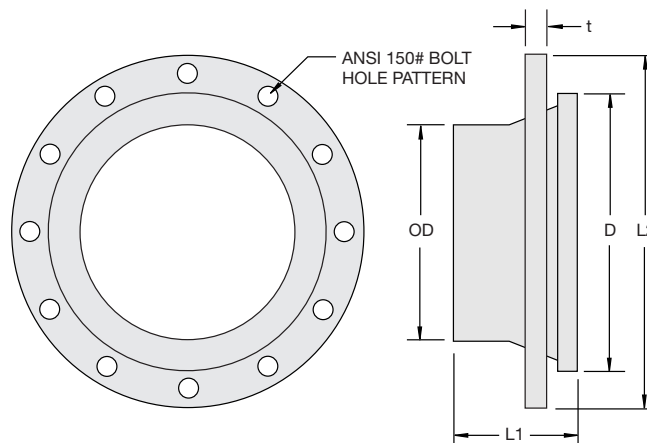
NOTES:

- PS 1569 flange part #: with holes: (7517) + size code without holes: (7518) + size code
- PS 1569 flanges for hot gas or extrusion welding only

ANSI STUB ENDS AND BACKING RINGS

ANSI STUB ENDS AND BACKING RINGS

| Nominal Size (size code) | D (in) | L1 (in) | t (in) | L2 (in) | BH Cir φ (in) | # Holes (in) | Hole φ (in) |
|-----------------------------|-----------|------------|-----------|------------|------------------|-----------------|----------------|
| 4 (040) | 6.72 | 3.15 | 0.709 | 9.02 | 7.50 | 8 | 0.750 |
| 6 (060) | 8.65 | 3.15 | 0.945 | 11.14 | 9.50 | 8 | 0.875 |
| 8 (080) | 10.89 | 3.94 | 0.945 | 13.58 | 11.75 | 8 | 0.875 |
| 10 (100) | 12.60 | 3.94 | 1.063 | 16.22 | 14.25 | 12 | 1.000 |
| 12 (120) | 16.00 | 3.94 | 1.260 | 19.17 | 17.00 | 12 | 1.000 |
| 14 (140) | 16.93 | 4.72 | 0.938 | 21.00 | 18.75 | 12 | 1.125 |
| 16 (160) | 18.98 | 4.72 | 1.000 | 23.50 | 21.25 | 16 | 1.125 |
| 18 (180) | 23.03 | 4.72 | 1.062 | 25.00 | 22.75 | 16 | 1.250 |
| 20 (200) | 23.03 | 4.72 | 1.125 | 27.50 | 25.00 | 20 | 1.250 |
| 22 (220) | 26.97 | 4.72 | 1.188 | 29.50 | 27.25 | 20 | 1.375 |
| 24 (240) | 26.97 | 4.72 | 1.250 | 32.00 | 29.50 | 20 | 1.375 |
| 28 (280) | 31.50 | 4.72 | 1.312 | 36.50 | 34.00 | 28 | 1.375 |
| 32 (320) | 35.63 | 4.72 | 1.500 | 41.75 | 38.75 | 28 | 1.625 |
| 36 (360) | 39.57 | 4.72 | 1.625 | 46.00 | 42.75 | 32 | 1.625 |
| 40 (400) | 43.70 | 5.51 | 1.625 | 50.75 | 47.25 | 36 | 1.625 |
| 48 (480) | — | — | 1.750 | 59.50 | 56.00 | 44 | 1.625 |
| 54 (540) | — | — | 2.125 | 66.25 | 62.75 | 44 | 1.875 |



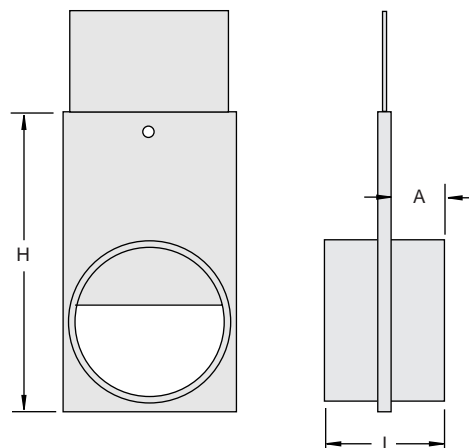
NOTES:

- PRO 45 stub ends (4–40") part #: (7519) + size code PRO 30 stub ends (28–40") part #: (7619) + size code
- PP backing rings (4–12") part #: (7520) + size code DI backing rings (4–54") part #: (7521) + size code
- ANSI flanges for butt fusion only

PRO-VENT™ BLAST GATES

PRO-VENT BLAST GATES

| Nominal Size (size code) | A (in) | H (in) | L (in) |
|-----------------------------|-----------|-----------|-----------|
| 4 (040) | 4 | 8 | 9 |
| 6 (060) | 4 | 11 | 9 |
| 8 (080) | 4 | 14 | 9 |
| 10 (100) | 4 | 17 | 9 |
| 12 (120) | 4 | 20 | 9 |
| 14 (140) | 4 | 23 | 9 |
| 16 (160) | 4 | 26 | 9 |
| 18 (180) | 6 | 29 | 13 |
| 20 (200) | 6 | 32 | 13 |
| 22 (220) | 6 | 35 | 13 |
| 24 (240) | 6 | 38 | 13 |
| 28 (280) | 6 | 44 | 13 |
| 32 (320) | 8 | 50 | 17 |
| 36 (360) | 8 | 56 | 17 |
| 40 (400) | 8 | 62 | 17 |
| 48 (480) | 8 | 74 | 17 |
| 54 (540) | 8 | 83 | 17 |



NOTES:

Blast gate part #:

PRO 45: (7514) + size code

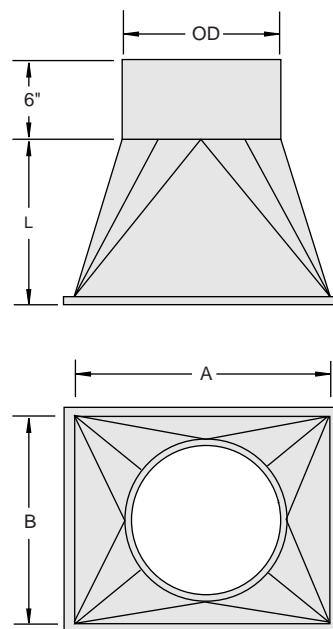
PRO 30: (7614) + size code

Vent Grade: (7714) + size code

PRO-VENT™ SQUARE TO ROUND TRANSITION

PRO-VENT SQUARE TO ROUND TRANSITION

| Nominal Size (size code) | A x B (in x in) | L (in) |
|-----------------------------|--------------------|-----------|
| 4 (040) | any size | 12 |
| 6 (060) | any size | 12 |
| 8 (080) | any size | 12 |
| 10 (100) | any size | 12 |
| 12 (120) | any size | 12 |
| 14 (140) | any size | 24 |
| 16 (160) | any size | 24 |
| 18 (180) | any size | 24 |
| 20 (200) | any size | 24 |
| 22 (220) | any size | 24 |
| 24 (240) | any size | 24 |
| 28 (280) | any size | 36 |
| 32 (320) | any size | 36 |
| 36 (360) | any size | 36 |
| 40 (400) | any size | 48 |
| 48 (480) | any size | 48 |
| 54 (540) | any size | 60 |



NOTES:

Square to round transition part #:

PRO 45: (7522) + size code

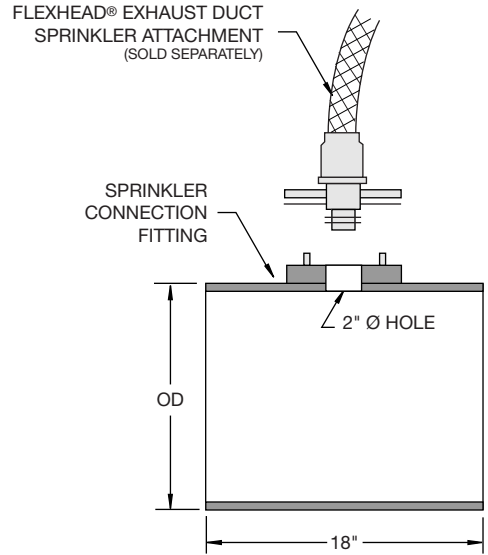
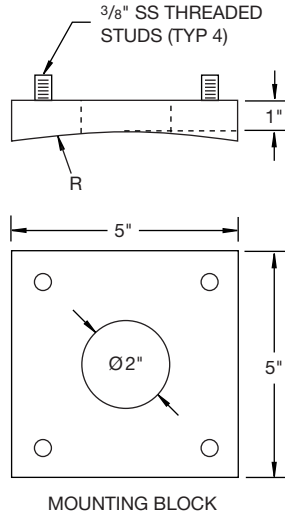
PRO 30: (7622) + size code

Vent Grade: (7722) + size code

PRO-VENT™ SPRINKLER CONNECTION FITTINGS

PRO-VENT SPRINKLER CONNECTION FITTINGS

| Nominal Size (size code) | R (in) |
|-----------------------------|-----------|
| 4 (040) | 2.17 |
| 6 (060) | 3.15 |
| 8 (080) | 3.94 |
| 10 (100) | 4.92 |
| 12 (120) | 6.20 |
| 14 (140) | 6.99 |
| 16 (160) | 7.87 |
| 18 (180) | 8.86 |
| 20 (200) | 9.84 |
| 22 (220) | 11.02 |
| 24 (240) | 12.40 |
| 28 (280) | 13.98 |
| 32 (320) | 15.75 |
| 36 (360) | 17.72 |
| 40 (400) | 19.69 |
| 48 (480) | 23.62 |
| 54 (540) | 27.56 |



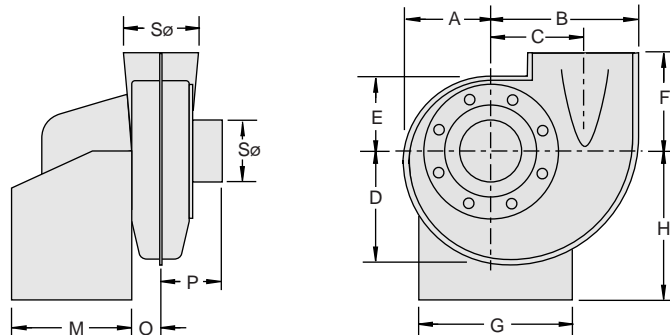
NOTES:
 Sprinkler connection part #:
 PRO 45: (7523) + size code
 PRO 30: (7623) + size code
 Vent Grade: (7723) + size code

PRO-VENT™ FANS

PRO-VENT FANS

| Nominal Size (size code) | A (in) | B (in) | C (in) | D (in) | E (in) | F (in) | G (in) | H (in) | M (in) | O (in) | P (in) | S (in) |
|-----------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|--------------------------------|--------------------------------|
| 5 (050) | 6 ³ / ₄ | 9 ¹ / ₂ | 6 ¹ / ₂ | 8 | 6 | 7 ¹ / ₈ | 10 ³ / ₄ | 11 | 8 ¹ / ₈ | 2 | 4 ³ / ₈ | 4 ⁷ / ₈ |
| 6 (060) | 8 ³ / ₈ | 11 ³ / ₄ | 8 ¹ / ₈ | 9 ⁷ / ₈ | 7 ¹ / ₈ | 8 ¹ / ₄ | 12 ³ / ₄ | 13 ¹ / ₄ | 8 ¹ / ₄ | 2 ¹ / ₂ | 4 ⁷ / ₈ | 6 ¹ / ₄ |
| 7 (070) | 9 ¹ / ₄ | 13 ¹ / ₄ | 9 ¹ / ₈ | 11 | 7 ⁷ / ₈ | 9 ¹ / ₄ | 14 ¹ / ₈ | 14 ³ / ₄ | 8 ⁵ / ₈ | 2 ⁷ / ₈ | 5 ¹ / ₂ | 7 ¹ / ₈ |
| 8 (080) | 10 ¹ / ₄ | 14 ¹ / ₂ | 10 | 12 ¹ / ₈ | 8 ⁵ / ₈ | 10 ³ / ₈ | 15 ⁵ / ₈ | 15 ³ / ₄ | 10 ¹ / ₄ | 3 ¹ / ₄ | 6 ¹ / ₄ | 7 ⁷ / ₈ |
| 9 (090) | 11 ³ / ₈ | 16 ¹ / ₄ | 11 ¹ / ₄ | 13 ⁵ / ₈ | 9 ⁵ / ₈ | 11 ³ / ₈ | 17 ⁵ / ₈ | 17 ³ / ₄ | 10 ⁷ / ₈ | 3 ⁵ / ₈ | 7 ¹ / ₈ | 8 ⁷ / ₈ |
| 10 (100) | 12 ¹ / ₂ | 18 | 12 ¹ / ₂ | 15 | 10 ¹ / ₂ | 12 ⁵ / ₈ | 19 ¹ / ₂ | 19 ⁵ / ₈ | 10 ⁷ / ₈ | 4 | 7 ⁷ / ₈ | 9 ⁷ / ₈ |
| 11 (110) | 13 ³ / ₄ | 19 ³ / ₄ | 13 ³ / ₄ | 16 ¹ / ₂ | 11 ¹ / ₂ | 14 | 21 ⁵ / ₈ | 22 | 11 ¹ / ₄ | 4 ¹ / ₂ | 8 ⁷ / ₈ | 11 |
| 12 (120) | 15 ¹ / ₂ | 22 ³ / ₈ | 15 ⁵ / ₈ | 18 ⁵ / ₈ | 13 | 15 ³ / ₄ | 24 ¹ / ₈ | 24 ³ / ₄ | 12 ³ / ₄ | 5 ¹ / ₈ | 9 ⁷ / ₈ | 12 ³ / ₈ |
| 16 (160) | 17 ¹ / ₂ | 25 ⁷ / ₈ | 17 ³ / ₈ | 21 ¹ / ₄ | 14 ¹ / ₂ | 16 ¹ / ₂ | 27 ¹ / ₈ | 28 | 14 ¹ / ₈ | 6 ³ / ₈ | 12 ³ / ₈ | 15 ³ / ₄ |

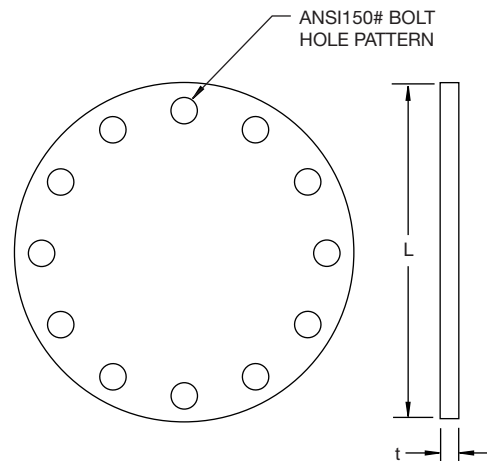
NOTES:
 1. Fan part #: (7524) + size code



PRO-VENT™ ANSI BLIND FLANGES

ANSI BLIND FLANGES

| Nominal Size (size code) | t (in) | L (in) | BH Cir. ϕ (in) | # Holes (in) | Hole ϕ (in) |
|-----------------------------|-----------|-----------|------------------------|-----------------|---------------------|
| 4 (040) | 0.375 | 9.00 | 7.50 | 8 | 0.750 |
| 6 (060) | 0.375 | 11.00 | 9.50 | 8 | 0.875 |
| 8 (080) | 0.375 | 13.50 | 11.75 | 8 | 0.875 |
| 10 (100) | 0.375 | 16.00 | 14.25 | 12 | 1.000 |
| 12 (120) | 0.375 | 19.00 | 17.00 | 12 | 1.000 |
| 14 (140) | 0.375 | 21.00 | 18.75 | 12 | 1.125 |
| 16 (160) | 0.375 | 23.50 | 21.25 | 16 | 1.125 |
| 18 (180) | 0.375 | 25.00 | 22.75 | 16 | 1.250 |
| 20 (200) | 0.375 | 27.50 | 25.00 | 20 | 1.250 |
| 22 (220) | 0.375 | 29.50 | 27.25 | 20 | 1.375 |
| 24 (240) | 0.375 | 32.00 | 29.50 | 20 | 1.375 |
| 28 (280) | 0.375 | 36.50 | 34.00 | 28 | 1.375 |
| 32 (320) | 0.375 | 41.75 | 38.75 | 28 | 1.625 |
| 36 (360) | 0.375 | 46.00 | 42.75 | 32 | 1.625 |
| 40 (400) | 0.375 | 50.75 | 47.25 | 36 | 1.625 |
| 48 (480) | 0.375 | 59.50 | 56.00 | 44 | 1.625 |
| 54 (540) | 0.375 | 66.25 | 62.75 | 44 | 1.875 |



NOTES:

1. Blind flange part #: (7527) + size code
2. Machined from sheets. Not pressure rated

INDEX AND CUSTOMER SERVICE

ASAHI/AMERICA, INC.

Asahi/America products are sold and serviced in North and South America through a network of nearly 1000 distributors. They are supported by large Applications Engineering and Custom Fabrication departments at our headquarters complex in Malden MA, and by field offices and company representatives. This support system works with you from specification through system design and final installation.

- Thermoplastic Pipe and Valves
- Double-Containment Pipe
- High-Purity Pipe
- Compressed Air Pipe
- Backwashable Filters
- Vortex Flow Meters

INDEX

| | |
|---------------------------------|----------|
| Specification Guidelines | 1 |
| Pipe | 2 |
| Elbows | |
| 90° Elbows | 2 |
| 45° Elbows | 3 |
| 60° Elbows | 3 |
| 30° Elbows | 4 |
| Concentric Reducers | 4 |
| Tees | 5 |
| Reducing Tees | 5 |
| Laterals | 6 |
| Reducing Laterals | 6 |

Dampers

| | |
|--------------------------------------|-----------|
| Knob Handles | 7 |
| Butterfly Handles | 7 |
| Flanged Knob Handles | 8 |
| Flanged Butterfly Handles | 8 |
| Couplings | 9 |
| Slip Caps | 9 |
| Slip Flanges | 10 |
| ANSI Stub Ends/Backing Rings | 10 |
| Blast Gates | 11 |
| Square to Round Transition | 11 |
| Sprinkler Connection Fittings | 12 |
| Fans | 12 |
| ANSI Blind Flanges | 13 |

Asahi/America and Pro-Vent are trademarks of Asahi/America, Inc.

Superior Performance and Lower Cost then PVC, Fiberglass or Sheet Metal



Warranty: Limitation on Liability

Any products sold by Asahi/America, Inc., ("Seller"), are warranted by Seller to the original purchaser/consumer ("Buyer") only, to be free from defects in design and manufacture for a period of one year from the date of purchase, provided such product is installed, used, operated, and serviced properly and in strict accordance with any instructions relating thereto furnished by Seller to Buyer.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY SPECIAL, INDIRECT INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING IN ANY WAY IN CONNECTION WITH ITS PRODUCTS OR THE SALE THEREOF.

Seller's sole liability (and Buyer's sole remedy) in connection with the sale of a product and/or the foregoing warranty is limited, at Seller's sole option, to the repair of, replacement, or refund of the purchase price of the product, if returned to the Seller prior to the end of the warranty term (at Buyer's expense and risk of loss or damage in transit) promptly following Buyer's discovery of the alleged defect together with Buyer's particularized statement of the claimed defect, and determined by the Seller to have proved defective under the terms of and within the period of the foregoing warranty.

Some states do not allow limitations on how long an implied warranty lasts, or the limitation or exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

The agreement of Seller to sell its products is expressly conditioned upon Buyer's assent to all terms and conditions set forth above and Buyer's acceptance of any products shall constitute such assent.

Copyright 1998 Asahi/America, Inc. All rights reserved. Printed in U.S.A.

ORDERING AND CUSTOMER SERVICE • CALL TOLL FREE

EAST
1-800-232-7244

CENTRAL
1-800-442-7244

WEST
1-800-282-7244