

WSP SERIES - PLASTIC WELL SEALS

Typically used in warmer climates where there is no risk of freezing. They are sometimes used inside of a heated pump house in cold climates and that protects the pump pipes from freezing. Boshart's WSP Series Plastic Well Seals provide a sanitary, watertight seal at the top of a well casing where the drop pipe and electrical cable enter the well, when properly installed. These well seals are available to accommodate a range of installation requirements in:

- single hole for submersible/shallow well jet pump
- double hole for deep well jet pump
- blank configurations for sealing a well head

WSP well seals offer excellent durability, manufactured from high-strength, corrosion-resistant materials, for long-term performance. Their lightweight construction allows for easier handling and installation while maintaining reliable sealing performance in residential, agricultural, and light commercial water well applications.

These well seals are suitable for installations of submersible pumps up to and including depths of 600 feet when used with Schedule 80 PVC drop pipe and 400 feet on Schedule 40 steel pipe. A compression style rubber gasket expands when the bolts are tightened during installation to form a tight seal and to prevent surface water, debris, and contaminants from entering the water well.

SPECIFICATION:

- ABS (Acrylonitrile Butadiene Styrene) top and bottom plates
- Zinc plated bolts and flanged nuts - Stainless steel hardware is available upon request (add -SH to the end of the part number - not available in every size)
- Grommet kit is included for all single hole and blank well seals
- Offset drop pipe allows for large conduit connection
- Bolt ends are peened to prevent accidental disassembly when loosening the seal for removal



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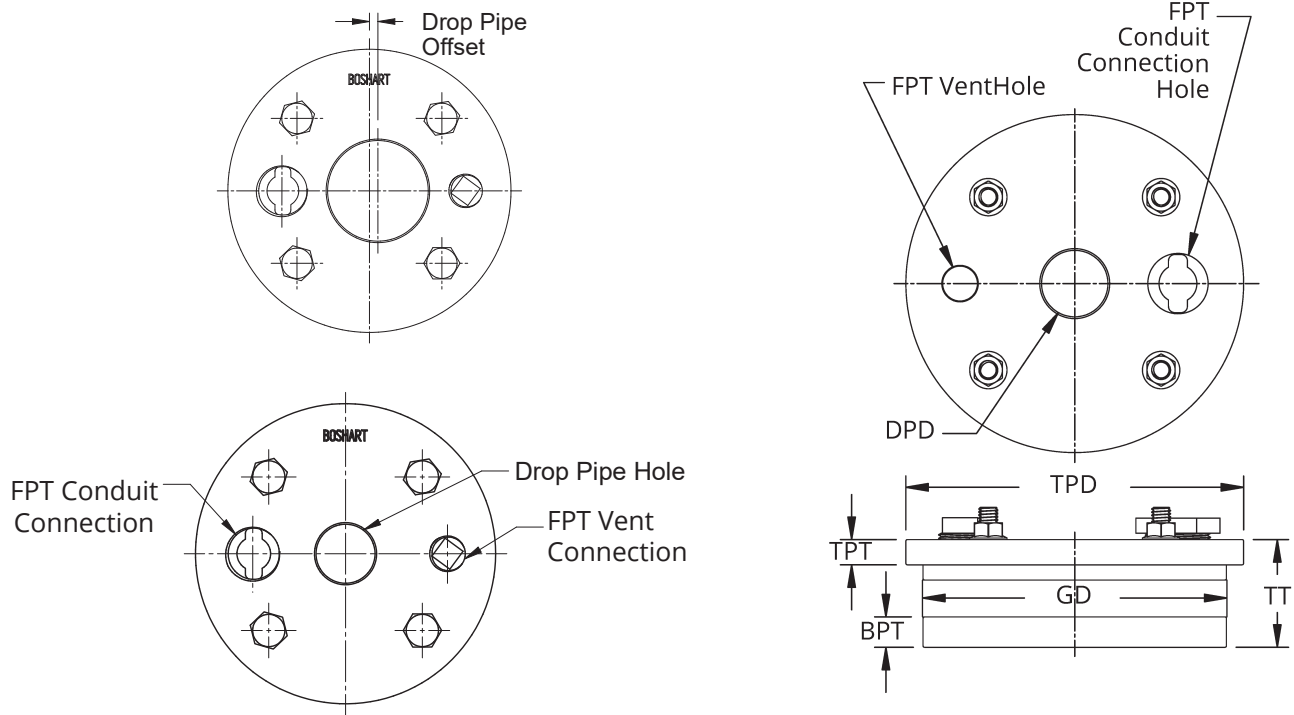
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Single Hole Well Seals

- Single hole are designed for submersible pump applications



| DIMENSIONS | | | | | | | | | | | | |
|--|------------------|--------------------|--------------------------|------|-------------------------|--------------------------|------------------------|----------------------------------|-------------------------------------|-----------------------------|---------------------------------|-------------------------|
| Part No. | Well Casing I.D. | Gasket O.D. (inch) | (DPD) Drop Pipe Diameter | | Drop Pipe Offset (inch) | FPT Conduit Conn. (inch) | (FPT) Vent Size (inch) | (TPT) Top Plate Thickness (inch) | (BPT) Bottom Plate Thickness (inch) | (TT) Total Thickness (inch) | (TPD) Top Plate Diameter (inch) | Bolt & Flanged Nut Size |
| | | | Nominal | O.D. | | | | | | | | |
| 4" WSP Series | | | | | | | | | | | | |
| WSP4010 | 4" | 3.99 | 1" | 1.32 | 0.50 | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | 3/8"-16 UNC x 2-1/2" |
| WSP4012 | 4" | 3.99 | 1-1/4" | 1.66 | 0.50 | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | |
| WSP4015 | 4" | 3.99 | 1-1/2" | 1.90 | 0.50 | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | |
| WSP4020* | 4" | 3.99 | 2" | 2.38 | 0.50 | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | 5/16"-18 UNC x 2-1/2" |
| *WSP4020 has raised supports, making it possible to incorporate a 3/4" cable hole | | | | | | | | | | | | |
| 4-1/4" WSP Series | | | | | | | | | | | | |
| WSP4210 | 4-1/4" | 4.08 | 1" | 1.32 | 0.50 | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | 3/8"-16 UNC x 2-1/2" |
| WSP4212 | 4-1/4" | 4.08 | 1-1/4" | 1.66 | 0.50 | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | |
| WSP4215 | 4-1/4" | 4.08 | 1-1/2" | 1.90 | 0.50 | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | |
| WSP4220 | 4-1/4" | 4.08 | 2" | 2.38 | 0.50 | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | 5/16"-18 UNC x 2-1/2" |
| 5" WSP Series | | | | | | | | | | | | |
| WSP5010 | 5" | 5.01 | 1" | 1.32 | 0.90 | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 5.62 | 3/8"-16 UNC x 2-1/2" |
| WSP5012 | 5" | 5.01 | 1-1/4" | 1.66 | 0.90 | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 5.62 | |
| WSP5015 | 5" | 5.01 | 1-1/2" | 1.90 | 0.90 | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 5.62 | |
| WSP5020 | 5" | 5.01 | 2" | 2.38 | 0.90 | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 5.62 | |



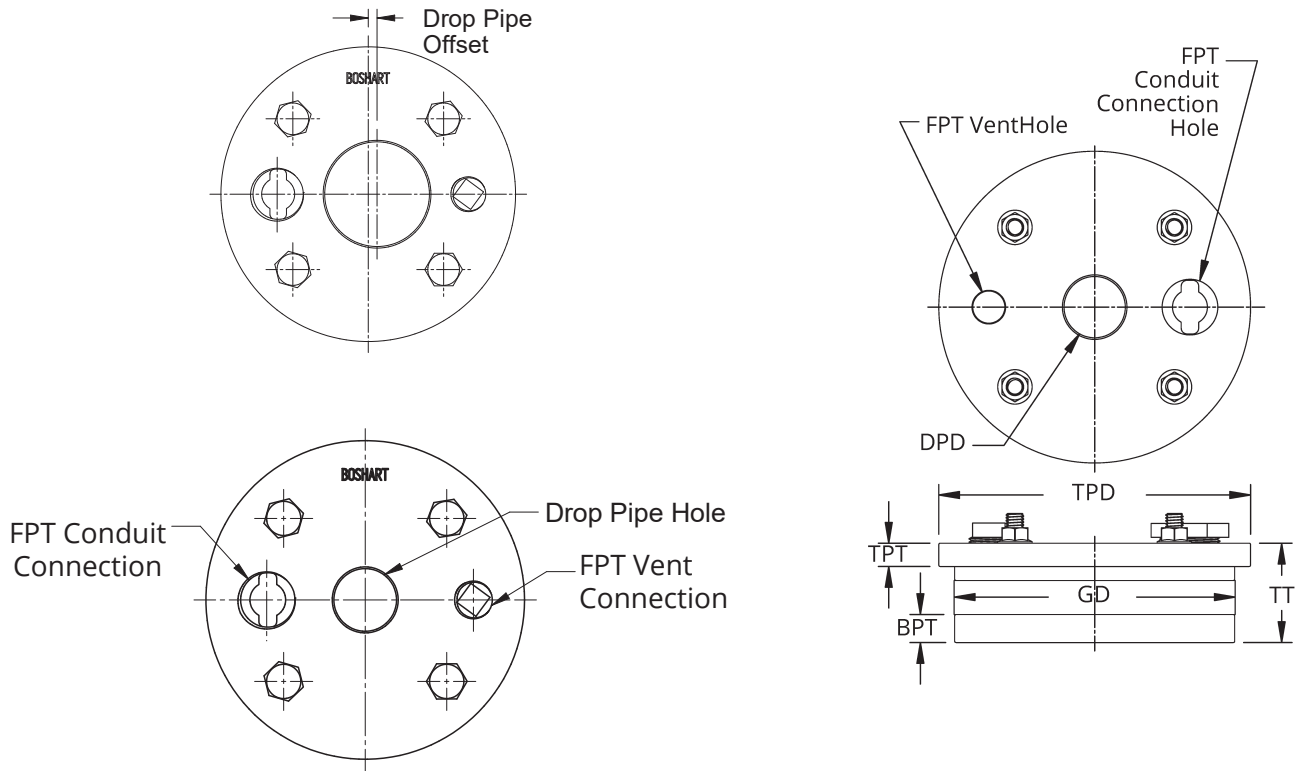
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Single Hole Well Seals

- Single hole are designed for submersible pump applications



| DIMENSIONS | | | | | | | | | | | | |
|--------------------------|------------------|--------------------|--------------------------|------|-------------------------|--------------------------|------------------------|----------------------------------|-------------------------------------|-----------------------------|---------------------------------|---------------------------|
| Part No. | Well Casing I.D. | Gasket O.D. (inch) | (DPD) Drop Pipe Diameter | | Drop Pipe Offset (inch) | FPT Conduit Conn. (inch) | (FPT) Vent Size (inch) | (TPT) Top Plate Thickness (inch) | (BPT) Bottom Plate Thickness (inch) | (TT) Total Thickness (inch) | (TPD) Top Plate Diameter (inch) | Bolt and Flanged Nut Size |
| | | | Nominal | O.D. | | | | | | | | |
| 5-1/4" WSP Series | | | | | | | | | | | | |
| WSP5210 | 5-5/8" | 5.15 | 1" | 1.32 | 0.90 | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 5.62 | 3/8"-16 UNC x 2-1/2" |
| 6" WSP Series | | | | | | | | | | | | |
| WSP6010 | 6" | 6.03 | 1" | 1.32 | N/A | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | 3/8"-16 UNC x 2-1/2" |
| WSP6012 | 6" | 6.03 | 1-1/4" | 1.66 | N/A | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | |
| WSP6015 | 6" | 6.03 | 1-1/2" | 1.90 | 0.35 | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.66 | |
| WSP6020 | 6" | 6.03 | 2" | 2.38 | 0.35 | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.66 | |
| 6-1/4" WSP Series | | | | | | | | | | | | |
| WSP6210 | 6-1/4" | 6.21 | 1" | 1.32 | N/A | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | 3/8"-16 UNC x 2-1/2" |
| WSP6212 | 6-1/4" | 6.21 | 1-1/4" | 1.66 | N/A | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | |
| WSP6215 | 6-1/4" | 6.21 | 1-1/2" | 1.90 | 0.35 | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.66 | |
| WSP6220 | 6-1/4" | 6.21 | 2" | 2.38 | 0.35 | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | |



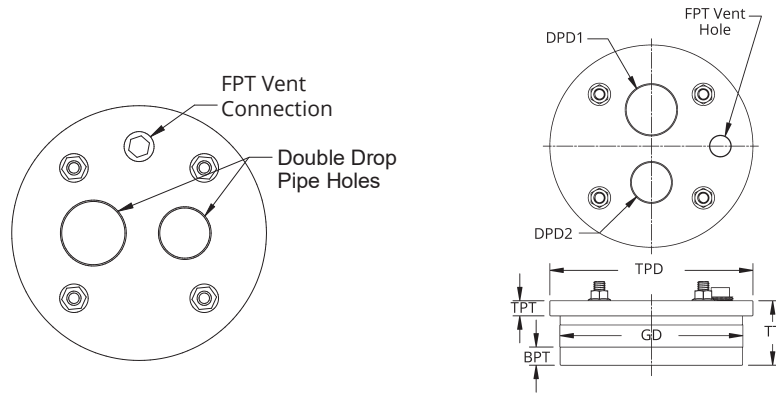
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Double Holes Well Seals

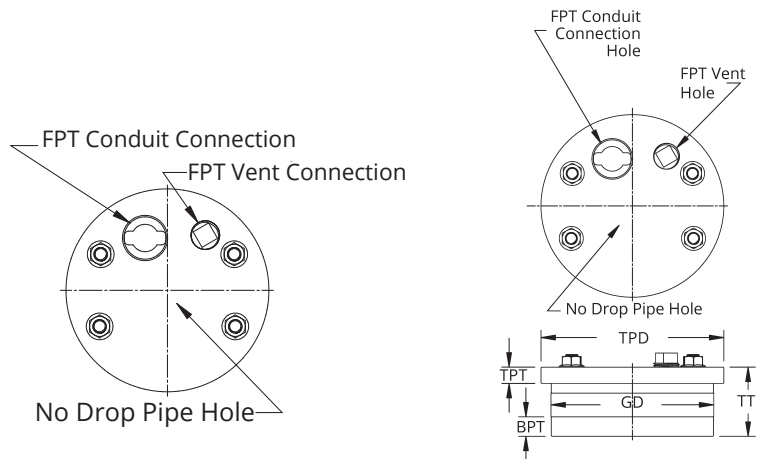
- Designed for jet pump applications



| DIMENSIONS | | | | | | | | | | |
|------------|------------------|--------------------|--------------------------|-------------|----------------------|----------------------------------|-------------------------------------|-----------------------------|---------------------------------|---------------------------|
| Part No. | Well Casing I.D. | Gasket O.D. (inch) | (DPD) Drop Pipe Diameter | | FPT Vent Size (inch) | (TPT) Top Plate Thickness (inch) | (BPT) Bottom Plate Thickness (inch) | (TT) Total Thickness (inch) | (TPD) Top Plate Diameter (inch) | Bolt and Flanged Nut Size |
| | | | Nominal | O.D. | | | | | | |
| WSP401210 | 4" | 3.99 | 1-1/4" x 1" | 1.66 x 1.32 | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | 3/8"-16 UNC x 2-1/2" |
| WSP421210 | 4-1/4" | 4.08 | 1-1/4" x 1" | 1.66 x 1.32 | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | |
| WSP501210 | 5" | 5.01 | 1-1/4" x 1" | 1.66 x 1.32 | 1/2" | 0.50 | 0.60 | 2.13 | 5.62 | |
| WSP601210 | 6" | 6.03 | 1-1/4" x 1" | 1.66 x 1.32 | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | |
| WSP601212 | 6" | 6.03 | 1-1/4" x 1-1/4" | 1.66 x 1.66 | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | |
| WSP621210 | 6-1/4" | 6.21 | 1-1/4" x 1" | 1.66 x 1.32 | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | |
| WSP621212 | 6-1/4" | 6.21 | 1-1/4" x 1-1/4" | 1.66 x 1.66 | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | |

Blank Well Seals

- Supplied with a plug for the conduit connection



| DIMENSIONS | | | | | | | | | | | |
|------------|------------------|--------------------|----------------|-------------------------|--------------------------|----------------------|----------------------------------|-------------------------------------|-----------------------------|---------------------------------|---------------------------|
| Part No. | Well Casing I.D. | Gasket O.D. (inch) | Drop Pipe Size | Drop Pipe Offset (inch) | FPT Conduit Conn. (inch) | FPT Vent Size (inch) | (TPT) Top Plate Thickness (inch) | (BPT) Bottom Plate Thickness (inch) | (TT) Total Thickness (inch) | (TPD) Top Plate Diameter (inch) | Bolt and Flanged Nut Size |
| WSP40 | 4" | 3.99 | Blank | N/A | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | 3/8"-16 UNC x 2-1/2" |
| WSP42 | 4-1/4" | 4.08 | Blank | N/A | 3/4" | 1/2" | 0.50 | 0.60 | 2.13 | 4.56 | |
| WSP50 | 5" | 5.01 | Blank | N/A | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 5.62 | |
| WSP52 | 5-1/4" | 5.15 | Blank | N/A | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 5.62 | |
| WSP60 | 6" | 6.03 | Blank | N/A | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | |
| WSP62 | 6-1/4" | 6.21 | Blank | N/A | 1" | 1/2" | 0.50 | 0.60 | 2.13 | 6.69 | |



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Installation Instructions

1. Ensure the well casing is cut off level and that the inside of the well casing is clean and free of debris (approx. 3" down from top edge)
2. Loosen the compression bolts to ensure they are not applying any compression to the rubber gasket
3. Insert the last section of drop pipe through the well seal, against the drop pipe coupling
4. Insert the pump cable through the wire hole
5. As you lower the drop pipe, insert the well seal into the top of the casing until the top plate rests directly on the well casing
6. Align any cable or pipe openings as required for the installation
7. Evenly tighten all the compression bolts until they are snug
8. Further tighten bolts in a crisscross/star pattern to apply even pressure
 - First Round: 3 ft.lb
 - Second Round: 6 ft-lb
 - Third Round: 9 ft-lb
 - Final Round: 10-12 ft-lb

CAUTION: Never tighten one bolt to full torque at a time. Doing so can cause uneven compression and result in damage to the top and bottom plates.

9. Install the grommet kit using the slotted rubber gasket for flat jacketed pump cable and the rounded for twisted cable as shown (FIG 2.). With grommet kit installed, fill gap between the pump cable and grommet bushing with silicone to ensure a water tight seal (this is extremely important when using twisted pump cable as the grommet gasket cannot seal the gaps between the separate wires)

Well Seal Removal

WARNING: Never loosen nuts off so far as to disengage the bolts, as it will result in the bolts falling down the well and possibly getting wedged between the well casing and the submersible pump, making it difficult to pull the pump for replacement.

FIG. 1

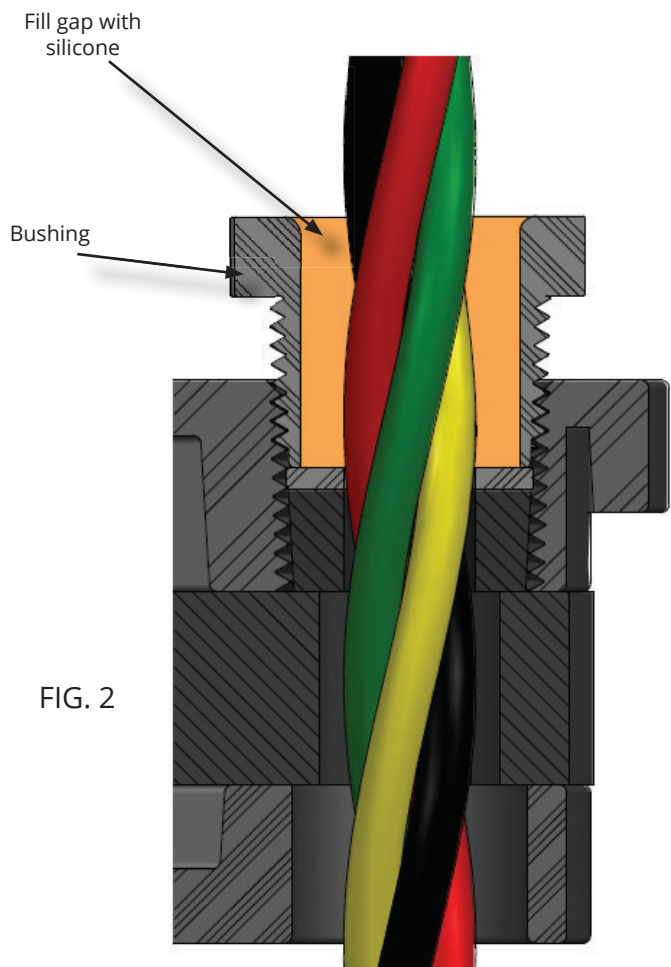
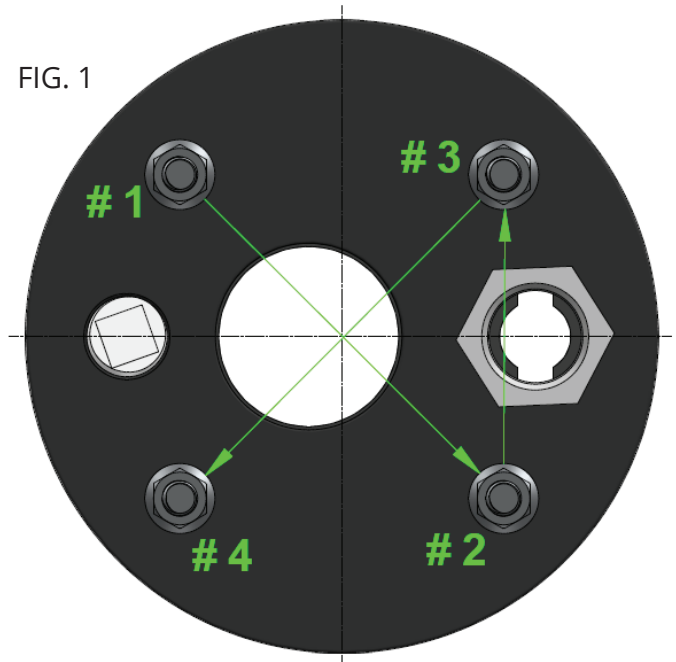


FIG. 2

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REPLACEMENT PARTS

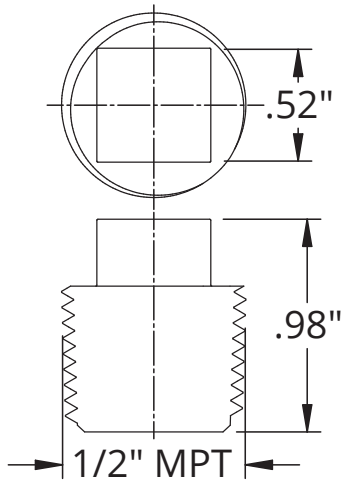
WS-GK Series - Grommet Kits

FEATURES

- Includes a PVC vent plug, PVC conduit bushing, PVC washer, slotted rubber gasket and round rubber gasket
- It is recommended that silicone sealant is applied to fill the conduit bushing above the washer and grommet kit after cables are installed
- Round hole grommet is for 3-4 twisted cables
- Slotted hole is for flat jacketed cable

NOTE: the replacement grommet kit will look different than the one supplied with the cast iron well seals only

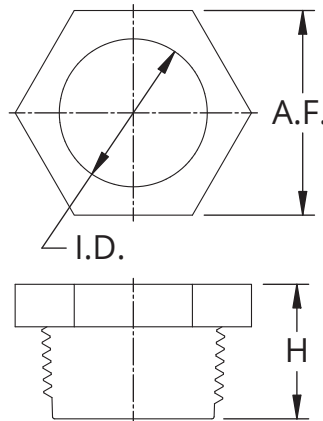
PVC Vent Plug



| GROMMET KITS | |
|--------------|------|
| Part No. | Size |
| WS-GK-07 | 3/4" |
| WS-GK-10 | 1" |

PVC Conduit Bushing

| DIMENSIONS | | | | | | |
|------------|------------------------|-------|--------|-------|------------|-------|
| Size (MPT) | Inside Diameter (I.D.) | | (A.F.) | | Height (H) | |
| | in | mm | in | mm | in | mm |
| 3/4" | 0.83 | 21.08 | 1.17 | 29.72 | 0.95 | 24.13 |
| 1" | 1.05 | 26.67 | 1.45 | 36.83 | 0.95 | 24.13 |



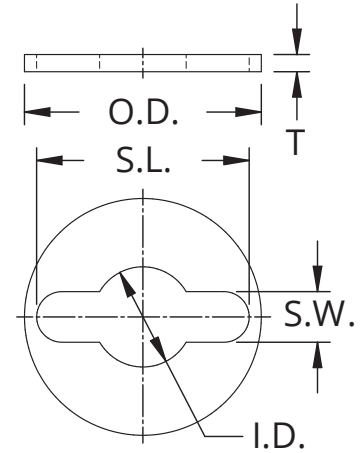
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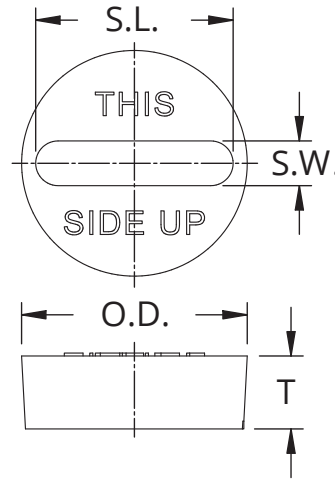
PVC Washer

| DIMENSIONS | | | | | | | | | | |
|------------|------------------------|-------|-------------------------|-------|--------------------|-------|-------------------|------|---------------|------|
| Size | Inside Diameter (I.D.) | | Outside Diameter (O.D.) | | Slot Length (S.L.) | | Slot Width (S.W.) | | Thickness (T) | |
| | in | mm | in | mm | in | mm | in | mm | in | mm |
| 3/4" | 0.50 | 12.70 | 0.93 | 23.62 | 0.82 | 20.83 | 0.25 | 6.35 | 0.09 | 2.29 |
| 1" | 0.50 | 12.70 | 1.17 | 29.72 | 1.05 | 26.67 | 0.25 | 6.35 | 0.09 | 2.29 |



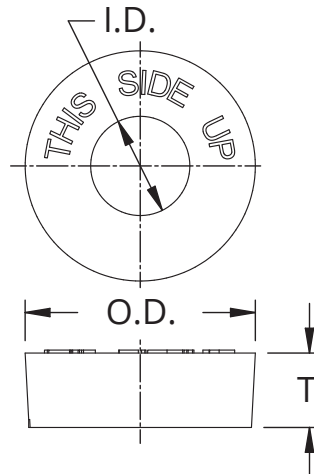
Slotted Rubber Grommet

| DIMENSIONS | | | | | | | | |
|------------|-------------------------|-------|--------------------|-------|-------------------|------|---------------|------|
| Size | Outside Diameter (O.D.) | | Slot Length (S.L.) | | Slot Width (S.W.) | | Thickness (T) | |
| | in | mm | in | mm | in | mm | in | mm |
| 3/4" | 0.92 | 23.37 | 0.77 | 19.56 | 0.24 | 6.10 | 0.39 | 9.91 |
| 1" | 1.16 | 29.46 | 1.02 | 25.91 | 0.24 | 6.10 | 0.39 | 9.91 |



Round Rubber Grommet

| DIMENSIONS | | | | | | |
|------------|------------------------|-------|-------------------------|-------|---------------|------|
| Size | Inside Diameter (I.D.) | | Outside Diameter (O.D.) | | Thickness (T) | |
| | in | mm | in | mm | in | mm |
| 3/4" | 0.50 | 12.70 | 0.92 | 23.37 | 0.39 | 9.91 |
| 1" | 0.50 | 12.70 | 1.16 | 29.46 | 0.39 | 9.91 |



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WS-V05 Series - Black PVC Well Seal Air Vent

APPLICATIONS:

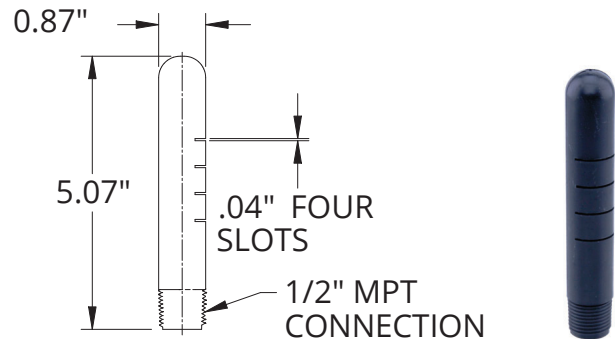
- These air vents are threaded into the well seal air vent connection for water well ventilation, allowing air into the well during the pumping phase and to release air as the static level of the water rises between pumping cycles
- Air vents must be plumbed to ensure the intake screen of the vent will never be submersed in water if the well pit were to get flooded with surface water in heavy rain or flood condition

FEATURES:

- Vents have four 0.04" (1.016 mm) slots on each side
- Slots make vermin proof

SPECIFICATIONS:

- WS-V05: 1/2" MPT Black PVC, 0.059 lbs (26.76 grams)



WS-V05-G Series - Galvanized Well Seal Air Vent

APPLICATIONS:

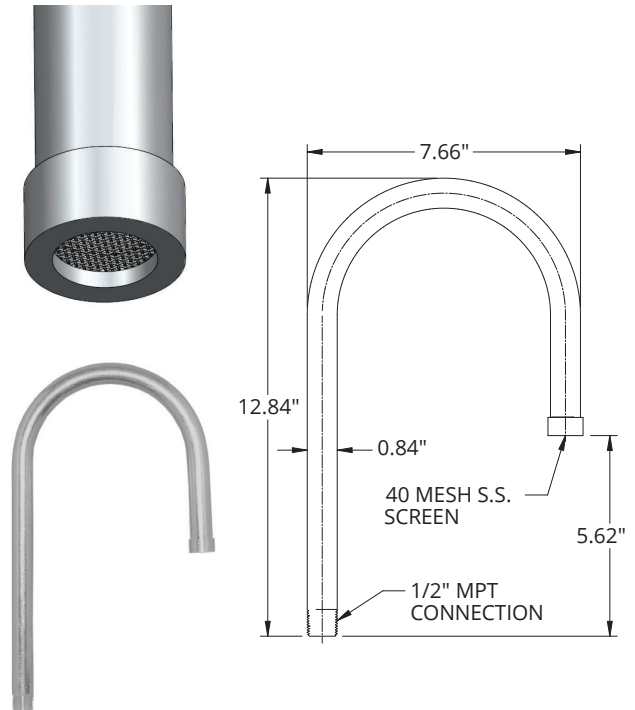
- These air vents are threaded into the well seal air vent connection for water well ventilation, allowing air into the well during the pumping phase and to release air as the static level of the water rises between pumping cycles
- Air vents must be plumbed to ensure the intake screen of the vent will never be submersed in water if the well pit were to get flooded with surface water in heavy rain or flood condition

FEATURES:

- Steel: 40 mesh - equivalent to 0.015" (0.381 mm) slot size of PVC slotted well screen / points, 36% open area, 1/64" (0.397 mm) openings
- Screen makes vermin proof

SPECIFICATIONS:

- WS-V05-G: 1/2" MPT Zinc Plated Steel tube, 1.520 lbs (689.5 grams)



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