

Section K: MiscellaneousEffective Date: 01-01-20
Revision #: 2

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K 1 – CASING INSULATORS/ STAINLESS STEEL:

Effective Date: 01-01-20
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SPECIFICATION:

Casing Insulators shall meet or exceed the Performance specifications of:

- Must ensure electrical insulation between the two pipes.
- Shall permanently prevent bells from resting on casing pipe.
- Shall be resistant to corrosion.
- Band widths of 8” or 12”.

MATERIAL:

Panel & Riser:

- Type 304 stainless steel per ASTM Standards A240.

Liner:

- Elastomeric PVC per ASTM Standards D149 or extruded EPDM rubber.

Skids:

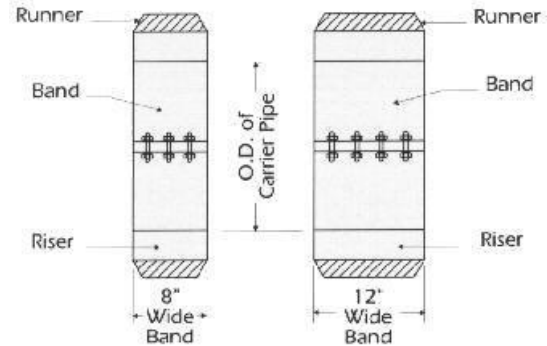
- Glass reinforced nylon or Ultra High Molecular Weight (UHMW) polyethylene per ASTM Standards D638.

Fasteners:

- Type 316 stainless steel per ASTM Standards A193.

REQUIREMENTS:

- Band width requirement determined by weight, pipe and fluid, and spacing.



MANUFACTURER:

- BWM COMPANY- MODEL BWM-SS
- CASCADE WATERWORKS- MODEL CCS
- CCI PIPELINE SYSTEMS- MODEL CSS
- PIPELINE SEAL AND INSULATOR- MODEL S8G-2 & S12G-2
- POWER SEAL- MODEL 4810
- SPIDER MFG. INC.

RESTRICTIONS:

K 2 – POLYETHYLENE ENCASEMENT:	Effective Date: <u>01-01-20</u> Revision #: <u>2</u>
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SPECIFICATION:

Polyethylene film shall meet or exceed the performance specifications of:

- ANSI/ AWWA C105/A21.5, Polyethylene Encasement for Ductile-Iron Pipe Systems.
- Shall have minimum thickness of 0.008” or 8-mil.
- Shall be linear low-density polyethylene film.
- Shall be supplied in rolled tube form, suitable for installation method “A” as outlined in reference standard.
- The tube shall be sized according to the pipe being protected.
- Film shall be color coded.

COLOR-CODED:

- Blue– potable water
- Green– sanitary sewer/ force main

TUBE SIZE:

Nominal pipe diameter Minimum flat tube width

4”	14”
6”	16”
8”	20”
10”	24”
12”	27”
14”	30”
16”	34”
18”	37”
20”	41”
24”	54”
30”	67”
36”-42”	81”
48”	95”

MARKING REQUIREMENTS:

- Manufactures name or trademark
- Year of manufacture
- ANSI/ AWWA C105/ A21.5
- Thickness/ type (LLDPE)
- Size
- Warning- Corrosion Protection- Repair Any Damage



MANUFACTURER:

- OPEN

RESTRICTIONS:

K 3 – MANHOLE INSERT:

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SPECIFICATION:

Manhole inserts shall meet or exceed the performance specifications of:

- Shall reduce or eliminate inflow thru manhole cover.
- Shall have a deep-dish design to allow for easy removal and replacement of the manhole cover (i.e., cover rotation).
- Body shall be manufactured of high density copolymer (HDPE) for non-traffic area.
- Body shall be manufactured of 304 stainless steel with a thickness of not less than 18-gauge for traffic areas.
- Shall have a sealing gasket made of Nitrile Buna-N (Acrylonitrile butadiene (NBR)), EPDM (Ethylene Propylene Diene Monomer) or closed cell neoprene.
- Shall have a handle made of 1/8" minimum, 304 stainless steel cable. Plastic coating of handle is optional or 1" heavy weight polypropylene.
- The handle shall be attached using two 304 stainless steel round head bolts with flat washers and self locking bolts or stainless steel pop rivets.

ADDITIONAL REQUIREMENTS:

When hydrogen sulfide (H₂S) gas levels warrant relief; a relief valve shall be provided and meet the following:

- The gas relief valve shall be designed to release at a pressure of 0.5 to 1.5 psi and have a water leak down rate no greater than 5 gallons per 24 hours.



MANUFACTURER:

- ROWLAND INC. - INFLOW SHIELD
- SEALING SYSTEMS INC.
- SOUTHWESTERN PACKING & SEALS - RAINSTOPPER
- OPEN

RESTRICTIONS:

K 4 – PIPE SADDLE SUPPORT/VALVE VAULTS/ADJUSTABLE:

Effective Date: 01-01-20
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SPECIFICATION:

Adjustable pipe saddle supports shall meet or exceed the performance specifications of:

- Shall be a stanchion type support for vertical adjustment of stationary pipe.
- Shall comply with Federal Specification A-A-1192A (type 38) and the Manufactures Standardization Society (MMS), MSS-SP-69 (type 38).
- Material shall be an assembled cast iron saddle, locknut nipple and special cast iron reducer.
- Shall have a Galvanized finish.
- Shall be capable of vertical adjustments of 4-1/2”.



MANUFACTURER:

- ANVIL INTERNATIONAL, INC.- MODEL 264
- EMPIRE
- OPEN

RESTRICTIONS:

- For supporting pipe in pump station valve vaults only.

K 5 – CYLINDRICAL WALL SEALS & LINE SLEEVES:

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SPECIFICATION:

Cylindrical wall seals & line sleeves shall meet or exceed the performance specifications of:

- Rubber links shall meet ASTM D2000 M3 BA510.
- Stainless steel shall meet ASTM F593, with a 85,000 psi average tensile strength.
- Hydrostatic seal shall be capable of holding 20 psig (40 feet of head) between the pipe and barrier through which it passes.
- Wall sleeves shall be high impact resistant HDPE or PVC.
- Wall sleeves shall have a integral water stop collar.
- Hole forming disks can be used for holes above 29” in diameter.
- Pressure plates shall be a composite material.
- Components and system shall be manufactured at a plant with a current ISO-9001:2000 registration.

MATERIAL:

Bolts and nuts:

- ANSI type 316 Stainless Steel.

Pressure plates:

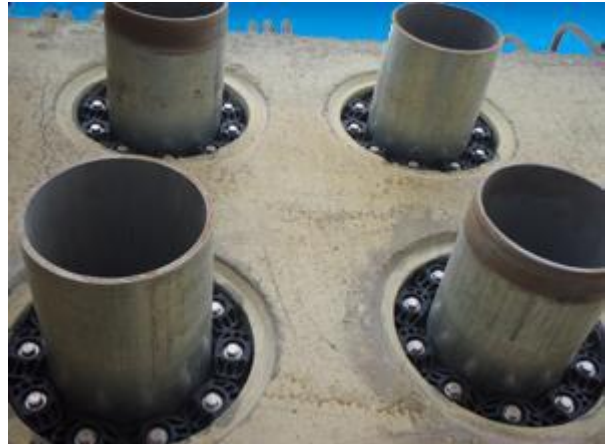
- Reinforced nylon polymer.

Gasket:

- Nitrile Buna-N.
- EPDM (Ethylene Propylene Diene Monomer).
- Viton; Fluorel (FKM) (Fluorocarbon).

ADDITIONAL INFORMATION:

- For pipe penetrations through concrete vaults.
- Holes can be cored into concrete barriers.



MANUFACTURER:

- ADVANCE PRODUCTS & SYSTEMS, INC. MODELS “ S-304”, “S-316”, “OS-304”, “OS-316”
- PIPELINE SEAL AND INSULATOR, INC.-
- LINK-SEAL- MODELS “S-316” & “OS-316”
- OPEN

RESTRICTIONS:

K 6 – METAL DETECTABLE UNDERGROUND WARNING TAPE:	Effective Date: <u>01-01-20</u> Revision #: <u>2</u>
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SPECIFICATION:

Metal detectable underground tape shall meet or exceed the performance specifications of:

- Shall have a solid aluminum foil core with permanent printing under a protective layer to maintain the integrity and legibility of the warning sign.
- The aluminum core shall be laminated with a polyethylene layer.
- The inert polyethylene plastic shall be impervious to all known alkalis, acids, chemical reagents, and solvents likely to be encountered in the soil.
- Tape shall have a minimum thickness of 5 mils.
- The warning label shall be in black ink.
- The warning label shall be printed over a background color matching the type service.
- Affidavit of compliance to this specification shall be available upon request.

REQUIREMENTS:

Color code:

- Blue: Potable Water
- Green: Sanitary Sewer

Width:

- Minimum of 2-inches.



MANUFACTURER:

- EMPIRE LEVEL MFG. CORP.
- MERCO TAPE COMPANY- M225
- PRESCO
- TRUMBULL- 364-49XX
- OPEN

RESTRICTIONS:

- Required for all force mains
- Required for all portable water mains

K 7 – SANITARY SEWER INSIDE DROP BOWL:

Effective Date: 01-01-20
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SPECIFICATION:

Sanitary sewer inside drop bowls shall meet or exceed the performance specifications of:

- Shall be a plastic composite collection device designed to facilitate a controlled drop of effluent into the main stream flow of a sanitary sewer manhole.
- Shall be fabricated from marine grade fiberglass.
- Shall have an optional hood for use in force main applications.
- Clamping pipe supports brackets shall be manufactured from totally non-magnetic 11-gauge type 316 stainless steel.
- Bolts, washers and nuts shall be manufactured from totally non-magnetic 18-8 316 stainless steel.
- Secure bowl and pipe support brackets to wall with lead tamp-in expansion anchors.
- Seal bowl to wall with an approved marine grade high-performance polyurethane adhesive sealant.
- Connection from drop bowl to drop pipe shall be by approved external flexible pipe adapter.
- The bowl size shall be determined by incoming pipe size and flow rate.
- The bowl assembly shall be installed as per manufacturer’s instructions.
- Affidavit of compliance to this specification shall be available upon request.



MANUFACTURER:

- DURAN INC.- RELINER INSIDE DROP SYSTEM
- OPEN

RESTRICTIONS:

- Must be approved by CFPUA.
- For manhole rehabilitation only.

K 8 – FLANGE INSULATING GASKET KITS:

Effective Date: 01-01-20
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SPECIFICATION:

Flange insulating gasket kits shall meet or exceed the performance specifications of:

- Designed and manufactured to work with flange pipe and fittings per ANSI B16.1 125 pound class specifications.
- Shall create an insulated joint to separate a branch connection from a cathodically protected pipeline.
- Nuts, bolts and gasket shall be designed to withstand the design and test pressures of the pipe.
- Each kit shall be individually packaged in a reinforced cardboard box, which is clearly labeled as to its contents.

MUST INCLUDE:

Gasket:

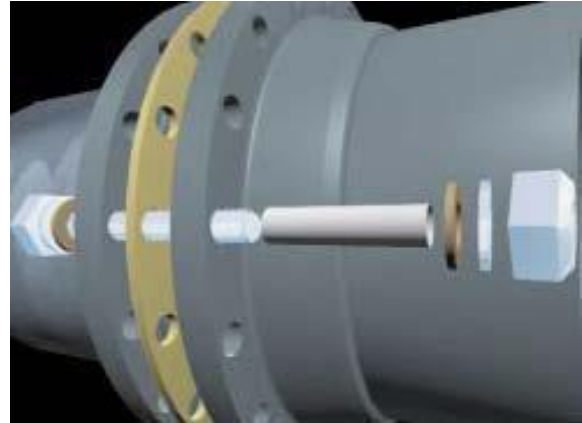
- Gasket shall be full-faced isolating and sealing – Type “E”, 1/8 inch thick, manufactured from Nema grade G-10 glass reinforced epoxy retainer with a Nitrile, Viton or EPDM seal. The G-10 retainer shall have a 550 volt/mil dielectric strength and a minimum 50,000 psi compressive strength.

Sleeve:

- Shall have one full length Nema grade G-10 sleeve for every flange bolt. The G-10 shall be a 1/32 inch thick tube with a 400 volt/mil dielectric strength.

Washer:

- Shall have two insulating washers manufactured from Nema grade G-10 glass reinforced epoxy for each bolt hole. Their compressive strength shall be 50,000 psi, dielectric strength 550 volts/mil. Two, 1/8 inch thick zinc plated, hot rolled steel washers for each bolt. The I.D. of all washers shall fit over the isolating sleeve and both the steel and isolating washers shall have a same I.D. and O.D.
- Products supplied must have ISO 9001 or later certification.
- Affidavit of compliance to this specification shall be available upon request.



MANUFACTURER:

- ADVANCE PRODUCTS & SYSTEMS, INC.
- PIPELINE SEAL AND INSULATOR, INC.
- OPEN

RESTRICTIONS:

- Must be approved by CFPUA, for insulating cathodically protected aerial pipelines only.

K 9 – Sampling Station:

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SPECIFICATION:

Sampling Stations shall meet or exceed the performance specifications of:

- Stainless steel standpipe with 1" fittings and connections and a 3/4" reducer.
- All stations shall be enclosed in a lockable, nonremovable, aluminum-cast housing.



MANUFACTURER:

- KUPFERLE FOUNDRY COMPANY
- OPEN

RESTRICTIONS: