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## **SUPPORT SPACING — POLYPROPYLENE / PVDF**

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Hangers and straps should not compress, distort, cut, or abrade the piping and should allow free movement of pipe. Supports should allow free movement. Maintain vertical piping in straight alignment with supports at each floor or at 10-foot intervals, whichever is less. Horizontal should be installed in uniform alignment with a uniform slope in accordance with local plumbing codes.

| Size   | Horizontal Pipe | Vertical Pipe |
|--------|-----------------|---------------|
| 1-1/2" | 4'              | 10'           |
| 2"     | 4-1/2'          | 10'           |
| 3"     | 5'              | 10'           |
| 4"     | 6'              | 10'           |

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## **THERMAL EXPANSION INFORMATION**

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Allow for thermal expansion and movement in all piping installations by use of approved methods. Support, but do not rigidly restrain piping at branches or changes of direction. Do not anchor pipe rigidly in walls. Polypropylene pipe will change length by .076" in 10 feet for a 10-degree temperature increase or decrease change. PVDF will change length by .079" per 10-foot length for each 10°F temperature increase or decrease.

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## **UNDERGROUND INSTALLATION**

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Underground installation of pipe shall be in accordance with Practice ASTM D 2311 "Standard Practice for Underground Installation of Thermoplastic Pipe for Sewer and Other Gravity-Flow Applications," except aggregate size shall be limited to 1/2" for angular and 3/4" for rounded particles. Non-flame-retardant pipe is generally used in underground applications.

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## **RETURN AIR PLENUM INSTALLATION**

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Return Air Plenum installations require that piping systems meet ASTM E84 25/50 for flame spread and smoke development and UL723 for flame propagation and smoke density in environmental spaces.

For these installations, Zurn will provide a pipe and fitting system made of PVDF (polyvinylidene fluoride). This will make for an easy transition from Zurn polypropylene pipe and fittings to Zurn PVDF for use in return air plenum areas.