



**PipeSak**<sup>®</sup>

## Technical Notes

### PipePillo™



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### GENERAL

PipePillo™ is a structured pipeline pillow (SPP) used to safely support fully loaded pipelines, both in and out of the trench, for the life of the pipeline.

PipePillos are manufactured from high strength polypropylene resins which are environmentally inert yet softer than most pipeline coatings. In addition, PipePillo's many cavities and rough texture help to limit any cathodic shielding.

The design incorporates a patented dual frustoconical shape which is able to transfer extreme loads very effectively through to consolidated or virgin soil beneath.

Although designed as stable, long-lasting support for pipelines in rocky trenches, PipePillos also work extremely well outside the trench – as a pipe support during the stringing and welding processes.

When used outside the trench as a single or multi-stacked support, spacing can typically be one tower per joint of pipe – much like current wood skid technology. In the trench for long-term support in a fully backfilled and operating condition, we recommend 15 ft (4.5 m) spacing. See the PipePillo dimensional data chart for more details.

PipePillos are light enough to be manually handled, yet dense enough to resist floatation.

All PipePillos have a rectangular center hole, which accommodates an installation rod (2 x 4) for positioned placement without workers in the trench. For deeper

excavations, PipePillos can be strapped to the bottom of the pipeline prior to the pipe installation.

PipePillos can also be utilized as an effective means to support exposed pipelines during and following integrity digs, limiting the requirement for compacted soil beneath the pipeline.

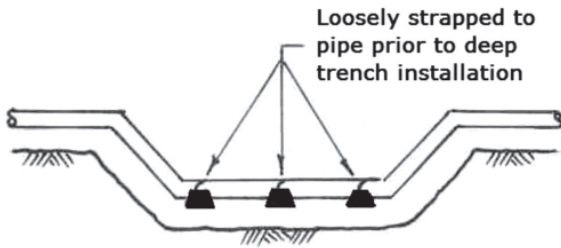


### INSTALLATION GUIDELINES

#### In the Trench

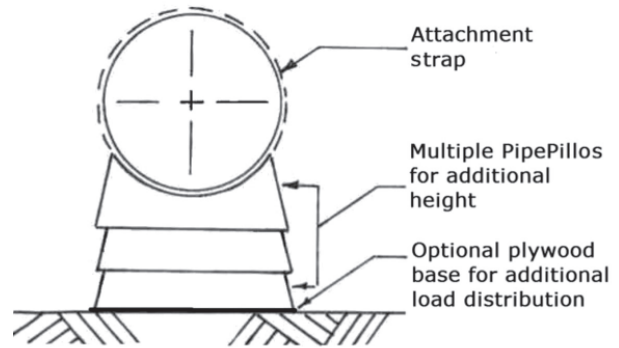
1. Position each PipePillo along the trench line at the required interval.
2. Slide into position with an installation rod (16' long aluminum 2 x 4 - supplied). Ensure the yellow centerline of each PipePillo is positioned properly before placement. Reposition PipePillo as required utilizing the installation rod to ensure centerline of each line up.
3. As pipeline is lowered-in, ensure it is centered over the PipePillos.

4. For deep excavations, attach the PipePillo with an attachment strap (suggest a poly rope) to the bottom of the section of pipe prior to installing. PipePillos have two side holes to accommodate attachment as shown below.



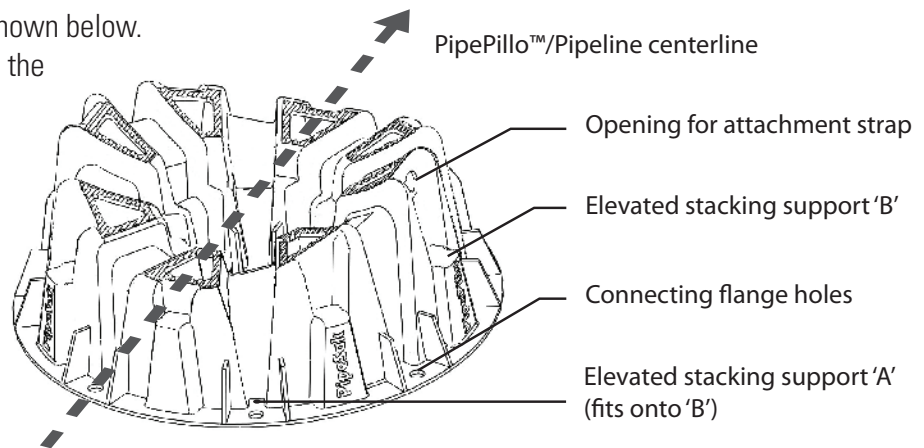
4. For areas where soil may be loose or wet, a bottom plate of 3/4" plywood may be required. It is suggested to 'peg' or nail the PipePillo loosely to the plywood through the bottom flange holes for easy removal later.

5. For long-term support, additional stability can be achieved by attaching the top PipePillo to the pipeline with an attachment strap (poly rope).



### Outside the Trench

1. PipePillos arrive stacked in a tight configuration as shown.
2. For stringing, space PipePillos as you would wooden skids with approximately one tower of PipePillos per joint of pipe.
3. Additional height can be achieved by stacking PipePillos. Each PipePillo has two levels – one being the shipping level which adds approximately 3" and the other is the extended level. To achieve the extended level, the second PipePillo must be rotated approximately 1/8 turn or 22.5 degrees off center. When stacking, ensure the corresponding 'lands' line up as shown below. For additional information, review the dimensional data chart below.



### PipePillo™ Dimensional Data

Size inches (mm)	Weight lbs (kg)	Diameter inches (mm)	Elevated Stacking Pipeline Height per PipePillo inches (mm)					Suggested Spacing ft (m)	
			1	2	3	4	5	Outside Trench	In-Trench (Single)
12.75 to 16 (323.9 to 406)	4.2 (1.9)	16 (406)	6 (152)	10.5 (267)	15 (381)	19.5 (495)	24 (610)	40 (12)	15 (4.6)
18 to 26 (457 to 660)	7.9 (3.6)	24 (610)	6 (152)	10.5 (267)	15 (381)	19.5 (495)	24 (610)	40 (12)	15 (4.6)
30 to 36 (762 to 914)	22.3 (10.1)	36 (914)	8 (203)	14 (356)	20 (508)	26 (660)	32 (813)	40 (12)	15 (4.6)
42 to 48 (1067 to 1219)	37 (16.8)	48 (1219)	8 (203)	14 (356)	20 (508)	26 (660)	32 (813)	40 (12)	15 (4.6)