



## Packaging Information Metric Bundles

### PERFORMANCE PIPE METRIC PRODUCTS BUNDLES

Size	Bundle Style	Pipe OD	Joints Per Bundle	Bundles Per Truck	Joints Per Truck 40' -12 meter	PN	SDR	Feet per Truck 40' Joints	Meters Per Truck 12 meters joints
90mm	Soft	3.543	46	12	552	16	7.25	22,080	6,624
90 mm	Soft	3.543	46	14	644	3.2 - 10	32.25 - 11	25,760	7,728
110 mm	Soft	4.331	32	10	320	16	7.25	12,800	3,840
110 mm	Soft	4.331	32	14	448	3.2-10	32.25 - 11	17,920	5,376
125 mm	Soft	4.921	29	8	232	16	7.25	9,280	2,784
125 mm	Soft	4.921	29	12	348	3.2 - 10	32.25 - 11	13,920	4,176
160 mm	Soft	6.299	13	12	156	16	7.25	6,240	1,872
160 mm	Soft	6.299	13	14	182	3.2 - 10	32.25 - 11	7,280	2,184
200 mm	Soft	7.874	11	10	110	16	7.25	4,400	1,320
200 mm	Soft	7.874	11	12	132	3.2 - 10	32.25 - 11	5,280	1,584

### METRIC BUNDLE PACKAGING STANDARDS

1. Soft – Side Style:
  - A. For encasing all straight lengths between 3.543" OD and 7.874 OD.
    - (1) Lumber Sizes and Placement:
      - (a) For industrial pipe packs shall be constructed using 2"x 6" bottom boards (Note: 2" x 6" boards actually have a thickness of approximately 1.5".) For gas products plants will use 3" X 4" lumber. Hardwood or softwood is acceptable. Grooved boards are preferable, but not mandatory as the banding will create a notch in some soft woods securing the banding in place. Plants may use one (1) 3" x 4" for bottom boards for any product line in diameters 3" and 4" to help with pack stability as long as they don't exceed height restrictions.



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- (a) Bottom board lengths are as follows:

Pipe Size	Board Length
90 mm (3.543")	42"
110 mm (4.331")	46"
125 mm (4.921")	48"
160 mm (6.299")	42"
200 mm (7.874")	44"

- (b) Bottom boards are spaced at six (6) equidistant locations for 12-meter joints.  
 (c) Bottom boards are spaced at six (6) equidistant locations for forty-foot (40') joints.

(2) Top Boards

Top boards may be used to increase the stability of 3" and 4" bundles.

- (a) Top boards are used at manufacturer's discretion or at the customer's request.  
 (b) Top board are placed one each end of the bundle, in line with the end bottom board. (Optional middle top boards are acceptable.)  
 (c) Top boards may be constructed of 3x4 or 2x6 boards. Hardwood or softwood is acceptable.  
 (d) Top board lengths are as follows.

Pipe Size	Board Length
90 mm	42"
110 mm	46"

(3) Banding:

- (a) Each band on a bundle shall be tightened to the same approximate tension. Use at least one (1) 5/8" X .035 or 3/4" X .050 polyester banding per bottom board.

(6) Storage:

- (a) Soft-side bundles must be stacked plumb to prevent leaning. Special care must be taken when staging bundles in storage.



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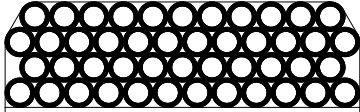
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- (7) Transport:
  - (a) Performance Pipe Transport Strapping Policy establishes minimum requirements regarding the number of trucker straps used by all transportation providers to secure bundles. The policy also contains conditions regarding the tightening of straps after a carrier leaves a Performance Pipe facility.
- (8) Tarping:
  - (a) All 6500, 8100 and 8300 pipe series bundles may be smoke tarped at least 8' back on top and 8' in front and on sides or full tarped. Tarping is done by customer request.
  - (b) All 4000 and 4100 pipe series bundles are subject to tarping in accordance with gas pipe series specifications.
- (9) End Caps:
  - (a) Place end caps (or plugs) on all series 6500, 8100, 8300 pipe and geothermal 5300 series products or if the customer requests end caps.

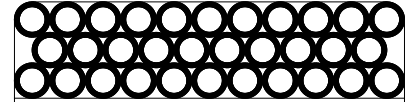
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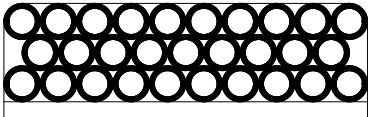
### METRIC – SOFT SIDED BUNDLES (EXAMPLE)



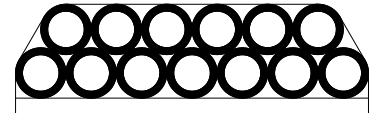
90 mm, 46 joints per bundle



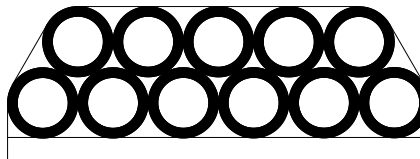
110 mm, 32 joints per bundle



125 mm, 29 joints per bundle



160 mm, 13 joints per bundle



200 mm, 11 joints per bundle

NOTE: Loads and material not drawn to scale



## Packaging Information Metric Bundles

### PERFORMANCE PIPE METRIC BUNDLE PACKAGING STANDARDS BUNDLE PATTERNS

Size	Pipe OD	Bundle Style	Bundle Height	BTM Board Length	Side Board Length	Joints Per Bundle	Bundle pattern	Feet Per 40' bundle	Meters per 12 meter Bundle
90 mm	3.543	Soft	14 ¼"	42" *	n/a"	46	11/12/11/12	1,840'	552
110 mm	4.331	Soft	15 ½"	46" *	n/a	32	11/10/11	1,280'	384
125 mm	4.921	Soft	17"	48"	n/a	29	10/9/10	1,160'	348
160 mm	6.299	Soft	15 ¼"	42"	n/a	13	6/7	520'	156
200 mm	7.874	soft	16 ¼"	44"	n/a	11	6/5	440'	132

\* Figure is also top board length. Using a top board is optional