



### Materials and equipment

1. Appropriate size WPC60 sleeve and WPCP IV closure
2. Raychem torch (or equivalent)
3. Propane gas tank, hose, regulator and gauge
4. Contact pyrometer

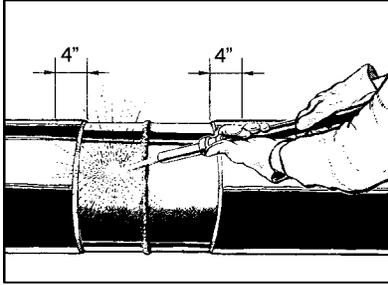
5. Hand roller (straight)
6. Standard safety equipment such as gloves, goggles, hard hat, etc.

Installation has to be done according to local government regulations and usual safety precautions.

### Note:

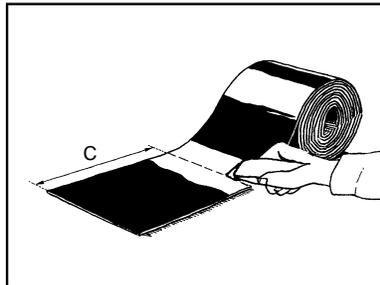
For sleeves 12"(300 mm) in diameter and larger, two people are recommended.

For proper selection of Tyco Adhesives joint protection materials, see Product Selection Guide or contact Tyco Adhesives.

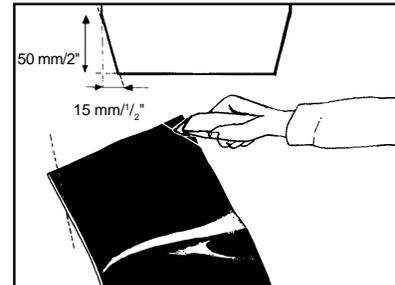


### Sleeve application

1. Clean exposed steel and adjacent pipe coating to be covered by WPC60 sleeve with a grit blaster, to remove loose and foreign materials. Wiping may be necessary to remove the particles from cleaning. For pipelines operating at ambient temperature, power wire brush cleaning to SIS 055900 - ST3 can also be used.

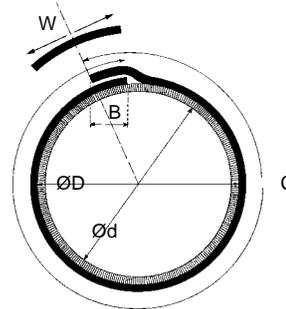


2. Cut the sleeve to the appropriate length according to below table.

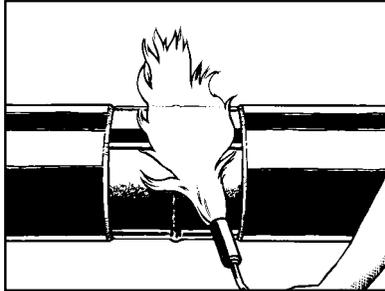


3. Cut the corners of the underlying end of the sleeve to approximately 1/2" x 2" (15 mm x 50 mm).

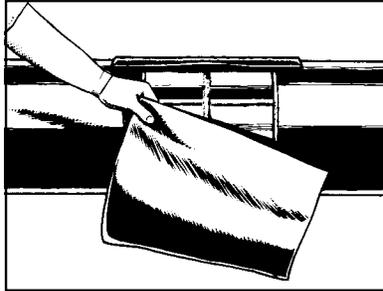
Ø D mils inches (0,001)	Ø d mm	C in./mm	B in./mm	W in./mm
2375	50	12/305	2/50	4/100
2875	65	13/330	2/50	4/100
3500	80	15/380	2/50	4/100
4000	90	18/460	2/50	4/100
4500	100	18/460	2/50	4/100
5563	125	21,5/550	2/50	4/100
6625	150	25/640	2/50	4/100
8625	200	31,5/800	2/50	4/100
10750	250	38,5/980	2/50	4/100
12750	300	45,5/1150	2/50	4/100
14000	350	49,5/1260	2/50	4/100
16000	400	56/1420	2/50	4/100
18000	450	62,5/1590	2/50	4/100
20000	500	69,5/1770	2/50	6/150
22000	550	77/1950	2/50	6/150
24000	600	83/2110	2/50	6/150
26000	650	89,5/2270	2/50	6/150
28000	700	95,5/2430	2/50	6/150
30000	750	102,5/2600	2/50	6/150
32000	800	108,5/2760	2/50	6/150
34000	850	115,5/2930	2/50	6/150
36000	900	122/3100	2/50	6/150
38000	950	128,5/3260	2/50	6/150
40000	1000	135/3430	2/50	6/150
42000	1050	141,5/3590	2/50	6/150
44000	1100	147,5/3750	2/50	6/150
46000	1150	154/3910	2/50	6/150
48000	1200	160/4065	2/50	6/150
50000	1250	167/4240	2/50	6/150
52000	1300	174/4420	2/50	6/150
54000	1350	180,5/4590	2/50	6/152
56000	1400	187/4750	2/50	6/150
58000	1450	193,5/4920	2/50	6/150
60000	1500	200/5080	2/50	6/150



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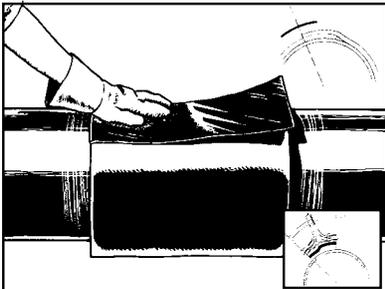
4. Preheat joint area to approximately 280°F (140°C) minimum. Preheating reduces installation time and ensures proper bonding.



5. Remove the protective release plastic from the coated sleeve. Center sleeve over the weld so it is evenly overlapping adjacent pipe coating. Wrap loosely around pipe so that the Raychem logo runs circumferentially around the pipe.

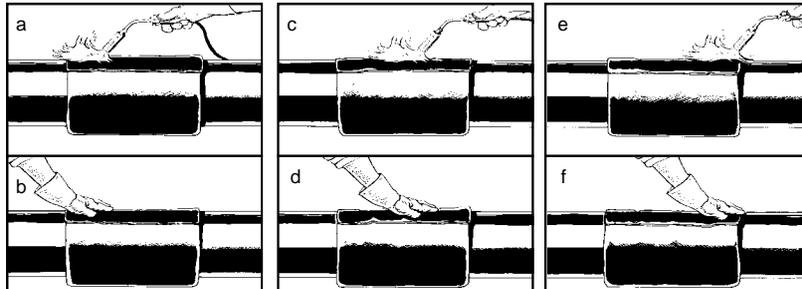
**Note:**

- 1) Clean overlap area of the sleeve to remove dirt and other foreign materials.
- 2) Edges of sleeve should extend 2" or more onto adjacent pipe coating.
- 3) Overlapping ends of sleeve should align evenly.
- 4) Position overlap to permit easy access for installing closure.



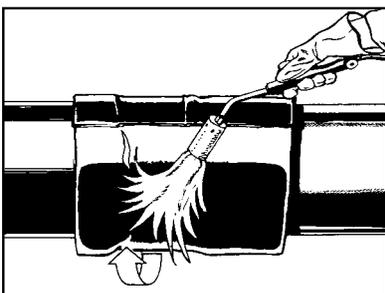
**WPCP IV closure application**

1. Press the WPCP IV closure in position, centering over the exposed sheet end. (For UNI-sleeve products, the closure is preattached and already centered in position.) The sheet should overlap the sheet (excluding closure) by 2" (50mm) minimum.



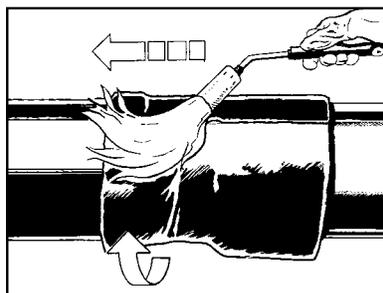
2. Using a Raychem torch (or equivalent), adjust flame length to approximately 20" (500 mm) to produce a yellow flame. Using the yellow portion of the flame, heat the closure evenly until the pattern of the fabric reinforcement is visible.

With gloved hand, pat down the closure and smooth any wrinkles by gently working them outward from the center of the closure.



**Sleeve recovery**

1. Using the Raychem torch (or equivalent), begin at the center of the sleeve and heat circumferentially around the pipe, using a constant paintbrush motion.



2. Continue heating toward one end of the sleeve, followed by the other.

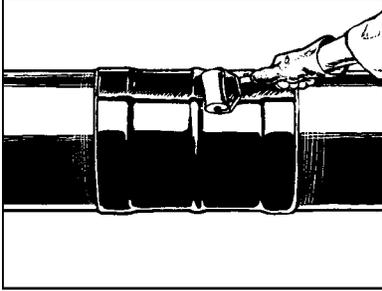
**Note:**

Sleeve may be recovered starting at one end and proceeding toward the opposite end, depending on conditions (i.e., wind)

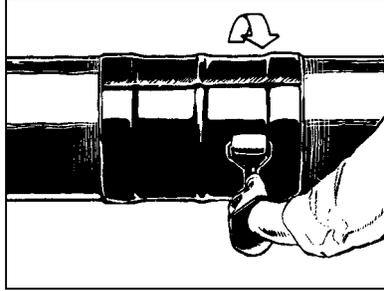


3. During shrinkdown, occasionally check adhesive flow with finger. Wrinkles should disappear automatically.

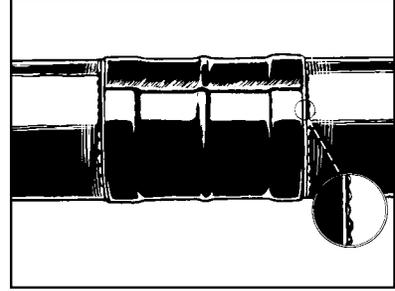
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4. When the sleeve has been shrunk onto the joint area, and is still hot and soft, run a small hand roller over the sleeve to push out any trapped air.



5. Particular attention should be paid to the weld and cut-back area. If necessary, areas may be reheated to roll out air.



6. Sleeve is fully recovered when all of the following have occurred:

- 1) The sleeve has fully conformed to the pipe and adjacent coating.
- 2) There are no cold spots or dimples on the sleeve surface.
- 3) Weld bead profile can be seen through the sleeve.
- 4) After sleeve is cool, adhesive flow is evident on both edges.