

Heat Transfer Compounds

ESTIMATING BILL OF MATERIALS

North American Norms



The Heat Tracing Specialists®

Heat Transfer Compounds

A complete heat transfer package may include the following materials:

- Heat Transfer Compound
- Banding and Seals
- Banding and Crimping Tools
- TFK Strap-On Jackets for Standard T3, T-63, T-75, T-99 and Non-Hardening Heat Transfer Compound (TFK Strap-On Jackets are an integral part of a SnapTrace package).
- Application Guns for Cartridges of T-80 and T-85 Heat Transfer Compound
- Installation Instructions

Additional steam tracing materials may include the following:

- DLS-IT and SLS-IT SafeTrace® isolated steam tracers for
 - 1) light heat,
 - 2) sensitive lines
 - 3) freeze protection or
 - 4) process temperature maintenance.
- SafeTrace® BTS, equivalent heat output to bare tracing but with a safety jacket
- ThermoTube preinsulated steam supply and condensate return tubing
- HeetSheet™ heat transfer units for tank heating
- Accessories

Heat Transfer Compound: Add coverage allowances for piping, valves, and pumps. When SnapTrace is used for piping, Standard T3, T-63, T-75, T-85, T-99 or Non-Hardening compound must be selected for valves, pumps and other irregularly shaped equipment.

Piping: Divide total pipe footage by allowance given in Table 1 for gallons required.

Valves: Multiply number of valves by allowance given in Table 4 for gallons required.

Pumps: Follow valve allowance procedure and multiply by 2.

Example: Determine compound requirement for the following: A 4-inch pipe, 500 feet long with a 1/2" O.D. tube tracer installed with T-85 compound (fillet application). There are 6 each, 4-inch valves and 2 each, 4-inch pumps in the system.

1. Piping, Valves and Pumps

500 feet ÷ 140 ft./gallons = 3.57 gallons
(see Table 1)

6 each, 4 valves x .040 gallons/valve = 0.24 gallons
(see Table 4)

2 each, inlet pumps x 0.080 gal./pump = 0.16 gallons
(see Table 4)

Total Requirements: 3.97 or 4.00 gal.

The customer would require $3.57 \times 10^* = 35.7$ or 36 cartridges and (1) one gallon of T-85 for the valves and pumps.

*T-80 and T-85 are supplied in 1/10-gallon cartridges and 1 or 5 gallon pails. Cartridges with a hand application gun will be the fastest installation method for the 500 feet of piping. Gallon pails work best for hand troweling T-80 or T-85 onto valves and pumps.

2. Estimated Requirements for Banding and Seals: (see Table 5)

Note . . . Use T2SSB with 3/8" O.D. and 1/2" O.D. tube tracers. Use T3SSB with 3/4" O.D. and 1" O.D. tube tracers and with NPS rigid pipe tracers. (see basic accessories on page 4)

500 feet of 4-inch pipe x 1.21 ft of strapping per lineal foot of pipe = 605.00 feet of banding

Seals: One, ea. (1) per foot of pipe length; two ea. (2) per valve; three ea. (3) per pump.

3. Banding and Crimping Tools: One (1) per installer. (see basic accessories on page 4)

4. TFK Strap-On Jackets: One (1) jacket per (4) four feet of pipe length. (see basic accessories on page 4)

5. Application Guns: One (1) per installer. (see basic accessories on page 4)

6. Installation Instructions: Accompany every order; additional copies are available upon request.

Note . . . T-85 is not used with "Strap-On" TFK Jackets. However, SnapTrace Pre-formed Flexible Heat Transfer Compound is provided with TFK Strap-On jackets as part of the package.



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Table 1: Coverage—Feet Per Gallon of Compound

Tracer Size (in.)	Process Pipe Size (in.)	STD T3, T-63, T-75, T-99 and Non-Hardening					T-85 & T-80
		TFK-4 Rigid Strap-On Jacket	TFK-6 Flexible Strap-On Jacket	TFK-7 Rigid Strap-On Jacket	TFK-8 Rigid Strap-On Jacket	TFK-9 Rigid Strap-On Jacket	Fillet Application
3/8" O.D.	1/2" to 1-1/4"	--	--	--	56	--	210
3/8" O.D.	1-1/2" to Flat	28	26	--	--	--	200
1/2" O.D.	1-1/2" to Flat	32	30	--	--	--	140
3/4" O.D.	3" to Flat	--	34	19	--	--	67
1" O.D.	6" to Flat	--	--	--	--	10	42
1/2" NPS	3" to Flat	--	--	21	--	--	58
3/4" NPS	6" to Flat	--	--	--	--	10	42
1" NPS	6" to Flat	--	--	--	--	12	24

Note . . .

- Coverage's given in Table 1 are approximations and may vary with skill of workman.
- See product specification Form TSP0032 for TFK Strap-On Jacket dimensions.

Table 2: Coverage—For Hand Troweled Heat Transfer Compound

Standard T3, T-63, T-75, T-99		
Tracer Size (in.)	Process Pipe Size (in.)	Feet Per Gallon
3/8" O.D.	1-1/2" to Flat	32
1/2" O.D.	1-1/2" to Flat	28
3/4" O.D.	2" & Larger	14
1" O.D.	3" to Flat	9
1/2" NPS	3" to Flat	12
3/4" NPS	3" to Flat	9
1" NPS	3" to Flat	6

Note . . .

- Coverage on flat surfaces: one gallon covers 12 sq. ft. with 1/8" of compound.
- Coverage's given in Table 2 are approximations and may vary with skill of workman.

Table 3: Tubing Requirements on Valves

Valve Size (inches)	Tubing Required (feet)			
	O.D. Tubing Size (inches)			
	3/8	1/2	5/8	3/4
1-1/2	2 to 3	1 to 2	--	--
2	3 to 5	3 to 4	--	--
3	4 to 7	4 to 5	--	--
4	6 to 10	5 to 7	5 to 6	4 to 5
6	9 to 15	7 to 11	6 to 9	5 to 8
8	12 to 20	9 to 15	7 to 12	6 to 10
10	15 to 25	10 to 20	8 to 14	7 to 12
12	18 to 30	15 to 25	12 to 20	8 to 13
14	--	21 to 35	16 to 28	12 to 20
16	--	24 to 40	20 to 32	16 to 25
18	--	27 to 45	24 to 35	20 to 30
20	--	30 to 50	25 to 40	20 to 35
24	--	36 to 60	30 to 50	25 to 40
30	--	45 to 75	40 to 65	35 to 50
36	--	54 to 90	45 to 75	40 to 60

Table 4: Heat Transfer Compound Coverage for Valves

Valve Size (inches)	Type of Compound Required		
	Standard T3, T-63, T-75, T-99		T-85 or T-80
	Gallons	Liters	Gallons
1-1/2	0.36	1.4	0.0050 to 0.0080
2	0.43	1.6	0.0120 to 0.200
3	0.71	2.7	0.0160 to 0.280
4	1.00	3.8	0.0240 to 0.0400
6	1.43	5.4	0.0360 to 0.0600
8	2.00	7.6	0.0480 to 0.0800
10	2.50	9.5	0.0600 to 0.100
12	3.00	11.3	0.0720 to 0.120
14	3.50	13.2	0.105 to 0.169
16	4.00	15.1	0.120 to 0.200
18	4.50	17.0	0.136 to 0.225
20	5.00	18.9	0.150 to 0.250
24	6.00	22.7	0.180 to 0.300
30	7.50	28.4	0.225 to 0.375
36	9.00	34.0	0.270 to 0.450

Note . . .

- T-80/T85 Cartridges are 1/10 gallon each.
- Coverage's given in Table 4 are approximations and may vary with skill of workman.
- For pumps multiply the above requirements by 2.

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Table 5: Estimated Stainless Steel Banding

Nominal Process Pipe Size (inches)	Feet of Banding Per Linear Foot of Pipe
1/2	0.48
3/4	0.52
1	0.57
1-1/4	0.64
1-1/2	0.70
2	0.80
2-1/2	0.90
3	1.00
4	1.21
6	1.62
8	2.02
10	2.43
12	2.84
14	3.25
16	3.66
18	4.07
20	4.47
24	5.29
30	6.39
36	7.57

Notes . . .

- Each band will require a crimp seal.
- Applications/Methods:
 - Bare Tracing
 - TFK-4, TFK-6, TFK-7, TFK-8 and TFK-9 Strap-On Jackets
 - Hand Troweled
 - T-80/T-85

Table 6: Thermal Insulation Sizes to Cover Traced Process Pipes

Nominal Process Pipe Size (inches)	TFK-4 Jackets		TFK-7 Jackets		TFK-9 Jackets	
	Tracer Sizes 3/8" or 1/2" O.D.		Tracer Sizes 3/4" or 7/8" O.D.		Tracer Sizes 3/4" or 1" NPS	
	Number of Tracers	Pipe Size Insulation (inches)	Number of Tracers	Pipe Size Insulation (inches)	Number of Tracers	Pipe Size Insulation (inches)
1-1/2	1	2-1/2	--	--	--	--
2	1	3	--	--	--	--
3	1 or 2	4	1 or 2	5	--	--
4	1 or 2	5	1 or 2	6	--	--
6	1, 2 or 3	8	1 or 2	8	1	8
	--	--	--	--	2 or 3	10
8	1, 2 or 3	10	1 or 2	10	1	10
	--	--	3	12	2 or 3	12
10	1, 2 or 3	12	1 or 2	12	1	12
	--	--	3	14	2 or 3	14
12	1, 2 or 3	14	1	14	1, 2 or 3	16
	--	--	2 or 3	16	--	--
14	1, 2 or 3	16	1	16	1	16
	--	--	2 or 3	18	2 or 3	18
16	1, 2 or 3	18	1	18	1	18
	--	--	2 or 3	20	2 or 3	20
18	1, 2 or 3	20	1	20	1	20
	--	--	2 or 3	22	2 or 3	22
20	1, 2 or 3	22	1	22	1	22
	--	--	2 or 3	24	2 or 3	24
24	1, 2 or 3	26	1	26	1	26
	--	--	2 or 3	use block	2 or more	use block

Note . . .

- TFK-8 Jacket covers a 3/8" tubing tracer attached to 1/2", 3/4", 1" or 1-1/4" nominal process pipe sizes. Use next larger pipe size insulation to accommodate tracer and TFK-8 Jacket.

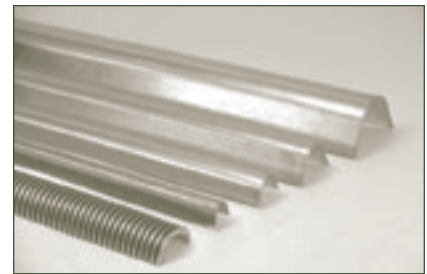
Basic Accessories . . .



- MC-1** . . . manually powered cartridge gun.
MC-1HB . . . manually powered cartridge gun (not shown) with heated barrel for cold weather applications (110 Vac, 48 watts with 3-wire grounded plug).
AC-1 . . . air-powered cartridge gun with 50' of air hose.
AC-1HB . . . air powered cartridge gun (not shown) with heated barrel for cold weather applications (110 Vac, 48 watts with 3-wire grounded plug).



- Stainless Steel Banding** . . . used to secure tracer to piping.
T2SSB (.50" x .020") for 3/8" and 1/2" O.D. tube tracers.
T3SSB (.50" x .030") for 3/4" and 1" O.D. tube tracers and NPS pipe tracers.
C001 . . . banding tool for applying tension to T2SSB or T3SSB banding.
1950A . . . crimping tool for T34PB-CR seals
T34PB-CR . . . crimp seals for fastening tensioned banding.



- TFK-4** . . . covers heat transfer compound applied to 3/8" or 1/2" O.D. tube tracers.
TFK-6 . . . flexible jacket covers heat transfer compound applied to 3/8" - 3/4" O.D. tube tracers.
TFK-7 . . . covers heat transfer compound applied to 3/4" O.D. tube or 1/2" NPS pipe tracers.
TFK-8 . . . covers heat transfer compound applied to 3/8" tube tracers.
TFK-9 . . . covers heat transfer compound applied to 1" O.D. tube and 3/4" or 1" NPS pipe tracers.

Note: Galvanized TFK jackets are used up to 410°F (210°C). Use stainless steel jackets for higher temperatures.



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