

Heat Transfer Compounds

ESTIMATING BILL OF MATERIALS

Metric Units



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-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-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 3 for liters or gallons required.

Valves: Multiply number of valves by allowance given in Table 6 for liters or gallons required.

Pumps: Follow valve allowance procedure and multiply by 2.

Example: Determine compound requirement for the following: A 100 mm pipe, 150 meters long with a 12 mm O.D. tube tracer installed with T-85 compound (fillet application). There are 6 each, 100 mm valves and 2 each, 100 mm pumps in the system.

1. Piping, Valves and Pumps

150 m ÷ 42.67m/3.79 liter pail (1gal. pail) = 3.52 gallons (see Table 1)

6 each, 100 mm valves x 0.150 liters/valve = 0.90 liters (0.24 gallons) (see Table 4)

2 each, inlet pumps x 0.300 liters/pump = 0.60 gallons (0.16 gallons) (see Table 4)

Total Requirements: 3.52 or 4.00 gallons

The customer would require $3.52 \times 10^* = 35.2$ or 36 cartridges and a 3.79 liter pail (one gallon pail) of T-85 for the valves and pumps.

*T-80 and T-85 are supplied in 0.379-liter (1/10-gallon) cartridges and 3.79-liter pails (1 gallon pail) or 18.95-liter pails (5 gallon pails). Cartridges with a hand application gun will be the fastest installation method for the 150 meters 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 10 mm and 12 mm tube tracers. Use T3SSB with 20 mm and 25 mm tube tracers and with small-bore rigid pipe tracers.

150 meters of 100 mm pipe x 1.21 meters of strapping per lineal meter of pipe = 181.5 meters of banding

Banding Seals: Use 3.28 seals per meter 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 1.22 meters 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 mm	Process Pipe Size BS/Din mm	Meters Per 3.79 Liter Pail (1.0 Gallon Pail) of Compound						Fillet Application
		Type of Heat Transfer Compound STD T3, T-63, T-99 and Non-Hardening					Type	
		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	T-85 & T-80	
10 O.D.	15-32	--	--	--	17.10	--	64.00	
10 O.D.	40 to Flat	8.50	6.10	--	--	--	61.00	
12 O.D.	40 to Flat	9.75	9.10	--	--	--	42.67	
20 O.D.	80 to Flat	--	10.36	5.80	--	--	20.42	
25 O.D.	150 to Flat	--	--	--	--	3.05	12.80	
15 NPS BS/DN	80 to Flat	--	--	6.47	--	4.27	17.68	
20 NPS BS/DN	150 to Flat	--	--	--	--	3.05	12.80	
25 NPS BS/DN	150 to Flat	--	--	--	--	3.66	7.32	

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 T-3, T-63		
Tracer Size mm	Process Pipe Size mm	3.79 Liter Pail (1.0 Gallon Pail)
10 O.D.	40 to Flat	9.75
12 O.D.	40 to Flat	8.50
20 O.D.	50 to Flat	4.27
25 O.D.	80 to Flat	2.74
15 NPS BS/DIN	80 to Flat	3.66
20 NPS BS/DIN	80 to Flat	2.74
25 NPS BS/DIN	80 to Flat	1.83

Note . . .

- Coverage on flat surfaces: A 3.79 liter pail covers 1.10 square meters with 3.0 mm 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 mm	O.D. Tubing Size mm		
	10	12	20
40	0.61 to 0.92	0.31 to 0.61	--
50	0.92 to 1.52	0.92 to 1.22	--
80	1.22 to 2.20	1.22 to 1.52	--
100	1.83 to 3.10	1.52 to 2.20	1.22 to 1.52
150	2.70 to 4.60	2.13 to 3.35	1.53 to 2.44
200	3.66 to 6.10	2.70 to 4.60	1.83 to 3.05
250	4.60 to 7.60	3.05 to 6.10	2.13 to 3.66
300	5.50 to 9.20	4.60 to 7.60	2.44 to 4.00
350		6.40 to 10.70	3.66 to 6.10
400		7.32 to 12.20	4.88 to 7.62
450		8.20 to 13.72	6.10 to 9.20
500		9.20 to 15.20	6.10 to 10.70
600		11.00 to 18.30	7.60 to 12.20
750		13.70 to 22.90	10.70 to 15.20

Table 4: Heat Transfer Compound Coverage for Valves

Valve Size mm	Type of Compound Required	
	Std T3, T-63	T-85 or T-80
	Liters	Liters
40	1.36	0.019 to 0.030
50	1.62	0.045 to 0.760
80	2.68	0.061 to 0.106
100	3.78	0.091 to 0.150
150	5.40	0.136 to 0.227
200	7.57	0.182 to 0.300
250	9.46	0.227 to 0.378
300	11.35	0.272 to 0.450
350	13.52	0.397 to 0.640
400	15.14	0.450 to 0.760
450	17.03	0.520 to 0.850
500	18.93	0.570 to 0.950
600	22.70	0.680 to 1.130
750	28.40	0.850 to 1.420

Note . . .

- T-80/T85 Cartridges are 0.379 liters each. For pumps multiply the above requirements by 2.
- Coverage's given in Table 4 are approximations and may vary with skill of workman.

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Table 5: Estimated Stainless Steel Banding

Nominal Process Pipe Size BS/DIN mm	Meters of Banding Per Linear Meter of Pipe
15	0.48
20	0.52
25	0.57
32	0.64
40	0.70
50	0.80
65	0.90
80	1.00
100	1.21
150	1.62
200	2.02
250	2.43
300	2.84
350	3.25
400	3.66
450	4.07
500	4.47
600	5.29
750	6.27
900	7.44

- 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

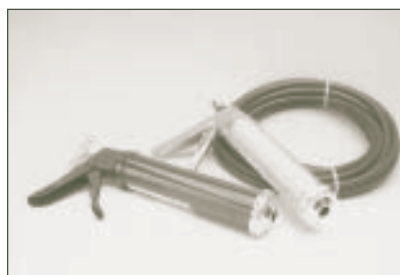
Table 6: Thermal Insulation Sizes to Cover Traced Process Pipes

Nominal Process Pipe Size mm	TFK-4 Jackets		TFK-7 Jackets		TFK-9 Jackets	
	Tracer Sizes 10mm or 12mm Tubing		Tracer Sizes 20mm or 22mm Tubing or NPS 15 BS/DIN		Tracer Sizes NPS 20 or 25 BS/DIN	
	Number of Tracers	Pipe Size Insulation mm	Number of Tracers	Pipe Size Insulation mm	Number of Tracers	Pipe Size Insulation mm
40	1	65	--	--	--	--
50	1	80	--	--	--	--
80	1 or 2	100	1 or 2	125	--	--
100	1 or 2	125	1 or 2	150	--	--
150	1, 2 or 3	200	1 or 2	200	1	200
	--	--	--	--	2 or 3	250
200	1, 2 or 3	250	1 or 2	250	1	250
	--	--	3	300	2 or 3	300
250	1, 2 or 3	300	1 or 2	300	1	300
	--	--	3	350	2 or 3	350
300	1, 2 or 3	350	1	350	1, 2, or 3	400
	--	--	2 or 3	400	--	--
350	1, 2 or 3	400	1	400	1	400
	--	--	2 or 3	450	2 or 3	450
400	1, 2 or 3	450	1	450	1	450
	--	--	2 or 3	500	2 or 3	500
450	1, 2 or 3	500	1	500	1	500
	--	--	2 or 3	550	2 or 3	550
500	1, 2 or 3	550	1	550	1	550
	--	--	2 or 3	600	2 or 3	600
600	1, 2 or 3	650	1	650	1	650
	--	--	2 or 3	use block	2 or more	use block

Note . . .

- TFK-8 Jacket covers a 10 mm tubing tracer attached to 15 mm, 20 mm, 25 mm or 32 BS/DIN nominal process pipe sizes. Use next larger pipe size insulation to accommodate tracer and TFK-8 Jacket.

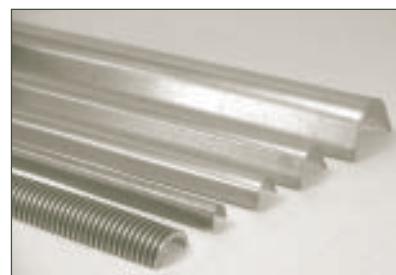
Basic Accessories . . .



- 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 15 m 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 (12 mm x .5 mm) for 10 mm and 12 mm O.D. tube tracers.
T3SSB (12 mm x .8 mm) for 20 mm and 25 mm 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 10 mm or 12 mm O.D. tube tracers.
TFK-6 . . . covers heat transfer compound applied to 10 mm -20 mm O.D. tube tracers.
TFK-7 . . . covers heat transfer compound applied to 20 mm O.D. tube or 15 mm NPS pipe tracers.
TFK-8 . . . covers heat transfer compound applied to 10 mm tube tracers.
TFK-9 . . . covers heat transfer compound applied to 25 mm O.D. tube and 20 mm or 25 mm NPS pipe tracers.



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