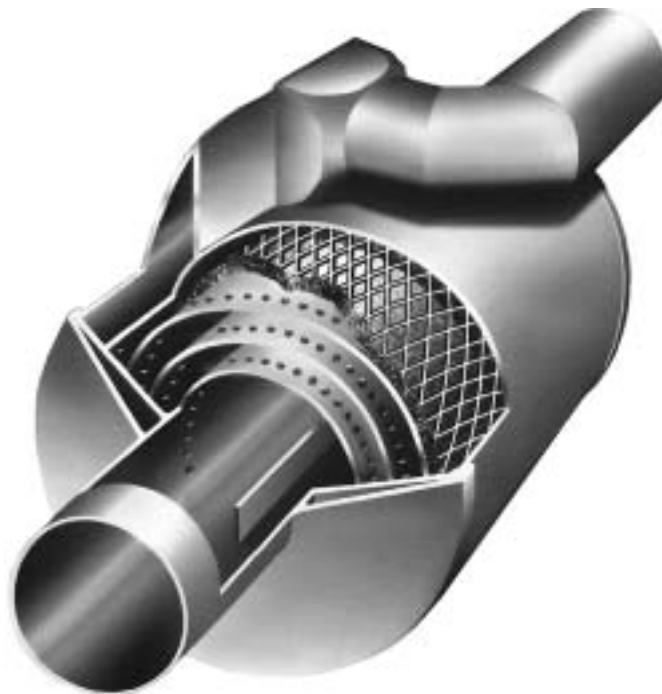




PHILLIPS & TEMRO INDUSTRIES, LTD.
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Spiral Chamber Silencers... Performance without the bulk



ENGINE EXHAUST SILENCERS

- COMPACT SPIRAL DESIGN SILENCERS
- EXHAUST SYSTEM ACCESSORIES



CONTACT INFORMATION



Engine Exhaust Silencers and Accessories Manufacturing Facilities

Phillips & Temro Industries, Ltd.
100 Paquin Road
Winnipeg, MB R2J 3V4 Canada
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Fax# 204-661-2639



**EM Products Division
Phillips & Temro Industries**
5380 Cottonwood Lane
Prior Lake, MN 55372
Ph# 952-440-9200
Fax# 952-440-3400



Cold Weather Starting, Comfort, and Emissions Control Products Manufacturing Facilities

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Phillips & Temro Industries
9700 W 74th Street
Eden Prairie, MN 55344
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Fax# 952-941-2285



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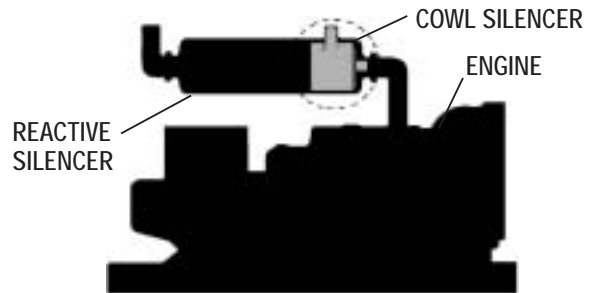
Meeting Your Complete Exhaust System Needs

Cowl® silencers feature a unique single spiral chamber that allows a free flow of exhaust gases through a uniform cross section partially lined with stainless steel wool and mesh. As exhaust gases pass through the spiral, noise is diffused and progressively attenuated...in a package about 1/3 the size and 1/2 the weight of most reactive silencers.



Many options are available to complete your installation including rain caps, flanges, mounting brackets, elbow connections, and flex connections. Many of the accessories listed in the EM Products® catalog are available for use with the Cowl® product line.

All Cowl silencers are manufactured in our 17,000 sq. ft. Winnipeg facility. The Cowl plant shares an 8-acre site with the cold weather starting products manufacturing and engineering operations of the ZeroStart/Temro Canadian division.



Cowl® silencers are available in residential and critical grades. Factory customization is also available to fit your specific silencing needs.

Standard Cowl Models (shown with standard high-temperature black paint finish)

MODELS "PL"



"PR"



"TL"



"TR"



MODELS "SL"



"SR"



"PV"



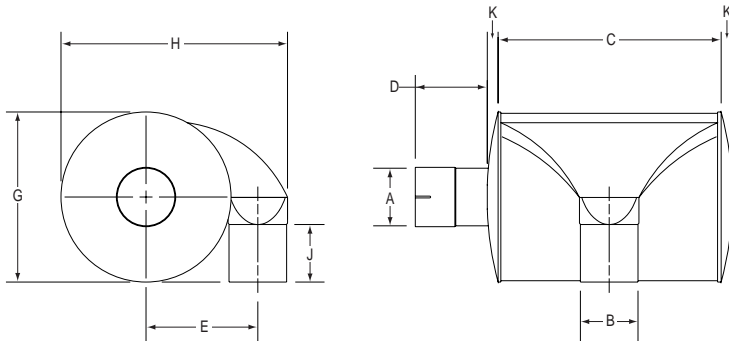
"SV"





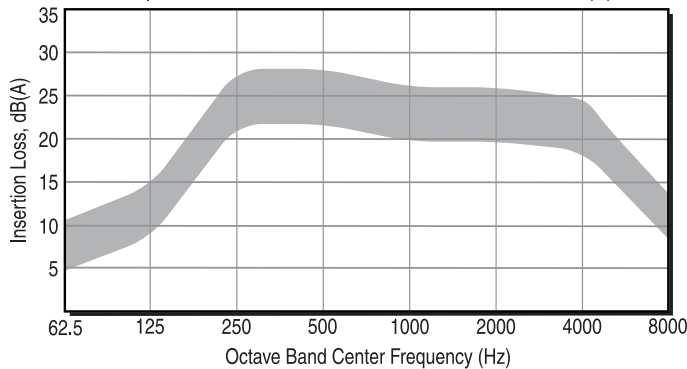
ENGINE EXHAUST SILENCERS

TS RESIDENTIAL GRADE — “PR” MODEL

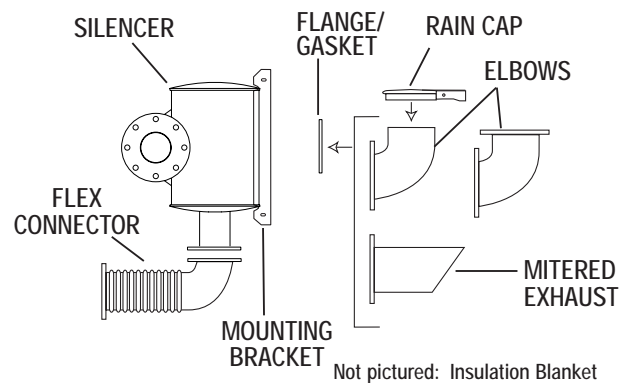


- Typical Insertion Loss = 22 — 28 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TS Series dB(A)



Engine Exhaust Silencer & Accessories



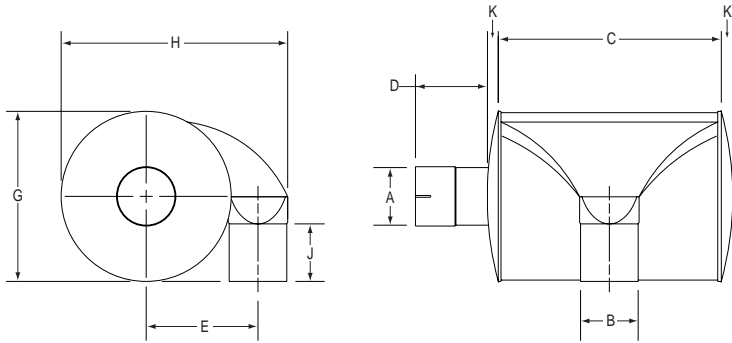
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	G inch / mm	H inch / mm	J inch / mm	K inch / mm	WEIGHT pounds / kg
TS15PRS000	1.50 / 38	1.50 / 38	5.24 / 133	2.50 / 64	4.12 / 105	7.18 / 182	8.55 / 217	3.59 / 91	.50 / 13	10 / 5
TS20PRS000	2.00 / 51	2.00 / 51	7.24 / 184	3.50 / 89	4.37 / 111	7.18 / 182	9.05 / 230	3.59 / 91	.50 / 13	14 / 7
TS25PRS000	2.50 / 64	2.50 / 64	8.24 / 209	3.50 / 89	5.41 / 137	8.81 / 224	11.13 / 283	4.41 / 112	.50 / 13	19 / 9
TS30PRS000	3.00 / 76	3.00 / 76	9.24 / 235	5.25 / 133	7.05 / 179	11.81 / 300	14.52 / 369	5.91 / 150	.75 / 19	31 / 14
TS35PRS000	3.50 / 89	3.50 / 89	11.49 / 292	5.25 / 133	7.26 / 184	11.81 / 300	14.92 / 379	5.91 / 150	.75 / 19	38 / 18
TS40PRS000	4.00 / 102	4.00 / 102	15.49 / 393	5.25 / 133	7.76 / 197	11.81 / 300	15.73 / 400	5.91 / 150	.75 / 19	46 / 21
TS45PRS000	4.50 / 114	4.50 / 114	12.49 / 317	5.00 / 127	10.04 / 255	16.06 / 408	20.38 / 518	8.03 / 204	1.00 / 25	65 / 30
TS50PRS000	5.00 / 127	5.00 / 127	16.49 / 419	5.00 / 127	10.27 / 261	16.06 / 408	20.84 / 529	8.03 / 204	1.00 / 25	71 / 33
TS60PRS000	6.00 / 152	6.00 / 152	22.49 / 571	5.00 / 127	10.65 / 271	16.06 / 408	21.74 / 552	8.03 / 204	1.00 / 25	92 / 42
TS70PRS000	8.00 / 203	8.00 / 203	15.35 / 390	6.55 / 166	14.58 / 370	22.00 / 559	29.72 / 755	11.00 / 279	1.45 / 37	100 / 46
TS80PRS000	8.00 / 203	8.00 / 203	24.27 / 616	6.55 / 166	14.58 / 370	22.00 / 559	29.72 / 755	11.00 / 279	1.45 / 37	154 / 70
TS100PRS000	10.00 / 254	10.00 / 254	30.08 / 764	6.25 / 159	18.14 / 461	28.00 / 711	37.15 / 944	14.00 / 358	1.75 / 44	250 / 114
TS120PRS000	12.00 / 305	12.00 / 305	36.08 / 916	5.75 / 146	21.63 / 549	33.00 / 838	44.19 / 1122	16.50 / 419	2.25 / 57	365 / 166



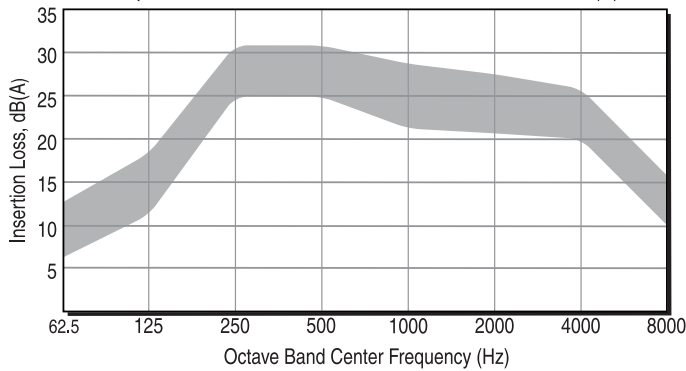
ENGINE EXHAUST SILENCERS

TXS CRITICAL GRADE — “PR” MODEL

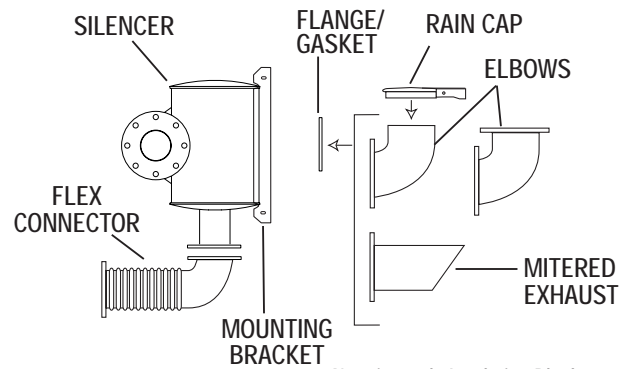


- Typical Insertion Loss = 28 — 33 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TXS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

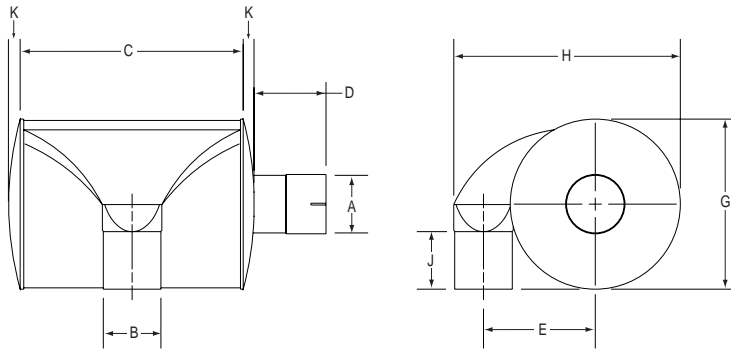
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	G inch / mm	H inch / mm	J inch / mm	K inch / mm	WEIGHT pounds / kg
TXS15PRS000	1.50 / 38	1.50 / 38	5.24 / 133	2.50 / 64	4.85 / 123	8.81 / 224	10.03 / 255	4.41 / 112	.50 / 13	12 / 6
TXS20PRS000	2.00 / 51	2.00 / 51	7.24 / 184	3.50 / 89	5.00 / 127	8.81 / 224	10.49 / 266	4.41 / 112	.50 / 13	17 / 8
TXS25PRS000	2.50 / 64	2.50 / 64	8.24 / 209	3.25 / 83	6.45 / 164	11.81 / 300	13.87 / 347	5.91 / 150	.75 / 19	31 / 14
TXS30PRS000	3.00 / 76	3.00 / 76	9.24 / 235	5.00 / 127	8.60 / 218	16.06 / 408	18.20 / 462	8.03 / 204	1.00 / 25	53 / 24
TXS35PRS000	3.50 / 89	3.50 / 89	11.49 / 292	5.00 / 127	8.82 / 224	16.06 / 408	18.61 / 473	8.03 / 204	1.00 / 25	61 / 28
TXS40PRS000	4.00 / 102	4.00 / 102	15.49 / 393	5.00 / 127	9.37 / 238	16.06 / 408	19.46 / 494	8.03 / 204	1.00 / 25	75 / 34
TXS45PRS000	4.50 / 114	4.50 / 114	12.49 / 317	4.55 / 116	11.32 / 288	19.38 / 492	23.32 / 592	9.69 / 246	1.45 / 37	80 / 37
TXS50PRS000	5.00 / 127	5.00 / 127	16.49 / 419	4.55 / 116	11.54 / 293	19.38 / 492	23.79 / 604	9.69 / 246	1.45 / 37	97 / 44
TXS60PRS000	6.00 / 152	6.00 / 152	22.49 / 571	4.55 / 116	11.98 / 304	19.38 / 492	24.73 / 628	9.69 / 246	1.45 / 37	124 / 57
TXS70PRS000	8.00 / 203	8.00 / 203	15.41 / 391	6.55 / 166	16.87 / 428	26.50 / 673	34.12 / 867	13.25 / 337	1.45 / 37	140 / 64
TXS80PRS000	8.00 / 203	8.00 / 203	24.33 / 618	6.55 / 166	16.87 / 428	26.50 / 673	34.12 / 867	13.25 / 337	1.45 / 37	216 / 98
TXS100PRS000	10.00 / 254	10.00 / 254	30.08 / 764	6.25 / 159	21.28 / 541	34.00 / 864	43.34 / 1101	17.00 / 432	1.75 / 44	350 / 159
TXS120PRS000	12.00 / 305	12.00 / 305	36.08 / 916	5.75 / 146	24.70 / 627	40.00 / 1016	50.76 / 1289	20.00 / 508	2.25 / 57	511 / 232



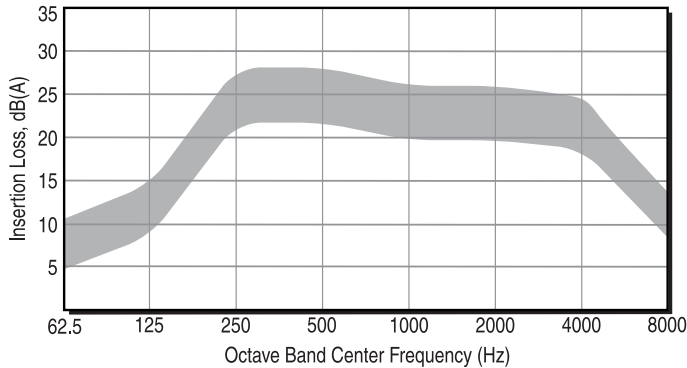
ENGINE EXHAUST SILENCERS

TS RESIDENTIAL GRADE — “PL” MODEL

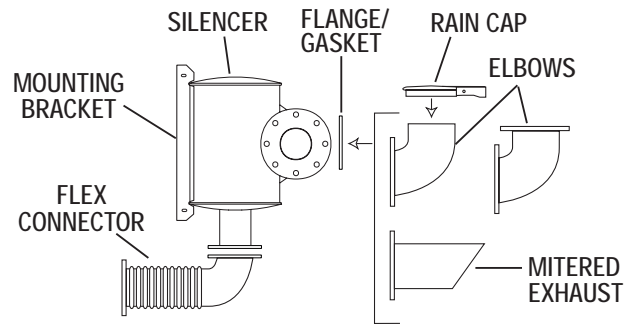


- Typical Insertion Loss = 22 — 28 dB(A)
(Actual Insertion Loss May Vary Per Application)
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- Low Weight
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- Standard High Temp Finish
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- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

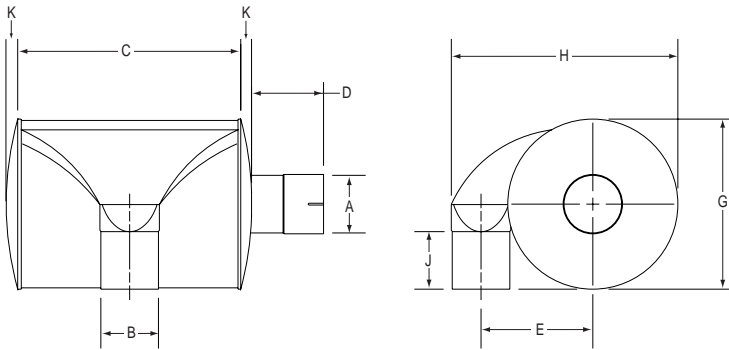
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	G inch / mm	H inch / mm	J inch / mm	K inch / mm	WEIGHT pounds / kg
TS15PLS000	1.50 / 38	1.50 / 38	5.24 / 133	2.50 / 64	4.12 / 105	7.18 / 182	8.55 / 217	3.59 / 91	.50 / 13	10 / 5
TS20PLS000	2.00 / 51	2.00 / 51	7.24 / 184	3.50 / 89	4.37 / 111	7.18 / 182	9.05 / 230	3.59 / 91	.50 / 13	14 / 7
TS25PLS000	2.50 / 64	2.50 / 64	8.24 / 209	3.50 / 89	5.41 / 137	8.81 / 224	11.13 / 283	4.41 / 112	.50 / 13	19 / 9
TS30PLS000	3.00 / 76	3.00 / 76	9.24 / 235	5.25 / 133	7.05 / 179	11.81 / 300	14.52 / 369	5.91 / 150	.75 / 19	31 / 14
TS35PLS000	3.50 / 89	3.50 / 89	11.49 / 292	5.25 / 133	7.26 / 184	11.81 / 300	14.92 / 379	5.91 / 150	.75 / 19	38 / 18
TS40PLS000	4.00 / 102	4.00 / 102	15.49 / 393	5.25 / 133	7.76 / 197	11.81 / 300	15.73 / 400	5.91 / 150	.75 / 19	46 / 21
TS45PLS000	4.50 / 114	4.50 / 114	12.49 / 317	5.00 / 127	10.04 / 255	16.06 / 408	20.38 / 518	8.03 / 204	1.00 / 25	65 / 30
TS50PLS000	5.00 / 127	5.00 / 127	16.49 / 419	5.00 / 127	10.27 / 261	16.06 / 408	20.84 / 529	8.03 / 204	1.00 / 25	71 / 33
TS60PLS000	6.00 / 152	6.00 / 152	22.49 / 571	5.00 / 127	10.65 / 271	16.06 / 408	21.74 / 552	8.03 / 204	1.00 / 25	92 / 42
TS70PLS000	8.00 / 203	8.00 / 203	15.35 / 390	6.55 / 166	14.58 / 370	22.00 / 559	29.72 / 755	11.00 / 279	1.45 / 37	100 / 46
TS80PLS000	8.00 / 203	8.00 / 203	24.27 / 616	6.55 / 166	14.58 / 370	22.00 / 559	29.72 / 755	11.00 / 279	1.45 / 37	154 / 70
TS100PLS000	10.00 / 254	10.00 / 254	30.08 / 764	6.25 / 159	18.14 / 461	28.00 / 711	37.15 / 944	14.00 / 358	1.75 / 44	250 / 114
TS120PLS000	12.00 / 305	12.00 / 305	36.08 / 916	5.75 / 146	21.63 / 549	33.00 / 838	44.19 / 1122	16.50 / 419	2.25 / 57	365 / 166



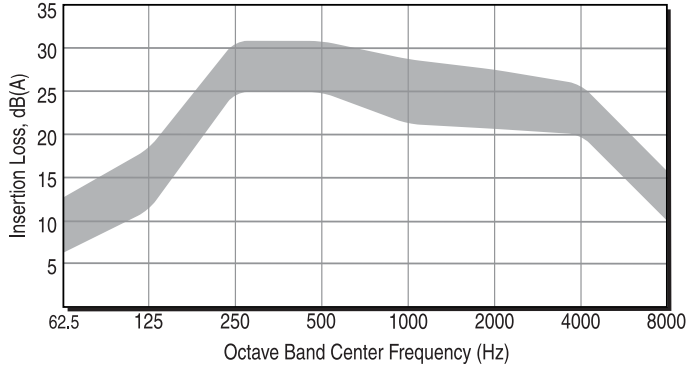
ENGINE EXHAUST SILENCERS

TXS CRITICAL GRADE — “PL” MODEL

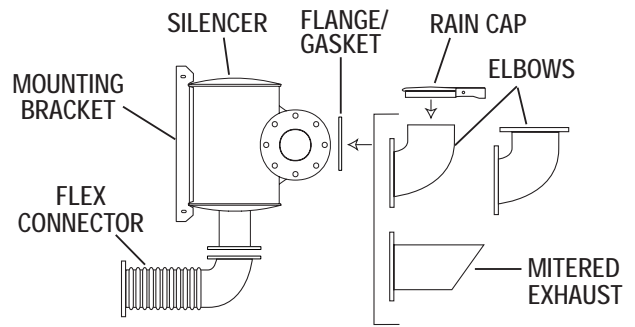


- Typical Insertion Loss = 28 — 33 dB(A)
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- Compact Spiral Chamber Design
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Representative Cowl Insertion Loss - TXS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

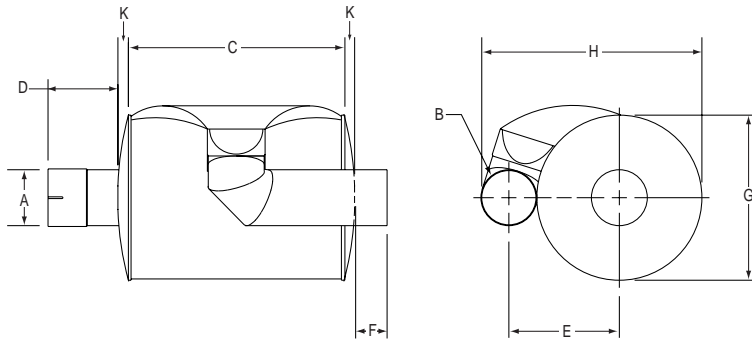
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	G inch / mm	H inch / mm	J inch / mm	K inch / mm	WEIGHT pounds / kg
TXS15PLS000	1.50 / 38	1.50 / 38	5.24 / 133	2.50 / 64	4.85 / 123	8.81 / 224	10.03 / 255	4.41 / 112	.50 / 13	12 / 6
TXS20PLS000	2.00 / 51	2.00 / 51	7.24 / 184	3.50 / 89	5.00 / 127	8.81 / 224	10.49 / 266	4.41 / 112	.50 / 13	17 / 8
TXS25PLS000	2.50 / 64	2.50 / 64	8.24 / 209	3.25 / 83	6.45 / 164	11.81 / 300	13.67 / 347	5.91 / 150	.75 / 19	31 / 14
TXS30PLS000	3.00 / 76	3.00 / 76	9.24 / 235	5.00 / 127	8.60 / 218	16.06 / 408	18.20 / 462	8.03 / 204	1.00 / 25	53 / 24
TXS35PLS000	3.50 / 89	3.50 / 89	11.49 / 292	5.00 / 127	8.82 / 224	16.06 / 408	18.61 / 473	8.03 / 204	1.00 / 25	61 / 28
TXS40PLS000	4.00 / 102	4.00 / 102	15.49 / 393	5.00 / 127	9.37 / 238	16.06 / 408	19.46 / 494	8.03 / 204	1.00 / 25	75 / 34
TXS45PLS000	4.50 / 114	4.50 / 114	12.49 / 317	4.55 / 116	11.32 / 288	19.38 / 492	23.32 / 592	9.69 / 246	1.45 / 37	80 / 37
TXS50PLS000	5.00 / 127	5.00 / 127	16.49 / 419	4.55 / 116	11.54 / 293	19.38 / 492	23.79 / 604	9.69 / 246	1.45 / 37	97 / 44
TXS60PLS000	6.00 / 152	6.00 / 152	22.49 / 571	4.55 / 116	11.98 / 304	19.38 / 492	24.73 / 628	9.69 / 246	1.45 / 37	124 / 57
TXS70PLS000	8.00 / 203	8.00 / 203	15.41 / 391	6.55 / 166	16.87 / 428	26.50 / 673	34.12 / 867	13.25 / 337	1.45 / 37	140 / 64
TXS80PLS000	8.00 / 203	8.00 / 203	24.33 / 618	6.55 / 166	16.87 / 428	26.50 / 673	34.12 / 867	13.25 / 337	1.45 / 37	216 / 98
TXS100PLS000	10.00 / 254	10.00 / 254	30.08 / 764	6.25 / 159	21.28 / 541	34.00 / 864	43.34 / 1101	17.00 / 432	1.75 / 44	350 / 159
TXS120PLS000	12.00 / 305	12.00 / 305	36.08 / 916	5.75 / 146	24.70 / 627	40.00 / 1016	50.76 / 1289	20.00 / 508	2.25 / 57	511 / 232



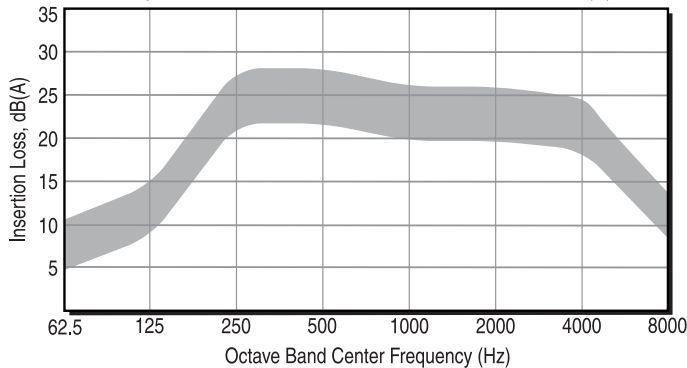
ENGINE EXHAUST SILENCERS

TS RESIDENTIAL GRADE — "TR" MODEL

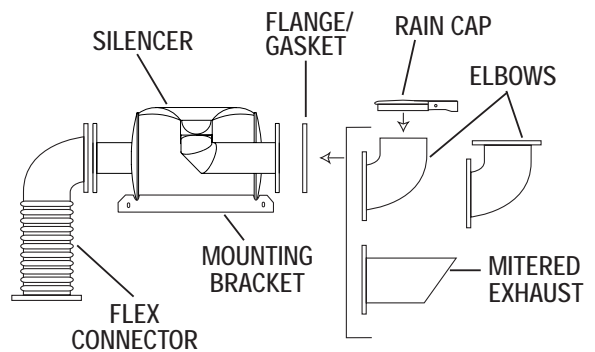


- Typical Insertion Loss = 22 — 28 dB(A)
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- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

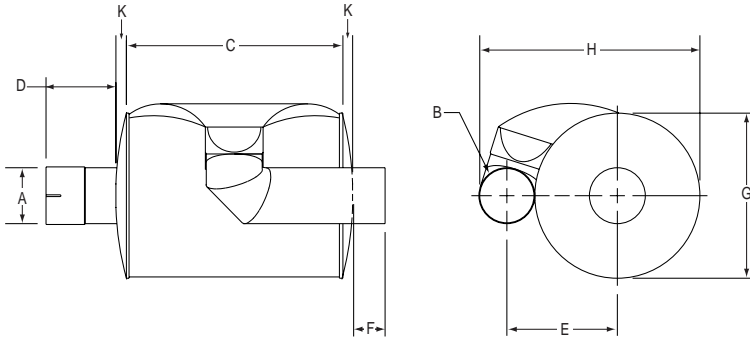
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	F inch / mm	G inch / mm	H inch / mm	K inch / mm	WEIGHT pounds / kg
TS15TRS000	1.50 / 38	1.50 / 38	5.24 / 133	2.50 / 64	4.34 / 110	2.07 / 53	7.18 / 182	8.68 / 220	.50 / 13	11 / 5
TS20TRS000	2.00 / 51	2.00 / 51	7.24 / 184	3.50 / 89	4.59 / 117	2.07 / 53	7.18 / 182	9.18 / 223	.50 / 13	15 / 7
TS25TRS000	2.50 / 64	2.50 / 64	8.24 / 209	3.50 / 89	5.66 / 144	2.07 / 53	8.81 / 224	11.31 / 287	.50 / 13	20 / 9
TS30TRS000	3.00 / 76	3.00 / 76	9.24 / 235	5.25 / 133	7.41 / 188	2.07 / 53	11.81 / 300	14.81 / 376	.75 / 19	32 / 15
TS35TRS000	3.50 / 89	3.50 / 89	11.49 / 292	5.25 / 133	7.66 / 195	2.26 / 57	11.81 / 300	15.31 / 389	.75 / 19	38 / 18
TS40TRS000	4.00 / 102	4.00 / 102	15.49 / 393	5.25 / 133	7.91 / 201	2.35 / 60	11.81 / 300	15.81 / 402	.75 / 19	47 / 22
TS45TRS000	4.50 / 114	4.50 / 114	12.49 / 317	5.00 / 127	10.28 / 261	2.57 / 65	16.06 / 408	20.56 / 522	1.00 / 25	66 / 30
TS50TRS000	5.00 / 127	5.00 / 127	16.49 / 419	5.00 / 127	10.53 / 267	2.57 / 65	16.06 / 408	21.06 / 535	1.00 / 25	74 / 34
TS60TRS000	6.00 / 152	6.00 / 152	22.49 / 571	5.00 / 127	11.03 / 280	2.57 / 65	16.06 / 408	22.06 / 580	1.00 / 25	94 / 43
TS70TRS000	8.00 / 203	8.00 / 203	15.35 / 390	6.55 / 166	15.00 / 381	3.97 / 101	22.00 / 559	30.00 / 762	1.45 / 37	105 / 48
TS80TRS000	8.00 / 203	8.00 / 203	24.27 / 616	6.55 / 166	15.00 / 381	3.97 / 101	22.00 / 559	30.00 / 762	1.45 / 37	162 / 74
TS100TRS000	10.00 / 254	10.00 / 254	30.08 / 764	6.25 / 159	19.00 / 483	2.62 / 87	28.00 / 711	38.00 / 965	1.75 / 44	268 / 122
TS120TRS000	12.00 / 305	12.00 / 305	36.08 / 916	5.75 / 146	22.50 / 572	3.71 / 94	33.00 / 838	45.00 / 1143	2.25 / 57	380 / 173



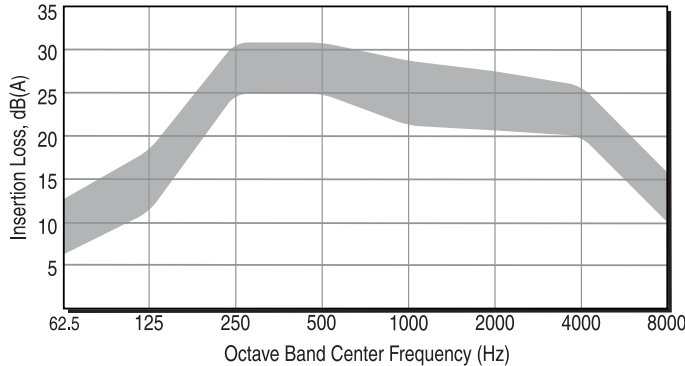
ENGINE EXHAUST SILENCERS

TXS CRITICAL GRADE — “TR” MODEL

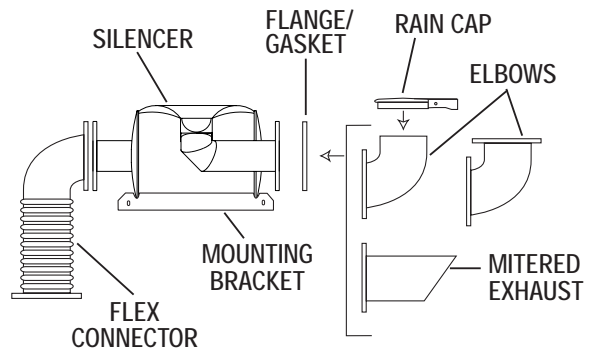


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- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TXS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

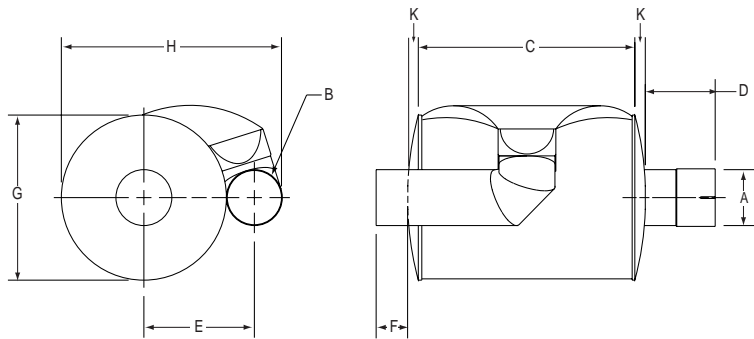
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	F inch / mm	G inch / mm	H inch / mm	K inch / mm	WEIGHT pounds / kg
TXS15TRS000	1.50 / 38	1.50 / 38	5.24 / 133	2.50 / 64	5.19 / 132	2.07 / 53	8.81 / 224	10.38 / 264	.50 / 13	14 / 7
TXS20TRS000	2.00 / 51	2.00 / 51	7.24 / 184	3.50 / 89	5.41 / 137	2.07 / 53	8.81 / 224	10.81 / 275	.50 / 13	19 / 9
TXS25TRS000	2.50 / 64	2.50 / 64	8.24 / 209	3.25 / 83	7.16 / 182	1.82 / 46	11.81 / 300	14.31 / 363	.75 / 19	32 / 15
TXS30TRS000	3.00 / 76	3.00 / 76	9.24 / 235	5.00 / 127	9.53 / 242	2.07 / 53	16.06 / 408	19.06 / 484	1.00 / 25	52 / 24
TXS35TRS000	3.50 / 89	3.50 / 89	11.49 / 292	5.00 / 127	9.78 / 248	2.07 / 53	16.06 / 408	19.56 / 497	1.00 / 25	63 / 29
TXS40TRS000	4.00 / 102	4.00 / 102	15.49 / 393	5.00 / 127	10.03 / 255	2.07 / 53	16.06 / 408	20.06 / 510	1.00 / 25	77 / 35
TXS45TRS000	4.50 / 114	4.50 / 114	12.49 / 317	4.55 / 116	11.94 / 303	1.46 / 37	19.38 / 492	23.88 / 607	1.45 / 37	81 / 37
TXS50TRS000	5.00 / 127	5.00 / 127	16.49 / 419	4.55 / 116	12.19 / 310	2.12 / 54	19.38 / 492	24.38 / 619	1.45 / 37	98 / 45
TXS60TRS000	6.00 / 152	6.00 / 152	22.49 / 571	4.55 / 116	12.69 / 322	2.05 / 52	19.38 / 492	25.38 / 645	1.45 / 37	137 / 63
TXS70TRS000	8.00 / 203	8.00 / 203	15.41 / 391	6.55 / 166	17.25 / 438	3.97 / 101	26.50 / 673	34.50 / 876	1.45 / 37	147 / 67
TXS80TRS000	8.00 / 203	8.00 / 203	24.33 / 618	6.55 / 166	17.25 / 438	3.97 / 101	26.50 / 673	34.50 / 876	1.45 / 37	227 / 103
TXS100TRS000	10.00 / 254	10.00 / 254	30.08 / 764	6.25 / 159	22.00 / 559	2.62 / 67	34.00 / 864	44.00 / 1118	1.75 / 44	375 / 171
TXS120TRS000	12.00 / 305	12.00 / 305	36.08 / 916	5.75 / 146	26.00 / 660	3.71 / 94	40.00 / 1016	52.00 / 1321	2.25 / 57	532 / 242



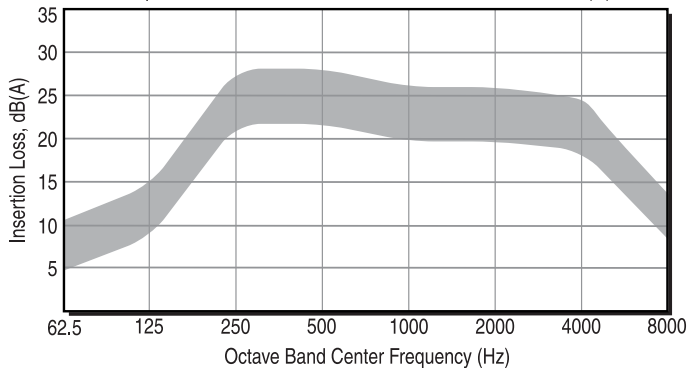
ENGINE EXHAUST SILENCERS

TS RESIDENTIAL GRADE — "TL" MODEL

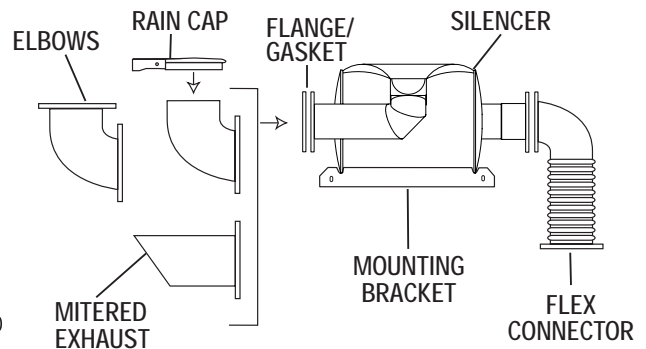


- Typical Insertion Loss = 22 — 28 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

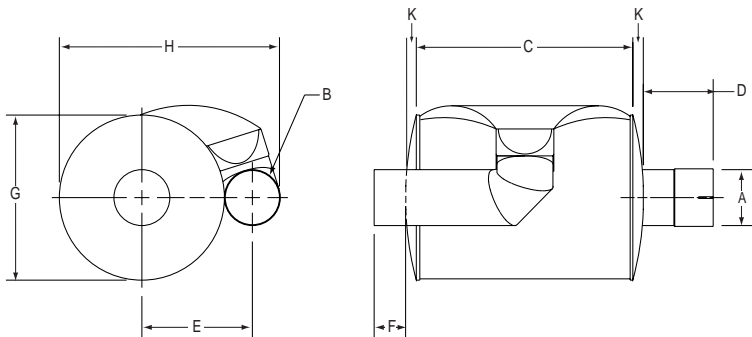
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	F inch / mm	G inch / mm	H inch / mm	K inch / mm	WEIGHT pounds / kg
TS15TLS000	1.50 / 38	1.50 / 38	5.24 / 133	2.50 / 64	4.34 / 110	2.07 / 53	7.18 / 182	8.68 / 220	.50 / 13	11 / 5
TS20TLS000	2.00 / 51	2.00 / 51	7.24 / 184	3.50 / 89	4.59 / 117	2.07 / 53	7.18 / 182	9.18 / 223	.50 / 13	15 / 7
TS25TLS000	2.50 / 64	2.50 / 64	8.24 / 209	3.50 / 89	5.66 / 144	2.07 / 53	8.81 / 224	11.31 / 287	.50 / 13	20 / 9
TS30TLS000	3.00 / 76	3.00 / 76	9.24 / 235	5.25 / 133	7.41 / 188	2.07 / 53	11.81 / 300	14.81 / 376	.75 / 19	32 / 15
TS35TLS000	3.50 / 89	3.50 / 89	11.49 / 292	5.25 / 133	7.66 / 195	2.26 / 57	11.81 / 300	15.31 / 389	.75 / 19	38 / 18
TS40TLS000	4.00 / 102	4.00 / 102	15.49 / 393	5.25 / 133	7.91 / 201	2.35 / 60	11.81 / 300	15.81 / 402	.75 / 19	47 / 22
TS45TLS000	4.50 / 114	4.50 / 114	12.49 / 317	5.00 / 127	10.28 / 261	2.57 / 65	16.06 / 408	20.56 / 522	1.00 / 25	66 / 30
TS50TLS000	5.00 / 127	5.00 / 127	16.49 / 419	5.00 / 127	10.53 / 267	2.57 / 65	16.06 / 408	21.06 / 535	1.00 / 25	74 / 34
TS60TLS000	6.00 / 152	6.00 / 152	22.49 / 571	5.00 / 127	11.03 / 280	2.57 / 65	16.06 / 408	22.06 / 580	1.00 / 25	94 / 43
TS70TLS000	8.00 / 203	8.00 / 203	15.35 / 390	6.55 / 166	15.00 / 381	3.97 / 101	22.00 / 559	30.00 / 762	1.45 / 37	105 / 48
TS80TLS000	8.00 / 203	8.00 / 203	24.27 / 616	6.55 / 166	15.00 / 381	3.97 / 101	22.00 / 559	30.00 / 762	1.45 / 37	162 / 74
TS100TLS000	10.00 / 254	10.00 / 254	30.08 / 764	6.25 / 159	19.00 / 483	2.62 / 87	28.00 / 711	38.00 / 965	1.75 / 44	268 / 122
TS120TLS000	12.00 / 305	12.00 / 305	36.08 / 916	5.75 / 146	22.50 / 572	3.71 / 94	33.00 / 838	45.00 / 1143	2.25 / 57	380 / 173

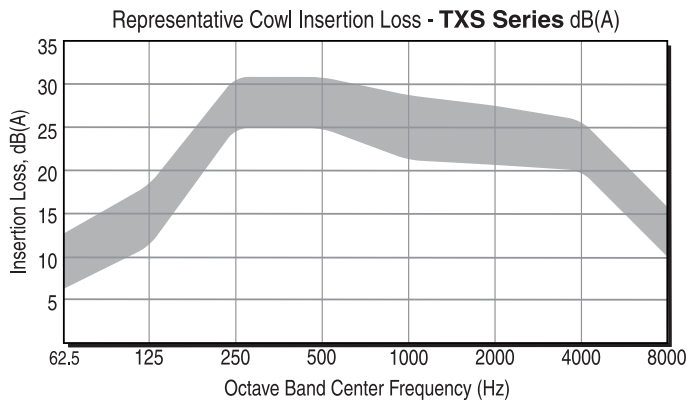


ENGINE EXHAUST SILENCERS

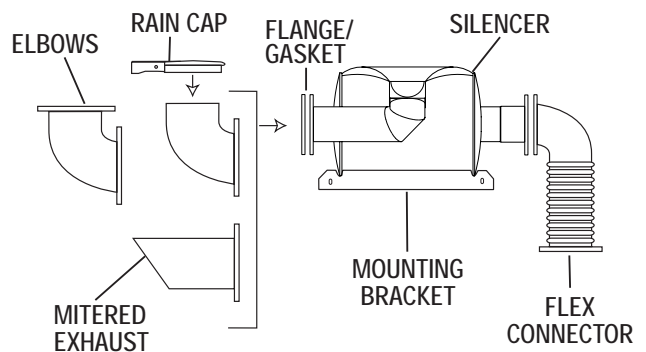
TXS CRITICAL GRADE — "TL" MODEL



- Typical Insertion Loss = 28 — 33 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

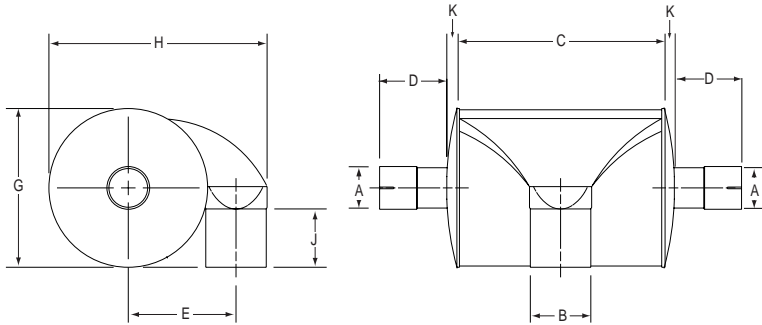
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	F inch / mm	G inch / mm	H inch / mm	K inch / mm	WEIGHT pounds / kg
TXS15TLS000	1.50 / 38	1.50 / 38	5.24 / 133	2.50 / 64	5.19 / 132	2.07 / 53	8.81 / 224	10.38 / 264	.50 / 13	14 / 7
TXS20TLS000	2.00 / 51	2.00 / 51	7.24 / 184	3.50 / 89	5.41 / 137	2.07 / 53	8.81 / 224	10.81 / 275	.50 / 13	19 / 9
TXS25TLS000	2.50 / 64	2.50 / 64	8.24 / 209	3.25 / 83	7.16 / 182	1.82 / 46	11.81 / 300	14.31 / 363	.75 / 19	32 / 15
TXS30TLS000	3.00 / 76	3.00 / 76	9.24 / 235	5.00 / 127	9.53 / 242	2.07 / 53	16.06 / 408	19.06 / 484	1.00 / 25	52 / 24
TXS35TLS000	3.50 / 89	3.50 / 89	11.49 / 292	5.00 / 127	9.78 / 248	2.07 / 53	16.06 / 408	19.56 / 497	1.00 / 25	63 / 29
TXS40TLS000	4.00 / 102	4.00 / 102	15.49 / 393	5.00 / 127	10.03 / 255	2.07 / 53	16.06 / 408	20.06 / 510	1.00 / 25	77 / 35
TXS45TLS000	4.50 / 114	4.50 / 114	12.49 / 317	4.55 / 116	11.94 / 303	1.46 / 37	19.38 / 492	23.38 / 607	1.45 / 37	81 / 37
TXS50TLS000	5.00 / 127	5.00 / 127	16.49 / 419	4.55 / 116	12.19 / 310	2.12 / 54	19.38 / 492	24.38 / 619	1.45 / 37	98 / 45
TXS60TLS000	6.00 / 152	6.00 / 152	22.49 / 571	4.55 / 116	12.69 / 322	2.05 / 52	19.38 / 492	25.38 / 645	1.45 / 37	137 / 63
TXS70TLS000	8.00 / 203	8.00 / 203	15.41 / 391	6.55 / 166	17.25 / 438	3.97 / 101	26.50 / 673	34.50 / 876	1.45 / 37	147 / 67
TXS80TLS000	8.00 / 203	8.00 / 203	24.33 / 618	6.55 / 166	17.25 / 438	3.97 / 101	26.50 / 673	34.50 / 876	1.45 / 37	227 / 103
TXS100TLS000	10.00 / 254	10.00 / 254	30.08 / 764	6.25 / 159	22.00 / 559	2.62 / 67	34.00 / 864	44.00 / 1118	1.75 / 44	375 / 171
TXS120TLS000	12.00 / 305	12.00 / 305	36.08 / 916	5.75 / 146	26.00 / 660	3.71 / 94	40.00 / 1016	52.00 / 1321	2.25 / 57	532 / 242



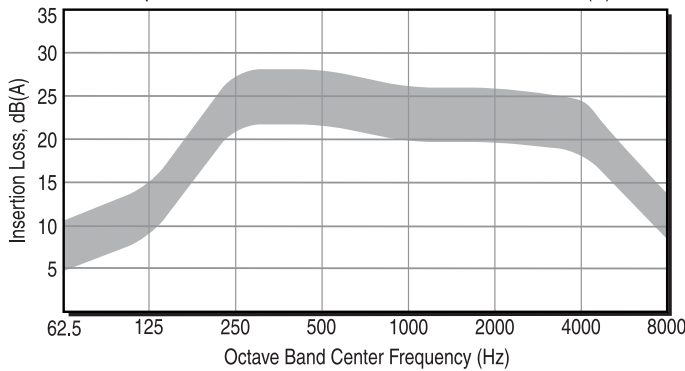
ENGINE EXHAUST SILENCERS

TS RESIDENTIAL GRADE — "PV" MODEL

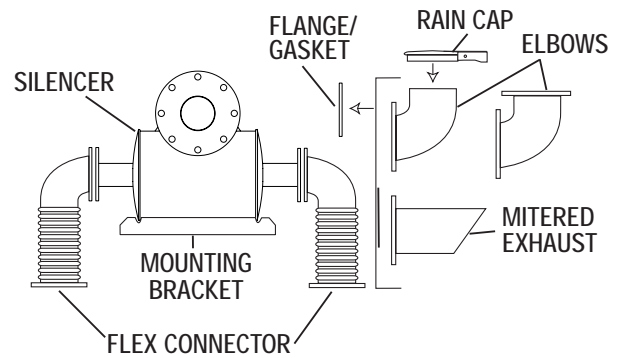


- Typical Insertion Loss = 22 — 28 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

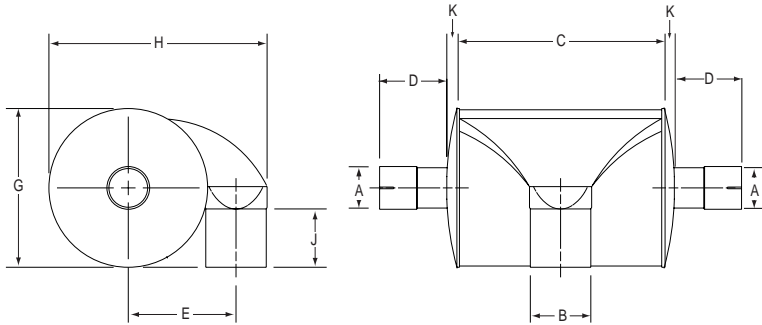
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	G inch / mm	H inch / mm	J inch / mm	K inch / mm	WEIGHT pounds / kg
TS20PV30S000	2.00 / 51	3.00 / 76	9.24 / 235	3.25 / 83	7.05 / 179	11.81 / 300	14.52 / 369	4.75 / 121	.75 / 19	32 / 15
TS25PV35S000	2.50 / 64	3.50 / 89	11.49 / 292	3.25 / 83	7.26 / 184	11.81 / 300	14.92 / 379	4.38 / 111	.75 / 19	39 / 18
TS30PV45S000	3.00 / 76	4.50 / 114	15.49 / 393	5.25 / 133	7.26 / 184	11.81 / 300	15.73 / 400	6.50 / 165	.75 / 19	47 / 22
TS35PV50S000	3.50 / 89	5.00 / 127	16.50 / 419	5.00 / 127	10.04 / 255	16.06 / 408	20.84 / 529	6.50 / 165	1.00 / 25	70 / 32
TS40PV80S000	4.00 / 102	6.00 / 152	22.49 / 571	5.00 / 127	10.27 / 261	16.06 / 408	21.74 / 552	5.25 / 133	1.00 / 25	90 / 41
TS45PV60S000	4.50 / 114	6.00 / 152	22.49 / 571	5.00 / 127	10.65 / 271	16.06 / 408	21.74 / 552	5.25 / 133	1.00 / 25	90 / 41
TS50PV70S000	5.00 / 127	8.00 / 203	15.35 / 390	4.55 / 116	14.58 / 370	22.00 / 559	29.72 / 755	7.25 / 184	1.45 / 37	103 / 47
TS50PV80S000	5.00 / 127	8.00 / 203	24.27 / 616	4.55 / 116	14.58 / 370	22.00 / 559	29.72 / 755	7.25 / 184	1.45 / 37	157 / 72
TS60PV80S000	6.00 / 152	8.00 / 203	24.27 / 616	4.55 / 116	14.58 / 370	22.00 / 559	29.72 / 755	7.25 / 184	1.45 / 37	158 / 72
TS80PV100S000	8.00 / 203	10.00 / 254	30.08 / 764	6.25 / 159	18.14 / 461	28.00 / 711	37.15 / 944	9.00 / 229	1.75 / 44	268 / 122
TS80PV120S000	8.00 / 203	12.00 / 305	36.08 / 916	5.75 / 146	21.63 / 549	33.00 / 838	44.19 / 1122	10.38 / 264	2.25 / 57	380 / 173



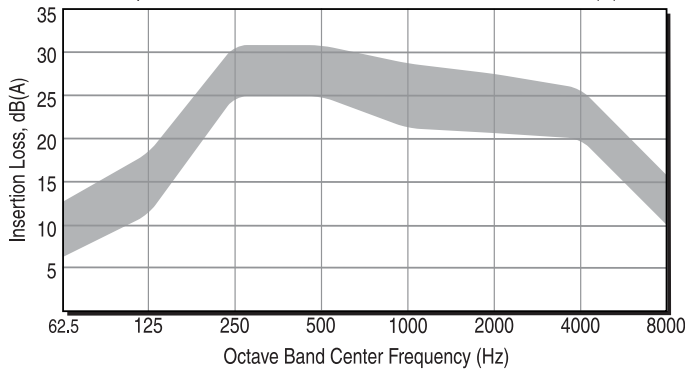
ENGINE EXHAUST SILENCERS

TXS CRITICAL GRADE — "PV" MODEL

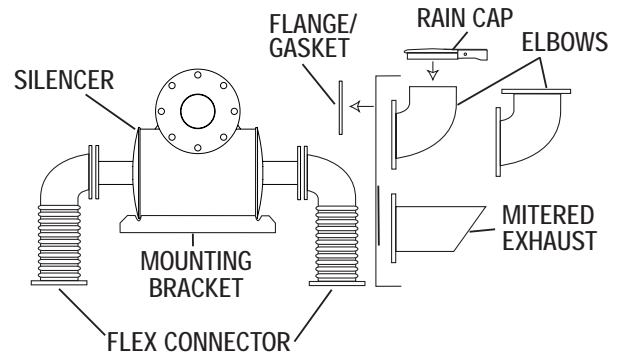


- Typical Insertion Loss = 28 — 33 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TXS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

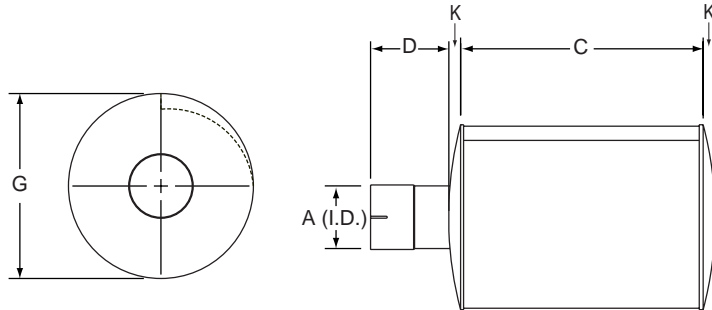
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	G inch / mm	H inch / mm	J inch / mm	K inch / mm	WEIGHT pounds / kg
TXS20PV30S000	2.00 / 51	3.00 / 76	9.24 / 235	3.00 / 76	8.60 / 218	16.06 / 408	18.20 / 462	4.75 / 121	1.00 / 25	50 / 23
TXS25PV35S000	2.50 / 64	3.50 / 89	11.49 / 292	3.00 / 76	8.82 / 224	16.06 / 408	18.61 / 473	4.38 / 111	1.00 / 25	62 / 29
TXS30PV45S000	3.00 / 76	4.50 / 114	15.49 / 393	5.00 / 127	9.37 / 238	16.06 / 408	19.46 / 494	6.50 / 165	1.00 / 25	76 / 35
TXS35PV50S000	3.50 / 89	5.00 / 127	16.50 / 419	4.55 / 116	11.32 / 288	19.38 / 492	23.79 / 604	6.50 / 165	1.45 / 37	97 / 44
TXS40PV80S000	4.00 / 102	6.00 / 152	22.49 / 571	4.55 / 116	11.54 / 293	19.38 / 492	24.73 / 628	5.25 / 133	1.45 / 37	125 / 57
TXS45PV60S000	4.50 / 114	6.00 / 152	22.49 / 571	4.55 / 116	11.98 / 304	19.38 / 492	24.73 / 628	5.25 / 133	1.45 / 37	126 / 58
TXS50PV70S000	5.00 / 127	8.00 / 203	15.41 / 391	4.55 / 116	16.87 / 428	26.50 / 673	34.12 / 867	9.25 / 235	1.45 / 37	150 / 68
TXS50PV80S000	5.00 / 127	8.00 / 203	24.33 / 618	4.55 / 116	16.87 / 428	26.50 / 673	34.12 / 867	9.25 / 235	1.45 / 37	230 / 105
TXS60PV80S000	6.00 / 152	8.00 / 203	24.33 / 618	4.55 / 116	16.87 / 428	26.50 / 673	34.12 / 867	9.25 / 235	1.45 / 37	230 / 105
TXS80PV100S000	8.00 / 203	10.00 / 254	30.08 / 764	6.25 / 159	21.28 / 541	34.00 / 864	43.34 / 1101	11.75 / 298	1.75 / 44	375 / 171
TXS80PV120S000	8.00 / 203	12.00 / 305	36.08 / 916	5.75 / 146	24.70 / 627	40.00 / 1016	50.76 / 1289	13.62 / 346	2.25 / 57	532 / 242

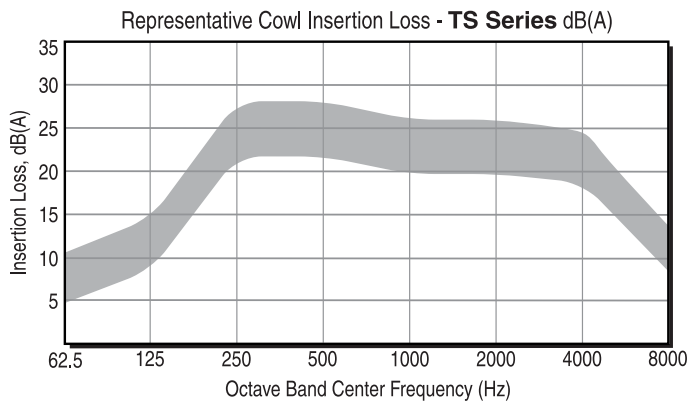


ENGINE EXHAUST SILENCERS

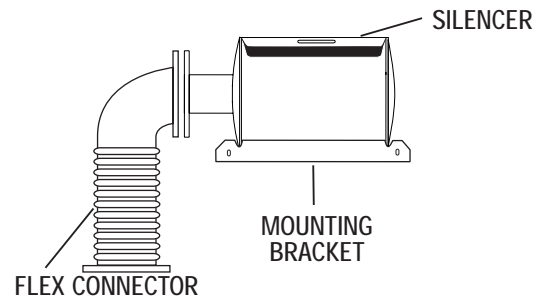
TS RESIDENTIAL GRADE — “SR” MODEL



- Typical Insertion Loss = 22 — 28 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

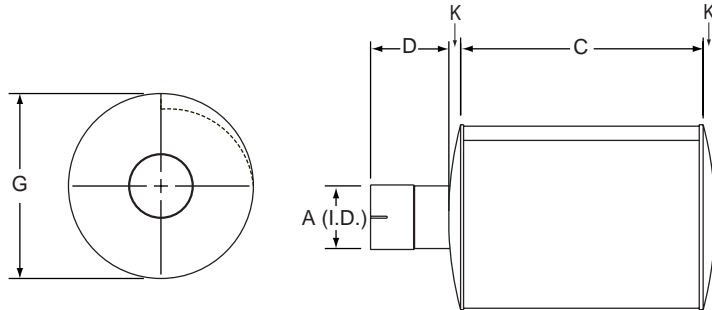
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	C inch / mm	D inch / mm	G inch / mm	K inch / mm	WEIGHT pounds / kg
TS15SR000	1.50 / 38	5.24 / 133	2.50 / 64	7.18 / 182	.50 / 13	10 / 5
TS20SR000	2.00 / 51	7.24 / 184	3.50 / 89	7.18 / 182	.50 / 13	14 / 7
TS25SR000	2.50 / 64	8.24 / 209	3.50 / 89	8.81 / 224	.50 / 13	16 / 8
TS30SR000	3.00 / 76	9.24 / 235	5.25 / 133	11.81 / 300	.75 / 19	32 / 15
TS35SR000	3.50 / 89	11.49 / 292	5.25 / 133	11.81 / 300	.75 / 19	35 / 16
TS40SR000	4.00 / 102	15.49 / 393	5.25 / 133	11.81 / 300	.75 / 19	46 / 21
TS45SR000	4.50 / 114	12.49 / 317	5.00 / 127	16.06 / 408	1.00 / 25	56 / 26
TS50SR000	5.00 / 127	16.49 / 419	5.00 / 127	16.06 / 408	1.00 / 25	70 / 32
TS60SR000	6.00 / 152	22.49 / 571	5.00 / 127	16.06 / 408	1.00 / 25	90 / 41
TS70SR000	8.00 / 203	15.35 / 390	6.55 / 166	22.00 / 559	1.45 / 37	100 / 46
TS80SR000	8.00 / 203	24.27 / 616	6.55 / 166	22.00 / 559	1.45 / 37	150 / 68
TS100SR000	10.00 / 254	30.08 / 764	6.25 / 159	28.00 / 711	1.75 / 44	230 / 105
TS120SR000	12.00 / 305	36.08 / 916	5.75 / 146	33.00 / 838	2.25 / 57	330 / 150



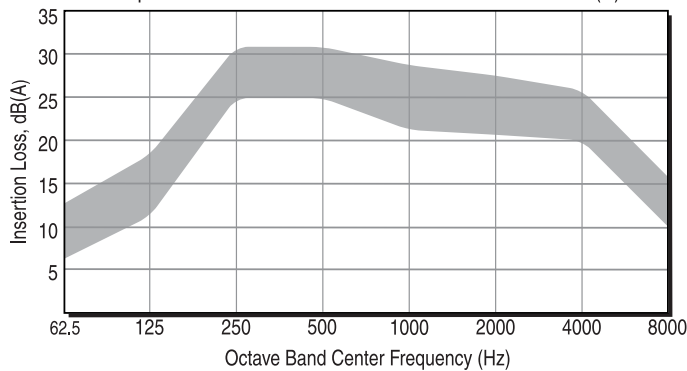
ENGINE EXHAUST SILENCERS

TXS CRITICAL GRADE — “SR” MODEL

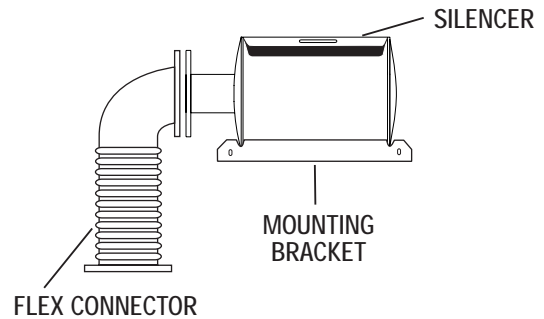


- Typical Insertion Loss = 28 — 33 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TXS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

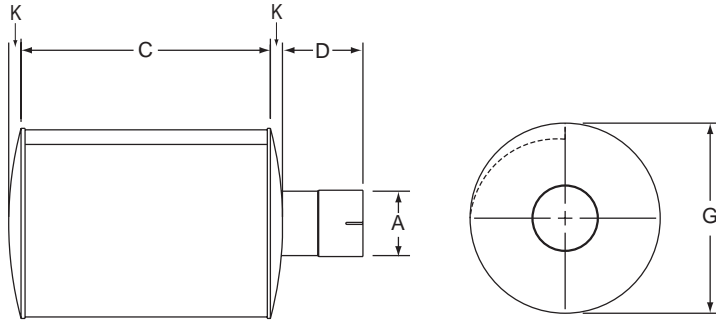
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	C inch / mm	D inch / mm	G inch / mm	K inch / mm	WEIGHT pounds / kg
TXS15SR000	1.50 / 38	5.24 / 133	2.50 / 64	8.81 / 224	.50 / 13	11 / 5
TXS20SR000	2.00 / 51	7.24 / 184	3.50 / 89	8.81 / 224	.50 / 13	17 / 8
TXS25SR000	2.50 / 64	8.24 / 209	3.25 / 83	11.81 / 300	.75 / 19	28 / 13
TXS30SR000	3.00 / 76	9.24 / 235	5.00 / 127	16.06 / 408	1.00 / 25	52 / 24
TXS35SR000	3.50 / 89	11.49 / 292	5.00 / 127	16.06 / 408	1.00 / 25	61 / 28
TXS40SR000	4.00 / 102	15.49 / 393	5.00 / 127	16.06 / 408	1.00 / 25	75 / 34
TXS45SR000	4.50 / 114	12.49 / 317	4.55 / 116	19.38 / 492	1.45 / 37	71 / 33
TXS50SR000	5.00 / 127	16.49 / 419	4.55 / 116	19.38 / 492	1.45 / 37	96 / 44
TXS60SR000	6.00 / 152	22.49 / 571	4.55 / 116	19.38 / 492	1.45 / 37	120 / 55
TXS70SR000	8.00 / 203	15.41 / 391	6.55 / 166	26.50 / 673	1.45 / 37	140 / 64
TXS80SR000	8.00 / 203	24.33 / 618	6.55 / 166	26.50 / 673	1.45 / 37	220 / 100
TXS100SR000	10.00 / 254	30.08 / 764	6.25 / 159	34.00 / 864	1.75 / 44	330 / 150
TXS120SR000	12.00 / 305	36.08 / 916	5.75 / 146	40.00 / 1016	2.25 / 57	475 / 216



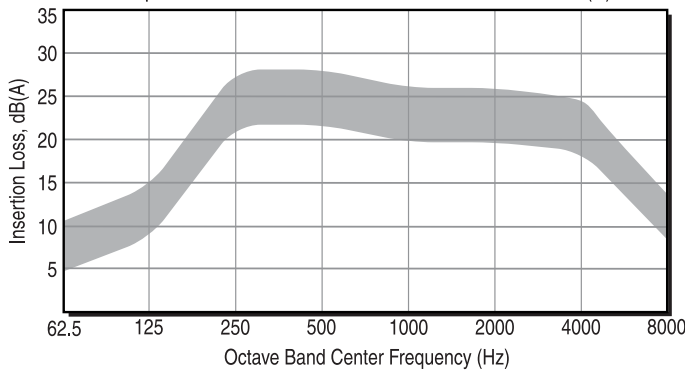
ENGINE EXHAUST SILENCERS

TS RESIDENTIAL GRADE — "SL" MODEL

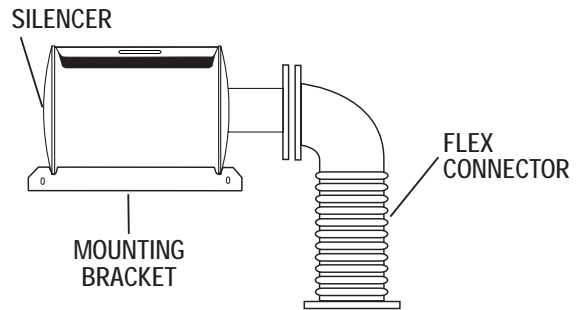


- Typical Insertion Loss = 22 — 28 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Representative Cowl Insertion Loss - TS Series dB(A)



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

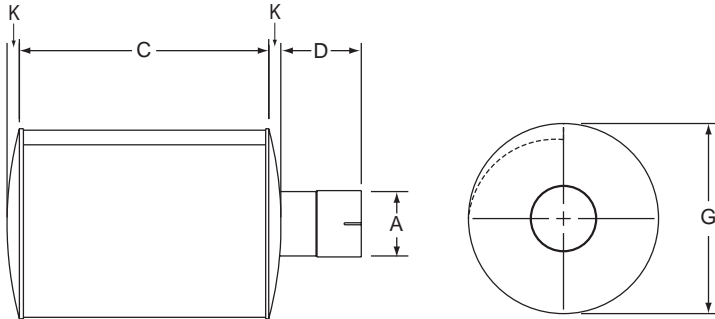
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	C inch / mm	D inch / mm	G inch / mm	K inch / mm	WEIGHT pounds / kg
TS15SL000	1.50 / 38	5.24 / 133	2.50 / 64	7.18 / 182	.50 / 13	10 / 5
TS20SL000	2.00 / 51	7.24 / 184	3.50 / 89	7.18 / 182	.50 / 13	14 / 7
TS25SL000	2.50 / 64	8.24 / 209	3.50 / 89	8.81 / 224	.50 / 13	16 / 8
TS30SL000	3.00 / 76	9.24 / 235	5.25 / 133	11.81 / 300	.75 / 19	32 / 15
TS35SL000	3.50 / 89	11.49 / 292	5.25 / 133	11.81 / 300	.75 / 19	35 / 16
TS40SL000	4.00 / 102	15.49 / 393	5.25 / 133	11.81 / 300	.75 / 19	46 / 21
TS45SL000	4.50 / 114	12.49 / 317	5.00 / 127	16.06 / 408	1.00 / 25	56 / 26
TS50SL000	5.00 / 127	16.49 / 419	5.00 / 127	16.06 / 408	1.00 / 25	70 / 32
TS60SL000	6.00 / 152	22.49 / 571	5.00 / 127	16.06 / 408	1.00 / 25	90 / 41
TS70SL000	8.00 / 203	15.35 / 390	6.55 / 166	22.00 / 559	1.45 / 37	100 / 46
TS80SL000	8.00 / 203	24.27 / 616	6.55 / 166	22.00 / 559	1.45 / 37	150 / 68
TS100SL000	10.00 / 254	30.08 / 764	6.25 / 159	28.00 / 711	1.75 / 44	230 / 105
TS120SL000	12.00 / 305	36.08 / 916	5.75 / 146	33.00 / 838	2.25 / 57	330 / 150



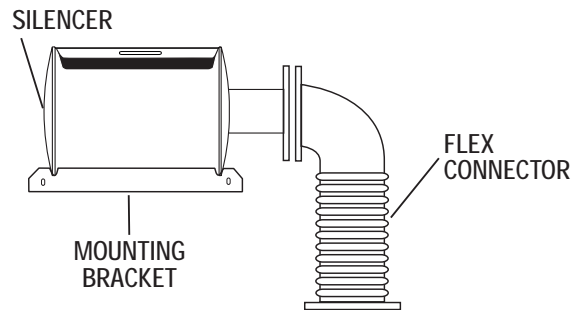
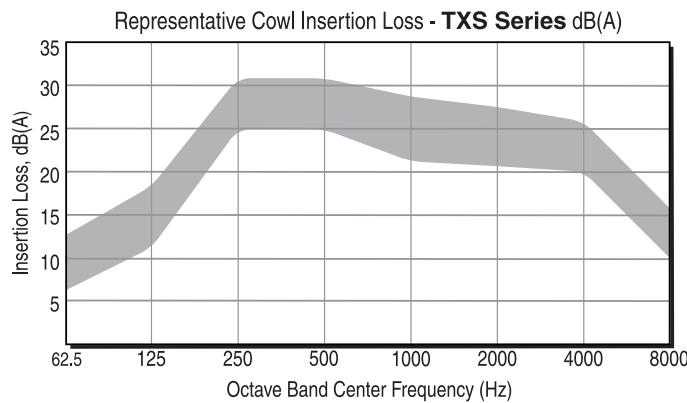
ENGINE EXHAUST SILENCERS

TXS CRITICAL GRADE — "SL" MODEL



- Typical Insertion Loss = 28 — 33 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available

Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

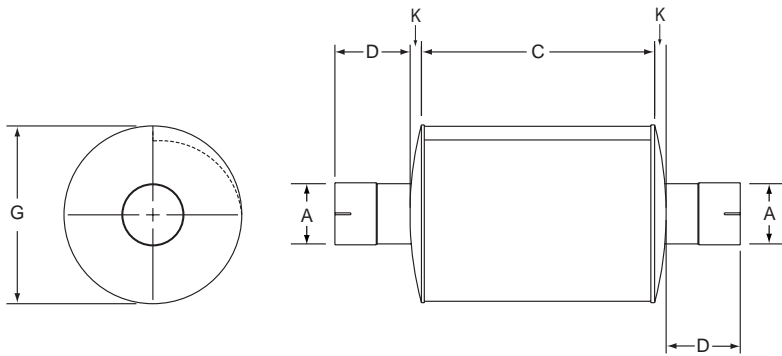
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	C inch / mm	D inch / mm	G inch / mm	K inch / mm	WEIGHT pounds / kg
TXS15SL000	1.50 / 38	5.24 / 133	2.50 / 64	8.81 / 224	.50 / 13	11 / 5
TXS20SL000	2.00 / 51	7.24 / 184	3.50 / 89	8.81 / 224	.50 / 13	17 / 8
TXS25SL000	2.50 / 64	8.24 / 209	3.25 / 83	11.81 / 300	.75 / 19	28 / 13
TXS30SL000	3.00 / 76	9.24 / 235	5.00 / 127	16.06 / 408	1.00 / 25	52 / 24
TXS35SL000	3.50 / 89	11.49 / 292	5.00 / 127	16.06 / 408	1.00 / 25	61 / 28
TXS40SL000	4.00 / 102	15.49 / 393	5.00 / 127	16.06 / 408	1.00 / 25	75 / 34
TXS45SL000	4.50 / 114	12.49 / 317	4.55 / 116	19.38 / 492	1.45 / 37	71 / 33
TXS50SL000	5.00 / 127	16.49 / 419	4.55 / 116	19.38 / 492	1.45 / 37	96 / 44
TXS60SL000	6.00 / 152	22.49 / 571	4.55 / 116	19.38 / 492	1.45 / 37	120 / 55
TXS70SL000	8.00 / 203	15.41 / 391	6.55 / 166	26.50 / 673	1.45 / 37	140 / 64
TXS80SL000	8.00 / 203	24.33 / 618	6.55 / 166	26.50 / 673	1.45 / 37	220 / 100
TXS100SL000	10.00 / 254	30.08 / 764	6.25 / 159	34.00 / 864	1.75 / 44	330 / 150
TXS120SL000	12.00 / 305	36.08 / 916	5.75 / 146	40.00 / 1016	2.25 / 57	475 / 216

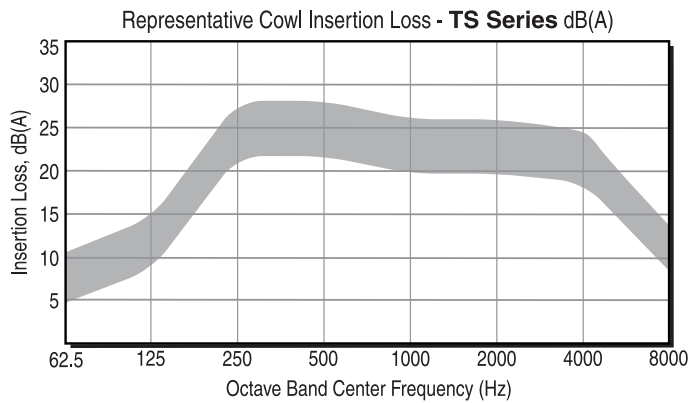


ENGINE EXHAUST SILENCERS

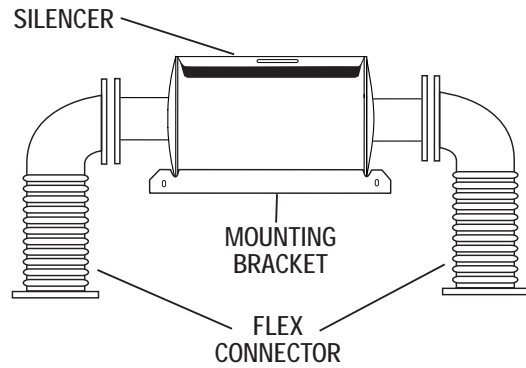
TS RESIDENTIAL GRADE — "SV" MODEL



- Typical Insertion Loss = 22 — 28 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

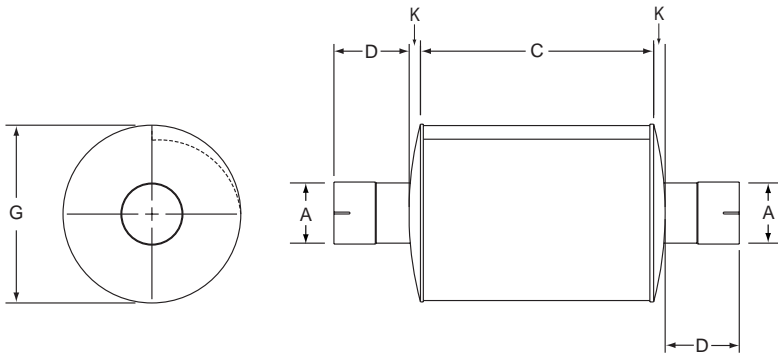
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	C inch / mm	D inch / mm	G inch / mm	K inch / mm	WEIGHT pounds / kg
TS20SV000	2.00 / 51	9.24 / 235	3.25 / 83	11.81 / 300	.75 / 19	32 / 15
TS25SV000	2.50 / 64	11.49 / 292	3.25 / 83	11.81 / 300	.75 / 19	39 / 18
TS30SV000	3.00 / 76	15.49 / 393	5.25 / 133	11.81 / 300	.75 / 19	47 / 22
TS35SV000	3.50 / 89	16.50 / 419	5.00 / 127	16.06 / 408	1.00 / 25	70 / 32
TS40SV000	4.00 / 102	22.49 / 571	5.00 / 127	16.06 / 408	1.00 / 25	90 / 41
TS45SV000	4.50 / 114	22.49 / 571	5.00 / 127	16.06 / 408	1.00 / 25	90 / 41
TS50SV-7000	5.00 / 127	15.35 / 390	4.55 / 116	22.00 / 559	1.45 / 37	103 / 47
TS50SV-8000	5.00 / 127	24.27 / 616	4.55 / 116	22.00 / 559	1.45 / 37	150 / 68
TS60SV-8000	6.00 / 152	24.27 / 616	4.55 / 116	22.00 / 559	1.45 / 37	155 / 71
TS80SV-10000	8.00 / 203	30.08 / 764	6.25 / 159	28.00 / 711	1.75 / 44	230 / 105
TS80SV-12000	8.00 / 203	36.06 / 916	5.75 / 146	33.00 / 838	2.25 / 57	330 / 150

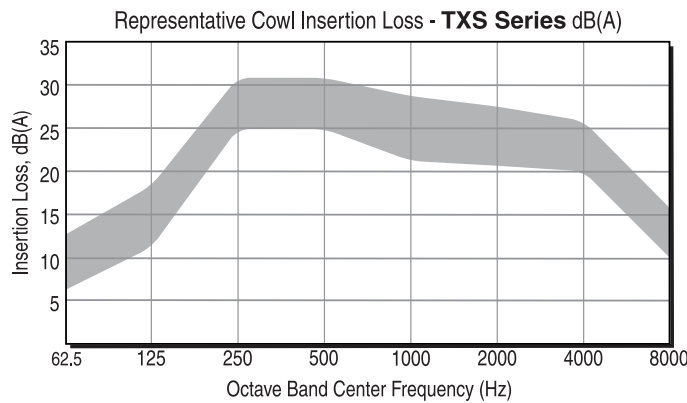


ENGINE EXHAUST SILENCERS

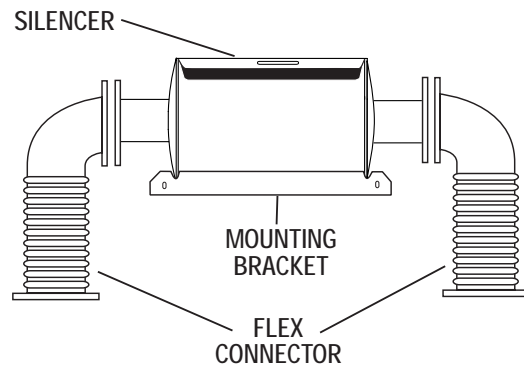
TXS CRITICAL GRADE — “SV” MODEL



- Typical Insertion Loss = 28 — 33 dB(A)
(Actual Insertion Loss May Vary Per Application)
- Compact Spiral Chamber Design
- Low Back Pressure
- Aluminized Steel Construction
- Low Weight
- Standard Slip-Fit Connections
- Standard High Temp Finish
- Complete Line of Accessories and Mounting Brackets
- Stainless Steel Construction & Factory Customization Available



Engine Exhaust Silencer & Accessories



Not pictured: Insulation Blanket

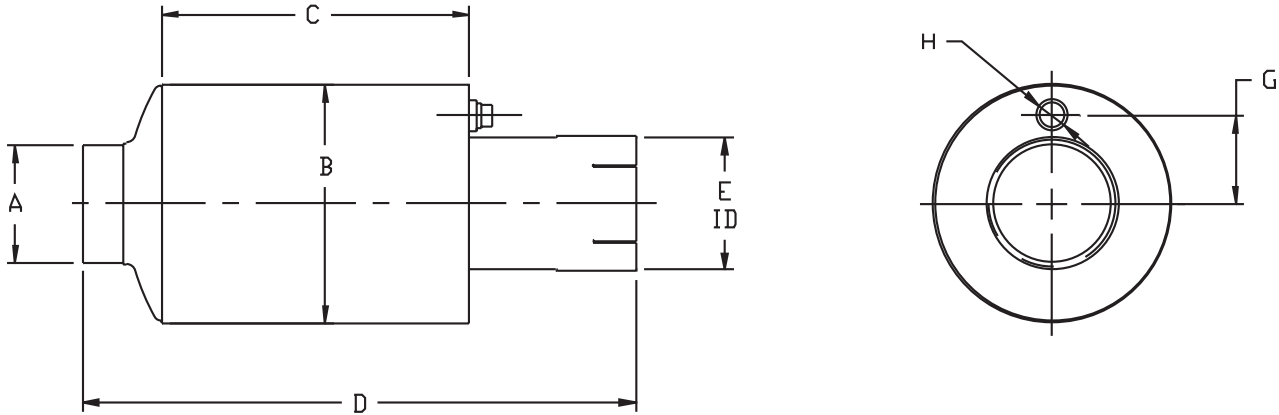
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

PART NO.	A inch / mm	C inch / mm	D inch / mm	G inch / mm	K inch / mm	WEIGHT pounds / kg
TXS20SV000	2.00 / 51	9.24 / 235	3.00 / 76	16.06 / 408	1.00 / 25	50 / 23
TXS25SV000	2.50 / 64	11.49 / 292	3.00 / 76	16.06 / 408	1.00 / 25	62 / 29
TXS30SV000	3.00 / 76	15.49 / 393	5.00 / 127	16.06 / 408	1.00 / 25	76 / 35
TXS35SV000	3.50 / 89	16.50 / 419	4.55 / 116	19.38 / 492	1.45 / 37	97 / 44
TXS40SV000	4.00 / 102	22.49 / 571	4.55 / 116	19.38 / 492	1.45 / 37	125 / 57
TXS45SV000	4.50 / 114	22.49 / 571	4.55 / 116	19.38 / 492	1.45 / 37	126 / 58
TXS50SV-7000	5.00 / 127	15.41 / 391	4.55 / 116	26.50 / 673	1.45 / 37	150 / 68
TXS50SV-8000	5.00 / 127	24.33 / 618	4.55 / 116	26.50 / 673	1.45 / 37	220 / 100
TXS60SV-8000	6.00 / 152	24.33 / 618	4.55 / 116	26.50 / 673	1.45 / 37	220 / 100
TXS80SV-10000	8.00 / 203	30.08 / 764	6.25 / 159	34.00 / 864	1.75 / 44	337 / 153
TXS80SV-12000	8.00 / 203	36.06 / 916	5.75 / 146	40.00 / 1016	2.25 / 57	500 / 227



SPARK ARRESTORS — "SAU" SERIES

INDUSTRIAL GRADE



Standard Silencer Application

- Exhaust spark arrester
- Designed for mobile and stationary engines
- Recommended for hazardous environments

Standard Construction Features

- U.S. department of Agriculture (Forest Service) qualified
- Tested by U.S. Forest Service and rated virtually 100% efficient
- Aluminized and stainless steel construction
- Slotted ID inlet / Stub OD outlet
- Protective finish applied
- Can be mounted vertically or horizontally

Optional

- Complete line of accessories

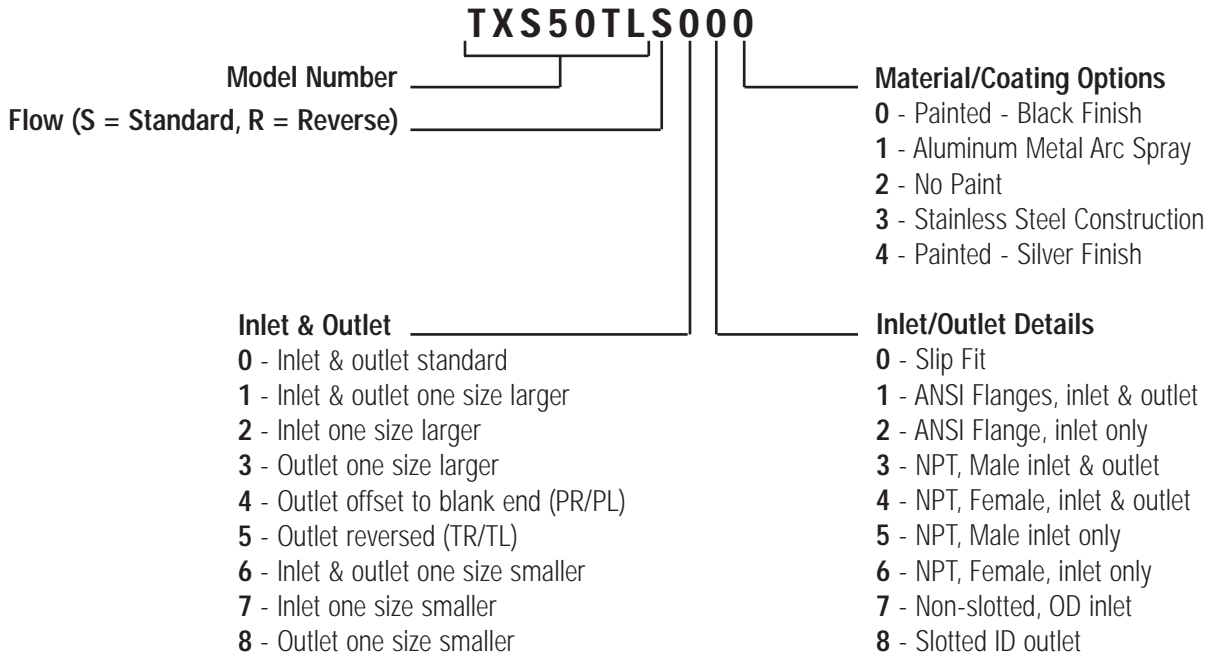
DIMENSIONS IN INCHES/MILLIMETERS, WEIGHT IN POUNDS/KILOGRAMS

WITH MNPT/ STUB CONNECTION Part NUMBER	WITH SLOTTED/ STUB CONNECTION PART NUMBER	A inch / mm	B inch / mm	C inch / mm	D inch / mm	E inch / mm	J inch / mm	G inch / mm	H inch / mm	WEIGHT pounds / kg
SAU-15-980330	SAU-15X-981071	1.5 / 38	6.0 / 152	3.8 / 97	10.38 / 264	1.5 / 38	3.52 / 89	1.9 / 48	3/8 / 9.5	5 / 2.3
SAU-02-980331	SAU-02X-981072	2.0 / 51	6.0 / 152	5.1 / 130	10.72 / 272	2.0 / 51	5.62 / 143	2.0 / 51	3/8 / 9.5	6 / 2.7
SAU-25-980332	SAU-25X-981073	2.5 / 64	6.6 / 168	6.2 / 157	15.47 / 393	2.5 / 64	6.12 / 155	2.3 / 58	3/8 / 9.5	8 / 3.6
SAU-03-980333	SAU-03X-981074	3.0 / 76	7.0 / 178	7.6 / 193	18.00 / 457	3.0 / 76	7.38 / 187	2.5 / 64	3/8 / 9.5	10 / 4.5
SAU-35-980334	SAU-35X-981075	3.5 / 89	7.0 / 178	9.0 / 229	20.52 / 521	3.5 / 89	8.62 / 219	2.6 / 66	1/2 / 13	12 / 5.4
SAU-04-980335	SAU-04X-981076	4.0 / 102	8.0 / 203	10.6 / 269	22.31 / 567	4.0 / 102	9.12 / 232	3.0 / 76	1/2 / 13	15 / 6.8
SAU-05-980336	SAU-05X-981077	5.0 / 127	9.0 / 229	11.8 / 300	24.87 / 632	5.0 / 127	10.18 / 259	3.5 / 89	1/2 / 13	21 / 9.5
SAU-06-980337	SAU-06X-981078	6.0 / 152	10.0 / 254	13.3 / 338	26.72 / 679	6.0 / 153	10.24 / 260	4.0 / 102	1/2 / 13	25 / 11.3



Part Numbering Formats / Insulation Blankets

Part Numbering Format: Standard Units



Thermal Insulation Blankets

TYPE: Custom designed flexible, removable/reusable, insulation blanket.

APPLICATIONS: Engine exhaust silencers, flex connectors, piping, exhaust elbows, manifolds, turbochargers, heat exchangers.

INSULATION MATERIAL: High density 11# fiberglass mat rated at 1200 °F. Optional: 8# spun heat-cleaned ceramic fiber wool mat rated at 2300 °F (Unifrax). Thickness: Standard thickness is 1" (dependent on end use options from 1/2" through 3" thick are available).

CONSTRUCTION: High temperature sewn construction. The insulation is encapsulated with either vacuum deposited aluminum coated fiberglass or silicone impregnated fiberglass cloth on the cold face and 304 S.S. knitted wire mesh on the hot face. S.S. capstan rivet fastening.

INSTALLATION: Blankets are hand formed around the part/pipe being insulated and laced using 0.032" S.S. lacing wire.

RECOMMENDATIONS: Diesel applications with exhaust temperatures below 1000 °F Fiberglass insulation as specified above. Gasoline powered applications and other applications where temperatures above 1000 °F are expected use ceramic fiber insulation as specified above. Certain applications, depending on thickness, combinations of fiberglass and ceramic fiber with a minimum of 1" thick ceramic fiber inner layer.

SPECIFICATION COMPLIANCE: MIL 1-16411; U.L. Requirement #R11184; Coast Guard Spec #164-0095



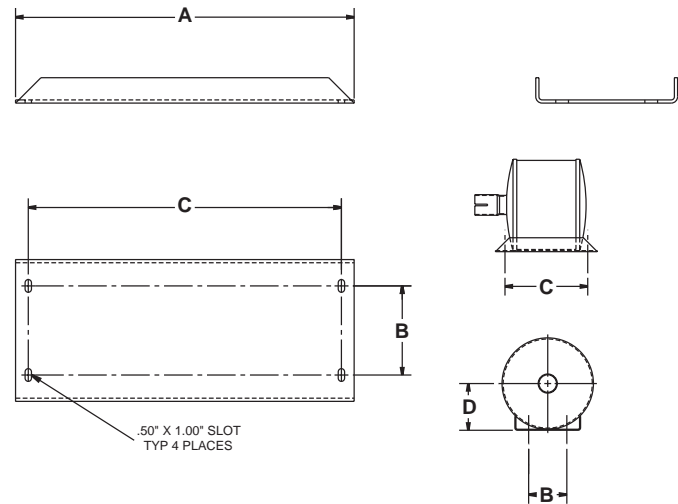


Mounting Brackets

The illustrations below describe the standard mounting brackets. All brackets are constructed with aluminized steel (stainless steel optional). Custom mounting brackets also available. Contact sales representative or factory for custom bracket information.

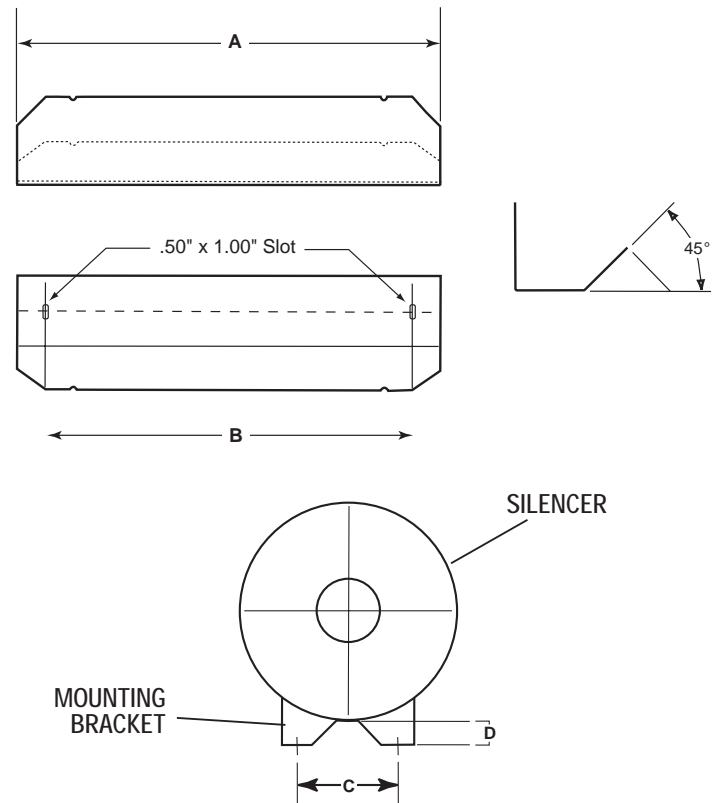
SMALLER SIZE SILENCERS — 1-1/2 to 3-1/2 INCHES

PART NO.	DESCRIPTION	A	B	C	D
18312-1	TS15 bracket	8.50	3.00	7.00	3.67
18312-2	TXS15 bracket	8.50	4.00	7.00	4.48
18312-3	TS20 bracket	10.50	3.00	9.00	3.67
18312-4	TXS20 bracket	10.50	4.00	9.00	4.48
18312-5	TS25 bracket	11.50	4.00	10.00	4.48
18312-6	TXS25 bracket	12.50	6.00	11.00	5.99
18312-7	TS30 bracket	13.50	6.00	12.00	5.99
18312-8	TXS30 bracket	13.50	7.50	12.00	8.13
18312-9	TS35 bracket	15.75	6.00	14.25	5.99
18312-10	TXS35 bracket	15.75	7.50	14.25	8.13



LARGER SIZE SILENCERS — 4 TO 12 INCHES

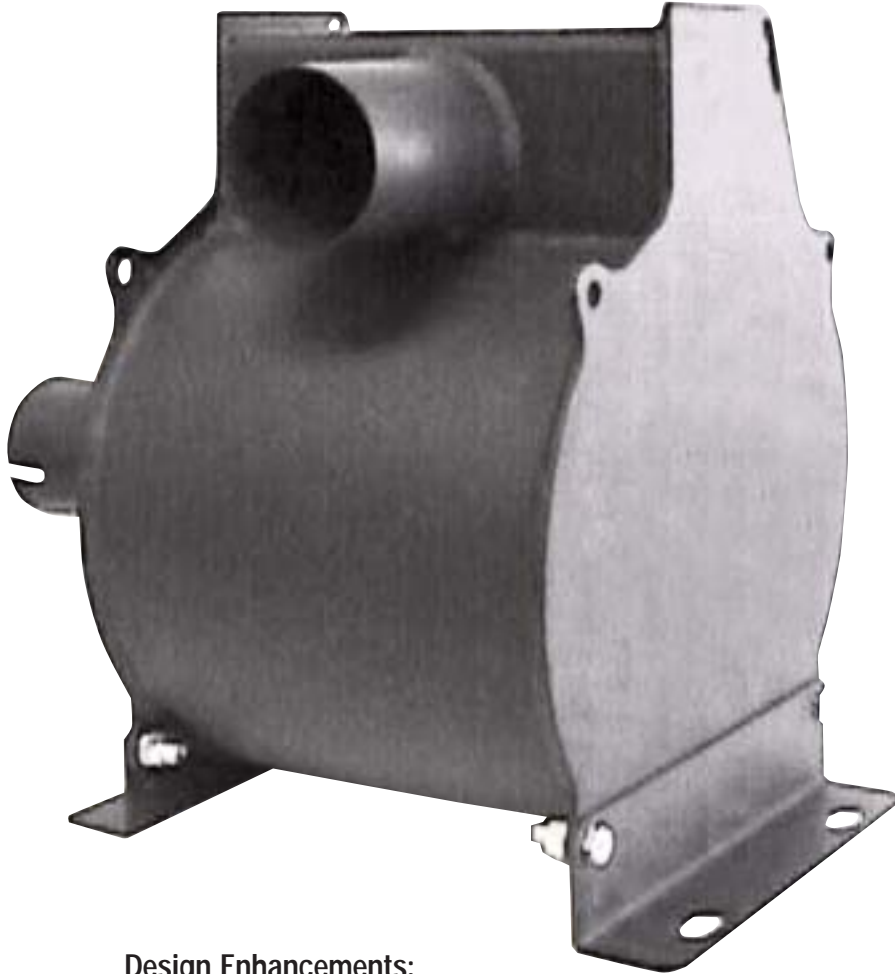
PART NO.	DESCRIPTION	A	B	C	D
18109-6	TS40 bracket	20.00	18.00	5.50	1.00
18109-7	TXS40 bracket	20.00	18.00	7.50	1.00
18109-8	TS45 bracket	17.00	15.00	7.50	1.00
18109-9	TXS45 bracket	17.00	15.00	10.00	1.00
18109-10	TS50 bracket	21.00	19.00	7.50	1.00
18109-11	TXS50 bracket	21.00	19.00	10.00	1.00
18109-12	TS60 bracket	27.00	25.00	7.50	1.00
18109-13	TXS60 bracket	27.00	25.00	10.00	1.00
18109-20	TS70 bracket	21.00	19.00	12.00	1.00
18109-21	TXS70 bracket	21.00	19.00	12.00	1.00
18109-14	TS80 bracket	30.00	28.00	12.00	1.00
18109-15	TXS80 bracket	30.00	28.00	12.00	1.00
18109-16	TS100 bracket	39.00	37.00	16.00	1.00
18109-17	TXS100 bracket	39.00	37.00	18.00	1.00
18109-18	TS120 bracket	45.00	43.00	18.00	1.00
18109-19	TXS120 bracket	45.00	43.00	24.00	1.00





NEW PRODUCT — COWL® MS-SERIES

COMING IN 2002
Cowl® MS-Series



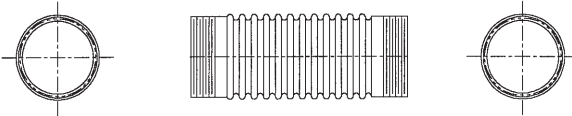
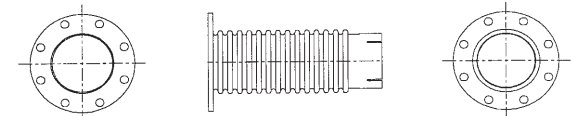
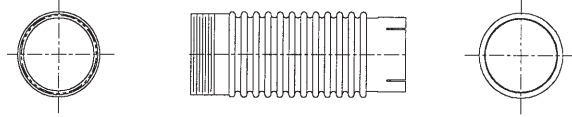

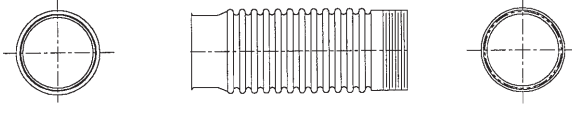
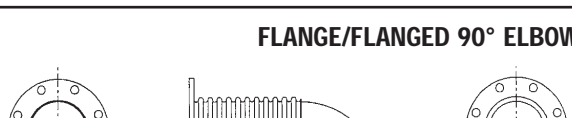
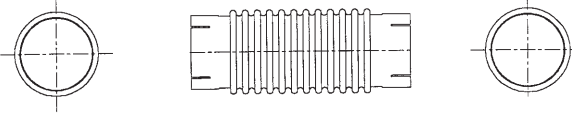

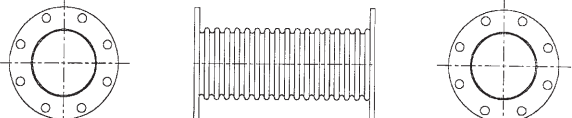

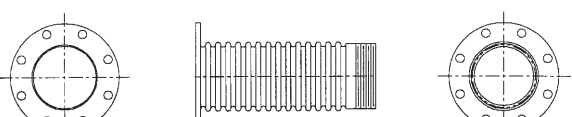
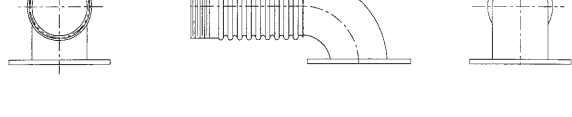
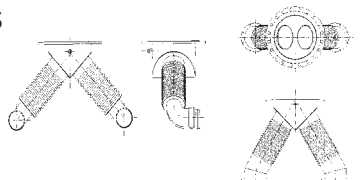
Design Enhancements:

- Integrated mounting system
- Modular
- Aesthetically pleasing
- Versatile configurations
- Computer engineered for improved performance
- Flat end plates for improved structural design and expanded mounting options
- Reduced number of welds

NEW DESIGN



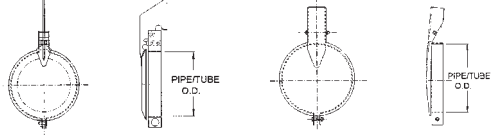


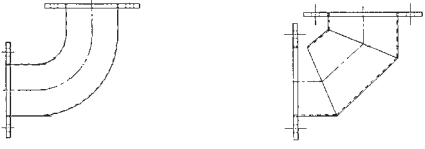
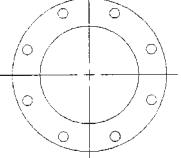
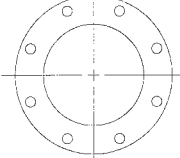
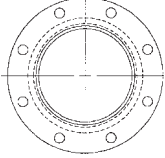
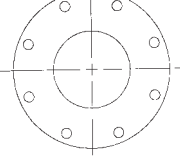
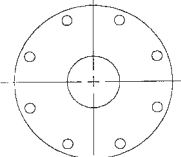
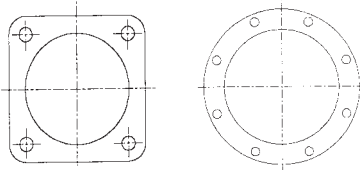
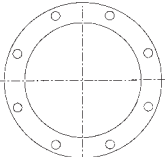
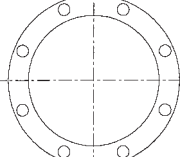
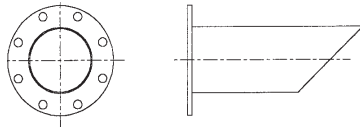
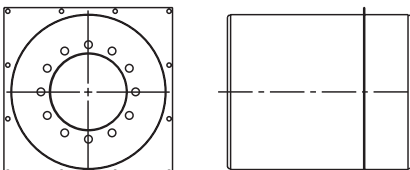
Engine Exhaust — Accessories

MALE NPT/MALE NPT 	FLANGE/SLOTTED CUFF 
MALE NPT/SLOTTED CUFF 	FLANGE/FEMALE NPT 
20° LIP FLANGE/MALE NPT 	FLANGE/FLANGED 90° ELBOW 
SLOTTED CUFF/SLOTTED CUFF 	FLANGE/20° LIP FLANGE 
FLANGE/FLANGE 	MALE NPT/FLANGED 90° ELBOW 
FLANGE/MALE NPT 	FEMALE NPT/FLANGED 90° ELBOW 
WYE CONNECTORS Available for various applications 	

A wide variety of accessories are available to customize your silencer installation — Sure Seal Clamps, Insulation Blankets; Outlet Extensions; Rain Guards; Roof Thimbles; Bolt, Nut, Gasket Kits; Various Types Mounting Supports, Etc.



Engine Exhaust — Accessories

RAIN CAPS Available for Pipe or Tube Applications 	90° SHORT RADIUS TUBE ELBOW 
90° SHORT RADIUS ELBOW WITH FLANGE ONE END 	90° SHORT RADIUS TUBE ELBOW WITH FLANGE BOTH ENDS 
FLANGES — MODEL PFL Pipe Plate Flange 	FLANGES — MODEL TFL Tube Plate Flange 
FLANGES — MODEL FLT Threaded Plate Flange 	FLANGES — MODEL REFL Reducing Plate Flange 
FLANGES — MODEL DREFL Double Reducing Plate Flange 	SPECIAL FLANGES CATERPILLAR 
SPECIAL FLANGES DETROIT DIESEL 	SPECIAL FLANGES CUMMINS/ONAN 
MITERED EXHAUST 	WALL THIMBLES 

A wide variety of accessories are available to customize your silencer installation — Sure Seal Clamps, Insulation Blankets; Outlet Extensions; Rain Guards; Roof Thimbles; Bolt, Nut, Gasket Kits; Various Types Mounting Supports, Etc.



Limited Warranty Guarantee

This limited warranty is expressly limited to the Company's products that have been purchased by the original consumer purchaser or for purposes of resale or use in the ordinary course of the purchaser's business. The term original consumer purchaser is defined as a person who purchases Company products for personal, family, or household use.

The Company's products are warranted against defects in materials and workmanship for a period of one year from date of purchase by purchaser. The exclusive remedy for any product found to be defective under this limited warranty consists of the repair or replacement of the defective product. This limited warranty does not apply to defects which arise from normal wear and tear, surface finish, accident, misuse, abuse, neglect, mishandling, misapplication, faulty installation, vibration, modification, improper or extraordinary use or use inconsistent with any instruction or recommendation issued by the Company.

The foregoing limited warranty is exclusive and in lieu of all other warranties, whether written or oral, express, implied or statutory.

NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. THE LIMITED WARRANTY CONTAINED HEREIN DOES NOT EXTEND TO INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF A BREACH OF THIS WARRANTY.

To obtain performance of this limited warranty, the alleged defective product must be returned, together with reasonable proof of purchase, postage or freight prepaid, directly to:

**Warranty Department
Phillips & Temro Industries Ltd.
100 Paquin Road, Bldg. B
Winnipeg, Manitoba R2J 3V4
Phone: (204) 667-2260
FAX: (204) 661-2639**

The Company will return the repaired or replaced product, postage or freight prepaid. Final determination of defects shall be made in accordance with procedures established by the Company.

This limited warranty gives the original consumer purchaser specific rights. You may have other rights which vary from state to state or province to province depending upon the location of your residence. Some states do not allow the exclusion or limitation of incidental or consequential damages.

Manufacturer's rights retained:

The Company reserves the right to make changes in design, additions or improvements to any of its products at any time without incurring any obligation whatsoever to install or replace the same or improve upon products previously manufactured.



Customer Profile / Sizing A Silencer

Need additional information?

Please provide us with the following information and we will have a sales representative or the factory contact you direct.

NAME: _____ TITLE: _____

COMPANY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

PHONE: (____) - ____ - ____ FAX: (____) - ____ - ____ E-MAIL: _____

Please complete and fax to (204) 661-2639 or contact your local Sales Representative/Distributor.

Information Required for Sizing a Cowl® Silencer Sizing Disks Available

For Dry Exhaust System:

1. Engine Model/KW / HP _____

2. Maximum Exhaust Flow Rate (ACFM) _____ Maximum Exhaust Temperature (°F) _____

3. Maximum Allowable Pressure Drop in W.C. _____

4. Engine Exhaust Outlet Size & Description _____

5. Silenced Noise Criteria & Applicable Distance
From Silencer to Which Criteria Applies _____

6. Grade of Silencer Required: _____ Residential _____ Critical

7. Mounted Vertical / Horizontal _____

8. Exhaust Pipe System: # of 90° Elbows: _____ Size / Diameter: _____

of 45° Elbows: _____ Size / Diameter: _____

Length of Flex: _____ Size / Diameter: _____

Length of Straight Pipe Run: _____ Size / Diameter: _____