



Type SCS Reflection silencer

Application

The TIO silencers type SCS are designed for mounting in exhaust lines of diesel engines

Design

The operation of the silencer SCS is based on the resonance principle. The acoustical performance is determined by several expansion chambers. The gas flow passes through these chambers which are connected by tubes. Diameter and length of the SCS silencer are calculated in such a way that an optimum attenuation in nearly all frequencies can be realized, in relation to the back pressure. It is advisable to install the SCS silencer as close as possible to the engine. If high silencing-demands are required, the SCS silencer can be efficiently combined with absorption silencers like our types HD, HDD, etc.

Attenuation

Up to 25 dB(A).

The noise attenuation curve shows the attenuation in the middle frequencies. The shaded area shows the differences which probably appear due to the influence of temperature, back pressure and location of silencer and unsilenced noise level. The attenuation also depends on the unsilenced noise level.

Gasvelocity

Recommended: 30 m/sec.

Pressure loss

The graphic shows approx. pressure drop across the silencer in relation to the gas velocity.

Temperature

Maximum: 600° C.

Special designs are available for higher temperatures.

Insulation

As the gasses are in direct connection with the body of the silencer, thermal insulation is recommended. In those applications where also the body transmitted noise of the silencer can be of influence on the noise level, an acoustical insulation is recommended too.

Material

Standard – S235JRG2 - St37.2. Executions in stainless steel, Cor-Ten, etc. are possible.

Paint

One layer of zinc phosphate primer.

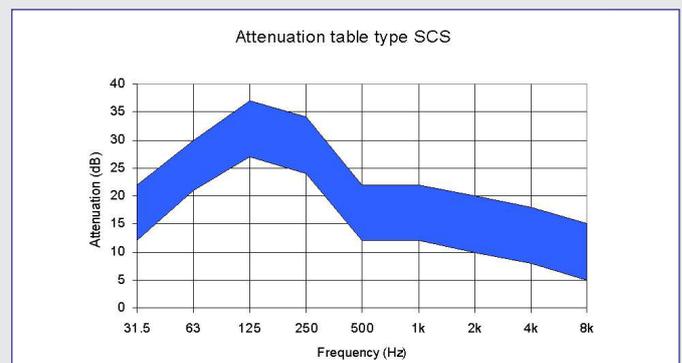
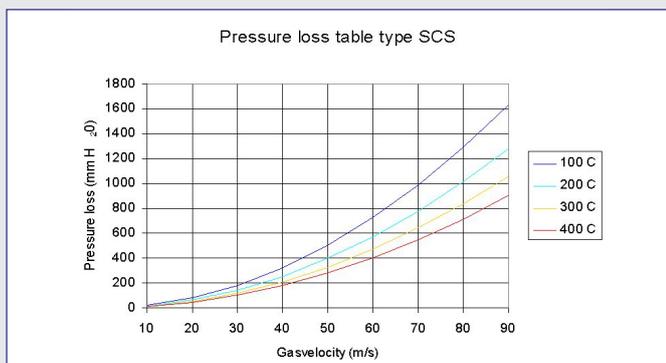
Installation

The silencer type SCS may be installed vertically, horizontally or in any position wanted, but as close to the engine as possible. Because the gasses are in direct connection with the body, the temperature of the wall will be fast equal to medium's temperature and expansion of the body of the silencer takes place. Before supporting and installing the SCS, you have to consider the above. When installing at side, it is possible to weld suspensions on the body.

Special connections

For in- and outlet are special connections on request available.

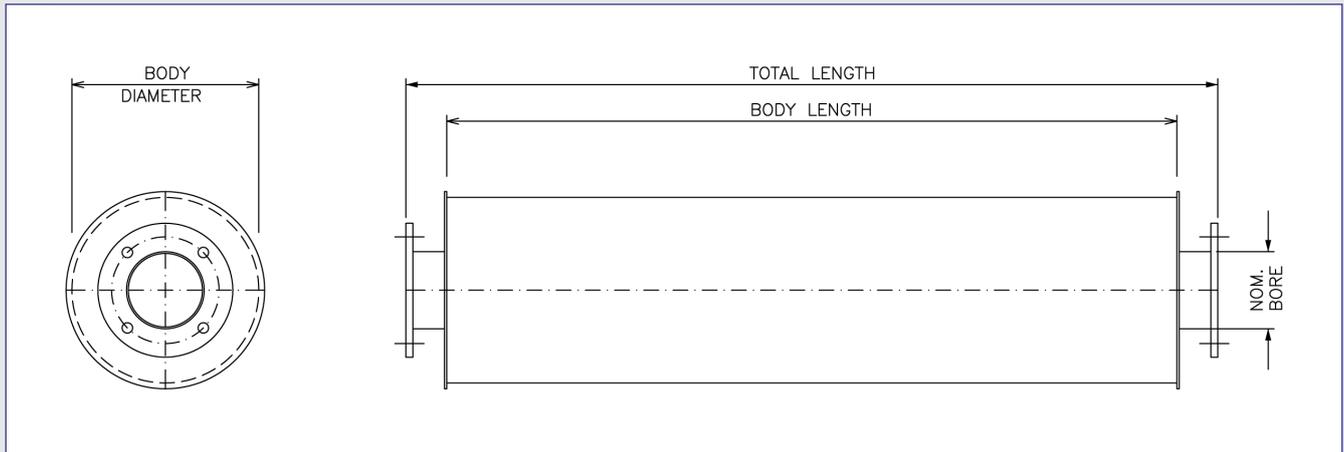
N.B. All TIO silencers can be combined with TIO spark arresters.



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Executions with TIO thread

Silencer type	Nominal bore	Body diameter	Body length	Total length
1"	25	158	490	560

Executions with TIO flanges

Silencer type	Nominal bore	Body diameter	Body length	Total length
1-1/2"	40	181	520	610
2"	50	240	680	770
2-1/2"	70	240	720	820
3"	80	240	1000	1120
3-1/2"	94	320	1050	1170
4"	100	369	1090	1220
5"	125	390	1335	1475
6"	150	457	1680	1830
7"	175	531	1830	1980
8"	200	608	1980	2130
9"	225	656	2200	2350
10"	250	756	2200	2350
11"	275	850	2400	2600
12"	300	911	2400	2600
13"	325	911	2400	2600
14"	350	911	2400	2600
15"	375	1020	2400	2600
16"	400	1067	2400	2600
18"	450	1220	2400	2600
20"	500	1370	2400	2600
22"	550	1370	2400	2600
24"	600	1525	2400	2600