



Type SDHC Reflection silencer

Application

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

Design

The acoustical performance of the silencer type SDHC is determined by several expansion chambers. The gas flow passes through these chambers which are connected by perforated tubes. Diameter and length of the SDHC silencer are calculated in such a way, that a maximum attenuation in nearly all frequencies can be realised, in relation to the pressure loss. The silencer flattens the pulsations in the exhaust system; that is why this type of silencer is operating most effectively when installed as close as possible to the engine. If noise requirements are high, the SDHC silencer can be efficiently combined with absorption silencers like HD and HDD.

Attenuation

Approx. 25 dB(A).

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

Gasvelocity

Recommended: 30 m/sec.

Pressure loss

The pressure loss table shows pressure loss in relation to velocity and temperature.

Temperature

Maximum: 600° C.

Special designs are available for higher temperatures.

Material

In- and outside normal steel, S235JRG2 –ST37.2., trade quality, stainless steel, Cor-Ten etc.

Insulation

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

Paint

One layer of zinc phosphate primer.

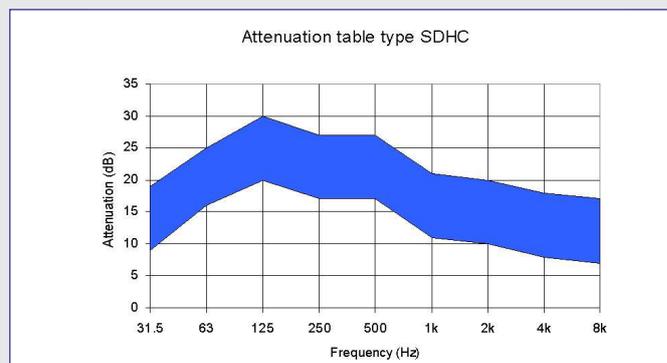
Installation

Type SDHC may be installed vertically, horizontally or in any position close to the engine. 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 connection

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

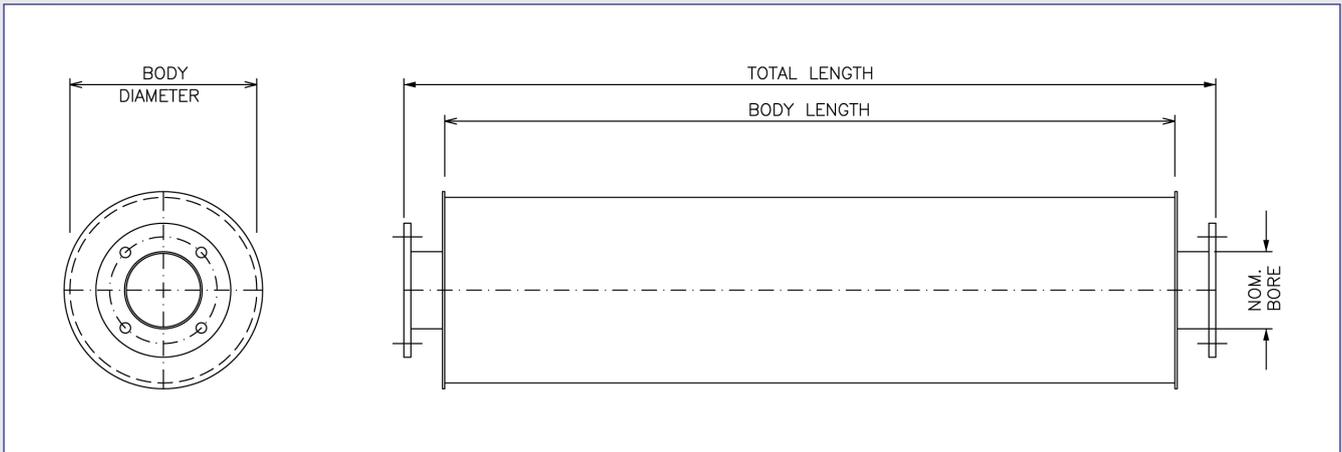
N.B. All TIO silencers can be combined with TIO spark arresters.



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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	2440	2590
10"	250	756	2745	2895
11"	275	850	2800	3000
12"	300	911	2900	3100
13"	325	911	3350	3550
14"	350	911	3760	3960
15"	375	1020	3850	4050
16"	400	1067	3915	4115
18"	450	1220	4065	4265
20"	500	1370	4220	4420
22"	550	1370	4930	5130
24"	600	1525	5080	5280