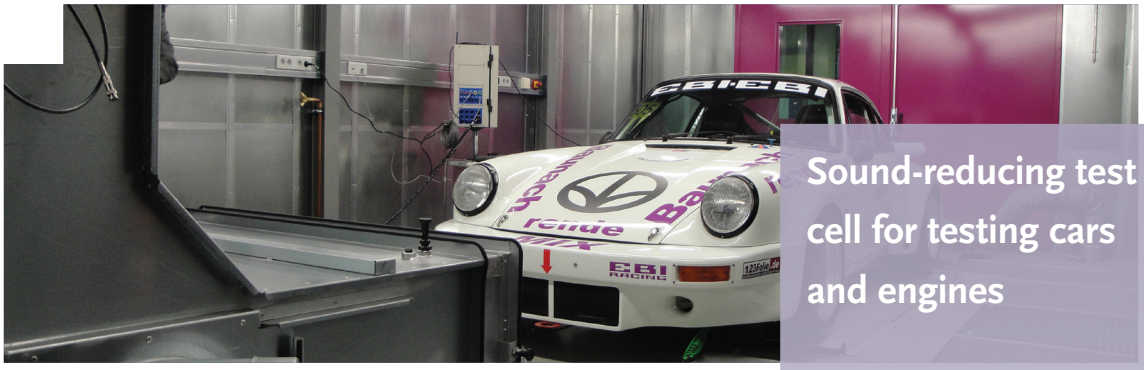

Sound-reducing test cell for testing cars and engines

ACOUSTIC TEST CELL

The testing of cars and engines creates a significant noise nuisance for the environment. Merford has developed special test cells which reduce the noise nuisance to an acceptable level. The test cell as standard is fitted with forced ventilation that can also simulate driving wind if desired.

APPLICATIONS

The testing of cars and engines creates a lot of noise, heat and exhaust fumes. Merford has developed special acoustic test cells for this purpose that reduce the noise nuisance to an acceptable level and control the ventilation. The test cells can also be equipped with an exhaust fumes system. The test cells are not built as a fixed construction, but are a modular system assembled using robust selfbearing panels. This means the test cells can be disassembled and rebuild at a different location.

SOUND INSULATION AND ABSORPTION

A sound-insulating test cell ensures that the outside sound measured during the testing of the vehicle or engine is reduced to an acceptable level. The height of the sound reduction is determined by the sound absorption capacity and the sound insulation value. There is a choice of different sound insulation values from 34 dB up to 50 dB. For absorption, there is a choice of sound absorption coefficients from 0.75 to 1.00.

ACOUSTIC VENTILATION

All test cells are equipped with (forced) ventilation to remove the heat created within the test cell. The necessary air flow is determined by Merford in conjunction with the customer, and is based on the capacity of the test object. The ventilation features heavy acoustic silencers consisting of the same insulation values as the panels used. These high quality silencers are cleanable. The acoustic ventilation system can also function as a simulation of driving wind at high speeds. Ventilation flows are possible up to approx. 200,000 m^3/h! Merford always provides you with a ready-to-use solution. We provide absolute sound guarantees so that you can be sure the test cell meets the specified requirements.

CERTIFICATION

- Acoustic values tested in conformance with ISO 717.
- Absorption materials in conformance with NEN 6064.
- Sendzimir galvanised plating in conformance with EN 10327.

FEATURES

- Sound insulation RWup to 50 dB
- Sound absorption value wup to 1.00
- Sound guarantee
- Insulation and absorption values combinations are possible
- Modular system that can be dissembled
- Silent ventilation, driving wind simulation

APPLICATIONS

- Engine Dyno
- Chassis Dyno
- Cycle Dyno

SOUND INSULATION AND ABSORPTION

Airborne sound insulation values measured with ISO 140-3 and calculated conform ISO-717-1

MERFORD

ACOUSTIC TEST CELL

DIMENSIONS
- Panel thickness: 75 or 100 mm.
- Dimensions of panel (W x H): maximum of 500 x 4,000 mm.

WEIGHT
Panel weight: approx. 20 to 40 kg/m² (depending on insulation values).

COMPOSITION
The acoustic test cell is a modular system assembled using robust self-bearing panels. The panels consist of Sendzimir galvanized plate with acoustic filling. Aluminium or stainless steel plating is optional.

FINISH
- The panels can optionally be treated with an enamel treatment in a standard RAL colour of your choice.
- Blind sheet-metal work on the outside, inside perforated or blind.

OPTIONS
- Certified acoustic doors with an R_W value of your choice.
- Acoustic windows with safety glass.
- Silencers, ventilators, closable valves, heat recovery, etc.
- Exhaust fumes system.
- Steel constructions.

CUSTOM-MADE
The test cells are built according to the customer's specifications. Whether it be custom-work in choice of material, colour or dimensions and shape (e.g. recesses).

GUARANTEE
Merford Noise Control provides you with a guaranteed, custom-made solution. Please contact our sales department for more information.

DISCLAIMER
Although this product sheet is drawn up meticulously, no right can be derived from its content. We reserve the right to make changes. For the most up-to-date version, please contact our sales department or visit our website.

Acoustic test cell for testing motor cycle power

Sound insulation values of test cell panels measured in conformance with ISO 140-3 including single values in conformance with ISO 717-1:

Panel	R_w	125	250	500	1000	2000	4000	(Hz)
Type 1	34 (-1,-2)	18	22	31	42	51	56	(dB)
Type 2	37 (-2,-2)	19	25	32	43	51	56	(dB)
Type 3	39 (-1,-5)	22	27	35	44	52	57	(dB)
Type 4	40 (-2,-5)	23	28	35	45	52	57	(dB)
Type 5	50 (-2,-4)	26	32	39	46	53	57	(dB)
Type 4	40 (-2,-5)	23	28	35	45	52	57	(dB)

Sound absorption values of the acoustic filling measured in conformance with ISO 354 and ISO 11654:

Panel	α_w	125	250	500	1000	2000	4000	(Hz)
Type 75	1,00	0,40	0,90	1,00	1,00	1,00	0,95	(-)
Type 75 PE	0,75	0,60	0,70	0,65	0,75	0,80	0,75	(-)
Type 100	1,00	0,60	1,00	1,00	1,00	1,00	1,00	(-)

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