

Rural wastewater treatment BetoBox® - Technics Enclosure

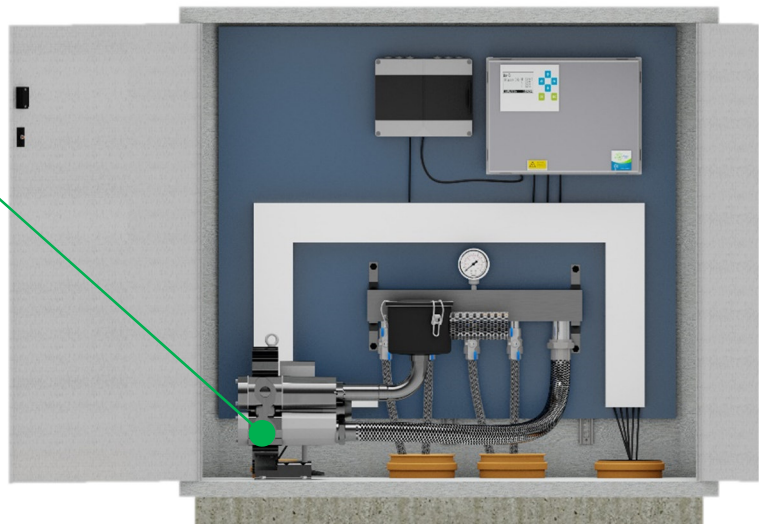
Reduction of sound emissions
at wastewater treatment plants

Source of sound emissions

SIDE CHANEL BLOWER

- Without silencer
- medium throttling; without pressure relief valve
- with connected pressure hoses
- Tolerance: +/-3 dB(A)

Blower Type	Sound pressure level according to spec sheet
2BH7 410	62 dB(A) [Distance: 1.0 m]
2BH7 420	66 dB(A) [Distance: 1.0 m]
2BH7 620	71 dB(A) [Distance: 1.0 m]



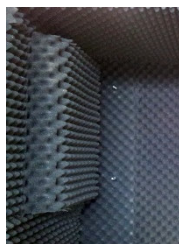
*Shown without sound insulation

Reduction of sound emissions

CHARACTERISTICS OF THE ENCLOSURE

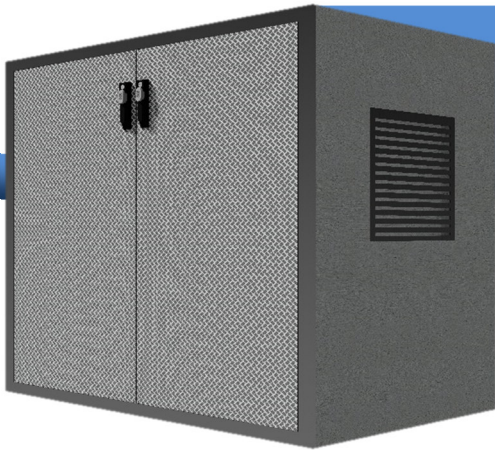
- Monolithic concrete body (5 cm wall thickness)
- Inside lining with affixed burling plates
- Doors equipped with acoustic boards
- Ventilation windows equipped with sound absorber gates

Blower Type	Sound pressure level With doors closed
2BH7 410	46 dB(A) [Distance: 1.0 m]
2BH7 420	50 dB(A) [Distance: 1.0 m]
2BH7 620	55 dB(A) [Distance: 1.0 m]



*Measurement conditions: 200 mbar head loss; pressure hose R1 ½"; with silencer

Please note following page for further information regarding distance-based sound pressure level decrease.



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Increasing distance - decreasing sound pressure level

Principles of sound propagation

1. A doubled distance to a sound source at an open area leads to a sound pressure level decrease by 6 dB(A).
2. An acoustic open area describes a field with negligible effect of reflections at peripheral surfaces or disruptive objects at the decisive frequency range (DIN EN ISO 3744).
3. The effective sound level at the immission site is always lower than specified because of the influence of disruptive structures, diffuse reflections and absorption.

Distance to sound source	Reduction of sound pressure level
1.0 m	- 0 dB(A)
2.0 m	- 6 dB(A)
4.0 m	- 12 dB(A)
8.0 m	- 18 dB(A)
16.0 m	- 24 dB(A)
32.0 m	- 32 dB(A)

