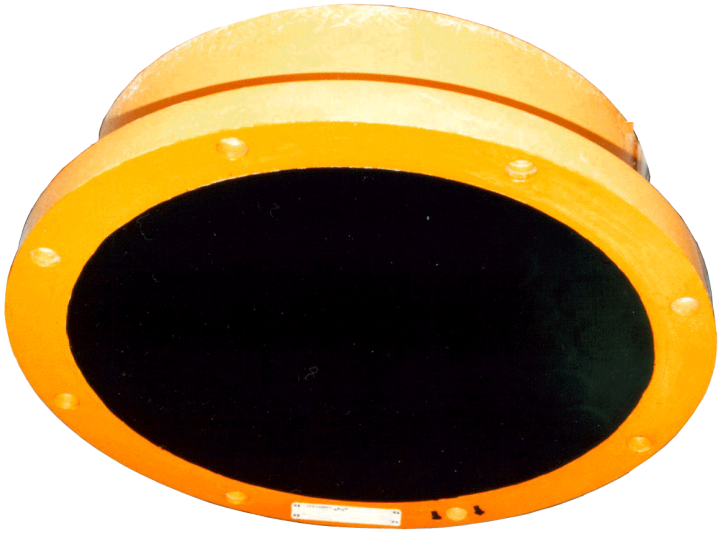
SIMRAD

# 12 kHz dual-beam transducer

## Introduction

The 12-16/60 is a 12 kHz dual beam transducer with 19 tonpilz elements. It can be set up for dual or single beam use.



## Order number

KSV-089510

## Technical specifications

### Common

Resonant frequency ..... 12 kHz
Maximum transducer depth: ..... 20 m
Cable length ..... 20 m
Cable diameter ..... 12.5 mm
Weight with/without cable ..... 84 / 78 kg
Storage temperature ..... -20 to 70 °C

### 18 + 1 elements (Narrow beam)

Circular beamwidth ..... 16 deg
Directivity:
- D ..... 130
- DI=10 log D ..... 21 dB

Equivalent two-way beam angle:
- Ψ ..... 0.045
- 10 log Ψ ..... -13.5 dB

Side lobes ..... less than -15 dB
Back radiation ..... less than -30 dB
Impedance:
- Nominal ..... 60 ohms
- Max. variation in |Z| ..... 45 - 80 ohms
- Max variation in phase angle ..... ±30 deg

Transmitting response ..... 171 dB re 1µPa per V
Receiving sensitivity, open circuit ..... -168.5 dB re 1V per µPa
Electroacoustic efficiency ..... 0.60
Maximum pulse power input ..... 2000 W
Maximum continuous power input ..... 80 W

### 1 element (Wide beam)

Circular beamwidth ..... 60 deg
Directivity:
- D ..... 10
- DI=10 log D ..... 10 dB

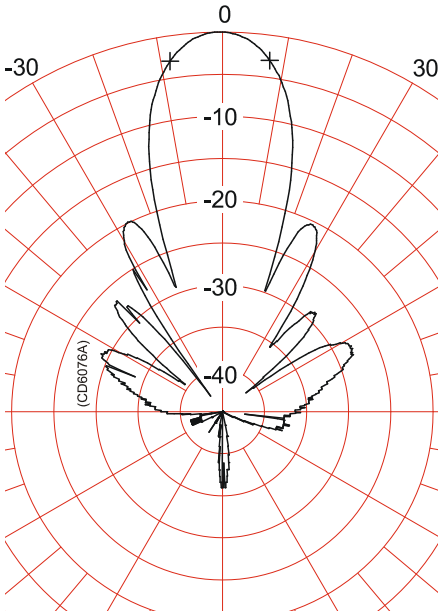
Equivalent two-way beam angle:
- Ψ ..... 0.6
- 10 log Ψ ..... -2 dB

Side lobes ..... Not applicable
Back radiation ..... less than -15 dB
Impedance:
- Nominal ..... 2 kohms
- Max. variation in |Z| ..... 1 - 3 kohms

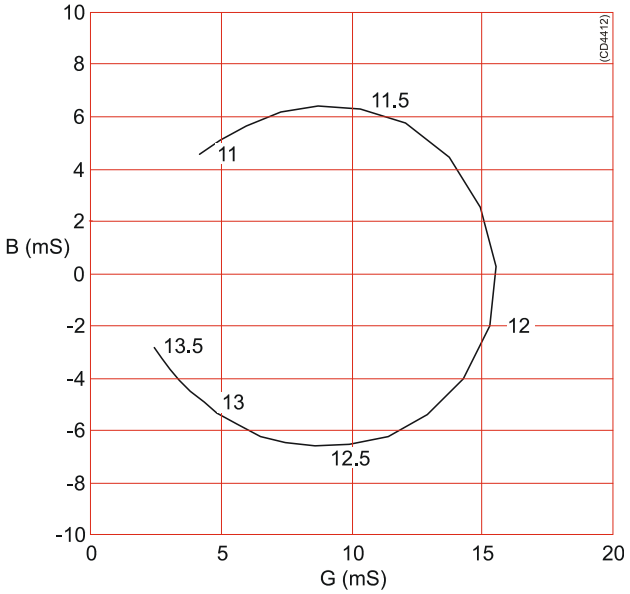
Transmitting response ..... 142 dB re 1µPa per V
Receiving sensitivity, open circuit ..... -168.5 dB re 1V per µPa
Electroacoustic efficiency ..... 0.60
Maximum pulse power input ..... 100 W
Maximum continuous power input ..... 4 W

(855-160920 Rev.B)

## Data

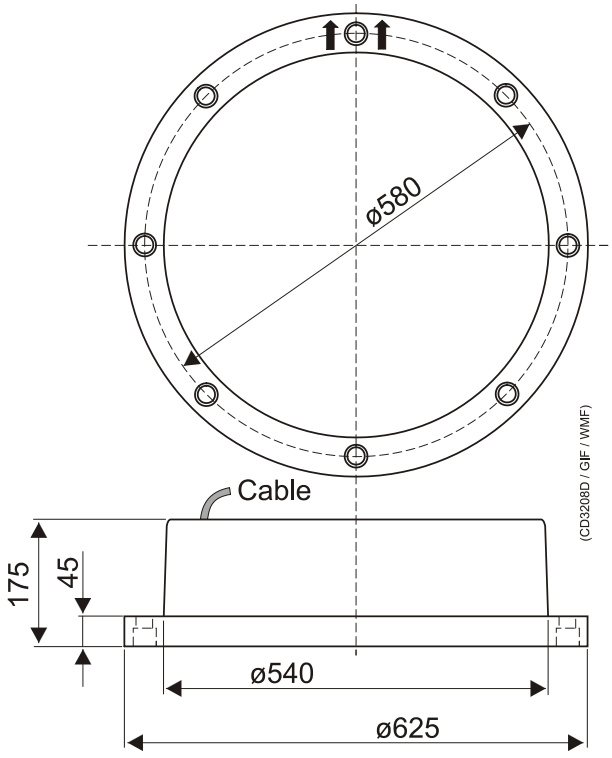



*Beam pattern, 18+1 elements (narrow)*

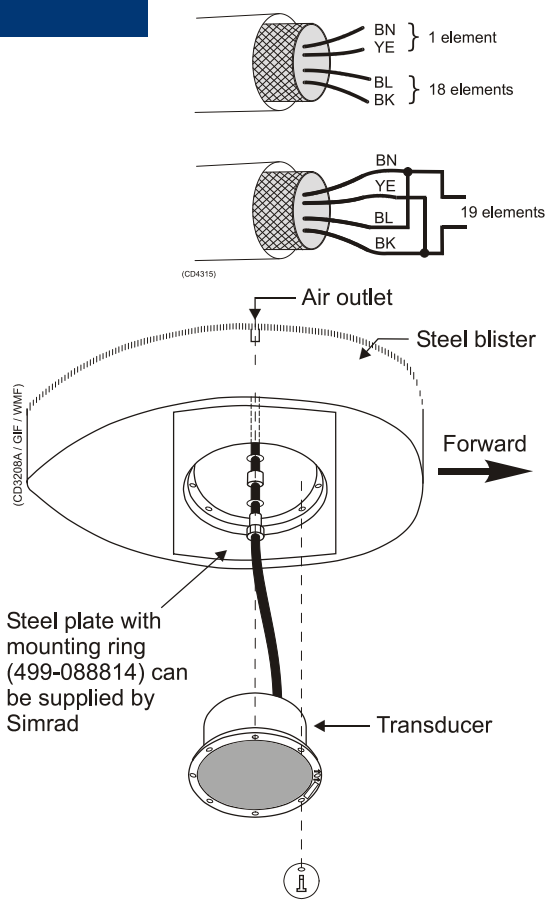



*Admittance, 18+1 elements*

## Installation




*Outline dimensions*




*Installation example*

**Manufacturer**:

Simrad AS

Strandpromenaden 50

P.O.Box 111

N-3191 Horten

Telephone: +47 33 03 40 00