

Non-Contact Ultrasonic Transducers

SONOSCAN CFC and CF Series

In addition to the following standard specifications, we offer multi-element, focused and customized ultrasonic probes with the following features:

- Outstanding acoustic characteristics
- Reasonable price performance ratio
- Robust and durable design



The ultrasonic **SONOSCAN CFC230** transducers with a frequency of 230 kHz are used for air-coupled testing with the inspection system SONOAIR. The probes are available with apertures of 12.5 mm | 19 mm | 25 mm. Transmitter and receiver are adjusted separately. The receivers are available with integrated preamplifier (several discrete gain steps up to 80 dB) or as passive version.

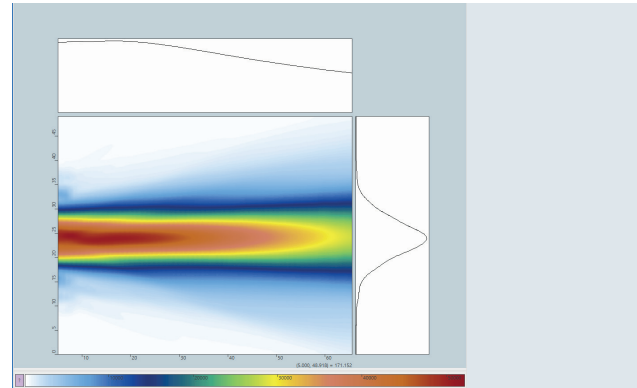
- Wide bandwidth
- Frequency matched transmitter and receiver
- Short pulses
- Multiple aperture sizes



The probes of the **SONOSCAN CF** series have been designed for couplant-free material testing with the inspection system SONOAIR. The probes in stainless steel housing are available in frequencies from 50 to 400 kHz.

SONOSCAN CFC230-D12

Transmitter (T) | Receiver (R) | Receiver with Integrated Amplifier (RA)

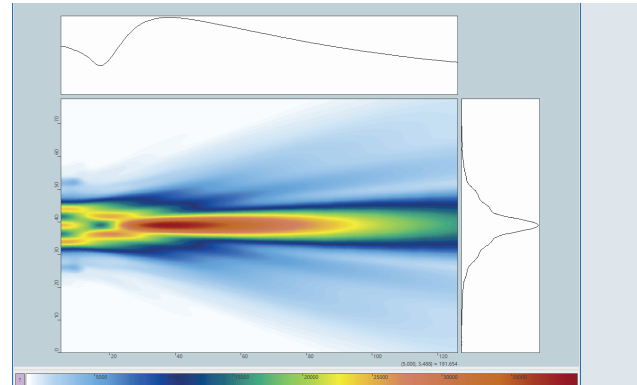


Specification	CFC230-D12-T	CFC230-D12-R	CFC230-D12-RA
Transducer Size / Aperture	Ø 12.5 mm	Ø 12.5 mm	Ø 12.5 mm
Focal Distance	17 mm	17 mm	17 mm
Focal Width	5 mm	5 mm	5 mm
Theoretical Near Field Length	24 mm	24 mm	24 mm
Dimensions (Without Connector)	Ø 19 mm × 43 mm	Ø 19 mm × 43 mm	Ø 28 mm × 56 mm
Weight	45 g	45 g	105 g
Order number	100 02 0332	100 02 0333	100 02 0334

Technical Data	CFC230-D12-T	CFC230-D12-R	CFC230-D12-RA
Center Frequency ⁽¹⁾	230 kHz (± 25 kHz)	230 kHz (± 25 kHz)	230 kHz (± 25 kHz)
Relative Bandwidth ⁽¹⁾	35 % (± 10 %)	35 % (± 10 %)	35 % (± 10 %)
Sensitivity ⁽¹⁾	N/A	650 µV/Pa (± 150 µV/Pa)	650 µV/Pa (± 150 µV/Pa)
Sound Pressure ⁽²⁾	950 Pa (± 150 Pa)	N/A	N/A
Max. Driving Voltage	400 V _{pp}	N/A	N/A

SONOSCAN CFC230-D19

Transmitter (T) | Receiver (R) | Receiver with Integrated Amplifier (RA)

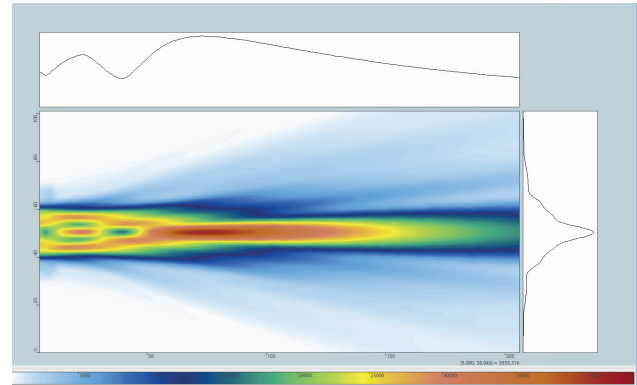


Specification	CFC230-D19-T	CFC230-D19-R	CFC230-D19-RA
Transducer Size / Aperture	Ø 19 mm	Ø 19 mm	Ø 19 mm
Focal Distance	45 mm	45 mm	45 mm
Focal Width	4 mm	4 mm	4 mm
Theoretical Near Field Length	60 mm	60 mm	60 mm
Dimensions (Without Connector)	Ø 28 mm × 51 mm	Ø 28 mm × 51 mm	Ø 28 mm × 56 mm
Weight	90 g	90 g	110 g
Order number	100 02 0329	100 02 0330	100 02 0331

Technical Data	CFC230-D19-T	CFC230-D19-R	CFC230-D19-RA
Center Frequency⁽¹⁾	230 kHz (± 25 kHz)	230 kHz (± 25 kHz)	230 kHz (± 25 kHz)
Relative Bandwidth⁽¹⁾	35 % (± 10 %)	35 % (± 10 %)	35 % (± 10 %)
Sensitivity⁽¹⁾	N/A	850 µV/Pa (± 150 µV/Pa)	850 µV/Pa (± 150 µV/Pa)
Sound Pressure⁽²⁾	1150 Pa (± 150 Pa)	N/A	N/A
Max. Driving Voltage	400 V _{pp}	N/A	N/A

SONOSCAN CFC230-D25

Transmitter (T) | Receiver (R) | Receiver with Integrated Amplifier (RA)



Specification	CFC230-D25-T	CFC230-D25-R	CFC230-D25-RA
Transducer Size / Aperture	Ø 25 mm	Ø 25 mm	Ø 25 mm
Focal Distance ⁽³⁾	70 mm	70 mm	70 mm
Focal Width	5 mm	5 mm	5 mm
Theoretical Near Field Length	100 mm	100 mm	100 mm
Dimensions (Without Connector)	Ø 42 mm × 64 mm	Ø 42 mm × 64 mm	Ø 42 mm × 69 mm
Weight	200 g	200 g	270 g
Order number	100 02 0326	100 02 0327	100 02 0328

Technical Data	CFC230-D25-T	CFC230-D25-R	CFC230-D25-RA
Center Frequency ⁽¹⁾	230 kHz (± 25 kHz)	230 kHz (± 25 kHz)	230 kHz (± 25 kHz)
Relative Bandwidth ⁽¹⁾	35 % (± 10 %)	35 % (± 10 %)	35 % (± 10 %)
Sensitivity ⁽¹⁾	N/A	850 µV/Pa (± 150 µV/Pa)	850 µV/Pa (± 150 µV/Pa)
Sound Pressure ⁽²⁾	1150 Pa (± 150 Pa)	N/A	N/A
Max. Driving Voltage	400 V _{pp}	N/A	NA

Test Conditions CFC Series

Test apparatus	SONOAIR
Excitation amplitude	100 V
Excitation type	⁽¹⁾ Pulse ⁽²⁾ Burst, 5 cycles
Receiver	E250U optical microphone
Measuring distance	Theoretical near field length

⁽³⁾ Also available as focusing probes with focal distance of 50 mm (CFC230-D25-P50).

SONOSCAN CF

CF50 | CF75 | CF125



Ideally for air-coupled
ultrasonic testing with
SONOAIR R&D!

Specification	CF50	CF75	CF125
Transducer Size / Aperture	Ø 45 mm	Ø 30 mm	Ø 19 mm
Focal Distance	65 mm	30 mm	14 mm
Focal Width	21 mm	9 mm	7 mm
Dimensions (Without Connector)	Ø 62 mm × 77 mm	Ø 42 mm × 64 mm	Ø 28 mm × 51 mm
Weight	465 g	195 g	95 g
Order number	100 02 0302	100 02 0295	100 02 0296

Technical Data	CF50	CF75	CF125
Center Frequency	50 kHz (± 4 %)	75 kHz (± 4 %)	125 kHz (± 4 %)
Relative Bandwidth	12 % (± 5 %)	12 % (± 5 %)	12 % (± 5 %)
Sound Pressure	220 Pa (± 50 Pa)	1200 Pa (± 240 Pa)	600 Pa (± 120 Pa)
Max. Driving Voltage	1500 V _{pp}	1000 V _{pp}	800 V _{pp}

SONOSCAN CF

CF200 | CF300 | CF400*



Ideally for air-coupled
ultrasonic testing with
SONOAIR R&D!

Specification	CF200	CF300	CF400*
Transducer Size / Aperture	Ø 11mm	Ø 7mm	Ø 20mm
Focal Distance	9 mm	5 mm	40mm
Focal Width	5 mm	5 mm	2 mm
Dimensions (Without Connector)	Ø 19 mm × 43 mm	Ø 19 mm × 38 mm	Ø 28 mm × 51 mm
Weight	39 g	38 g	90 g
Order number	100 02 0297	100 02 0301	100 02 0298

Technical Data	CF200	CF300	CF400*
Center Frequency	200 kHz (± 4 %)	300 kHz (± 4 %)	400 kHz (± 4 %)
Relative Bandwidth	12 % (± 5 %)	12 % (± 5 %)	12 % (± 5 %)
Sound Pressure	800 Pa (± 160 Pa)	320 Pa (± 100 Pa)	2 000 Pa (± 400 Pa)
Max. Driving Voltage	500 V _{pp}	400 V _{pp}	400 V _{pp}

* This probe is offered as well as multi element transducer CF400 3E with the possibility of an electronic focused beam (halving of near field length and a considerably improved resolution).

Test Conditions CF Series

Test apparatus	SONOAIR
Transmission voltage	200 V
Excitation Type	Burst, 7 cycles
Microphone	E250U optical microphone
Measuring Distance	CF400 50 mm CF300 60 mm CF200 90 mm CF125 160 mm CF075 250 mm CF050 365 mm