

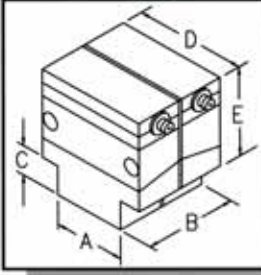
## Optima Ultrasonic Transducers

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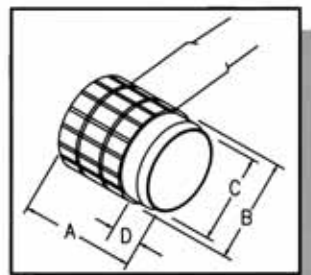
 **NDT Systems**  
[www.ndtsystems.com](http://www.ndtsystems.com)

# GENERAL PURPOSE Dual Element

## Finger Tip Series



## Rectangular Series



Dual Element Potted Fingertip			
Freq. MHz	Element Size - in		
	0.25"	0.375"	0.50"
1	-----	-----	DVF014
2.25	DVF022	DVF023	DVF024
3.5	DVF032	DVF033	DVF034
5.0	DVF052	DVF053	DVF054
7.5	DVF072	DVF073	DVF074
10.0	DVF102	DVF103	-----

Element Size	Element Dimensions - in			
	A	B	C	D
.250 Dia	0.55	0.45	0.36	0.15
.375 Dia	0.56	0.625	0.50	0.16
.500 Dia	0.61	0.75	0.62	0.16

Element Size	Dual Element Dimensions - in				
	A	B	C	D	E
.50 X .50	0.52	0.70	0.20	0.80	0.83
.50 X 1.00	1.05	0.70	0.25	1.50	1.04

Dual Element Rectangular		
Freq. MHz	Element Size - in	
	0.50 x 0.50"	0.50 x 1.00"
1	DXR0144	DXR0148
2.25	DXR0244	DXR0248
3.5	DXR0344	DXR0348
5.0	DXR0544	DXR0548

**Dual Element Transducers** - These transducers produce improved near-surface resolution when compared with normal single element contact transducers. Used on instruments having isolated pulser/receiver connections (through-transmission mode on many instruments), each of the elements functions independently, one as a transmitter, the other as a receiver. Having a remarkable combination of sensitivity, penetration and resolution, dual element transducers are used in precision thickness gaging applications, and for detection of corrosion, erosion, pits and small internal laminar or elongated flaws.

Replacement Delay Lines		
Delay Type	Delay Size - in	
	0.50 x 0.50"	0.50 x 1.00"
Acrylic	DX44	DX48
Hi Temp	DXH44	DXH48

**Cylindrical Fingertip Models** - Small cylindrical fingertip sizes are provided in hardened Stainless Steel cases and are ideal for areas where access is restricted or when maximum sensitivity and highest resolution are desired. Intermittent operation on hot surfaces up to 400°F is possible using a 15% duty cycle. The cable is permanently side-mounted with two BNC connectors for ultrasonic instrument hook-up.

**Rectangular Duals** are recommended for more rugged applications or applications requiring greater coverage. These models have replaceable delay lines and cross-talk barriers for use in high-wear applications or where shaped delay lines are needed. The standard delay line on rectangular duals is acrylic. A high temperature delay (intermittent operation to 400°F) option is also offered. Side-mounted Microdot connectors are standard.



# NOVA SERIES Dual Element - Probes

Nova TG110DL



Features include:  
 50" Range  
 Time Encoded 'B' Scan  
 50,000 Point Data Logger  
 Min, Max Cap & Alarms  
 AutoProbe Recognition  
 PC Data Transfer Package

**NDT Systems' Nova transducers** listed on this page perform superbly on our older Nova models as well as the current models. Although some older Nova transducer model numbers have changed, the descriptions given here will readily enable you to match earlier models with the new ones. Please choose the appropriate model transducer for the appropriate model thickness gage.

	Model	Range	Freq	Dia	Dia @ tip	Height	Temp		Holder
DV-506	6 100D	0.040-9.999	5.0	0.375	0.56	1.30	600°F	LMD-1	BH-1
DV-507	6 100D	0.060-9.999	5.0	0.375	0.56	1.30	600°F	LMD-1	BH-1
DF-505	4 100D	.040-2.000	5.0	0.300	0.55	0.45	400°F	Side - Int	N/A
DF-505TM	2 100D	.040-2.000	5.0	0.300	0.55	0.45	400°F	Top - Int	N/A
DF-502	3 100D	.060-2.000	5.0	0.220	0.28	0.75	150°F	Side - Int	N/A
DF-502TM	1 100D	.060-2.000	5.0	0.220	0.28	0.75	150°F	Top - Int	N/A
DV-208	7 100D	0.200-9.999	2.0	0.600	0.90	1.50	600°F	LMD-1	BH-2
DQ506	9 100D	0.200-9.999	5.0	0.375	0.60	3.40	1000°F	LMD-1	BH-3
TG-506	6 TG110	0.040-9.999	5.0	0.375	0.56	1.30	450°F	LMD-1	BH-1
TG-556	6 TG110	0.040-9.999	5.0	0.375	0.56	1.30	600°F	LMD-1	BH-1
TG-560P	6 TG110	0.040-9.999*	5.0	0.375	0.90	1.50	450°F	LMD-1	BH-1
TG-790	8 TG110	0.040-9.999	5.0	0.280	0.43	2.50	900°F	LMD-1	N/A
TG-505	4 TG110	0.040-9.999	5.0	0.375	0.60	3.40	450°F	Side - Int	N/A
TG-505TM	2 TG110	0.040-9.999	5.0	0.375	0.56	1.30	450°F	Side - Int	N/A
TG-208	7 TG110	0.200-9.999	2.0	0.375	0.56	0.80	450°F	LMD-1	BH-2
TQ-506	9 TG110	0.200-9.999	2.0	0.600	0.90	1.50	1000°F	LMD-1	BH-3
TG-502	3 TG110	0.060-1.000	10.0	0.280	0.38	0.80	450°F	Side - Int	N/A
TG-502TM	TG110	0.060-1.000	5.0	0.375	0.60	3.40	450°F	Side - Int	N/A

\* 0.110 - 3" in Through Paint Mode

Temperatures indicated are for intermittent applications only. The temperature of the transducer case should not exceed 200 degrees F where no temperature is indicated.

BH style probe holders are made of aluminum with a flared skirt and recessed set screw for attachment to the transducer.

# NOVA Transducers



## Nova and NovaScope Transducers

For many years, NDT Systems has manufactured the highest quality precision ultrasonic thickness gages. The NOVA line continues to provide unmatched performance in a wide range of demanding industry applications.



These transducers exhibit extremely good, high frequency, broad banded responses which are particularly suited to precision thickness gaging. The echo envelope normally exhibits 1-1 1/2 cycles. Designed for use primarily on the NDT Systems Nova series of instrumentation, these transducers will also offer superior response when used with many of today's higher performance pulser-receiver combinations.

## NOVA Precision Transducers

MODEL	APPLICATION	THICKNESS RANGE	ELEMENT		CASE SIZE-INCHES	
			FREQ. MHz.	DIA. IN.	DIA.	HEIGHT
10 C11	General Purpose	0.062-19.999"	5	0.375	0.63	0.56
9 C11L	C11 with LED alarm light	0.062-19.999"	5	0.375	0.63	0.96
11 C11E	For ID cylinder walls .2" radius	0.062-1.000"	5	0.125 x 0.375	0.63	0.56
12 C13	C11 but smaller size	0.062-19.999"	5	0.250	0.45	0.55
C14	C11 subminiature with top connector	0.062-2.000"	5	0.125	0.32	1.16
8 C16	For more attenuative materials	0.200-19.999"	2.25	0.500	0.75	0.61
7 C16L	C16 with LED alarm light. C16 with LED	0.200-19.999"	2.25	0.500	0.75	1.05
8 C17	Very high power on attenuative materials	2.00-199.9"	2.25	0.500	0.75	0.61

MODEL	APPLICATION	THICKNESS RANGE	ELEMENT		CASE SIZE-INCHES	
			FREQ. MHz.	DIA. IN.	DIA.	HEIGHT
IBU-5	Sharp focused type bubbler immersion transducer with plastic cone and metal tip. Use only oscilloscope monitoring.	0.0500-0.7000"	5	0.250	0.88	2.10
IBU-10		0.0300-0.7000"	10	0.250	0.88	2.10
IBU-15		0.0150-0.6000"	15	0.250	0.88	2.10
IBU-25		0.0120-0.5000"	20	0.250	0.88	2.10
E11877		0.0090-0.2000"	30	0.250	0.88	2.10
IBU-C	Replacement plastic cone for IBU models					
IBU-T	Replacement plastic tips (5) for IBU models					
T-300	Bubble tank for IBU models with pump; tank and holder for transducer.					





Miscellaneous Bubbler & Pencil Probes

MODEL	APPLICATION	THICKNESS	ELEMENT		CASE SIZE - INCHES		ACCESSORIES
			FREQ. Mhz	DIA. IN.	DIA.	HEIGHT	
D11 5	General purpose on thin smooth materials. Fixed delay	0.0050-0.7000"	15	0.250	0.45	0.81	
D11TC	D11 with top connector	0.0050-0.7000"	15	0.250	0.45	0.90	
D11R 2	D11 with replaceable delay 0.29" tip diameter	0.0050-0.7000"	15	0.250	0.50	0.90	D11R-T replacement tips
D11RTC 4	D11R with top connector	0.0050-0.7000"	15	0.250	0.50	1.12	
D11L	D11 with LED alarm light	0.0050-0.7000"	15	0.250	0.45	1.19	
D12 6	Similar to D11 with smaller housing and element	0.0500-0.3000"	15	0.188	0.32	1.16	
D13R 1	For more attenuative materials with smooth surfaces	0.4000-1.000"	10	0.500	0.89 0.55 tip	1.25	D13R-T replacement tips
D15	For use on plastic-backed metals (chem-mill) or bonded face sheet laminates	0.0050-0.2500"	15	0.250	0.45	0.70	
D15L	D15 with LED alarm light	0.0050-0.2500"	15	0.250	0.45	1.20	
D16R 2	D11R with extended delay tip and thickness range	0.0250-1.100"	15	0.250	0.45	1.00	D16R-T replacement tips
D17	D15 for thicker materials	0.0220-0.700"	15	0.250	0.45	0.81	
D20R 14	D11 with replaceable delay 0.125" tip diameter	0.0050-0.7000"	15	0.125	0.50	0.90	
DM-123 17	Swivel-mounted on 4" handle. Use only with oscilloscope monitoring	0.0050-0.4000"	15	0.125 x 0.313	0.30 x 0.50	0.35	
AEX-01C 16	Focused beam with .060" diameter replaceable tip and pencil style case. For use on irregular surfaces when used with scope display.	0.0100-0.3100"	12	0.188	0.37	4.50	AEX-T replacement tips
AEX-02C 16	AEX-01C with permanent tip	0.0400-0.3100"	12	0.188	0.37	4.50	
AEX-03C 15	AEX-01C right angle style	0.0100-0.3100"	12	0.188	0.37	4.25	AEX-T
AEX-04C 15	AEX-02C right angle style	0.0100-0.3100"	12	0.188	0.37	4.25	