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Isometric Transducers

Cat. No. 7003 / 7004 / 7005 & 7010

General

The three models 7003-7004-7005 cover the range from 0 to 50 g (see table on the facing page). The high sensitivity 7010 is designed for the mg range.

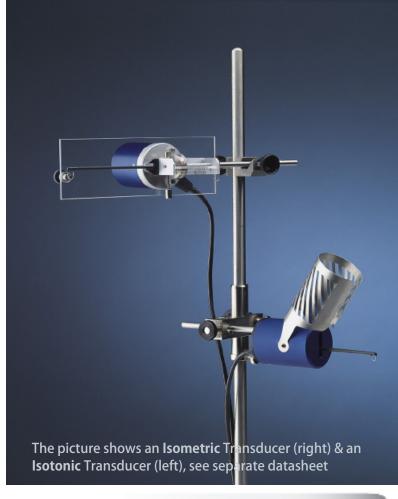
The force exerted on a hollow carbon fibre beam is converted into proportional electric signal via strain-gauges, conveniently wired in Wheatstone bridge circuit.

Model Selection

Ugo Basile transducers are of robust construction and can withstand forces of up to 5-10 times the rated value.

It is possible to use 7003 which is generally used for trachea rings or artery strips, where forces of 5-10 grams are involved, by operating at minimum amplifier sensitivity; however, the cantilever will deflect with a load of the mentioned magnitude

Generally speaking, it is advisable to use a stiff transducer, operating at high amplifier sensitivity, and use the most sensitive transducer only when



Also available from Ugo Basile:

- Tissue Baths, 1, 2, 4-chambers
- Digital Recorder DataCapsule-Evo
- Electrodes & Stimulators



Main Features

- Ugo Basile transducers have been designed for precise measurement of force in muscular preparations under isometric conditions
- An Isometric Transducer measures changes in force at constant length whereas an Isotonic Transducer is basically a displacement meter under constant load

Isometric Transducer Specifications

Model	7010	7003	7004	7005	
Electrical				•	
Excitation Voltage (max.)	6V	6V	6V	6V	
Excitation Voltage (typical)	3V	3V	3V	3V	
Sensitivity $(\mu V \text{ per g per V})$	110	70	25	10	
Non linearity & Hysteresis	+/-3%	+/-3%	+/-3%	+/-3%	
Mechanical					
Force Range	0-800 mg	0-2g	0-10g	0-50g	
Overload Rating	5g	20g	50g	200g	
Moment of Inertia	7gcm ²	7gcm²	7gcm²	7gcm²	
Lever Arm Displacement	0.5 mm/g	0.3 mm/g	0.1 mm/g	0.06 mm/g	
Physical					
Weight	270g	270g	270g	270g	
Shipping Weight	900g	900g	900g	900g	
Packing	29x26x	29cm			

Compatibility

Before ordering, check the connection compatibility of your amplifier/recording system.

The Isometric & Isotonic Transducers are normally supplied with a connector (type -F) designed for Ugo Basile DataCapsule-Evo Recorder (see datasheet).

If the customer wishes to make use of other recording apparatus, the transducers can be supplied with appropriate connector on request: we will be glad to provide transducer with different connectors, if available, or to provide wiring information and instruction.

Ordering Information

/003	Isometric Force Transducer, type DYT
7004	Isometric Force Transducer , type DY2
7005	Isometric Force Transducer , type DY3
7010	High-Sensitivity Transducer , type DY0

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Isometric Transducers 7003, 7004, 7005

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High-Sensitivity Transducer 7010

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