

# RADIOACTIVE SOURCES

**M**odel RN-1025, TH-1025 and RNC sources are flow-through sources that provide a convenient means of generating either radon or thoron gas

## Sources:

Calibrated gas sources were developed by Pylon to satisfy the need for a convenient and accurate means of checking field instrumentation. These sources feature reliable rate of emanation, high accuracy and ease of use. They are widely used for field checking of radon and thoron measuring instruments.

## Flow-Through Sources:

The Pylon Models RNC, RN-1025 and TH-1025 are convenient flow-through radioactive gas sources, ideally suited for continuous or intermittent applications in environmental chambers, radon and thoron enclosures and for the checking of instruments. They contain a dry radium (Ra-226) or thorium (Th-228) source which provides calibrated quantities of radon (Rn-222) or thoron (Rn-220) for laboratory or field use.

## Applications:

- Radon or thoron monitor/detector checks

## Features:

- ANSI N538-1979 safety standard compliant
- High accuracy
- Easy to use
- Continuous operation
- Constant rate of emanation



Model RN-1025

## Theory of Operation:

The classical method of producing radon gas involves degassing a solution containing radium salts, a process requiring careful attention to detail if accurate results are to be obtained. The equipment is fragile and generally not suitable for field use. There is also the attendant risk of spills and contamination.

Pylon sources provide a convenient means of generating calibrated quantities of either radon or thoron gas. The source material is in a dry powder form which reliably emanates 100% of the gas produced.

RN - 1025 / TH - 1025 / RNC

## RADIOACTIVE SOURCES

### Specifications:

	<u>RN-1025</u>	<u>TH-1025</u>	<u>RNC</u>	
Parent nuclide:	Ra-226	Th-228	Ra-226	
Nominal activity:	See PN Table	See PN Table	0.002 (0.074)	uCi (kBq)
Activity Tolerance:	-10 / +25	-10 / +25	-10 / +25	%
Calibration Accuracy <sup>1</sup> :	± 4	± 8	± 4	%
Housing Material:	Aluminum	Aluminum	Aluminum	
Maximum Flow Rate:	10	10	10	lpm
Operating Temperature Range:	0 to +50 (+32 to +122)	0 to +50 (+32 to +122)	0 to +50 (+32 to +122)	°C (°F)
Storage Temperature Range:	-20 to +75 (-4 to +167)	-20 to +75 (-4 to +167)	-20 to +75 (-4 to +167)	°C (°F)
Relative Humidity Range <sup>2</sup> :	0 to 90	0 to 90	0 to 90	%
Length <sup>3</sup> :	15.2 (6)	15.2 (6)	-	cm (in.)
Width <sup>3</sup> :	48.3 (19)	48.3 (19)	-	cm (in.)
Height <sup>4</sup> :	10.2 (4)	10.2 (4)	-	cm (in.)
Height <sup>5</sup> :	13.3 (5.3)	13.3 (5.3)	-	cm (in.)
Weight <sup>4</sup> :	1.6 (3.5)	1.6 (3.5)	-	kg (lb.)
Weight <sup>5</sup> :	13.6 (30)	13.6 (30)	-	kg (lb.)
Diameter <sup>6</sup> :	-	-	6.7 (2.65)	cm (in.)
Height <sup>6</sup> :	-	-	9.1 (3.6)	cm (in.)
Weight <sup>6</sup> :	-	-	525 (1.16)	g (lb.)

<sup>1</sup> At a 1  $\sigma$  Confidence Level.

<sup>2</sup> Non-Condensing.

<sup>3</sup> 1025.

<sup>4</sup> Small Body 1025 (< 54 uCi (2000 kBq))

<sup>5</sup> Large Body 1025 ( $\geq$  54 uCi (2000 kBq))

<sup>6</sup> RNC

• Values are nominal.

### Ordering Information:

<b>Model</b>	<b>Nominal Source Activity</b>	<b>Order Part Number</b>
RN-1025-Custom-S <sup>7</sup>	< 2000 kBq (54 $\mu$ Ci)	6202074
RN-1025-Custom-L <sup>7</sup>	$\geq$ 2000 kBq (54 uCi) & < 4070 kBq (110 uCi)	6202075
TH-1025-Custom-S <sup>7</sup>	< 2000 kBq (54 $\mu$ Ci)	6202094
TH-1025-Custom-L <sup>7</sup>	$\geq$ 2000 kBq (54 uCi) & < 4070 kBq (110 uCi)	6202095
RNC	0.002 $\mu$ Ci (74 Bq)	A206324

<sup>7</sup> Activity is specified by the Customer.

THESE SOURCES CONTAIN RADIOACTIVE MATERIALS. PYLON REQUIRES A COPY OF THE USER'S RADIOISOTOPE LICENCE PRIOR TO SHIPPING THESE PRODUCTS.

Specifications subject to change without notice.

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