

**SUBMINIATURE INTEGRATED AMPLIFIER NMR PROBES**

- **Range : 0.043 to 13.7 Tesla**
- **External amplifier not required**
- **Easier to handle, more economical**
- **TO BE USED WITH PT 2025 or PT 4025 TESLAMETER MAIN UNIT**

The 1082 integrated amplifier probes combine the function of the 1030 amplifier and the 1060 NMR probes in the same housing as the 1080 probes.

The  $^1\text{H}$  probes are built with a solid sample containing a large amount of hydrogen.

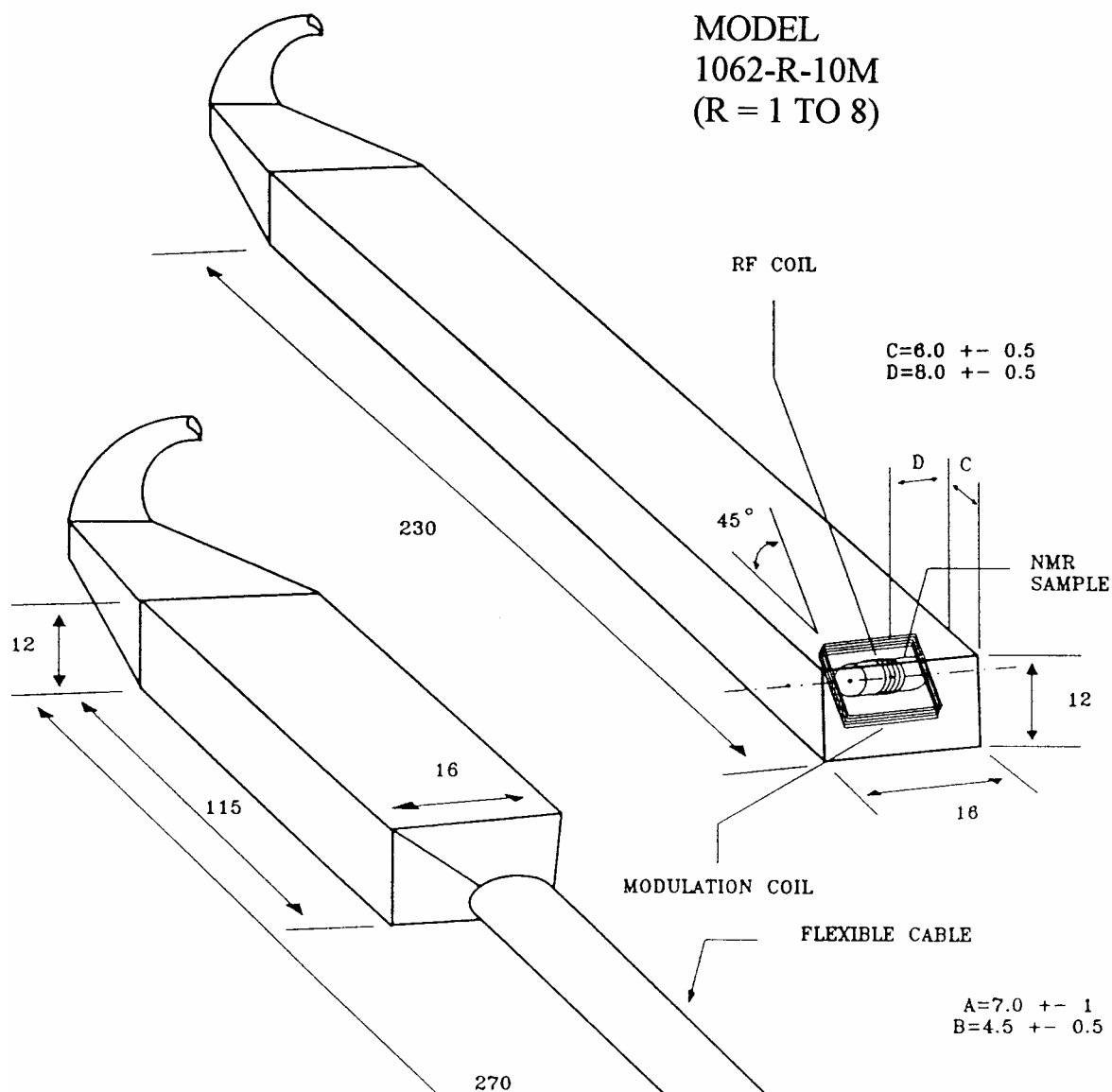
The  $^2\text{H}$  probes are built with a sample of  $\text{D}_2\text{O}$  (heavy water) and consequently should not be exposed below freezing point.

**Specifications :**

|                            |   |  |
|----------------------------|---|--|
| Amplifier                  | : | built-in.  |
| Probe identification       | : | automatic.   |
| Housing                    | : | beryllium copper.  |
| External dimensions        | : | 16.5 x 12.5 x 115 mm, + 9 X 6 X 155 mm fits in 10 mm diameter.   |
| Cable length               | : | 10 meters, special length available.   |
| Connectors                 | : | one 8-pin LEMO and one BNC.  |
| Multiplexed configurations | : | up to 8 probes can be connected to the 2030 multiplexer (or up to 64 with multiplexers 2032 and 2030). |
| Field direction            | : | transverse.  |
| Absolute accuracy          | : | better than $\pm 5$ ppm.   |
| Relative accuracy          | : | 0.1 ppm RMS.   |
| Temperature coefficient    | : | better than 0.05 ppm/°C.   |
| Temperature range          | : | +5 °C to +40 °C.   |
| Storage temperature        | : | -20 °C to 80 °C, except for heavy water probes (ranges: 6 to 8).                                       |

| Probe ranges |              |           |         | Active sample    | Required field homogeneity |
|--------------|--------------|-----------|---------|------------------|----------------------------|
| <b>R = 1</b> | $^1\text{H}$ | from 0.05 | to 0.13 | 5 (dia.) 4.5 (L) | 600                        |
| <b>R = 2</b> | $^1\text{H}$ | from 0.11 | to 0.26 | 5 (dia.) 4.5 (L) | 1200                       |
| <b>R = 3</b> | $^1\text{H}$ | from 0.17 | to 0.52 | 4 (dia.) 4.5 (L) | 1200                       |
| <b>R = 4</b> | $^1\text{H}$ | from 0.35 | to 1.05 | 4 (dia.) 4.5 (L) | 1500                       |
| <b>R = 5</b> | $^1\text{H}$ | from 0.7  | to 2.1  | 4 (dia.) 4.5 (L) | 250                        |
| <b>R = 6</b> | $^2\text{H}$ | from 1.5  | to 3.4  | 4 (dia.) 4.5 (L) | 240                        |
| <b>R = 7</b> | $^2\text{H}$ | from 3.0  | to 6.8  | 4 (dia.) 4.5 (L) | 300                        |
| <b>R = 8</b> | $^2\text{H}$ | from 6.0  | to 13.7 | 4 (dia.) 4.5 (L) | 50                         |

**MODEL  
1062-R-10M  
(R = 1 TO 8)**



**MODEL  
1082-R-10M  
(R = 3 TO 8)**

DIMENSIONS IN MM.  
DRAWING NOT ON SCALE.

NMR SAMPLE DIMENSIONS (R=FIELD RANGE)  
DIAM=8 (R=1)  
DIAM=5 (R=2)  
DIAM=4 (R=3 TO 8)  
LENGTH=4.5 (R=1 TO 8)