metrolab

MFC8246

Motorized mapper & holder for small-bore magnet

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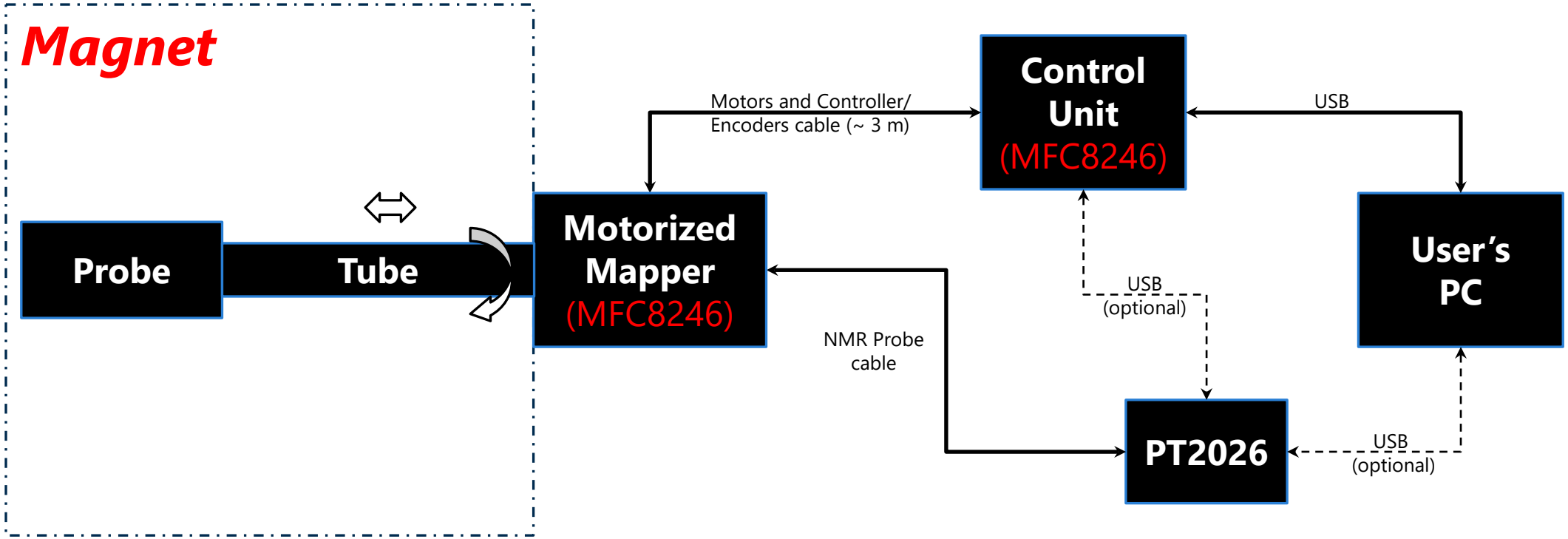
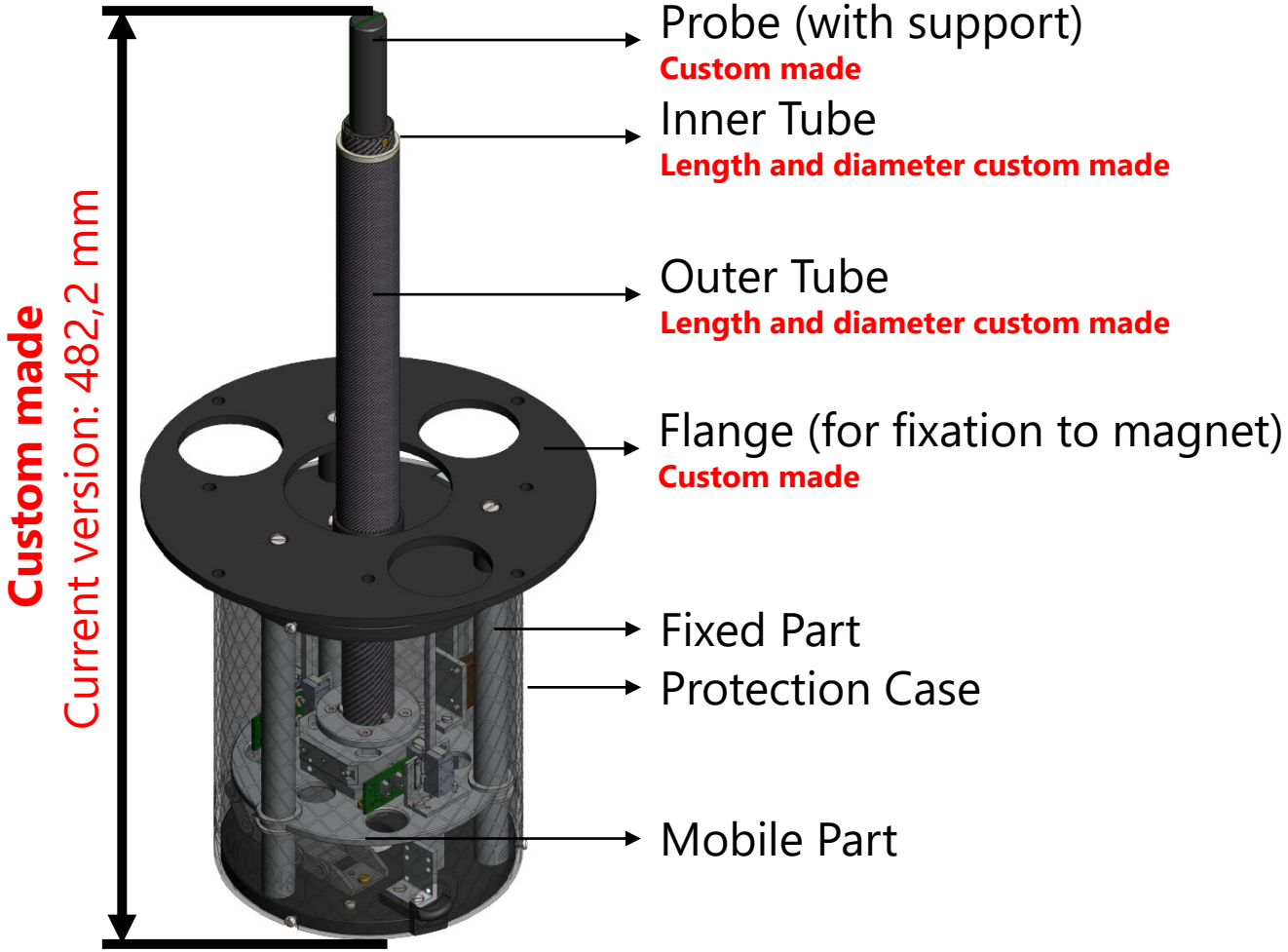
Introduction

- Small bore mapper for fast and accurate magnet mapping
- Dedicated NMR probe arrays or single probes
- Ideal for NMR spectrometer magnets, small bore magnets
- Fields from 38 mT up to 30T
- Accuracy < 5 ppm
- Resolution 0.2 ppm probe array, 10 ppb single probe

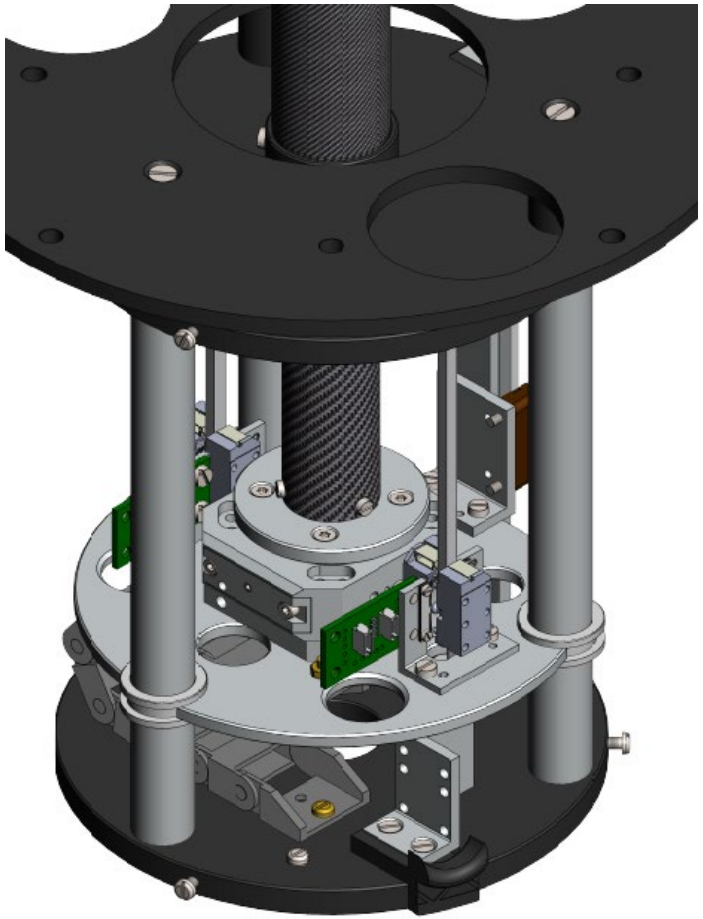
Overview


Magnet
Probe
Tube
Motorized Mapper (MFC8246)
Motors and Controller/ Encoders cable (~ 3 m)
Control Unit (MFC8246)
USB
User's PC
USB (optional)
NMR Probe cable
PT2026
USB (optional)

MFC8246 Motorized Mapper

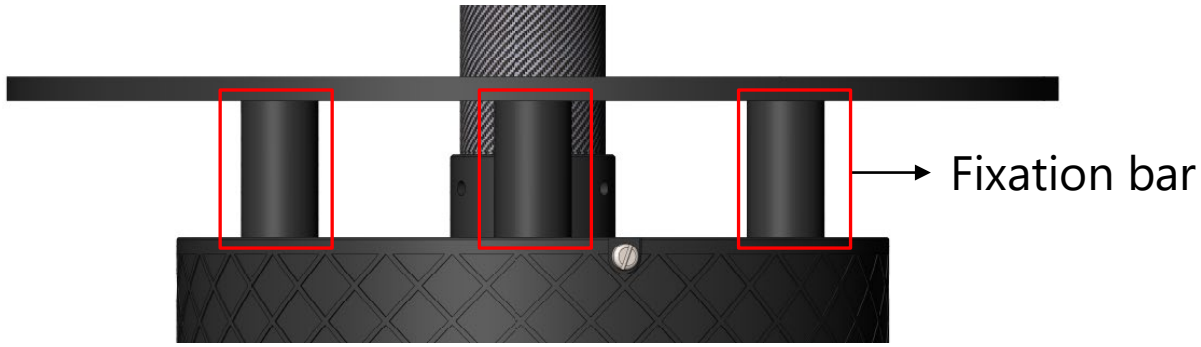


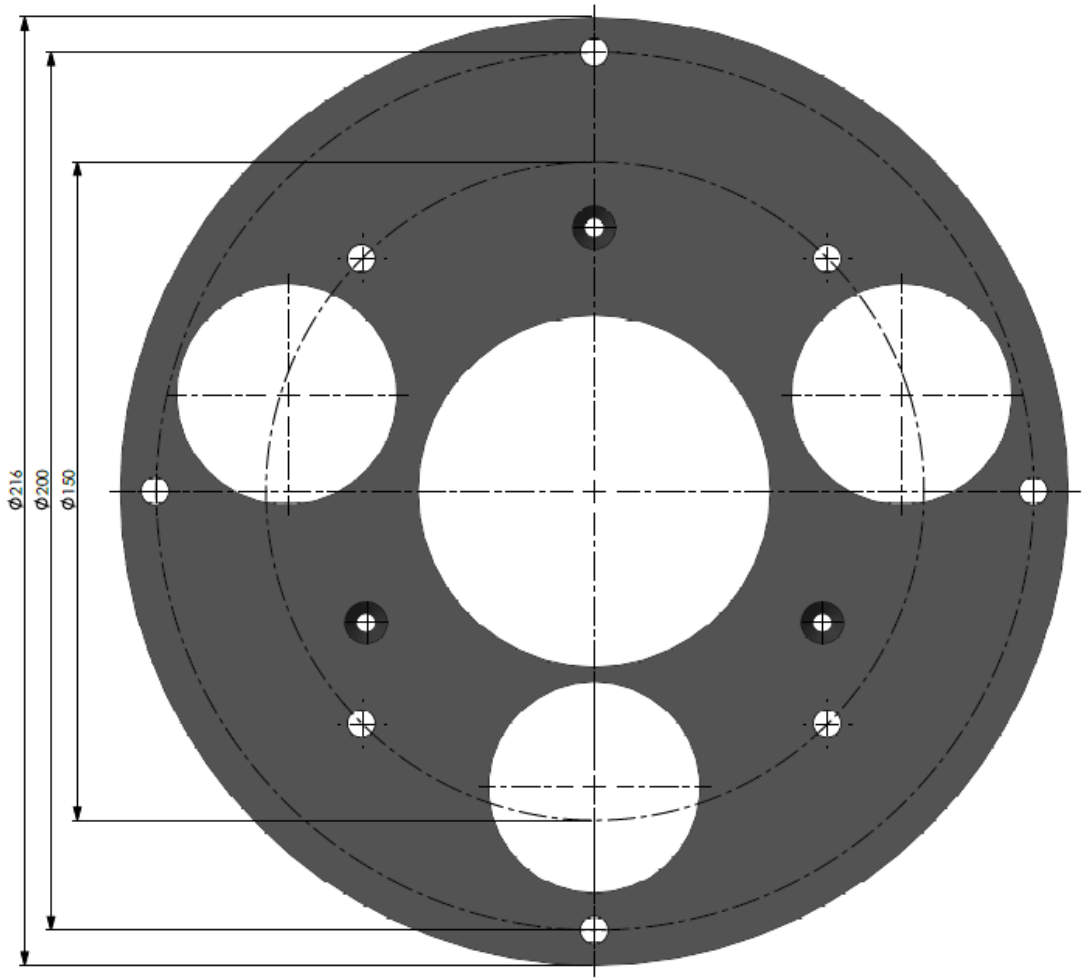
Mobile Part: Detailed View



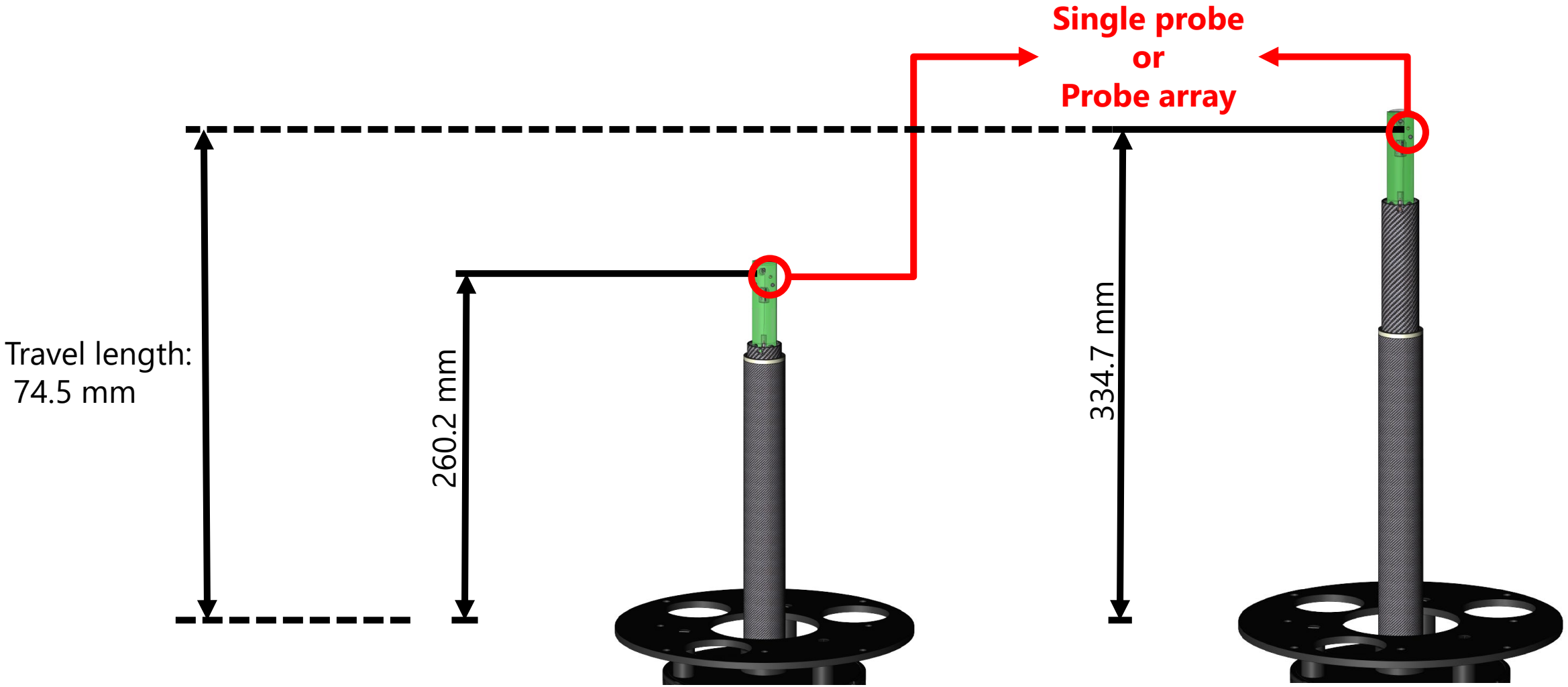
MFC8246 Fixation to Magnet

- Flange interface with custom made fixation points
- Current version:
  - Fixation points: Nominal PCD of 4 off equispaced on a PCD 150mm tapped M6.
  - Alternative PCD off 200mm pitched round 45 degrees
- Adjustable distance to magnet by replacing “fixation bar”





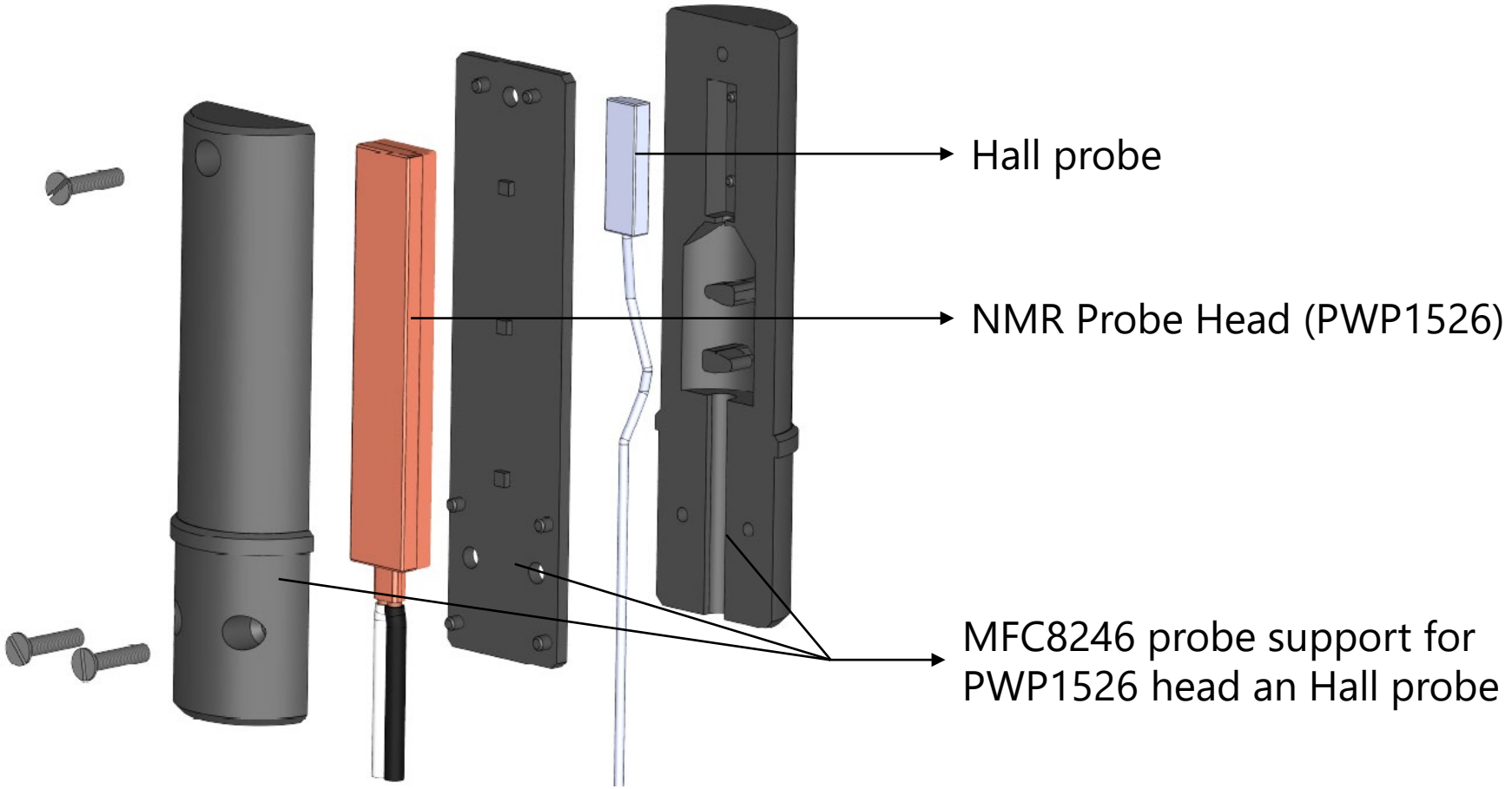
Probe Positioning



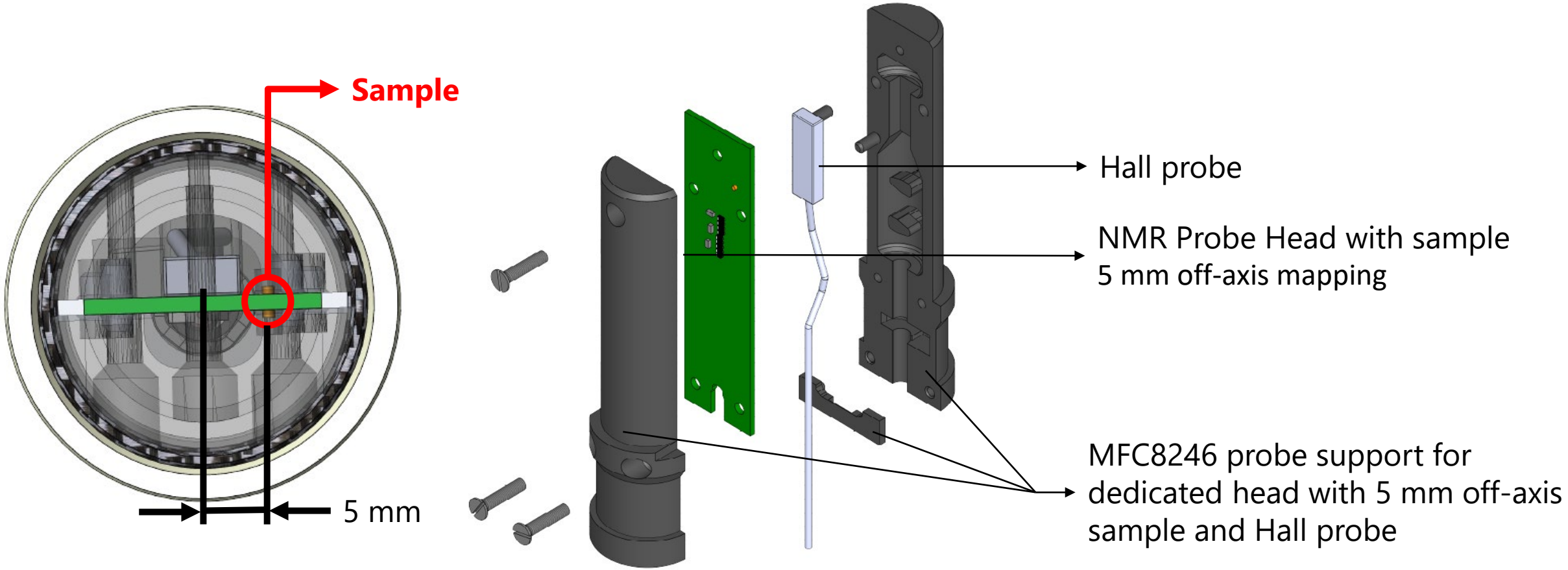
Specifications

Parameter	Specification
Precision on the rotation angles	Max error 1 degree in a 360-degree rotation
Precision on the vertical displacement	<0.5 mm through full travel length
Minimum travel length	74.5 mm
Timing requirements	Depending on the probe design (single or array)
Drift compensation	Included
Timestamp for each datapoint	Date and time
Precision of the sample positioning versus the centre of the magnet	Ability to define a relative point on its axial position of the magnet centre about which it performs its axial and radial plots is required
Length of the shaft and extensions	Adaptable to cover a range of at least 150 mm to 500 mm

Probes and Probe Support
Standard PWP1526 Head with Hall Probe

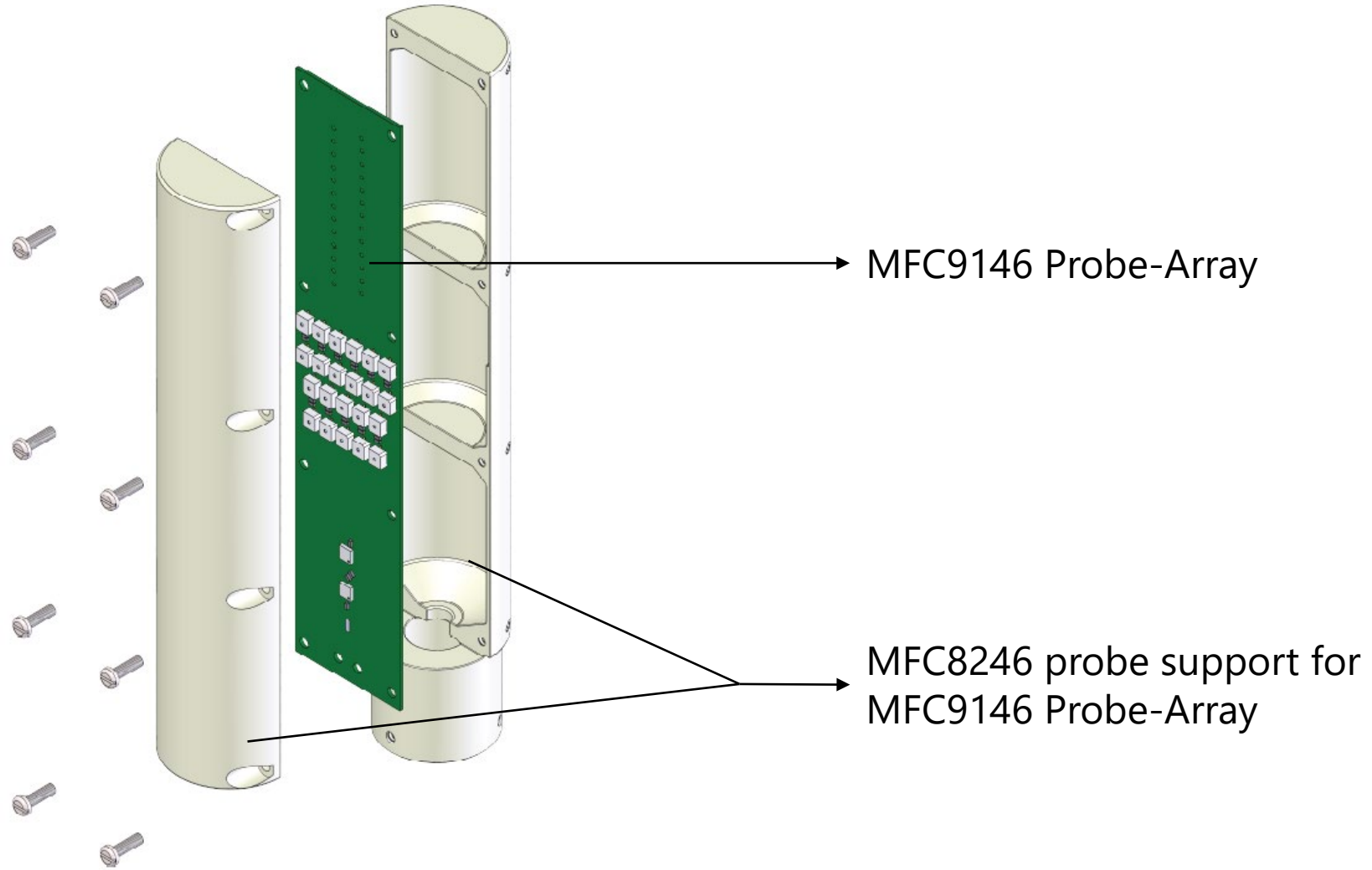


Probes and Probe Support
PWP1426 MM-Head P-O5D1 with Hall Probe



- Sample and coil positioned on a dedicated PCB to achieve required precision

Probes and Probe Support
MFC9146 Probe Array



Full System

A few pictures