What is a microphone set?

Microphone sets are pre-made combinations of microphones capsules with preamplifiers. The measurement microphone sets have been combined so they fulfil our users' typical measurement needs and applications. Independently of your measurement system and application you should be able to find a set that suits your needs. The microphone sets can be connected directly to all professional measurement systems and, as indicated, they are available for both CCP and Traditional LEMO inputs.

All GRAS measurement microphones sets are composed by two main parts: the microphone capsule and the preamplifier (See Figure 1). The microphone capsule contains the diaphragm, which is designed to move when exposed to a certain range of acoustic pressure variations. On the other hand, the preamplifier is a device designed to transform the high impedance signal coming from the microphone capsule and change it to a low impedance signal that can be fed to a cable. The signal will be then sent to an Analyzer or Data Acquisition System (DAQ). The connector used to get the signal out of the microphone and bring the power to drive the set is usually also in the preamplifier.

Figure 1. GRAS microphone set comprises microphone capsule and preamplifier with connector.

Ordering a microphone set has two main advantages:

- All microphone sets are delivered as a unit and are calibrated accordingly. The sets are delivered with calibration charts including sensitivity values and frequency response curves for the complete set. The sensitivity value can therefore be used directly in your system setup.
- If your measurement platform supports intelligent transducers according to IEEE 1451.4 (TEDS) you can simply plug in the microphone sets and they will identify themselves with their specific properties, type and calibration data. A feature especially appreciated by multi-channel users. The TEDS chip is stored inside the preamplifier and will be loaded with the sensor data whenever it's order as a microphone set.