Application of Technology

In order to measure gas applications it is essential that our specifically designed gas sensor are used and that the operating pressure be above a certain threshold.

The table below summarises the type of gases that can be measured by the new KATflow range of meters, the required pipe diameters and pressures and the type of flow sensors that would be required:

Gas Type	Pipe Material	Required Pressure	Diameter Range	Sensors
Natural gas	Metal	> 40 bar	DN 80 – 800	K2N
Natural gas	Plastic	Ambient	DN 80 – 130	K2N
Air	Metal	> 40 bar	DN 80 – 800	K2N
Air	Plastic	Ambient	DN 25 – 50	M2N
"-"	"-"	"-"	DN 50 – 130	K2N
Ethylene	Metal	> 20 bar	DN 50 – 100	K2N
Propane	Metal	> 10 bar*	DN 15 – 100	M2N/ K2N
Butane	Metal	> 10 bar*	DN 15 – 100	M2N/ K2N
Propane	Metal	> 10 bar*	DN 15 – 100	M2N/ K2N
CO_2	All pipes	> 55 bar	DN 50 – 100	K2N
N_2	Metallic	> 30 bar	DN 80 – 1000	K2N
N_2	Plastic	Ambient	DN 50 – 1000	K2N
H_2	All pipes	> 200 bar	DN 80 – 1000	K2N

* = Liquefied phase only

Possible Applications for Clamp-on Gas Meters:

Gas Type	Pipe Material	Potential Industry and Usage
Natural gas	Metal	Non-custody transfer monitoring, verification of existing meters on offshore platforms, replacement of failed flowmeters.
Natural gas	PE	Low-pressure sub-distributor network
Air	Metal	Air supply monitoring, network monitoring
Ethylene	Metal	Applications during the manufacturing of plastics, PE, PP etc.
N_2	All pipes	Applications in beverage industry Monitoring of deep-freeze and freeze-drying application in food industry
CO_2	Metal	Use in extraction plants, decaffeination systems