GROUP OF COMPANIES METRAN

| Customer information | | |
|---|---|---|
| **Company*:** | | Industry: |
| Address: | **Tel./Fax*:** | e-mail: |
| **Contact person:*** | | Job title: |

# Questionnaire for selecting Metran level gauges

| **Required measurement*** | **Requirements for the level gauge** |
|---|---|
| ☐Level<br>☐Interface Level<br>☐Distance to surface<br>☐ _____ (other) | Accuracy: ☐Built-in LCD indicator<br>Explosion proof type*:<br>Output signal:<br>Housing material:<br>Conduit / cable threads: |

| **Preferred type of level gauge** | | | |
|---|---|---|---|
| ☐Non-contact Radar | ☐Guided Wave Radar | | Quantity: |
| Position (Tag ): | | | |

| **Information about the process** | | | | |
|---|---|---|---|---|
| **Name of the process***: | | | | |
| **Measured environment***: | Aggressiveness of the environment: | | | |
| Dielectric constant: | ☐1.6 - 2 | ☐2 - 3 | ☐3 - 10 | ☐>10 |
| **Process temperature***: Min. Norm. Max. $^0$C | | | | |
| Ambient temperature: Min. Norm. Max. $^0$C | | | | |
| **Process pressure***: Min. Norm. Max. | | | | |
| Density of the medium: kg/m3 | Viscosity: ☐cP ☐cSt ☐_____ at temperature: $^0$C | | | |
| Turbulence: Cause of turbulence:<br>Approximate level fluctuation due to turbulence: mm | | | | |
| Rate of change of level during filling: mm/s | Rate of change of level during draining: mm/s | | | |

***Which of the following characteristics does the measured medium have? (check all that apply)***)

☐Saturated with gas bubbles (aerated) ☐Can coat wetted parts
☐Multiphase fluid (fill in the table below) ☐Vapors may coat non-wettable surfaces
☐Crystallization is possible / ☐sticking ☐There is a solid sediment

***The volume above the liquid is (check all that apply):***

☐Product vapors ☐ easy vapors / ☐heavy vapors ☐Inert gas layer
☐Dust ☐Condensation on surfaces

Foam: Approximate layer thickness: mm

***Which categories best describe the foam in this case?***

☐ Light foam, large bubbles, plenty of air (example: foam from air bubbling through a medium).
☐ Mixture of dense and light foam. Clear phase separation with liquid (example: foam in a glass of beer).
☐ Dense foam, small bubbles. Clear phase separation with liquid (example: shaving cream).
☐ Dense or light foam, but has a layer of emulsion between the foam and the liquid.

| **Multiphase applications only*** | |
|---|---|
| **Top product** *: | **Bottom product***: |
| Dielectric constant of the upper product: (exact value!) | Dielectric constant of the lower product: (exact value!) |
| Thickness of the top product layer: from mm / up to mm | |

*- *Fields to fill in are mandatory*

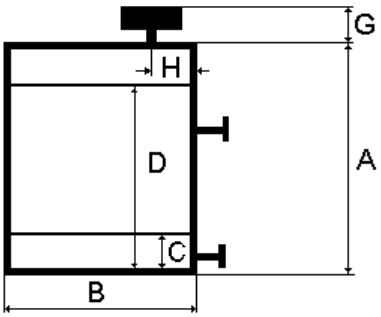
| **Installation/mounting type** |
|---|

☐ nozzle* ☐ chamber* ☐ in a stilling pipe* ☐ open space*

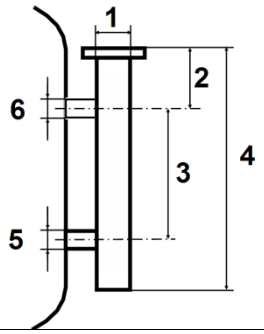
The geometric dimensions of the stilling pipe should be indicated in the section "Important Note"

***Possible limitations for installing the level gauge?***

☐ No limits ☐ Top mounting only ☐ Side mounting only

| **Geometric dimensions of the tank** | | |
|---|---|---|
| **A.** Tank height: | mm |  |
| **B.** Tank diameter: | mm | |
| **C.** Minimum level: | mm | |
| **D.** Maximum level: | mm | |
| **G.** Nozzle height: | mm | |
| **H.** Nozzle distance from the wall: | mm | |
| **Tank material:** * | | |



| **Geometric dimensions of the remote chamber** | | |
|---|---|---|
| **1.** Diameter of the remote chamber / bypass: | mm |  |
| **2.** Distance from flange to branch axis: | mm | |
| **3.** Center distance (measurement range) | mm | |
| **4.** Chamber height: | mm | |
| **5.** DN of lower inlet: | mm | |
| **6.** DN of upper inlet: | mm | |
| **Chamber material:*** | | |



| **Process connection, top nozzle (G)** | | | |
|---|---|---|---|
| **Flange connection** | | **Threaded connection** | |
| **Flange size*** *(EN(DIN), flat).*<br>☐ DN 50 PN<br>☐ DN 80 PN<br>☐ DN 100 PN<br>☐ DN 150 PN | Other:<br>☐ * _____<br>Form / Type:<br>_____ | **Thread type and size**<br>☐ 1.5" NPT<br>☐ G 1 ½ "<br>Other:☐ * _____ | ☐ Mounting bracket for installing the level gauge above an open tank/open space |
| Opposite flange: | Opposite flange material: | | |
| Boss: | Boss material: | | |
| Chief - supervision: | (If supervision is required, please tick the appropriate Yes/No box) | | |
| **Important note:*** | | | |

If your process tank or vessel has a complex design, internal equipment or other features, it is necessary to send a sketch or drawing of your tank with the dimensions given in the Example drawing above together with the completed questionnaire. Please mark the preferred locations for installing level gauges, internal structures (location of mixers, ladders, partitions, thermocouples, if any), entry points of filling and drain pipelines and their internal diameters.