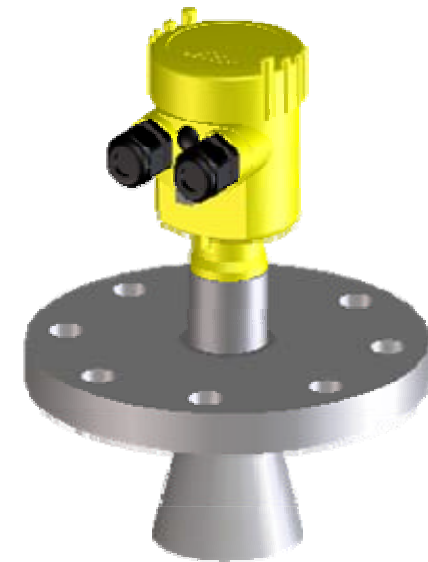


MOUNTING INSTRUCTION for Vegapuls 60 serie



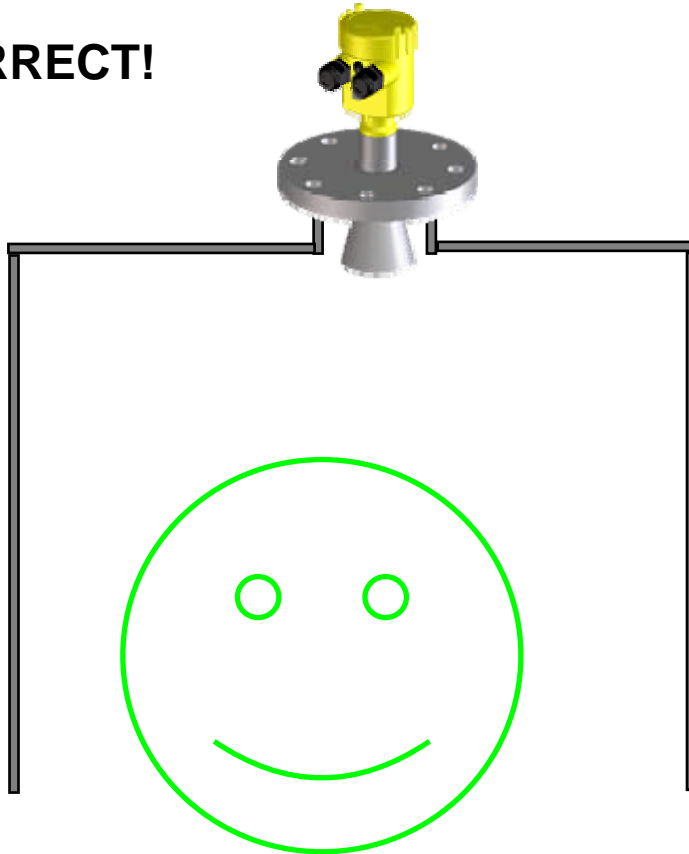
Mounting recommendation for VEGAPULS 60 serie



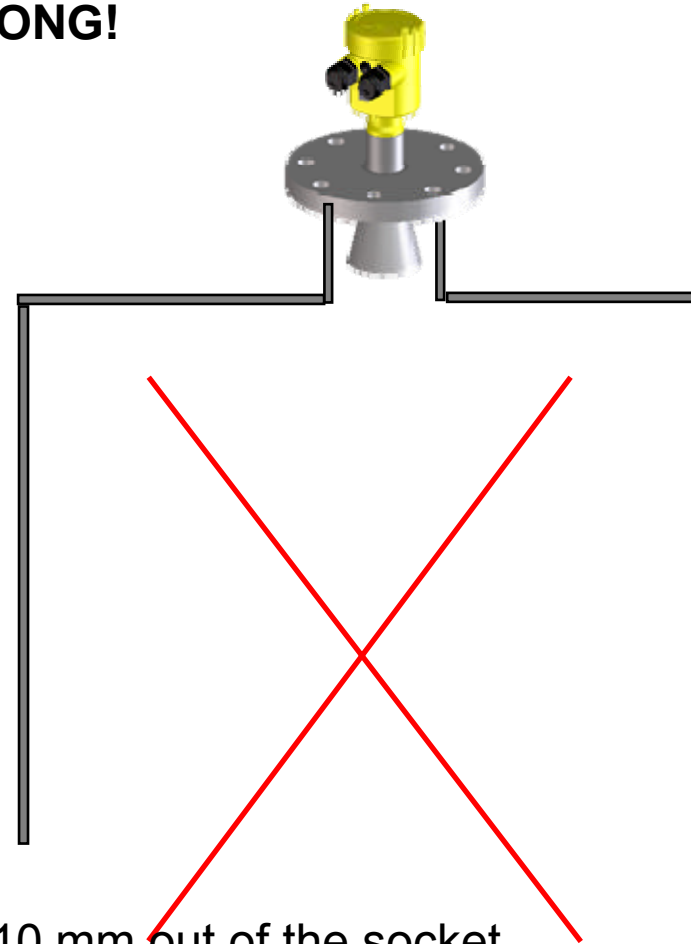
- Mount VEGApuls 60 serie in such a way that the distance to tank wall is least 500 mm
- If this distance can not be maintained a false echo storage should be carried out.
- Do not mount the sensor in or above the filling stream.
- Horn antenna should protrudes at least 10 mm out of the socket.
- On rounded tank tops, mount sensor out of tank center to avoid multiple echoes
- In case of large false echoes from tank installations, change polarisation direction by turning the sensor 90 deg. to see if the false echoes reduces. If false echoes increase, change back to the first sensor position.
- When mounting the sensor in stand pipe, be sure that the walls inside the bypass tube are totaly flat without any obstructions. Sensor should be mounted at a distance of 500 mm or more above the upper pipe connection. Mount the sensor with the polarisation mark 90 deg. to the tube holes.

Mounting recommendation

■ **CORRECT!**

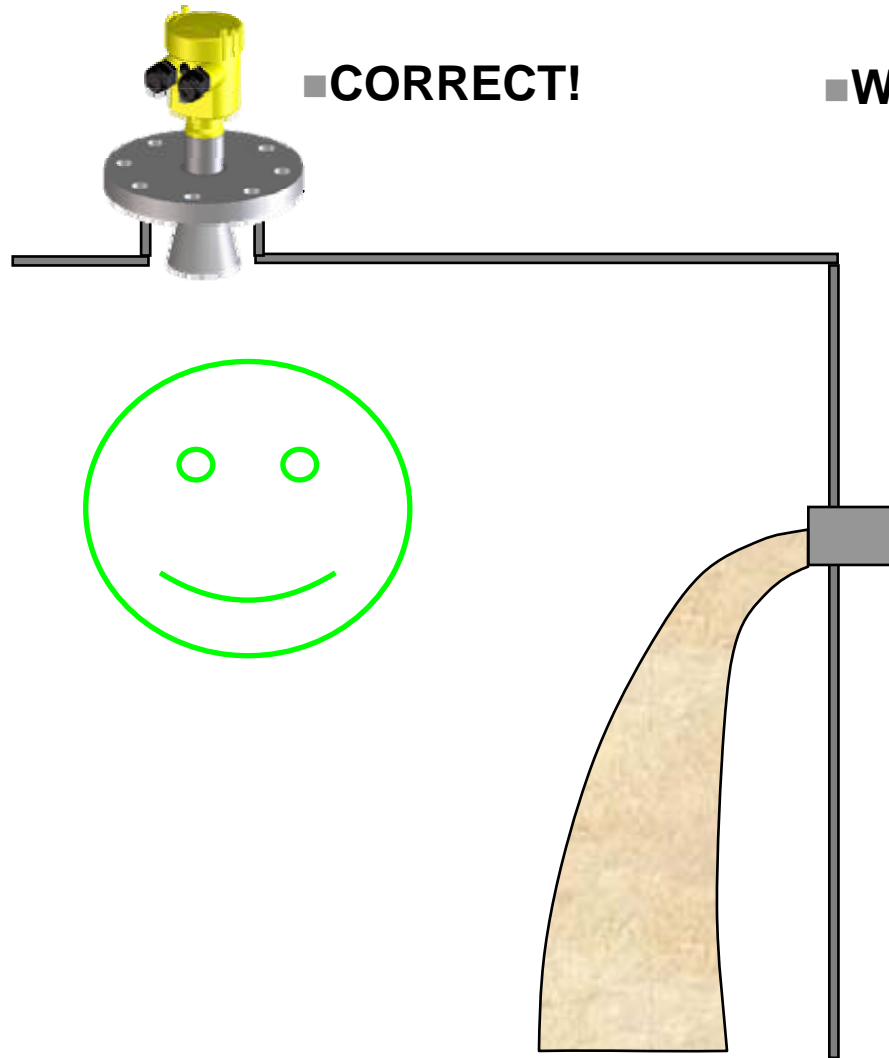


■ **WRONG!**

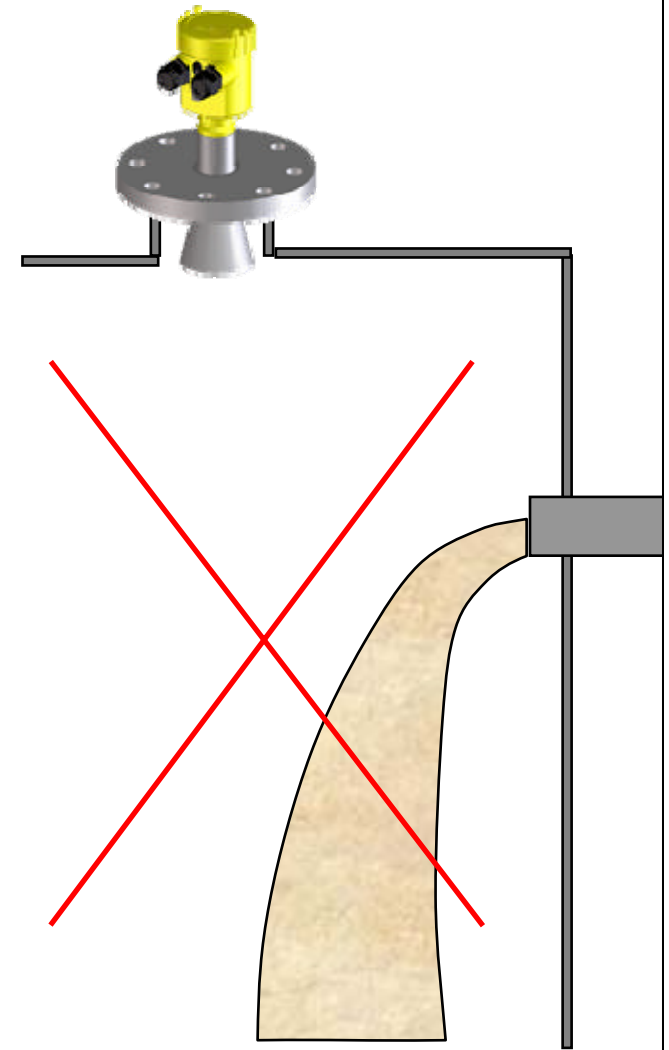


- Horn antenna should protrudes at least 10 mm out of the socket.
- Horn antenna extention can be used if existing nozzel on tank top is to long and can't be modified

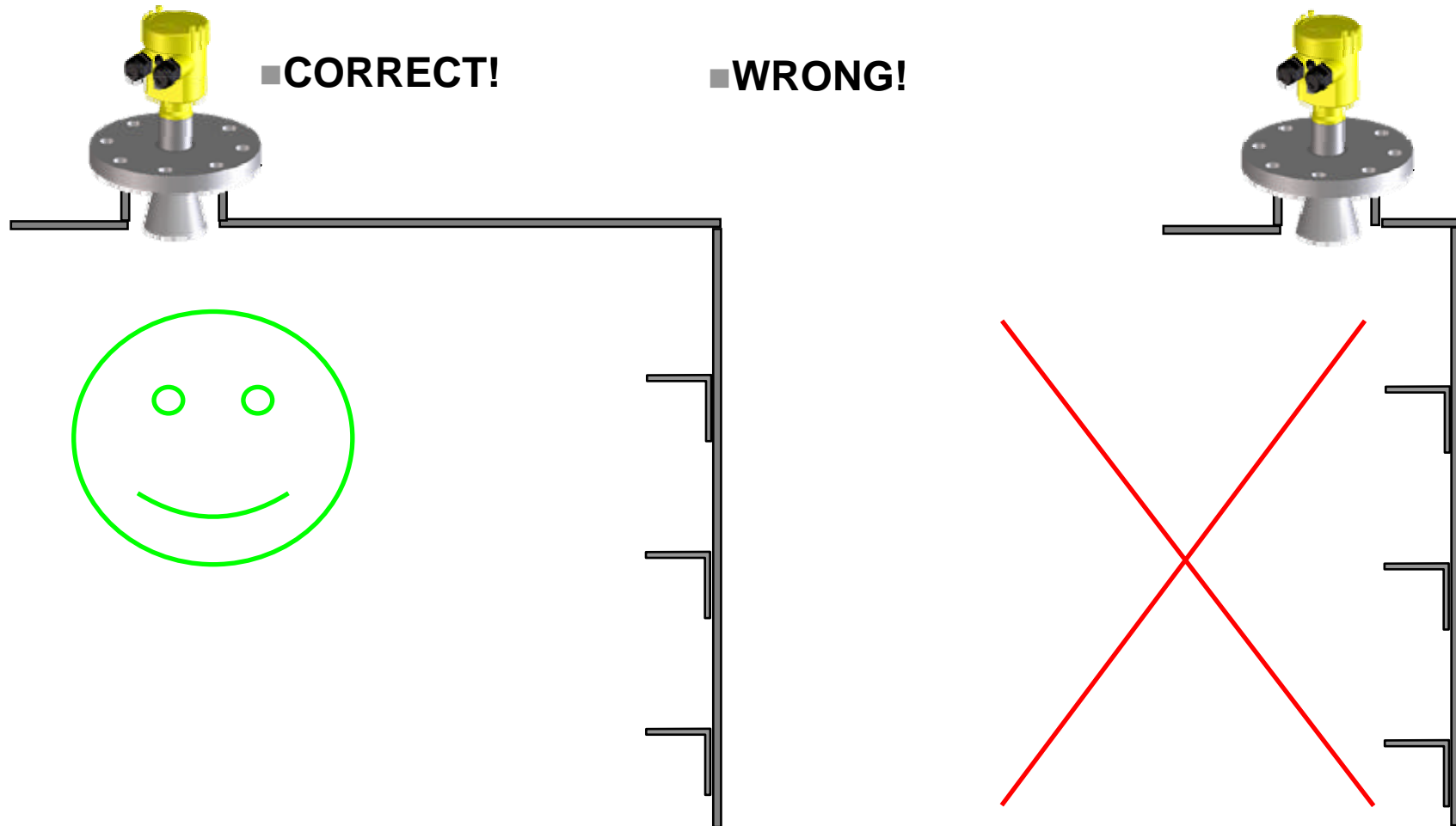
Mounting recommendation



■ **WRONG!**

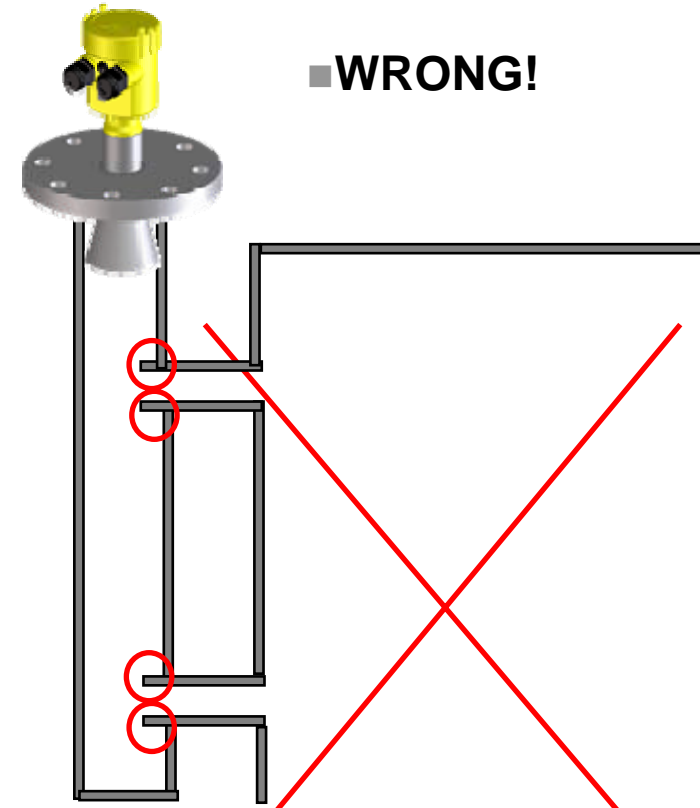
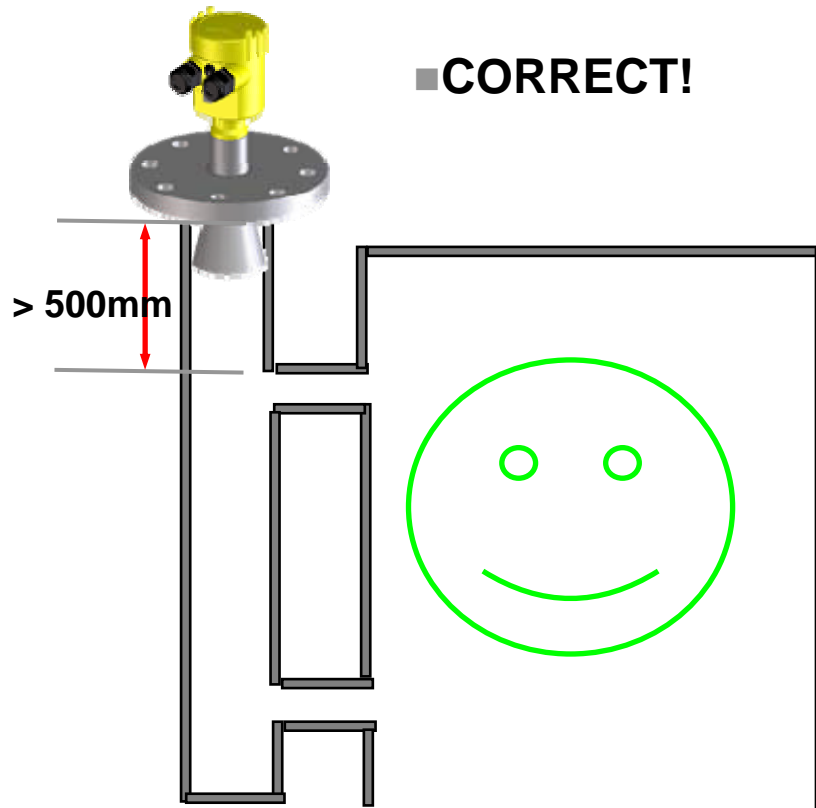


Mounting recommendation



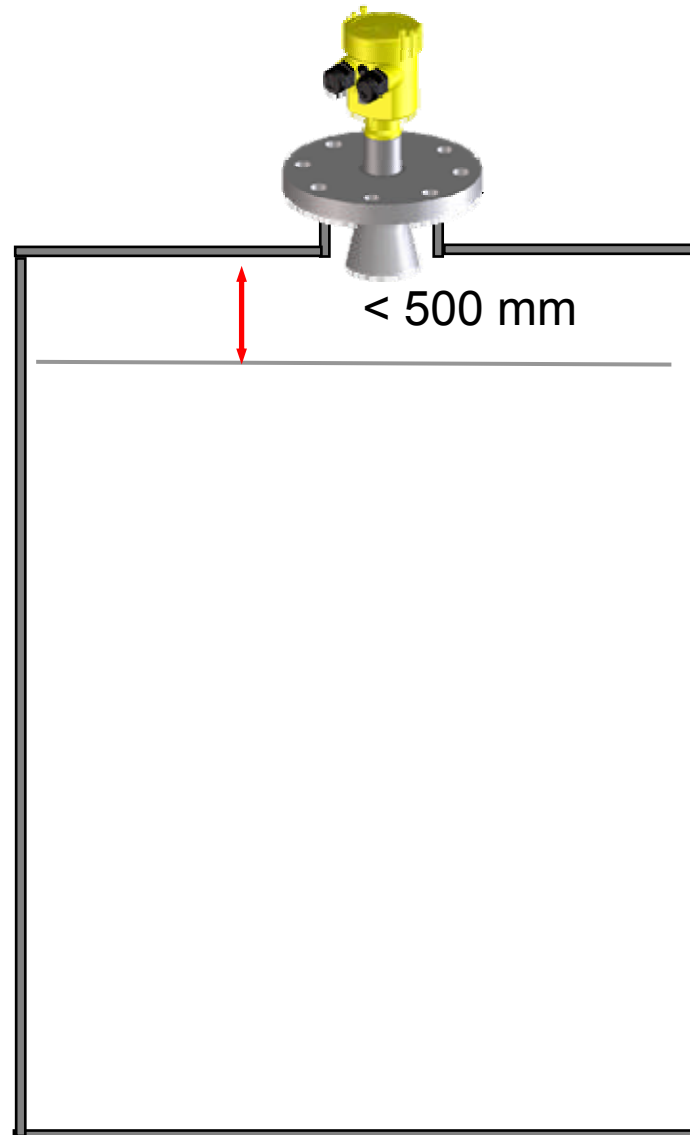
- Try to install the sensor in location where no installations cross the radar signals
- If sensor receive large false echoes from installations inside tank, change the polarisation angle by turning the sensor 90 deg. to see if fale echoes reduces

Mounting recommendation



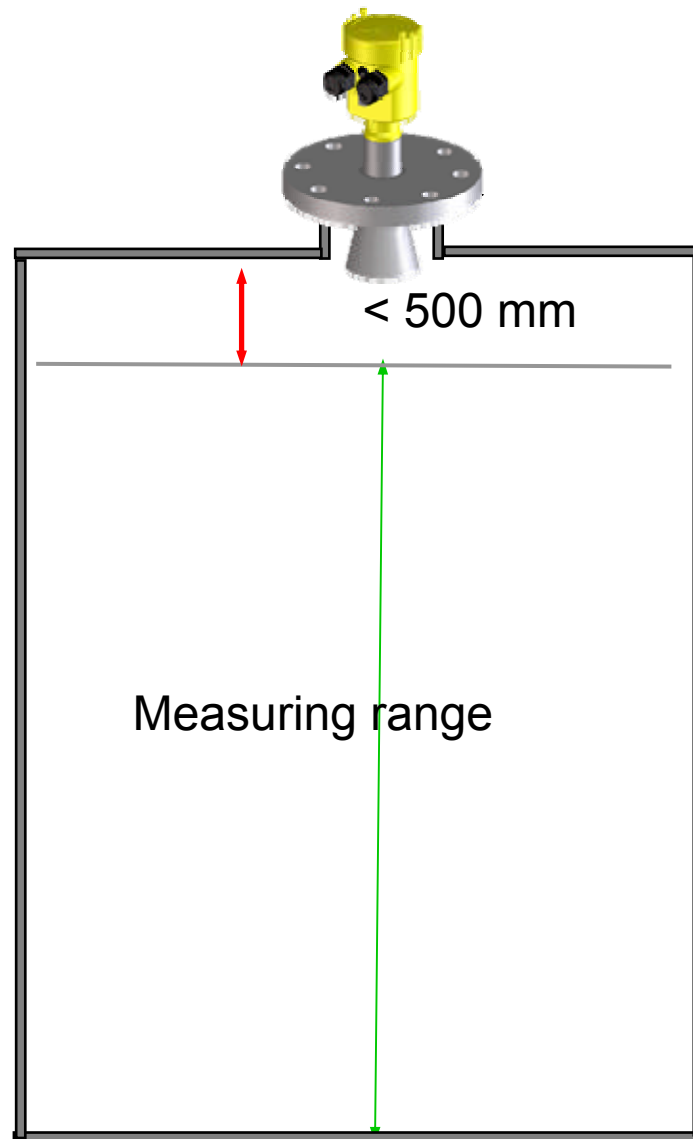
- Sensor should be mounted at a distance of 500 mm or more above the upper pipe connection.
- Walls inside the bypass tube must be totally flat without any obstructions
- Mount the sensor with the polarisation mark 90 deg. to the tube holes.

Blocking distance in top of tank



- Blocking distance when measuring on hydrocarbones (low DK) min. 500 mm. On high DK products (waterbased) blocking distance will decrease

No blocking distance in bottom of tank



Criteria of the antenna focusing



■ Antenna size

- the bigger the antenna, the better the signal focusing

■ Emitting frequency

- the higher the emitting frequency, the better the signal focusing (at constant antenna size)
- the higher the emitting frequency, the smaller the antenna size

Focusing of horn antennas

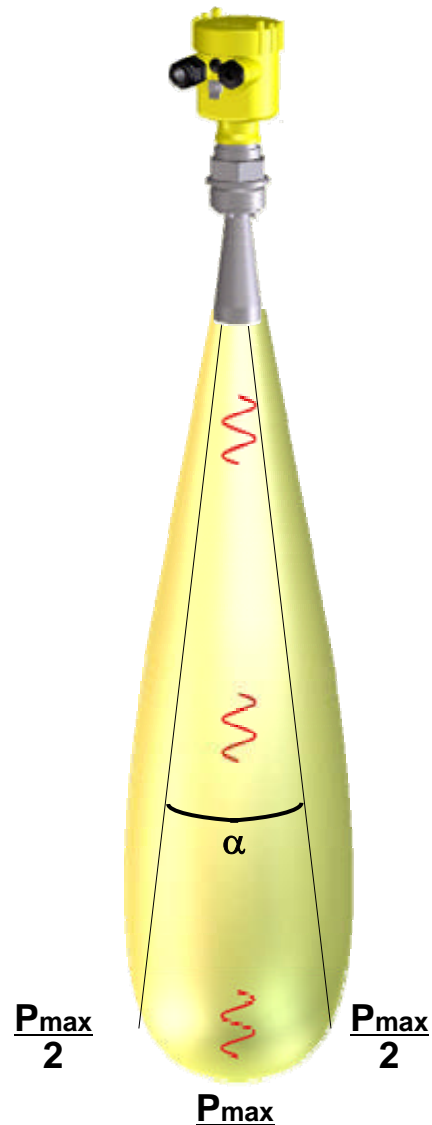


■ K-Band

- 40mm 22°
- 48mm 18°
- 76mm 10°
- 96mm 8°

■ C-Band

- 75mm 38°
- 96mm 30°
- 145mm 21°
- 240mm 15°



- **Definition signal focusing**
 - P_{max} is the maximum emitted power in the main direction of radiation
 - $P_{max}/2$ is half of the maximum emitted power (50%), also called -3dB point
 - angle α is the complete beam angle of the antenna

- **Note:**
energy is also emitted outside the beam angle α