

SYSTEM PROPOSAL REQUEST FORM

The SYSTEM PROPOSAL REQUEST form is the best tool to use when making a request for a price on a custom sample panel. This two-sided form contains all of the information we need to give you a reasonably close estimate or firm price to meet your requirements, using Waters Standard Design construction methods. Here are some tips on how to fill out the form:

1. Provide your NAME and ADDRESS in the space provided at the top of the front side.
2. If you have an RFQ number you want applied to the job, fill that in along with the person to contact if other than you. Provide the contact's phone (and fax) number in the space provided. We will assign a Proposal No. and reference both numbers on the quote.
3. Mark off the LOCATION where the system will be installed. If there are multiple pieces making up the system, like a chiller, remote primary conditioning rack and a secondary panel, please note the location of each. For example:
 Primary Rack - Indoor
 Chiller - Indoor
 Secondary Panel - Air Conditioned
4. Fill in the pressure, temperature and source of the COOLING WATER to be used by the primary sample coolers and, if applicable, the chiller. If the coolant ranges in temperature and pressure, provide that information.
5. Identify the source of each sample coming into the panel in the SAMPLE LINE DESIGNATION area. List the samples in the order or group that you would like them arranged, L→R, on the panel faceplate. List the temperature and pressure conditions for each sample. If you don't know the sample

temperature, but know it's in a state of saturation, just list the pressure and write "SAT" in the temperature box. List all of the analytical measurements wanted for each line.

If you're going to take a grab sample for a particular measurement, rather than use a continuous, on-line, instrument, just write "GS" in the block for that measurement. Otherwise, we will assume an instrument is involved and will price it in.

If any instruments are going to be shared over multiple sample lines, identify them with an "S" designation. For example, you have 8 sample lines, which are to be shared between 2 silica analyzers. Identify all of the samples sharing the first analyzer as "S1" and all of those sharing the second analyzer as "S2". If there are other shared analyzers, continue to identify them as "S3", "S4" and so on. It is normal to share instruments for measurements such as silica, phosphate, ammonia, sodium, hydrazine, etc. since they are normally large case and higher priced. Conductivity, ORP, pH and dissolved oxygen analyzers are not normally shared, since they are relatively inexpensive and are available from many of our suppliers with multiple channel capability. If the sequencer is to have special features, let us know. You can see the available features on product bulletin, W5000.

6. On the back of the System Proposal Request form, fill in the ANALYZERS section with the names of the instrument brands you want us to provide. Also mark whether you will be supplying any of the instruments. Identify model numbers of the instruments you have. If a recorder is to be included, identify the brand and whether you want dedicated

recorders for each form of analysis, or whether you will accept a multi-channel recorder, which will save money. Any other hardware such as annunciators, high-temperature shut-off, etc. can be written into the area identified as OTHER PREFERENCES, or in the NOTES section at the bottom.

7. List the LINE SIZES of the transfer lines and indicate whether they are pipe or tubing.
8. Circle whether you want BLOWDOWN valves for any or all sample lines. It is recommended that all lines be blown down prior to or immediately at the entry into the panel, to rid them of solids. If you want all blowdown valves to be packed for the highest temperature entering the common blowdown header, please note this. It's a recommended feature.
9. If you want to reuse the sample water, mark the RECLAIM box. We will normally provide a separate header for all non-grab samples and non-reagent contaminated streams. We need to know if the reclaim will be flowing into a gravity line as it leaves the panel, or whether we need to provide an accumulation tank and transfer pump.
10. SECONDARY TEMPERATURE CONTROL is provided in the form of secondary sample coolers or Waters FTA system. Secondary temperature control means that all samples will be controlled to a final temperature of 77°F ($\pm 1^\circ\text{F}$) or 25°C.
11. Identify any OUTPUT SIGNALS, which are to be wired to terminals or other use. Normally, we provide a set of terminals to transmit the 4-20mA signals from each instrument to the DCS. The cost to wire out alarm contacts is additional.
12. If we are to provide some form of data acquisition, or control, identify this under the heading CONTROLLERS. For instance, a panel-mounted controller could be used to directly pace a chemical feed pump, rather than going through the plant distributed control system (DCS). The Multi-Stream Sequencer could also be programmed to perform this feature. Please let us know how you would like this done.
13. If there are any PANEL SIZE RESTRICTIONS we need to be aware of, indicate those dimensions. Keep in mind any doorways, hallways, elevators and aisles, which the panel will need to be transported through on the way to its final location. Note that some of our customers have found it more convenient to remove and rebuild sections of wall leading to the room where the panel was installed, rather than to have us ship the panel in sub-sections. Consider the final installation cost of shipping the panel in one piece versus the cost of the field labor to rejoin, re-tube and re-wire the sections.
14. Provide any other information you or your customer feel is pertinent in the area at the bottom entitled NOTES.