Company Name
SAMPLE
PNEUMATIC EQUIPMENT PURCHASE SPECIFICATIONS
VENDOR EVALUATION DATA SHEET

TO: {Vendor's Name}

The intent of this specification is to be a guideline for establishing firm criteria and plant specific parameters under what is now a standard plant policy for the purchase of equipment requiring compressed air for plant operational and production services.

All vendors are to be aware of the fact that any and all deviations and/or exceptions to this specification must be taken in writing and supported by complete engineering calculations and rationale supporting the logic for such deviations.

Vendors should be aware of the fact that a portion of the bid evaluation process will be a life cycle cost analysis not only of the equipment quoted by the vendor and its individual impact on the plant's operational costs as a stand alone item, but specific attention will be given to the impact of the quoted equipment's impact on adjacent equipment on the compressed air loop, as well as the overall impact on plant energy consumption and the economy thereof.

The express intent of this requirement is that there will be no more than a 3 PSI differential at full flow on any component train in the vendor's offering.

NOTE: This form **must** be signed and dated by an authorized corporate officer or professional engineer stipulating to the accuracy of the data presented as being full disclosure of all material facts. No other signatures will be acceptable and those submitting forms not conformed accordingly will be deemed a non-responsive bidder. Failure to submit the form for all components will result in the vendor being found a non-responsive bidder.

TECHNICAL NOTE: It is a ***mandatory requirement*** that all performance flows be clearly stated in ACTUAL CFM (not ICFM or SCFM) at stated supply pressure at the inlet of the proposed component(s), site elevation, temperature and relative humidity. Any deviation from this requirement will void this offering.

Be advised that the actual performance of your offering will be subject to pre-shipment and or on-site witnessed and or certified performance testing on the basis of flow and pressure. Failure of your offering to perform as stipulated by your submittal will subject your company to liquidated damages pro-rata as a function of net life cycle cost offset to our company.

1. The pneumatically operated equipment operational compressed air supply will be no higher than _60__ psig at entry point of the equipment.
   *EXCEPTION NOTE: For those applications which involve process valve actuators, the pressure upper limit is 40 psig.

2. Vendor will state:

    a. Number of cylinders/ actuators supplied on each piece of equipment and include a tabulation of each cylinder/actuator:
        i. Bore and stroke
        ii. Design thrust in pounds
        iii. Stroke time domain in each direction of travel in seconds
        iv. Cylinder supply and discharge port size
        v. Diameter of pipe or tubing feeding the cylinder.
        vi. Pressure limit the cylinder is capable of withstanding exclusive of any safety factor.
        vii. State whether the elastomers and seals require or do not require lubrication.
        viii. If lubrication is required, state the specific type in terms of chemical composition, SSU or "weight" in SAE terms, and amount required for long term reliability<u>. Note, Preference will be given to vendors offering cylinders not requiring lubrication.</u>
        ix. Weight/flow of air at site pressure/temperature/humidity required for successful actuation in each direction.
        x. Differential pressure through that specific component at full flow and pressure.
        xi. State the design fastest and slowest actuation time domain for each stroke direction.

    b. For each cylinder/actuator set, tabulate the pneumatic actuator/valve/solenoid/flow control device supplied on each pneumatic circuit and include:
        i. Pressure drop (Delta P) through each device at unit actuation pressure and flow
        ii. Port sizes in and out
        iii. Internal port cross sectional area
        iv. Connection pipe or tubing diameter feeding the device
        v. Air velocity through the connecting tubing in feet per second

    c. For each pressure reducing device (regulator), lubricator if supplied, and filter:
        i. Pressure drop (Delta P) through each device at unit actuation pressure and full flow
        ii. Internal port sizes in and out
        iii. Smallest internal port diameter
        iv. Connection pipe or tubing diameter feeding the device
        v. Air velocity through the device
        vi. Rationale for installing each device
        vii. **A preference will be accorded to piloted, precision, low differential, high flow regulators**.

d. For all tubing connection fittings, state the manufacturer and supply documentation certifying the fittings are leak free and for what duration of service life they will remain leak free.

e. State each non actuation use of compressed air, such as blow-off nozzles, vacuum eductors, texturizing nozzles, entanglement nozzles, and provide the flow in ACFM and pressure in PSIG for each device.

f. **<u>All valves</u>** are to be full port, not reduced port styles

g. For each complete machine set, state the total consumption of compressed air required at system pressure as follows;

   i. Weight/flow at above designated supply pressure at
      1. ____ACFM at
      2. ____PSIG at
      3. ____Temperature at
      4. ____%Humidity at
      5. ____At site elevation above sea level

   ii. Minimum pressure required to successfully operate the machine and produce product to the buyer's quality standard. ____ PSIG

h. Pressure gauge standard required by the buyer is for 1 percent accuracy, black letters on white face, 3 ½" minimum face diameter. Face range is to be such that normal operating pressure is mid-range of the gauge overall range.

NOTE: All gauges are to be mounted no higher than face level from the floor and be readily accessible to operator view and equipped with an isolation valve for maintenance removal for calibration purposes by the inclusion of full ported isolation valves.

In those services where operation of the machine creates fluctuating line pressures in excess of 5% of the system pressure, each such gauge shall be supplied with an integral restrictor screw or snubber device.

Table all low pressure cut off switches giving the set point and rationale for them.

i. State electrical requirements or each component in terms of
   1. Voltage
   2. Amperage or Watts
   3. Phase ___single ___three
   4. All shall by 60 htz

5. All switches shall be at least 10 AMP capacity

NOTE: Failure to fill out and submit this form will result in the determination that the vendor is a non-responsive bidder.

The above data is certified and stipulated as true, correct, complete, certain and not misleading.

Signed_____ Date_____
Title_____
Vendor Company_____
Address_____
_____