

Scope of Work to Install Heat Pump Water Heater

Description: The Consulate General in Jerusalem seeks to install a heat pump water heater to provide hot water in the buildings radiator system.

Details: The Contractor will install a heat pump water heater to connect into the existing hot water system currently heated by an oil boiler. The existing boiler fuel tank is leaking and is being taken out of service.

Sizing of System & Components

- The heat pump water heater should be approximately 40.0kW capacity producing up to 70C water.
- The heat pump water heater must be one packaged unit fit inside the existing boiler room and must maintain factory clearances.
- The heat pump water heater should come with the option to connect a separate domestic water loop to the same piece of equipment.
- The Contractor must include with his bid a product submittal showing all dimensions including factory clearances and a note that the proposed equipment can fit into the existing boiler room. Bids received without this information may not be considered.

Installation of New System

- The new heat pump water heater must be set on a new concrete pad so that the equipment is level. The concrete pad must be at least 10cm tall and extend 10cm around the equipment.
- The heat pump water heater should sit in a plastic drain pan with a PVC pipe run to the outside of the room for emergency drain.
- New type L copper will be run from the water heater to the existing valves. Old pipe at the existing valves need to be removed to accommodate the new pipe. If the existing valves are not copper, the Contractor must install a dielectric union between the new pipe and existing valve. The Contractor must ensure that the existing valves open and close smoothly with no leaks. If the valves are stuck or do not open smoothly, the Contractor must replace both valves.
- New pipe should be insulated with closed cell insulation such as Armaflex with a minimum insulation wall thickness of 38mm.
- Pipe connections to the water heater must include a union on each line so that the water heater can be removed if necessary without cutting the pipe.
- A separate electrical circuit should be run for the new heater system including an individual disconnect switch (not just the breaker in the panel). The Contractor should determine if the existing electrical panel is large enough for the new equipment or if a new panel must be installed. The Contractor should include all electrical costs in his bid.



Work on the existing system & infrastructure

- The existing water piping system must be drained and flushed with appropriate cleaner using only city water pressure. The Contractor must provide a description of the flushing method being used with their bid. Bids received without flushing information may not be considered.
- The Contractor must remove insulation from the existing hot water piping outside boiler room along the wall. New 38mm closed cell insulation should be installed on the existing pipe. For new exterior pipe insulation, the insulation must be protected by either wrapping the pipe and insulation within a plastic sleeve or covering with an aluminum wrap.
- The existing boiler room door, frame, and hinge should be replaced with a new louvered steel door painted black and to include a new handle and lock with 3 sets of keys turned over to the Consulate.



Sample of new door

Notes

- Along with his bid, the Contractor must provide 2 examples of heat pump water heaters that the Contractor has installed using the proposed equipment.
- The Contractor must provide a 1 year warranty on all parts and labor. The 1 year warranty begins when the heat pump water heater is started up.
- The Contractor must provide a 5 year compressor warranty.
- The Contractor must provide 2 spare sets of all sensors, 1 replacement control board, 1 replacement of each element, and 1 spare compressor.
- The Contractor must provide 2 hours of training to Consulate staff at the end of the project.

- Two sets of startup paperwork, maintenance and operation manuals, and warranty documentation must be turned over in 3 ring binders at the completion of the work.
- The Contractor must wear PPE safety equipment during the entire project.
- Work may take place 7 days per week from 8am – 3pm.
- Work must be completed within 2 months from the issuance of the contract. If the lead time for the equipment will cause delay, please indicate in writing within 2 weeks of receipt of the purchase order.
- No equipment or materials will be provided by the Consulate to the Contractor.

Summary of required Information:

Along with the Contractor's bid, they **must** include:

- Two references of heat pump water heaters the Contractor has installed using the proposed equipment. The Consulate reserves the right to go visit the installation to see the quality of the workmanship.
- A schedule including material lead times and installation times.
- Manufacturer's cut sheets showing equipment dimensions and required clearances.
- Description of the flushing procedure to be used including the proposed cleaning chemical.

Within 10 days of award of the contract, the Contractor must provide:

- Equipment product submittal showing performance, size, weight, dimensions, electrical draw, etc. The Contractor cannot order the equipment until it is approved in writing by the Consulate.

Within 10 days of the **completion** of the project, the Contractor must provide:

- Two three ring binders to include startup paperwork, maintenance and operation manuals, and warranty documentation.
- Equipment spare parts and door keys as noted above.

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