

Prefunctional Checklist

Project _____

PC-_____ BOILER #'s _____

Associated checklists: Boiler, Heating Water Piping, HW Pumps

1. Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This prefunctional checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ List attached.

_____ Mechanical Contractor	_____ Date	_____ Controls Contractor	_____ Date
_____ Electrical Contractor	_____ Date	_____ Sheet Metal Contractor	_____ Date
_____ TAB Contractor	_____ Date	_____ General Contractor	_____ Date

Prefunctional checklist items are to be completed as part of startup & initial checkout, preparatory to functional testing.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- Items that do not apply shall be noted with the reasons on this form (N/A = not applicable, BO = by others).
- If this form is not used for documenting, one of similar rigor shall be used.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.
- “Contr.” column or abbreviations in brackets to the right of an item refer to the contractor responsible to verify completion of this item. A/E = architect/engineer, All = all contractors, CA = commissioning agent, CC = controls contractor, EC = electrical contractor, GC = general contractor, MC = mechanical contractor, SC = sheet metal contractor, TAB = test and balance contractor, ____ = _____.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

_____ Commissioning Agent	_____ Date	_____ Owner’s Representative	_____ Date
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Notes:

BOILER PREFUNCTIONAL CHECKLIST

PC-_____

2. Requested documentation submitted

Check if Okay. Enter comment or note number if deficient.

Check	Equip Tag->							Contr.
Manufacturer's cut sheets								
Performance data (fan curves, coil data, etc.)								
Installation and startup manual and plan								
Sequences and control strategies								
O&M manuals								

- **Documentation complete as per contract documents** **YES** **NO**

3. Model verification

[Contr = _____]

1 = as specified, 2 = as submitted, 3 = as installed. Check if Okay. Enter note number if deficient.

Equip Tag-->								
1								
Manuf. 2								
3								
1								
Model 2								
3								
Serial # 3								
1								
Capacity 2								
3								
1								
Volts/Ph/A 2								
3								
1								
2								
3								

- **The equipment installed matches the specifications for given trade** **YES** **NO**

4. Physical Installation Checks

Check if Okay. Enter comment or note number if deficient.

Check	Equip Tag->							Contr.
General Installation								
General appearance good, no apparent damage								
Site sufficiently clean for testing								
Equipment labels affixed								
Tube pulling, and access door space adequate								
Required seismic restraints in place								
Flue completely installed and sloped properly								
Combustion air supply complete								
System filled								
Pressure gages installed								

Notes:

BOILER PREFUNCTIONAL CHECKLIST

PC-_____

Check if Okay. Enter comment or note number if deficient.

Check	Equip Tag->						Contr.
Thermometers installed							
Pressure gages installed							
P/T plugs installed as per drawings							
Multiple boiler interlocks completed							
Piping (Immediately around unit. Full piping in HW Piping Checklist.)							
Gas piping installed and tested (supply is at proper pressure)							
Hydronic piping complete, including blowdown system, makeup water piping and safety reliefs							
Hydronic system flushing complete and strainers cleaned							
Isolation valves and balancing valves installed							
Pipe fittings and accessories complete							
Test ports installed near all control sensors and per spec							
Flow switch installed as required							
Flow meters installed as required							
Piping type and flow direction labeled on piping							
Chemical treatment system or plan installed							
ASME pressure vessel data sheet or certification tag posted and inspection complete for each expansion tank							
Expansion tanks verified to not be air bound and system completely full of water							
Air vents and bleeds at high points of systems functional							
Electrical and Controls							
Power to unit and disconnect installed							
All electrical components grounded							
Sensors calibrated (see below)							
Control system interlocks hooked up and functional							
All control devices, pneumatic tubing and wiring complete							
Motorized valves, dampers and float switches functional							
Fire and smoke sensing components functional							
Final							
Startup report completed with this checklist attached							
Startup report includes written certification from boiler manufacturer that all specified features, controls and safeties have been installed and are functioning properly and that the installation and application comply with the manufacturer's recommendations.							

Notes:

BOILER PREFUNCTIONAL CHECKLIST

PC-_____

Check if Okay. Enter comment or note number if deficient.

Check	Equip Tag->						Contr.
Safeties installed and safe operating ranges for this equipment provided to the commissioning agent							
Heating water piping and pumps prefunctional checklists completed							

- **The checklist items of Part 4 are all successfully completed for given trade.** ___ YES ___ NO

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5. Operational Checks (These augment mfr's list. This is not the functional performance testing.)

Check if Okay. Enter comment or note number if deficient.

Check	Equip Tag->						Contr.
Boiler safeties energized and tested							
Startup report includes optimal and actual percent CO ₂ , CO, O ₂ , stack temperature; combustion efficiency							
Specified sequences of operation and operating schedules have been implemented with all variations documented							
Specified point-to-point checks have been completed and documentation record submitted for this system							

- **The checklist items of Part 5 are all successfully completed for given trade.** ___ YES ___ NO

Notes:

