York-Shipley Global’s Three Pass Dry Back Boiler is designed for packaged boiler assembly that is tested prior to shipment complying with ASME Section I and IV construction, or for field erect applications in existing limited access boiler rooms, limited to ASME Section IV construction. Length and width dimensions can be modified to fit most existing boiler rooms while still maintaining generally accepted design criteria of 5 square feet of heating surface per boiler horsepower. A generous steam disengaging area and steam chest provides high quality dry steam. The standard furnace volume is designed to provide a heat release of 150,000 BTUs per hour per cubic foot or less, capable of accepting essentially any fuel burner available when fired to the design rated input.

Some standard design criteria of York-Shipley Global’s Three Pass Dry Back boiler include:

- Boilers built with domestic pressure vessel quality (PVQ) ASTM-A-516 Grade 70 steel. Less costly foreign steel is never a consideration when competitive situations arise.
- Minimum 2” OD x .095 electric resistance welded (ERW) ASTM/ASME A/SA-178 Grade A firetubes.
- Tube attachment, at the entrance to the second pass, are rolled, beaded and/or seal welded.
- Flue gas down draft design promotes high velocity which helps maintain firetube cleanliness and maximum heat transfer within 2nd and 3rd pass.
- Structural "C" channel skid rail with formed boiler support frame, incorporating blow down piping penetrations, secured to vessel sacrificial weld pad.
- Vessel extensions are externally insulated, and jacketed, at front flue gas reversing and rear flue gas exit chambers.
- Front flue gas reversing chamber tube sheet access doors incorporate ceramic insulation blanket within steel casing, eliminating future maintenance or replacement.
- Single point davited front and rear flue gas chamber access doors, incorporating stud alignment holes, positively sealed and secured with cadmium plated steel nuts and locking star washers.
- 3-Section rear cover arrangement permits complete accessibility to all firetubes and furnace. The furnace access door incorporates an observation port and is easily operated by single point davit.
- Cylindrical single point spring loaded explosion relief device.
- Centerline furnace provides for uniform stress and promotes excellent internal water circulation
- 16 gauge formed modular jacket/catwalk platform system
- Bottom longitudinal inspection trough.
- Ample vessel inspection hand holes
- Standard two (2) inch thick insulation encased in 22 gauge CRS jacket with Y-SG Blue VALSPAR® polyurethane resin finish.
- When field erected, York-Shipley Global certified, ASME qualified welders, assuring the same quality control as if the boilers were factory built.