



**NOTES**

- Flanged Main Process Extract Ducting**  
 The contractor shall include to manufacture, supply & install a flanged spiral wound galvanised mild steel process extract duct system from each of the manufacturing equipment items back to the new RTO fan inlet as shown on the drawing.  
 The duct system shall include breaking into the existing individual ducted extract systems to install a divert damper & connection flanges.  
 The existing duct routes shown on the drawing are indicative only. The contractor shall survey and select the most suitable tie in point for the installation of the divert valves. The Contractor is responsible for selecting the final routes for the new ductwork and coordinating this with existing services and the building fabric.  
 All ducting & dampers shall be fitted with suitable earth bonding throughout the new duct system.  
 All ducting shall be manufactured in galvanised mild steel circular spiral form with 60x8mm rolled steel angle flanges in accordance with current B&ES specification DW 144.  
 All ducting shall be supported from the existing building steel structure with galvanised mild steel Lindaptor's, M10 screwed rods and 60x5 mild steel duct clamps. The contractor is responsible for locating the supports and ensure they are adequate for the installation.
- Process Extract Connection Plenum**  
 The contractor shall include to manufacture, supply & install a new connection plenum to interconnect all 4 main process extract ducts before extending to the main RTO fan unit.  
 The Process extract plenum shall be fabricated from a 70x70x3 SHS framework, 1.6mm thick prime galvanised mild steel composite panels, complete with a 800mm maintenance access door & profiled roof section.  
 The new plenum shall be provided with a fabricated support structure to be designed and built by the contractor and to ensure continued access to the building and storage in the vicinity of the new structure.
- Process Extract Bypass Dampers**  
 The contractor shall include to manufacture, supply & install 4 x divert dampers to the following equipment  

• 337	-	Cerruti	-	1120mm Diameter
• 338	-	Halley	-	900mm Diameter
• 364	-	Tecmo 3 Stage	-	900mm Diameter
• 334	-	Rotomecc	-	1120mm Diameter

 The damper body shall be fabricated from fully welded 3mm thick mild steel complete with 60x60x6 connection flanges.  
 The damper blade assembly shall be fabricated from 6mm thick mild steel with 40mm diameter drive shafts, 4 bolt RHP bearings.  
 The damper blade seal assembly shall be rolled from 20mm mild steel bar complete with 20x10 non-asbestos high temperature (350°C max) ceramic rope gasket.  
 The bypass damper shall be driven open by a pneumatic Kinetrol actuated damper complete with fail safe spring return to atmosphere. The pneumatic dampers shall be provided by the contractor. The contractor shall supply with the dampers a 110V solenoid valve that shall be powered by to drive the dampers to the RTO duct routing. The actuators shall be complete with 24V end switches that shall be monitored remotely.
- Existing Damper Installation**  
 The contractor shall include to supply additional connection flanges for the existing free issue 3 x divert dampers before installing them to the following equipment -  

• 341	-	Wax Melt PAK 600	-	800mm Diameter
• 339	-	Kroenert Laminator	-	710mm Diameter
• 334	-	Kroenert Reco 600	-	800mm Diameter
- Compressed Air**  
 The contractor shall include to supply & install a pipe break in, isolation valve, local filter regulator & connection pipe work to each of the 7 x bypass dampers. The compressed air ring main runs around the perimeter of the facility. The Contractor shall determine to most suitable location for each of the break ins required.
- Wall Penetrations**  
 The contractor shall include to cut out & re-flash any new wall penetrations. Wall penetration detail shall include bespoke fabricated galvanised mild steel profile flashings to suit the existing profile painted to match the existing building colour.
- Craneage**  
 The contractor shall include to provide a suitable crane to lift the external process extract plenum, support structure & process ducting into final position and to tie that duct into the RTO duct connection.
- MEWP Access Equipment**  
 The contractor shall include to provide mobile elevated work platforms (MEWPs) to enable high level access throughout the installation. All MEWPs shall be operated by fully IPAF trained personnel and competency shall need to be demonstrated.
- Insulated Duct**  
 The contractor shall include to insulate the duct from the Kroenert Reco 600 where it runs inside the building. The insulation shall be foil faced rockwool slab of 80 Kg/m3 suitable for 350 deg C. The slab shall be located with pins and then wired in place.

- Stack / exhaust from the process
- Local exhaust ventilation