

1. <u>SCHEDULE OF PRICES:</u>

All prices **exclude Vat** and additional items listed (with prices) shall be clearly labelled as <u>optional</u> or <u>essential</u>.

Item	Qty	Price per item	Price
 Replace two air cooled condensers(1/2Cu36-3-10-2100) (18) Condenser Coil-ACC015 two air cooled packaged condenser, condenser coil:1/2 CU 36-3-10-2100(18), 	2		
 The air-cooled packaged condenser supplied with 3 x 500mm diameter condenser fan fitted on each unit, Fan capacity to be 0,55Kw, 380 volts, 1330/1030rpm, IP54, 50 HZ, VDK 4I.6S,03105331. The dimension of each air-cooled packaged Condenser unit shall be Size (1000x1203x2160) Air cooled packaged condenser similar or equivalent to the above specification will be acceptable. 			
2. Replace two Air cooled packaged condensers (½ CU 36-4-10-236018), Condenser coil ACC025	2		
 Replace two air cooled packaged condenser, Condenser coil: ½ CU 36-4-10-2360(18), The air-cooled packaged condenser with 4 x 500mm diameter condenser fan fitted on each unit, Fan capacity to be 0,55Kw, 380 volts, 1330/1030rpm, IP54, 50 HZ VDK 4I.6S,03105331. The dimension of each air-cooled packaged Condenser unit shall be Size (1000x2420x1203) Air cooled packaged condenser similar or equivalent to the above specification will be acceptable. 			



3.Refrigeration gas system			
Flush the existing old gas and re-gas.	1		
Detect the system gas leak and repair all leaks.	1		
Connection of refrigeration gas pipeline to all	1		
new system including air-cooled condensers,			
compressors, switches and valves.			
4.Compressors			
Supply and install 8 air conditioning hermetic	8		
reciprocating compressors with the following			
operating parameters			
operating parameters			
• Gross weight: 71.5 kg			
• Volume: 107.333liters			
Operating technique: Reciprocating			
compressor			
• Capacitor control: Fixed speed			
 Compressor power supply: 380 -400 V 50HZ 			
 Connection type: Roto lock 			
 Cylinder:4 			
• Diameter:352mm			
• Discharge:125mm			
• Discharge connection pipe:3/4in / 20 mm.			
• Discharge connection size :11/4 in / 70			
mm.Factory Hp(bar):25bar			
 Factory LP (bar):25bar 			
• Frequency:50 HZ			
• Glass Torque (Nm):50Nm			
• GP LP torque (Nm):15Nm			
• High side TS Max150degrees C			
• High side Volume:1,2L			
• High value of nominal voltage at 50HZ:400V			
• IP Protection class: IP54 (With cable			
gland)			
Compressors similar to the existing Maneurop			
MT144HV4VE hermetic reciprocation compressor			
or equivalent will be acceptable.			
5.Switches and Valves			
• Supply and replace four HP/LP switch	4		
hermetic filter drier –			
MWP500PSIG/35BAR,7/8" Temperature			
Range: -40 to +160degreesF OR -40 TO			
+70 degrees C.			
similar or equivalent will be acceptable.			
	I	I	



Supply and replace four low ambient pressure controlles - (Ambient temp 80 "C(176 °F for max 120 min, Ambient temp range(max) 65 °C, Max working pressure 510psig, ambient temperature arangetmin) -40 °C, Contact ratings 10A at 400V, Differential (Aray 3bar, Differential (psi):43psi, Regulation range(max):32bar, Regulation range(max):42bar, Asset in the supply and replace four PLS valve 7/8 sweab, similar or equivalent will be acceptable. Supply and replace four H/S valve 7/8 sweab, simply and replace four H/S valve 7/8 sweab, simplar or equivalent will be acceptable. Supply and replace four the arity pressure 4 switches compatible with the existing DPS 200, similar or equivalent will be acceptable. Supply and replace the two existing motors, - 1440RPM 5.5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in 1D,3X V-belt on the perimeter zone. Far speed 610 pm, the repairs must chable the system to meet the specified supply air quantity requirements of 62, 6mi/s Repair and balance two blower fans in the perimeter zone. Far speed 610 pm, the repairs must chable the system to meet the air quantity requirements of 62, 6mi/s Repair and balance two blower fans in the perimeter zone. Far speed 610 pm, the repairs must chable the system to meet the air quantity requirements of 62, 6mi/s Repair and balance two blower fans in the perimeter zone. Far speed 610 pm, the repairs must chable the system to meet the air quantity requirements of 62, 6mi/s Repair and balance two blower fans in the perimeter zone. Far spe	r		
*C/176 *F for max 120 min, Ambient temp range(max) 65 °C, Max working pressure 510psig, ambient temperature range(min) 40 °C, Contact ratings 104 at 400V, Diffeential(dawi):3bar, Differential (psi):43psi, Regulation range(bar)(max):32bar, Differential (psi):43psi, Regulation range(bar)(max):32bar, Regulation range(bar)(max):32bar, Barding voltage:4kv, Shot circuit prot., fuse:16A. Supply and replace four expansion valves - (10PL, VIF6A) Alco TER-26), Similar or equivalent will be acceptable. Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable. Supply and replace four H/S valve 7/8 sweab, switches compatible with the existing DPS 200, similar or equivalent will be acceptable. Supply and replace four there air pressure Supply and replace four the air pressure		4	
temp range(max) 65 °C, Max working pressure 510psig, ambient temperature range(min) -40 °C, Contact ratings 10A at 400V, Differential(bar):3bar, Differential (psi)-43psi, Regulation rangetbar/(max):32bar, Regulation rangetbar/(max):32bar, Regulation rangetbar/(max):32bar, Regulation voltage:4kv, Short circuit prot., fuse:16A. Supply and replace four expansion valves – (10Fr, VIF6A) Alco TER-26), similar or equivalent will be acceptable. 4 Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable. 4 Supply and replace four H/S valve 7/8 sweab, 200, similar or equivalent will be acceptable. 4 Supply and replace four H/S valve 7/8 sweab, 200, similar or equivalent will be acceptable. 4 Supply and replace four H/S valve 7/8 sweab, 200, similar or equivalent will be acceptable. 4 Supply and replace four H/S valve 7/8 sweab, 200, similar or equivalent will be acceptable. 4 Supply and replace the two existing pross 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62/6mv/s 2 Repair and balance two blower fans in the prepairs must enable the system to meet the air quantity requirements of 62/6mv/s 2 Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Belts:4Xspa-1250, Barings:4 off UCP-207 similar or equivalent will be acceptable. 2 Repair Drive details, Bearings:4 off UCP-207 similar or equivalent wilb eacceptable. </td <td></td> <td></td> <td></td>			
pressure 510psig, ambient temperature range(min) -40 °C. Contact ratings 10A at 400V. Differential(bar):3bar, Differential (psi):43psi, Regulation range(bar)(ma):32bar, Regulation range(bar)(min):8bar, Insulation:400V, Pollution degree:3, Rated impulse voltage:4kv, Short circuit prot., fuse:16A.			
range(min) -40 °C, Contact raings 10A at 400V, Differential(bar):3bar, Differential (psi):43psi. Regulation range(bar)(max):3bar, Regulation (UFT, VIF6A) Alco TER-26), similar or equivalent will be acceptable. Supply and replace four H/S valve 7/8 sweab, 4 switches compatible with the existing DPS 200, similar or equivalent will be acceptable. Supply and replace four filter air pressure 4 switches compatible with the existing DPS 200, similar or equivalent will be acceptable. 5Upply Air Blower fans system and Electrical heating elements Supply and replace the two existing motors, - 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID.3, V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62.6m./s Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62.6m./s Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-20GR, Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable. Repair motorized dampers to meet the 2 requirement of the supply air Ax working pressure: 17 bar/245 psig 35 bar/510 psig Repair all electrical heating elements on the supply air ducting 7.Electrical Panel Supply and replace circuit breaker with capacity iculoka at400v,2.5A:4A X66			
400V, Differential(bar):3bar, Differential (psi):43psi, Regulation range(bar)(max):32bar, Regulation range(bar)(min):8bar, Insulation:400V, Pollution degrees:3, Rated impulse 4 voltage:4kv, Short circuit prot., fuse:16A. 4 Supply and replace four expansion valves – 4 (10Ft, VIF6A) Alco TER-26), similar or 4 equivalent will be acceptable. 5 Supply and replace four H/S valve 7/8 sweab, 4 similar or equivalent will be acceptable. 4 Supply and replace four filter air pressure 4 Supply and replace four expansion motors, - 2 Electrical heating elements 5 Supply and replace the two existing motors, - 2 1400RPM S, 5K W, 4 Pole 380V and replace 2 2 x pillow bearing 3/8in ID,3x V-belt on the 5 perimeter zone. The replacement motors must 5 be compatible to meet the specified supply air 2 quantity requirements of 62,6m3/s 2 Repair Drive teatils, Motor pulley:2 off SPA- 2 106-2gr, motor bush:38mm, Fan pulley:2 off 2 106-2gr, motor bush:38mm, Fan pulley:2 off 2 Pelits:4Xspa-1250, Beari			
(psi)-33psi. Regulation range(bar)(max):32bar. Regulation range(bar)(mix):3bar. Insulation:400V, Pollution degree:3. Rated impulse voltage:4kv, Short circuit prot., fuse:16A. 4 Supply and replace four expansion valves – 4 (10Ft, VIF6A) Alco TER-20, similar or 4 equivalent will be acceptable. 4 Supply and replace four H/S valve 7/8 sweab, 4 similar or equivalent will be acceptable. 4 Supply and replace four filter air pressure 4 switches compatible with the existing DPS 200, similar or equivalent will be acceptable. 6.Supply Air Blower fans system and Electrical heating elements Supply and replace the two existing motors, - 2 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x y pillow bearing 3/8in D,3X V-belt on the 2 perimeter zone. The replacement motors must 2 be compatible to meet the specified supply air 2 quantity requirements of 62,6m/s 2 Repair and balance two blower fans in the 2 perimeter zone. Fan speed 610 rpm, the 2 repairs must enable the system to meet the air 2 106-2gr, motor bush:38mm, Fan pulley:2 off SPA- <td></td> <td></td> <td></td>			
range(bar)(max):32bar, Regulation range(bar)(max):32bar, Regulation. Yeblittion degree: 3, Rated impulse voltage:4kv, Short circuit prot., fuse: 16A. Supply and replace four expansion valves - quivalent will be acceptable. Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable. Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable. Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable. Supply and replace to two existing motors, - 1440RPM 5.5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID.3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6ms/s Repair and balance two blower fans in the preimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6ms/s Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR, Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable. Replace/repair 8x pressure switch 17BAR, Reguint or nage. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig Repair Drive details, Motor pulley:2 off SPA-250,90, Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable. Replace/repair 8x pressure: 17 bar/245 psig 35 bar/510 psig Repair motorized dampers to meet the 2 requirement of the supply air Repair motorized dampers to meet the 2 requirement of the supply air Repair motorized langers to meet the 2 requirement of the supply air Repair ducting 7.Electrical heating elements on the supply air ducting 7.Electrical heating elements on the supply air ducting 7.Electrical Panel 7.Electrical Panel			
Polution degree:3, Rated impulse voltage:4ky, Short circuit prot., fuse:16A. Supply and replace four expansion valves – (10Ft, VIF6A) Alco TER-26), similar or equivalent will be acceptable. 4 Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable. 4 Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable. 5 Cosuppl Air Blower fans system and Electrical heating elements 2 Supply and replace the two existing motors, - 1440RPM 5,5 KW, 4 Pole 380V and replace 2 2 x pillow baring 3/8in ID.3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m./s 2 Repair and balance two blower fans in the primeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m./s 2 Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR, Fan bush:35mm, Belis:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable. 8 Regulation range. LP:0,0,-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig 8 Repair Drive details, heating elements on the supply air ducting 2 Repair motorized dampers to meet the arcguirement of the supply air 2 Repair As pressure: 17 bar/245 psig 35 bar/510 psig 8 <			
voltage:4kv, Short circuit prot., fuse:16A.Supply and replace four expansion valves (10Ft, VIF6A) Alco TER-26), similar or equivalent will be acceptable.4Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable.4Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable.4Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable.4Supply and replace the two existing motors, - 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID,3X V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6ma/s2Repair and balance two blower fans in the repairs must enable the system to meet the air quantity requirements of 62,6ma/s2Repair Drive details, Motor pulley:2 off SPA- is SPA-250. C2R, Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Repairand range. LP:0.9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair Indicate leating elements on the supply air ducting2Repair and talence two the equivalent with be acceptable.2Repair ducting delements on the supply air ducting4Supply and replace duction the supply air ducting4Supply air ducting7Supply air ducting7Supply and replace the specified supply air capacity icu100ka atd00v,2.5A.4A X66			
Supply and replace four expansion valves - (10Ft, VIF6A) Alco TER-20, similar or equivalent will be acceptable.4Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable.4Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable.4Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable.4Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable.5Supply and replace the two existing motors, - 1440RPM 55 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8 in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m3/s2Repair and balance two blower fans in the perimeter zone. The system to meet the air quantity requirements of 62,6m3/s2Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Repair motorized dampers to meet the ar/510 psig2Repair motorized dampers to meet the ary 1510 psig2Repair motorized dampers to meet the ary 1510 psig2Repair motorized dampers to meet the ary 10/245 psig 352Repair motorized d	U		
(10Ft, VIF6A) Alco TER-26), similar or equivalent will be acceptable.	voltage:4kv, Short circuit prot., fuse:16A.		
equivalent will be acceptable.4Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable.4Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable.4 6.Supply Air Blower fans system and Electrical heating elements2Supply and replace the two existing motors, - 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8th ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6ms/s2Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6ms/s2Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6ms/s2Repair Drive details, Motor pulley:2 off SPA-250-2GR., Fan bush:38mm, Fan pulley:2 off spA-250-2GR., Fan bush:38mm, Fan pulley:2 off spA-250-2GR., Fan bush:37mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Regulation range. LP:0.9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air Repair and orized dampers to meet the requirement of the supply air Repair and relating elements on the supply and ducting4Supply and replace circuit breaker with capacity icu100ka at400v, 2.5A-4A X66	Supply and replace four expansion valves –	4	
Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable.4Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable.4 6.Supply Air Blower fans system and Electrical Panel 2 7.Supply Air Blower fans system and Electrical Panel 2 8.Supply and replace the two existing motors, r 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID, 3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m/s2Repair and balance two blower fans in the repairs must enable the system to meet the air quantity requirements of 62,6m/s2Repair Dive details, Motor pulley:2 off SPA- tof-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR, Fan bush:38mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air Repair all electrical heating elements on the supply air ducting2 7.Electrical Panel Supply and replace circuit breaker with capacity icul00ka at400v,2.5A-4A X66			
Supply and replace four H/S valve 7/8 sweab, similar or equivalent will be acceptable.4Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable.4 6.Supply Air Blower fans system and Electrical Panel 2 7.Supply Air Blower fans system and Electrical Panel 2 8.Supply and replace the two existing motors, r 1440RPM 5.5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID, 3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m/s2Repair and balance two blower fans in the repairs must enable the system to meet the air quantity requirements of 62,6m/s2Repair Dive details, Motor pulley:2 off SPA- tof-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR, Fan bush:38mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Replace/repair 8x pressure switch 17BAR, Reguiation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the equirement of the supply air Repair all electrical heating elements on the supply air ducting2 7.Electrical Panel Supply and replace circuit breaker with capacity icul00ka at400v,2.5A-4A X66	equivalent will be acceptable.		
Supply and replace four filter air pressure switches compatible with the existing DPS 200, similar or equivalent will be acceptable.46.Supply Air Blower fans system and Electrical heating elements2Supply and replace the two existing motors, - 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8 in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6ms/s2Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6ms/s2Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair and lelectrical heating elements on the supply air ducting2Perimeter of the supply air cupair and notice dampers to meet the supply and replace dampers to meet the supply air ducting8Repair and lelectrical heating elements on the supply air ducting2Ferair all electrical heating elements on the supply air ducting2Repair all electrical heating elements on the supply air ducting4Supply air ducting5Repair all electrical heating elements on the supply air ducting5Repair all electrical heating elements on the supply air ducting6Capacity icu100ka at400v,2.5A-4A X66	Supply and replace four H/S valve 7/8 sweab,	4	
switches compatible with the existing DPS 200, similar or equivalent will be acceptable.6.Supply Air Blower fans system and Electrical heating elementsSupply and replace the two existing motors, - 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6ms/s2Repair and balance two blower fans in the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6ms/s2Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6ms/s2Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR, Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Repair motorized dampers to meet the equirement of the supply air requirement of the supply air2Repair motorized dampers to meet the 2 requirement of the supply air2Repair and lelectrical heating elements on the 			
200, similar or equivalent will be acceptable.6.Supply Air Blower fans system and Electrical heating elementsSupply Air Blower fans system and Electrical heating elements2Supply and replace the two existing motors, - 1440RPM 5.5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6ms/s2Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6ms/s2Repair function of 62,6ms/s2Repair function of 62,6ms/s2Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air2Repair all electrical heating elements on the supply air ducting4Supply air ducting Puply air ducting5Supply air ducting Supply air ducting5Supply air ducting Supply air ducting6Supply air ducting Supply air ducting6<	Supply and replace four filter air pressure	4	
6.Supply Air Blower fans system and Electrical heating elements2Supply and replace the two existing motors, - 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m3/s2Repair and balance two blower fans in the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m3/s2Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m3/s2Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Replace/repair 8x pressure switch 17BAR, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair all electrical heating elements on the supply air ducting2Repair all electrical heating elements on the supply air ducting2Repair all electrical heating elements on the supply air ducting4Supply and replace5Supply and replace5Supply and replace5Supply and replace to rout breaker with capacity icu100ka at400v,2.5A-4A X66	switches compatible with the existing DPS		
Electrical heating elements2Supply and replace the two existing motors, - 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m3/s2Repair and balance two blower fans in the perimeter zone. The replacement motors in the repairs must enable the system to meet the air quantity requirements of 62,6m3/s2Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m3/s2Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.2Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air Repair all electrical heating elements on the supply air ducting2 7.Electrical Panel 5Supply and replace cupit yi cu100ka at400v,2.5A-4A X66	200, similar or equivalent will be acceptable.		
Supply and replace the two existing motors, - 1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m3/s2Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m3/s2Repair nust enable the system to meet the air quantity requirements of 62,6m3/s2Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the supply air2Repair all electrical heating elements on the supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66	6.Supply Air Blower fans system and		
1440RPM 5,5 KW, 4 Pole 380V and replace 2 x pillow bearing 3/8in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m3/s Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m3/s Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable. Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig Repair motorized dampers to meet the requirement of the supply air Repair all electrical heating elements on the supply air ducting 7.Electrical Panel Supply and replace circuit breaker with capacity icu100ka at400v, 2.5A-4A X6	Electrical heating elements		
x pillow bearing 3/8in ID,3x V-belt on the perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62.6m3/s Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62.6m3/s Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable. Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0.9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig Repair motorized dampers to meet the requirement of the supply air Repair all electrical heating elements on the supply and ducting 7.Electrical Panel Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6	Supply and replace the two existing motors, -	2	
perimeter zone. The replacement motors must be compatible to meet the specified supply air quantity requirements of 62,6m3/sRepair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m3/sRepair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.Repair or equivalent will be acceptable.Repair motorized dampers to meet the requirement of the supply air Repair all electrical heating elements on the supply air ducting 7.Electrical Panel Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6	1440RPM 5,5 KW, 4 Pole 380V and replace 2		
be compatible to meet the specified supply air quantity requirements of 62,6m3/s Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m3/s Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR, Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable. Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig Repair motorized dampers to meet the requirement of the supply air Repair all electrical heating elements on the supply air ducting 7.Electrical Panel Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6	x pillow bearing 3/8in ID,3x V-belt on the		
quantity requirements of 62,6m3/sRepair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m3/sRepair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.Replace/repair 8x pressure switch 17BAR, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the supply air ducting2 7.Electrical Panel 4Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66	perimeter zone. The replacement motors must		
Repair and balance two blower fans in the perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m3/s2Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.2Replace/repair 8x pressure switch 17BAR, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the supply air ducting2 7.Electrical Panel 4Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66	be compatible to meet the specified supply air		
perimeter zone. Fan speed 610 rpm, the repairs must enable the system to meet the air quantity requirements of 62,6m3/sImage: Constraint of the system to meet the air quantity requirements of 62,6m3/sRepair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.2Replace/repair 8x pressure switch 17BAR, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air2Repair all electrical heating elements on the supply air ducting4Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66	quantity requirements of 62,6m3/s		
repairs must enable the system to meet the air quantity requirements of 62,6m3/s Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable. Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig Repair motorized dampers to meet the requirement of the supply air Repair all electrical heating elements on the supply air ducting 7.Electrical Panel Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6	Repair and balance two blower fans in the	2	
quantity requirements of 62,6m3/s2Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.2Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air2Repair all electrical heating elements on the supply air ducting4Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66			
Repair Drive details, Motor pulley:2 off SPA- 106-2gr, motor bush:38mm, Fan pulley:2 off SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.2Replace/repair 8x pressure switch 17BAR, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air2Repair all electrical heating elements on the supply air ducting4Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66			
InferenceInference106-2gr, motor bush:38mm, Fan pulley:2 offSPA-250-2GR., Fan bush:35mm,Belts:4Xspa-1250, Bearings:4 off UCP-207similar or equivalent will be acceptable.Replace/repair 8x pressure switch 17BAR,Regulation range. LP:0,9-7Bar, HB 8-32Bar,Max working pressure: 17 bar/245 psig 35bar/510 psigRepair motorized dampers to meet therequirement of the supply airRepair all electrical heating elements on thesupply air ducting 7.Electrical Panel Supply and replace circuit breaker with capacity icu100ka at400v, 2.5A-4A X6	quantity requirements of 62,6m3/s		
SPA-250-2GR., Fan bush:35mm, Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.8Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air2Repair all electrical heating elements on the supply air ducting4Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66		2	
Belts:4Xspa-1250, Bearings:4 off UCP-207 similar or equivalent will be acceptable.Image: Comparison of the supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6Image: Comparison of the supply at the suppl			
similar or equivalent will be acceptable.Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air2Repair all electrical heating elements on the supply air ducting4Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66			
Replace/repair 8x pressure switch 17BAR, Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psig8Repair motorized dampers to meet the requirement of the supply air2Repair all electrical heating elements on the supply air ducting4 7.Electrical Panel 0Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66			
Regulation range. LP:0,9-7Bar, HB 8-32Bar, Max working pressure: 17 bar/245 psig 35 bar/510 psigImage: Constraint of the supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6Image: Constraint of the supply at a state of the supply at a state of the supply at the supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6Image: Constraint of the supply at a state of the supply at			
Max working pressure: 17 bar/245 psig 35 bar/510 psigImage: Constraint of the supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6Image: Constraint of the supply and replace circuit breaker with constraint of the supply at4000000000000000000000000000000000000		8	
bar/510 psigImage: Constraint of the supply airRepair all electrical heating elements on the supply air ducting47.Electrical PanelImage: Constraint of the supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66			
Repair motorized dampers to meet the requirement of the supply air2Repair all electrical heating elements on the supply air ducting47.Electrical Panel6Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66			
requirement of the supply airImage: constraint of the supply airRepair all electrical heating elements on the supply air ducting47.Electrical PanelImage: constraint of the supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6			
Repair all electrical heating elements on the supply air ducting47.Electrical Panel6Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66	1 1	2	
supply air ductingImage: supply air ducting 7.Electrical Panel Image: supply and replace circuit breaker with 6 capacity icu100ka at400v,2.5A-4A X6	· · · · · ·		
7.Electrical PanelSupply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X6		4	
Supply and replace circuit breaker with capacity icu100ka at400v,2.5A-4A X66			
capacity icu100ka at400v,2.5A-4A X6			
		6	
Icu:100Ka.	1 0		
	Icu:100Ka.		



Supply and replace triple single breaker 16	5	
Amps MN116Z 444702 0,230 vac X5		
Supply and Replace Input 400Vac, Output	1	
110Vac,50/60Hz stepdown transformer.		
Supply and Replace 80Amps, 3phase	6	
contactor,2NO,2NC with auxiliaries with		
230vac coil voltage x6.		
Supply and Replace step down transformer	1	
input voltage 0-230V ac output 0-24Vac		
rating100VA		
Supply and Replace relay 10A,250Vac,24vac	25	
coil voltage, coil current :53mA, coil	_	
resistance 1900hmsX25.		
Supply and Replace	6	
contactor:3pole,4kw,9A,24Vcoil X6	Ũ	
Supply and Replace contactor - 3P (3 NO) -	6	
AC-3 - \leq 440 V 32 A - 24 V AC coil X6.	Ū	
Supply and Replace contactor	5	
400vac,32Amps,220coilvoltage with1n/o and	5	
1n/c X5.		
8.PLC Control System and drive		
Supply, install and program drive,18,5kw	1	
which control the speed of the extractor fan	1	
motor with the same or compatible drive and		
wiring.		
Supply, install and program PLC control	1	
	1	
system for the complete operation of the spray booth, including all application modes for		
spray painting mode, pre- heating mode, and		
baking mode		
9.Cooling Coil perimeter blower unit		
	1	
Repair and flush Air on coil evaporator: $1/2$	1	
CX 6-3-8-3850(2x27) similar or equivalent		
will be acceptable.	1	
Repair and flush Air off coil evaporator: 1/2	1	
CX 6-4-10-3850(2x36) similar or equivalent		
will be acceptable.	1	
Restoration of Saturated suction temperature	1	
:8 degrees C	1	
Restoration of Saturated condensing	1	
temperature :50 degrees C		
Clean any residues of melted coil insulation	4	
from other parts of the device or replace such		
parts.		
Check for cracks, breaks or deep erosion. Arc	1	
hoods and chutes should be repaired or		
replaced if damaged or deeply eroded.		



		[
10.Filters perimeter			
Supply and replace $12 \times 600 \times 600 \times 50(x2)$	2		
filters			
Supply and replace 61cmx61cmx18 filters in	1		
the perimeter zone.			
11.Extractor Fan			
Supply, replace and repair motor rated	1		
output:18,5kw, speed:1470r/min,			
supply:380/3/50, frame size:180M, Enclosure:			
IP55, REARING:6311-C3, NDE			
Bearing:6211-Z-C3 the replacement motor			
must be compatible to meet the exhaust air			
quantity of 57m3/s			
Repair and balance fan, series BC90, size	1		
800C/1.0, impeller diameter:800mm, Fan			
speed:1177r/min, cass:2, op. temp:20degrees			
C, Max temp:40degrees C, de bearing			
SNL22210, NDE Bearing SNL C2210, the			
repairs must enable the system to meet the			
exhaust air quantity of 57m3/s			
Belt drive Fan pulley: diameter200-4SPA	1		
Bore:45mm, Motor Pulley diameter160-4SPA			
Bore48mm, Vee-belts:13N (2800) qty per			
set4, Tension Force 35N, Belt			
deflection:18mm			
12 Test and commission			
Provision to be made for all required	1		
documentation under 18.1			
Issue a COC for the Electrical work that was	1		
done.			
Test, commission and hand over to production.	1		
The electrical installation and issuing of	1		
certificate of compliance shall bein accordance			
with SANS 10142-1.			
• Make and supply 2 sets of hardcopy	1		
drawings and 1 set of pdfdrawings in			
a USB memory stick.			
• The drawing shall have the components			
symbols recognized inelectrical and			
mechanical engineering.The drawing shall have the legends and			
 The drawing shan have the regends and notes. 			
The drawing shall show the component's			
rating, sizes, capacity, e.gamperage, voltage,			
capacitance, etc.			
Test and commission.	1		
The entire air-condition system shall be fully	1		
functional on handover.	1		
	1		



13.Training		
Training must be provided on the operation	1	
and maintenance of the entire air		
conditioning unit		
Sub-Total (excl. VAT)		R

Vat (15%)

R

Grand -Total (incl. VAT) R

 Name:
 Khethu Nzuza
 Designation:
 Engineering Technician
 Signature and date:
 12/06/2024

 Name:
 Max Dladla Designation:
 Engineering Technician
 Signature and date:
 12/06/2024

 Name:
 Mhlonipheni Nxumalo
 Designation:
 Executive Manager
 Signature and date:
 12/06/2024