Start Up Form

Start Up Date		Technician		Dealer	
Name		Address			
City		State		Zip Code	

Equipment Information

Indoor Unit		Coil		Outdoor Unit	
Model#		Model#		Model #	
Serial#		Serial#		Serial #	
Fltr size		TXV#		Heat Strips	
Fltr type		T stat		Cond Pump	
Fltr qty					

Voltage

System Low Voltage		OD Line Voltage		ID Line Voltage	

Blower Information

Fan Speed Settings for PSC and X-13 Motors (Standard ECM)

Gas Furnace Heating Spd Tap		CFM		AC / HP I stage Fan Spd Tap		CFM	
AC/HP ADD-ON Calculated CFM				AC / HP 2 stage Fan Spd Tap		CFM	
CFM without blower peformance chart CFM = BTU Out ÷ (Temp Rise x 1.08)				Electric Heat Spd Tap		CFM	

Variable Speed		Gas Furnace Only		Single Piece & ME Air Handlers		MVC Modular Air Handler	
ECM Jumpers		R/A before filter		Coils are included in the blower chart here only		R/A before filter	
Cool		S/A after coil		R/A before filter		R/A before coil	
Adj		S/A before coil		R/A before coil		RA after coil	
Heat		R/A after filter		S/A ducting		S/A ducting	
CFM		Blower Static		Blower static		Blower static	

Refrigerant Information

Metering Device and Charge

TXV		Suction Line size		Total Length in ft		Line Length Add in oz	
Orifice		Liquid Line Size		Coil Refrigerant Add oz		Total Refrigerant in oz	

Cooling Information

Condenser Dry-Bulb		Liquid Pressure		Sub Cooling	Required	Measured
Indoor Wet-Bulb		Liquid Line Temp				
Indoor Dry-Bulb		Vapor Pressure		Superheat	Required	Measured
Evap. Outlet Dry-Bulb		Vapor Line Temp				
Evap. Outlet Wet-Bulb		Temp Drop		TXV = Sub Cooling No TXV = Superheat		

Heating Information

Heat Pump		Electric Heat		Gas Furnace		
Suction Pressure		**Heat Kit**			Low Fire	High Fire / 1 Stage
Suction Temp		Supply Air Temp		Supply Air Temp		
Liquid Line Pressure		Indoor Temp		Indoor Temp		
Liquid Lne Temp		Temp Rise		Temp Rise		
Indoor Temp	Volts x amps = watts	**Heater Amps:**		Gas Pressure "wc		
Outdoor Temp		Circuit 1		Inlet Gas Pressure	Natural "wc	Propane "wc
Supply Air Temp		Circuit 2				
Temp Rise		Circuit 3		Vent size in "		#90s	#45s
Req'd Subcooling		Circuit 4		Vent rise in ft		
Subcooling		1 watt = 3.412 BTU		Total Length in ft		

Certified Technician's Signature:
Customer's Signature:

Start Up Form

Start Up Sheet Instructions

Suggest following the outline below for getting start up measurements. Estimated time to obtain all measurements is approximately 50 minutes. 20 minutes for gas furnace/air handler only. 30 minutes for AC. 50 minutes for HP.

Emergency Heat Measurements.

1. Set thermostat 10° above room temperature

2. Allow system to operate for 10 minutes prior to taking any measurements

3. Obtain amperage for each heat strip

4. Obtain return air temperature at equipment duct connection to Air Handler

5. Obtain supply air temperature at closest indoor register

6. Adjust fan speed to meet temperature rise requirements per the equipment data plate

Note: Electric furnace only applications take static pressure at this time

Gas Furnace Measurements

1. Set thermostat 10° above room temperature

2. Set manifold pressure

3. Allow system to operate for 10 minutes prior to taking any measurements

4. Review furnace data plate for proper temperature rise range

5. Obtain return air temperature at equipment duct connection to Air Handler

6. Obtain supply air temperature at closest indoor register

7. Make any necessary fan motor heat speed changes to obtain required temperature rise per the furnace data plate

Note: If this is a heat only application take static pressures at this time

Heat Pump Measurements (HEATING MODE)

1. Set thermostat 10° above room temperature

2. Obtain static pressure per the start up sheet

3. Make any fan speed corrections to get proper airflow (400CFM per ton)

3. Allow system to operate for 10 minutes prior to taking any measurements

4. Obtain return air temperature at equipment duct connection at indoor equipment

5. Obtain supply air temperature at closest indoor register

6. Obtain Outdoor Ambient Temperature

7. Obtain liquid line temperature and pressure at king valve

8. Obtain true suction pressure (True Port of OD Unit)

9. Obtain suction temperature from condenser coil suction line (Between condenser coil and reversing valve)

10. Calculate subcooling and superheat

Heat Pump/AC Measurements (COOLING MODE)

1. Set thermostat 10° below room temperature (NON HP applications only remove OD unit disconnect)

2. Static pressure and fan speeds set prior in heating mode

2a. NON HP applications only - verify static pressure and set fan speed for cooling to obtain 400 CFM per ton

2b. Insert disconnect into disconnect panel after verifying airflow

3. Allow system to operate for 10 minutes prior to taking any measurements

4. Obtain return air temperature at equipment duct connection at indoor equipment

5. Obtain entering wet bulb temperature

6. Obtain supply air temperature at closest indoor register

7. Obtain Outdoor Ambient Temperature

8. Obtain liquid line temperature and pressure at king valve

9. Obtain suction pressure at true suction port, suction temperature at king valve

10. Calculate subcooling and superheat