

FORM CL-01

CONSULTANT

**COMMISSIONING OF HVAC SYSTEMS**

CONTRACTOR

**SYSTEM STARTUP CHECKLIST**

BUILDING : \_\_\_\_\_ SHEET : \_\_\_\_\_ / OF / \_\_\_\_\_

SYSTEMS / EQUIPMENT INCLUDED : \_\_\_\_\_  
\_\_\_\_\_**I - PRE - STARTUP INSPECTION**

DESCRIPTION	REMARKS
EQUIPMENT MOUNTING & SETTING	
CONTROL , INTERLOCK & POWER WIRING	
ALIGNMENT OF MOTORS & DRIVES	
PIPING , CONNECTIONS & ACCESSORIES	
LUBRICATION OF EQUIPMENT	

**II - FIRST RUN OBSERVATIONS**

DIRECTION OF ROTATION	
SETTING OF SAFETY & OPERATING CONTROLS	
HEAT BUILDUP IN BEARINGS	
MOTOR LOADS AGAINST NAMEPLATE	

**III - EQUIPMENT CHECK**

RATINGS OF OVERLOAD HEATERS	
FUNCTION OF SAFETY & OPERATING CONTROLS	
OPERATION OF EQUIPMENT	
INSPECTION , OBSERVATION & CHECKING PROCEDURES	

REMARKS : \_\_\_\_\_  
\_\_\_\_\_

COMMISSIONING ENGINEER	CONSULTANT	CONTRACTOR
NAME : _____	NAME : _____	NAME : _____
SIGNATURE : _____	SIGNATURE : _____	SIGNATURE : _____
DATE : _____	DATE : _____	DATE : _____

FORM CL-02

CONSULTANT

# COMMISSIONING OF HVAC SYSTEMS

CONTRACTOR

## SYSTEMS COMMISSIONING CHECKLIST

BUILDING : \_\_\_\_\_ SHEET : \_\_\_\_\_ / OF / \_\_\_\_\_

SYSTEM / EQUIPMENT INCLUDED : \_\_\_\_\_  
\_\_\_\_\_

DESCRIPTION	REMARKS
SYSTEM STARTUP CHECKLIST	
AIR DISTRIBUTION INSTALLATION	
FILTER INSTALLATION	
QUALITY OF HEAT TRANSFER FLUID ( WATER )	
REFRIGERATION SYSTEMS ( leak test , evacuation , refrigerant & oil charge )	
STUFFING BOXES AND PACKING GLANDS (pumps & valves)	
AS - BUILT CONTROL DIAGRAMS & SEQUENCES	
FINAL VIEW OF INSTALLATION	
PAINT OF EQUIPMENT	
EQUIPMENT & PIPING IDENTIFICATION	
FINS ON EXTENDED SURFACE H.T. COILS	
OPERATING & MAINTENANCE MANUALS	
TRAINING OF BUILDING OPERATION & MAINTENANCE PERSONNEL	
GRAPHIC OPERATIONAL DATA	

REMARKS : \_\_\_\_\_  
\_\_\_\_\_

COMMISSIONING ENGINEER	CONSULTANT	CONTRACTOR
NAME : _____	NAME : _____	NAME : _____
SIGNATURE : _____	SIGNATURE : _____	SIGNATURE : _____
DATE : _____	DATE : _____	DATE : _____

FORM PSL 01

CONSULTANT

**COMMISSIONING OF HVAC SYSTEMS**

CONTRACTOR

**DUCTWORK PRE-START UP CHECKLIST (MECHANICAL COMPLETION)**

BUILDING : \_\_\_\_\_ SHEET : \_\_\_\_\_ / OF / \_\_\_\_\_

SYSTEM / EQUIPMENT INCLUDED : \_\_\_\_\_  
\_\_\_\_\_

DESCRIPTION	REMARKS
<b>1. ENGINEERING DATA</b>	
Availability of Design Drawings	
Conformity to Design (General)	
Availability of As-Built Drawings	
Availability of Equipment Catalogues	
Nameplate Data of Equipment	
<b>2. INSTALLATION</b>	
Air Handling Units	
Quality of Coil Surfaces	
Exhaust Fans	
Equipment Supports, Frames, Foundations	
Duct Material & Installation - General	
Ductwork Connection to Equipment(Flexible joints, Plenums)	
Ductwork Supporting	
Outside Air Louvers & Rain Protection	
Fire Dampers	
Sound Attenuators	
Volume Dampers	
Access Doors	
Filters	
Instrumentation (Manometers & Thermometers)	
Branch Take-off Fittings	
Branch Take-off Flaps	
Servomotor Mounting Seats	
End User Air Equipment Mounting (diffusers, registers, grilles)	
Duct Connection to End Users (Flexibles, Plenums)	
<b>ACCESS TO DAMPERS- GENERAL</b>	
<b>3. TESTS &amp; AIR PREPARATION</b>	
Ductwork Leakage Testing	
Internal Cleaning of Ductwork	
Internal Cleaning of Air Handling Equipment	
Temporary Air Filters	
Final Air Filters	

REMARKS : \_\_\_\_\_  
\_\_\_\_\_

COMMISSIONING ENGINEER	CONSULTANT	CONTRACTOR
NAME : _____	NAME : _____	NAME : _____
SIGNATURE : _____	SIGNATURE : _____	SIGNATURE : _____
DATE : _____	DATE : _____	DATE : _____



FORM PSL 02

CONSULTANT

**COMMISSIONING OF HVAC SYSTEMS**

CONTRACTOR

**PIPEWORK PRE-START UP CHECKLIST (MECHANICAL COMPLETION)**

BUILDING : \_\_\_\_\_ SHEET : \_\_\_\_\_ / OF / \_\_\_\_\_

SYSTEM / EQUIPMENT INCLUDED : \_\_\_\_\_  
\_\_\_\_\_

DESCRIPTION	REMARKS
<b>1. ENGINEERING DATA</b>	
Availability of Design Drawings	
Conformity to Design (General)	
Availability of As-Built Drawings	
Availability of Equipment Catalogues	
Nameplate Data of Equipment	
<b>2. INSTALLATION</b>	
Heat / Cool Generating Equipment	
Equipment Supports, Frames, Foundations	
Heat Exchangers	
Circulation Pumps	
Expansion Tanks & Water Feeding Systems	
Pipe Material & Installation - General	
Pipe Connection to Equipment(Flanges, Unions, Other fittings)	
Pipework Supporting	
Pipe Expansion Joints (c/w fixed & movable supports)	
Shut-off Valves	
Check Valves	
Strainers	
Balancing Valves	
Safety Relief Valves & Discharge Piping	
Air Vents	
Drains & Blow-downs	
Pressure Reducers	
Instrumentation (Manometers & Thermometers)	
Branch Take-off Fittings	
Branch Take-off Valves	
Control Valve Bodies	
Insertion Wells for Safety & Control Field Elements	
End User Equipment Mounting	
Pipe Connection to End Users (Coils, Radiators, Fan-coils)	
<b>ACCESS TO VALVES- GENERAL</b>	

REMARKS : \_\_\_\_\_  
\_\_\_\_\_

COMMISSIONING ENGINEER	CONSULTANT	CONTRACTOR
NAME : _____	NAME : _____	NAME : _____
SIGNATURE : _____	SIGNATURE : _____	SIGNATURE : _____
DATE : _____	DATE : _____	DATE : _____



FORM PSL 03

CONSULTANT

**COMMISSIONING OF HVAC SYSTEMS**

CONTRACTOR

**SAFETY/CONTROLS PRE-START UP CHECKLIST (INSTALLATION COMPLETION)**

BUILDING : \_\_\_\_\_ SHEET : \_\_\_\_\_ / OF / \_\_\_\_\_

SYSTEM / EQUIPMENT INCLUDED : \_\_\_\_\_  
\_\_\_\_\_

DESCRIPTION	REMARKS
<b>1. ENGINEERING DATA</b>	
Availability of Design Drawings	
Conformity to Design (General)	
Control Schematics	
Control Scenario	
Availability of As-Built Drawings	
Availability of Equipment Catalogues	
Nameplate Data of Equipment	
<b>2. INSTALLATION OF MECHANICAL SAFETY DEVICES</b>	
Safety Relief Valves & Setting	
Pressure Reducers & Setting	
Air Vents	
Drains & Blowdowns	
<b>3. INSTALLATION OF ELECTRICAL HARDWIRED SAFETY/CONTROL DEVICES</b>	
Thermal Cut-out Relays	
Thermistors	
Safety Thermostats	
Control Thermostats	
Anti-freeze Thermostats	
Fire Alarm Interlocks	
<b>4. INSTALLATION OF ELECTRONIC CONTROL DEVICES</b>	
<b>CENTRAL ELEMENTS</b>	
DDC Controllers	
Communication Bus	
Software	
Computer Connections	
<b>FIELD ELEMENTS</b>	
Damper Servomotors & Linkage to Dampers	
Duct Mounted Temperature Sensors	
Duct Mounted Humidity Sensors	
Outside Air Temperature Sensors	
Outside Air Humidity Sensors	
Room Temperature Sensors	

REMARKS : \_\_\_\_\_  
\_\_\_\_\_

COMMISSIONING ENGINEER	CONSULTANT	CONTRACTOR
NAME : _____	NAME : _____	NAME : _____
SIGNATURE : _____	SIGNATURE : _____	SIGNATURE : _____
DATE : _____	DATE : _____	DATE : _____



**FAN COIL UNITS START UP CHECK LIST**

FORM PSL-S-01

INSPECTION&TEST By : .....  
BUILDING : .....  
FLOOR : .....  
ROOM / UNIT CODE :

SHEET : ..... / OF / .....  
ZONE # : .....  
DATE : .....

**1. FAN :**

ELECTRICAL CONNECTIONS : .....  
SPEED - HIGH : .....  
MEDIUM : .....  
LOW : .....

**2. AIR FILTERS :** .....

**3. THERMOSTAT :**  
ELECTRICAL CONNECTIONS : .....  
FUNCTIONS : .....

**4. HEATING COIL :**  
STRAINER : .....  
CONTROL VALVE&ACTUATOR : .....

**5. COOLING COIL :**  
STRAINER : .....  
CONTROL VALVE&ACTUATOR : .....

**6. DRAIN PAN&CONNECTIONS :** .....

**7. SHUT-OFF VALVES :** .....

**8. PIPE INSULATION :** .....

**9. DUCT INSULATION :** .....

FORM PSL-S-02

CONSULTANT

## START UP & TESTING - COMMISSIONING CARD FOR HVAC SYSTEMS

CONTRACTOR

### AIR HANDLING UNIT IDENTIFICATION & START UP CHECKLIST

BUILDING : \_\_\_\_\_ SHEET : \_\_\_\_\_ / OF / \_\_\_\_\_

EQPT. CODE : \_\_\_\_\_ ZONE # \_\_\_\_\_

MANUFACTURER	:	_____
SIZE	:	_____
ARRANGEMENT	:	_____
OF SECTIONS	:	_____
FILTERS	:	_____
FAN SIZE	:	_____
ARRANGEMENT	:	_____
FAN BLADE	:	_____
FAN SHEAVE	:	_____
MOTOR SHEAVE	:	_____
MOTOR TYPE	:	_____
RATED POWER	:	_____
R P M	:	_____
PHASE / CYCLE / VOLT	:	_____
RATED AMP	:	_____
COOLING COIL TYPE	:	_____
NO OF ROWS	:	_____
HEATING COIL TYPE	:	_____
NO OF ROWS	:	_____
ELECTRIC HEATER	:	_____
DAMPERS	:	_____
CONTROL VALVES	:	_____