FORM T-A-01 CONSULTANT

TESTING ADJUSTING AND BALANCING CARD FOR HVAC SYSTEMS

CONTRACTOR

AIR SIDE TEST SUMMARY

BALANCING BY _____ INSTRUMENT _____

FAN DATA : RP M _____ FLOWRATE (DM^3 / S) _____ S.P. (Pa) _____ MOTOR AMPS _____ VOLTAGE _____

1	2	3	4	5	6	7	8
* DUCT MEASUREMENT POINT No. OR TERMINAL CODE	SUPPLY OR RETURN MODEL SIZE	FLOW FACTORS OR NET CORE AREA m^2	DESIGN AIR FLOW dm^3 / s	DESIGN VELOCITY m / s	AVERAGE VELOCITY READING m / s	MEASURED AIR FLOW dm^3 / s	REMARKS

* SEE DRWG'S _____

FINAL CHECK

	CONSULTANT	CONTRACTOR
BUILDING : _____	NAME : _____	NAME : _____
EQPT. CODE : _____	SIGNATURE: _____	SIGNATURE: _____
	DATE : _____	DATE : _____

FAN CAPACITY TEST REPORT

FORM T-A-02

TEST By : ..... SHEET : ..... / OF / .....

BUILDING : ..... ZONE #: .....

SYSTEM : ..... DATE : .....

REMARKS : .....

VOLTAGE : ___ Actual Volts : ..... (1)

(volts) ___ Nameplate Volts : ..... (2)

CURRENT : ___ No Load Amps : ..... (3)

(amps) ___ Full Load Amps : ..... (4)

___ Running Amps : ..... (5)

___ Corrected Actual

Full Load Amps : $\frac{\text{Line (2) x Line (4)}}{\text{Line (1)}}$ = ... (6)

POWER (HP) : Nameplate HP : ..... (7)

BRAKE HP = $\frac{\text{Line (5) - 1/2 Line (3)}}{\text{Line (6) - 1/2 Line (3)}}$ x Line (7) .. (8)

HEAD : Total Suction Head : ..... (9)

(Pa) Total Dısharge Head : ..... (10)

Static Dısharge Head: ..... (11)

***** FAN STATIC HEAD = Line (11) - Line (9) = …. (12)

****** FLOW RATE (dm^3 / s) : ..... (13)

SPEED (rpm) : ..... (14)

***** At operation point

****** Details of flow rate measurement of exit duct is attached.

DUCT TRAVERSE READINGS

FORM T-A-03

TEST By : _____

BUILDING : _____

SYSTEM : _____

REMARKS : _____

SHEET : _____ / OF / _____

ZONE # : _____

DATE : _____

NO.	VELOCITY PRESSURE	VELOCITY	DUCT POSITION	NO .	VELOCITY PRESSURE	VELOCITY	DUCT POSITION	NO .	VELOCITY PRESSURE	VELOCITY	DUCT POSITION
1A				1B				1C			
2A				2B				2C			
3A				3B				3C			
4A				4B				4C			
5A				5B				5C			
6A				6B				6C			
7A				7B				7C			
8A				8B				8C			
9A				9B				9C			
10A				10B				10C			
11A				11B				11C			
12A				12B				12C			
13A				13B				13C			
14A				14B				14C			
15A				15B				15C			
16A				16B				16C			
TOTAL _____ , _____ = AVERAGE VELOCITY _____				TOTAL _____ , _____ = AVERAGE VELOCITY _____				TOTAL _____ , _____ = AVERAGE VELOCITY _____			

1 TEST NUMBER _____

2 ALTITUDE _____ = CORRECTION FACTOR _____

3 AIR TEMPERATURE _____ = CORRECTION FACTOR _____

4 COMBINED FACTOR (LINE 2 x LNE 3) _____ = _____

5 GRAND TOTAL VELOCITIES _____ = _____ V_m , AVERAGE
NUMBER OF READING POINTS

6 V_m _____ (LINE 5) x FACTOR _____ (LINE 4) = _____ V , M / S

7 DUCT AREA _____ M^2

8 V _____ (LINE 6) x A _____ (LINE 7) = _____ DM^3 / S

9 ACTUAL DM^3 / S _____ (LINE 8) DESIGN DM^3 / S _____

10 STATIC PRESSURE (Sp) AT CENTER OF TEST _____

V_m = MEASURED VELOCITY OR INDICATED VELOCITY

V = ACTUAL VELOCITY AFTER DENSITY VARIATION CORRECTION

A = DUCT AREA , M^2

RECTANGULAR DUCT AREA , M^2 = WIDTH x HEIGHT

ROUND DUCT AREA , M2 = 3.142 x RADIUS SQUARED (pR^2)

FINAL CORRECTION FACTOR FOR NON - STANDARD AIR = ALTITUDE FACTOR x TEMPERATURE FACTOR.

ROUND DUCT FLOW ADJUSTING REPORT

FORM T-A-04

TEST By : .....

BUILDING : .....

SYSTEM : .....

REMARKS : .....

SHEET : ..... / OF / .....

ZONE #: .....

DATE : .....

EXISTING DATA

DUCT DESIGNATION : .....

DAMPER TYPE & DIMENSION : .....

SPECIFIED FLOW (dm^3 / s) : .....

1 st MEASUREMENT

MEASURED Δp_2 (pa) : .....

DAMPER POSITION : .....

AIR FLOW (dm^3 / s) : .....

2 nd MEASUREMENT

MEASURED Δp_2 (pa) : .....

DAMPER POSITION : .....

AIR FLOW (dm^3 / s) : .....

FINAL MEASUREMENT

MEASURED Δp_2 (pa) : .....

DAMPER POSITION : .....

AIR FLOW (dm^3 / s) : .....

FORM T-A-05

CONSULTANT

TESTING ADJUSTING AND BALANCING CARD FOR HVAC SYSTEMS

CONTRACTOR

AIR - HANDLING UNIT TEST REPORT WINTER / SUMMER

BUILDING : _____ SHEET : _____ / OF / _____

EQUIPMENT CODE: _____ ZONE # _____

TEST PERIOD : _____

NO	ITEM	SPECIFIED	FIELD TEST 1	FIELD TEST 2	FIELD TEST 3
1.1	OUTSIDE AIR TEMP (^oC)				
1.2	SUPPLY AIR TEMP (^oC)				
1.3	RETURN AIR TEMP (^oC)				
*2.1	OUTSIDE AIR FLOW (dm^3/s)				
2.2	SUPPLY AIR FLOW (dm^3/s)				
2.3	RETURN AIR FLOW (dm^3/s)				
3.1	COOLING COIL INLET WATER TEMP (^oC)				
3.2	COOLING COIL EXIT WATER TEMP (^oC)				
**3.3	COOLING COIL WATER FLOW (l / s)				
3.4	COOLING COIL PRESSURE DROP (kpa)				
3.5	COOLING COIL CAPACITY (kw)				
4.1	HEATING COIL INLET WATER TEMP (^oC)				
4.2	HEATING COIL EXIT WATER TEMP (^oC)				
**4.3	HEATING COIL WATER FLOW (l / s)				
4.4	HEATING COIL PRESSURE DROP (kpa)				
4.5	HEATING COIL CAPACITY (kw)				

* ITEMS 2.1 , 2.2 , 2.3 RECORDED AS MEASURED THROUGH AIR SIDE TESTS.

** ITEMS 3.3 , 4.3 RECORDED AS MEASURED THROUGH WATER SIDE TESTS.

REMARKS : _____

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

FORM T-P-01 CONSULTANT

TESTING ADJUSTING AND BALANCING CARD FOR HVAC SYSTEMS

CONTRACTOR

SEASONAL TEST CARD FOR ZONES
SUMMER / WINTER

BUILDING : _____ SHEET : _____ / OF / _____

TEST PERIOD : _____

INSTRUMENT : _____

* ZONE	TEMPERATURE(^{o}C) - HUMIDITY (%)			
	SPECIFIED	FIELD TEST 1	FIELD TEST 2	FIELD TEST 3

***** SEE DRWG'S : _____

REMARKS :

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