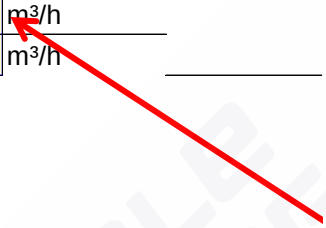
Input data from manufacturer

Name **Misubishi MSZ-GL50VGD**

Inside air flow_MAX	**1014**	m³/h
Inside air flow_MIN	**408**	m³/h



COP	KW Input Power		°C T_outside	°C T_inside
	0.96	Testpoint 1	**-10.0**	**21.0**
	1.14	Testpoint 2	**-5.0**	**21.0**
	1.26	Testpoint 3	**0.0**	**21.0**
	1.36	Testpoint 4	**5.0**	**21.0**
	1.43	Testpoint 5	**10.0**	**21.0**
	1.47	Testpoint 6	**15.0**	**21.0**
	1.52	Testpoint 7	**20.0**	**21.0**

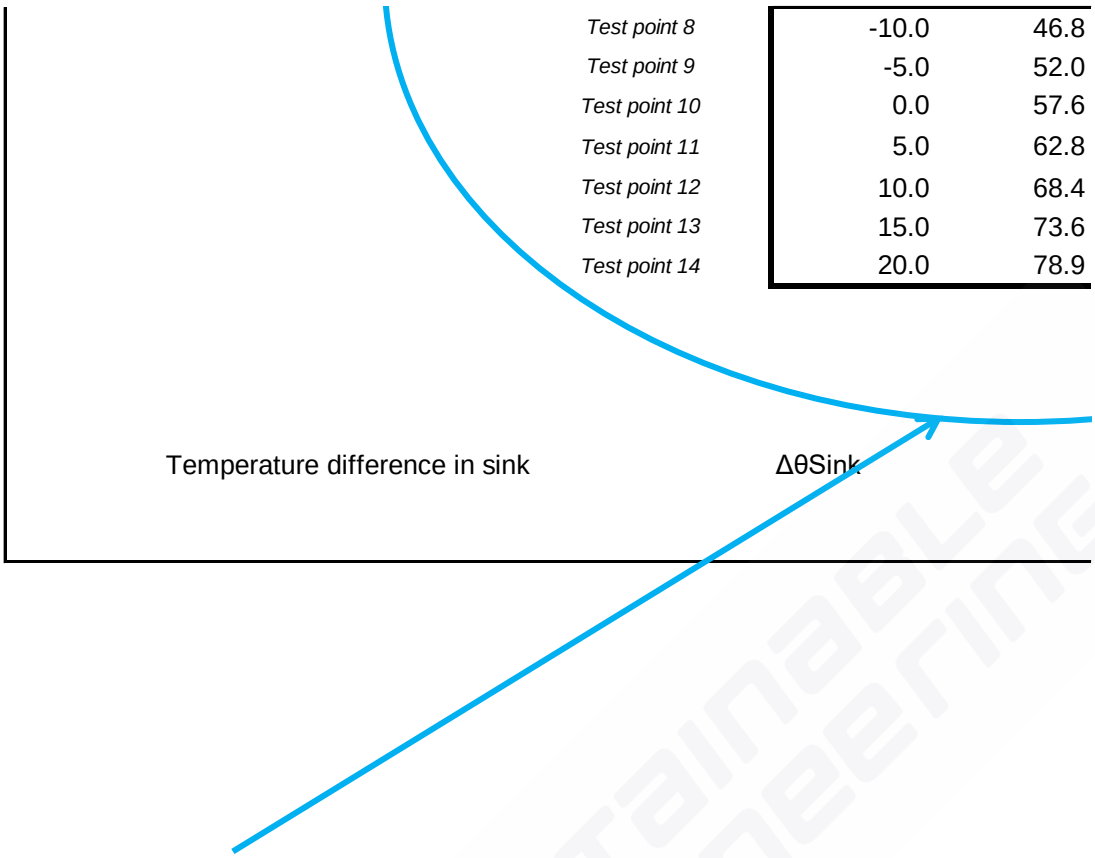
^ this columr

Input data for PHPP SI units

Misubishi MSZ-GL50VGD

Source: 1-Outdoor air

	θ_source °C	θ_sink °C
Test point 1	-10.0	31.4
Test point 2	-5.0	33.5
Test point 3	0.0	35.7
Test point 4	5.0	37.8
Test point 5	10.0	40.1
Test point 6	15.0	42.2
Test point 7	20.0	44.3



Test point 8	-10.0	46.8
Test point 9	-5.0	52.0
Test point 10	0.0	57.6
Test point 11	5.0	62.8
Test point 12	10.0	68.4
Test point 13	15.0	73.6
Test point 14	20.0	78.9

Insert into PHPP

m³/h	kW		kW	°C
Airflow_inside unit	Heatig capacity	COP	P_el	T_sink_max flow
1014	3.48	3.63	0.959	31.4
1014	4.18	3.68	1.137	33.5
1014	4.93	3.91	1.26	35.7
1014	5.63	4.14	1.36	37.8
1014	6.38	4.48	1.425	40.1
1014	7.08	4.83	1.466	42.2
1014	7.80	5.13	1.521	44.3

ı to be sourced from manufacturer's test data, but as close as possible to 20°C preferred

Heating cap kW	COP (De-rated)
3.48	3.63
4.18	3.68
4.93	3.91
5.63	4.14
6.38	4.48
7.08	4.83
7.80	5.13

COP
CARNOT
7.356302217
7.96642213
8.644166607
9.473710023
10.41748314
11.61000482
13.05881197

eta
0.429

3.48	2.42
4.18	2.45
4.93	2.46
5.63	2.49
6.38	2.51
7.08	2.54
7.80	2.56

0.00 K

5.629116365	
5.70061297	
5.740857293	eta
5.811017046	0.429
5.849652972	
5.918522181	
5.97435498	

Eta should be the sam

85

87

88

90

Heating Load

Heating load P_H

Abbreviated Instructions (see "Description of Calculation of split-type Air-to-Air Heat pumps for heating

Step 1: In this spreadsheet insert manufacturers data in all blank input cells C6 – I24. Power designed in cell J9 i

Step 2: Make sure there is no storage for heating chosen in DHW tab in row 186 of PHPP 9

Step 3: Temperature of Sink, (T_sink_designed in cell N13). Insert this value into DHW tab cell J30 of PHPP 9

Step 4: "Paste special" "as values only" relevant (SI or IP units) input values (below row 36 on this spreadsheet)

Step 5: At the top of the HP tab, choose your just entered split air-air HP unit from the drop down menu in cell J

Step 6: In cells P10-R10 in PER tab in PHPP 9, choose Heat pump as the primary source of heating (usually input

Power designed	**1194.00**	w
T_sink_designed	**29.60726644**	°C

°C
T_sink_min flow
46.8
52.0
57.6
62.8
68.4
73.6
78.9

Input data for PHPP IP units

Misubishi MSZ-GL50VGD

Source: 1-Outdoor air

		θ_source °F	θ_sink °F	Heating cap kBtu/hr	De-rated COI
0.493288594	*Test point 1*	14.0	88.5	11.88	3.63
0.461479594	*Test point 2*	23.0	92.3	14.27	3.68
0.452640329	*Test point 3*	32.0	96.3	16.83	3.91
0.436967764	*Test point 4*	41.0	100.1	19.22	4.14
0.429776634	*Test point 5*	50.0	104.1	21.77	4.48
0.415974671	*Test point 6*	59.0	107.9	24.16	4.83
0.39270074	*Test point 7*	68.0	111.8	26.62	5.13

0.429230197	*Test point 8*	14.0	116.3	11.88	2.42
0.429230197	*Test point 9*	23.0	125.7	14.27	2.45
0.429230197	*Test point 10*	32.0	135.7	16.83	2.46
0.429230197	*Test point 11*	41.0	145.1	19.22	2.49
0.429230197	*Test point 12*	50.0	155.1	21.77	2.51
0.429230197	*Test point 13*	59.0	164.5	24.16	2.54
0.429230197	*Test point 14*	68.0	174.1	26.62	2.56

Temperature difference in sink ΔθSink **0.00** K

$P_L - P_G$ = 245

=

purposes in HP sheet in PHPP" by Tomas Mikeska of PHI, source of this excerpt):

is "nominal power of distribution system" calculated by PHPP (cell F22 in PHPP 8)

into the corresponding user data field at the bottom of the HP tab of your PHPP. Note: "difference in sink
21 of PHPP 9, then choose "2-radiators" from the dr 85.3
100%)

istribution

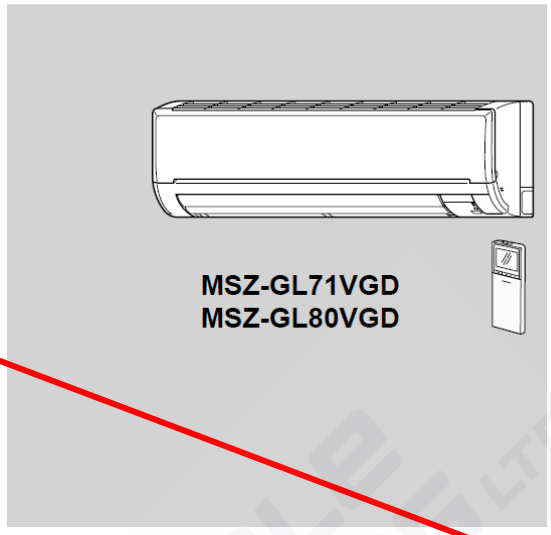
MITSUBIS
ELECTRI

SPLIT-TYPE AIR CONDITIONERS

SERVICE MA

Models

MSZ-GL25VC
MSZ-GL35VC
MSZ-GL42VC
MSZ-GL50VC
MSZ-GL60VC
MSZ-GL71VC
MSZ-GL80VC



Indoor model				
Power supply				
Electrical data	Power input *1	Cooling	W	
		Heating		
	Running current *1	Cooling	A	
		Heating		
Fan motor	Model			
	Current *1	Cooling	A	
		Heating		
Dimensions W × H × D			mm	
Weight			kg	
Airflow	Air direction			
	Cooling	Super High + LONG + POWERFUL	m³/h	
		Super High		
		High		
		Med.		
		Low		
		Silent		
	Heating	Super High + LONG + POWERFUL	m³/h	
		Super High		
		High		
		Med.		
		Low		
		Silent		

Airflows

50	or	2324
2450	W	

Don't forget divide by 1000

‹ temp” should be zero

SHI
C
S

SPLIT-TY

OUT

SE

ANUAL

No. OBH728

Mode

MU
MU
MU
MU
MU
MU
MU

GD - A1
GD - A1
GD - A1
GD - A1
GD - A1
GD - A1
GD - A1

Outdoor unit service manual
MUZ-GL·VGD Series (OBH729)

CONTENTS

Dimensions (WxDxH): 923 x 250 x 305mm

PARTS CATALOG (OBB728)

MSZ-GL

Heating Ca

Heating Ef

Cooling Capacity: 4.8

Cooling Efficiency – EE

MSZ-GL50VGD
34
34
0.32
0.32
RC0J3
0.32
0.32
923 × 30
12.5
1,014
1,014
876
726
1,014
1,014
876
744
540
408

MUZ-GL

CAPACITY:

INDOOR DB (°C)	
15	
21	
26	

MITSUBISHI ELECTRIC

PE AIR CONDITIONERS

TDOOR UNIT

RVICE MANUAL

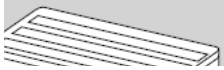
HFC utilized R32

No. OBH729

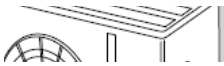
els

Z-GL25VGD - A1
Z-GL35VGD - A1
Z-GL42VGD - A1
Z-GL50VGD - A1
Z-GL60VGD - A1
Z-GL71VGD - A1
Z-GL80VGD - A1

Indoor unit service manual
MSZ-GL•VGD Series (OBH728)



CONTENTS



L50VGD

ıpacity: 5.8 kW (min 1.6kW~max 8.0kW)

ficiency – COP: 4.19 / ACOP: 4.18

kW (min 1.5kW~max 6.2kW)

:R: 4.32 / AEER: 4.31

50VGD ← Selected Unit Heatir

5.8 kW INPUT: 1370 W

	OUTDOOR WB (°C)								
-10		-5		0		5		10	
Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	I
3.65	891	4.41	1069	5.16	1206	5.92	1302	6.67	
3.48	959	4.18	1137	4.93	1260	5.63	1356	6.38	
3.13	1028	3.89	1206	4.58	1329	5.34	1425	6.09	

The Seasonal Energy Efficienc

ıg Data

)		15		20
INPUT	Q	INPUT	Q	INPUT
1384	7.37	1425	8.12	1452
1425	7.08	1466	7.80	1521
1493	6.79	1534	7.54	1576

y Ratio estimated from MaxCooling / Input pow

er