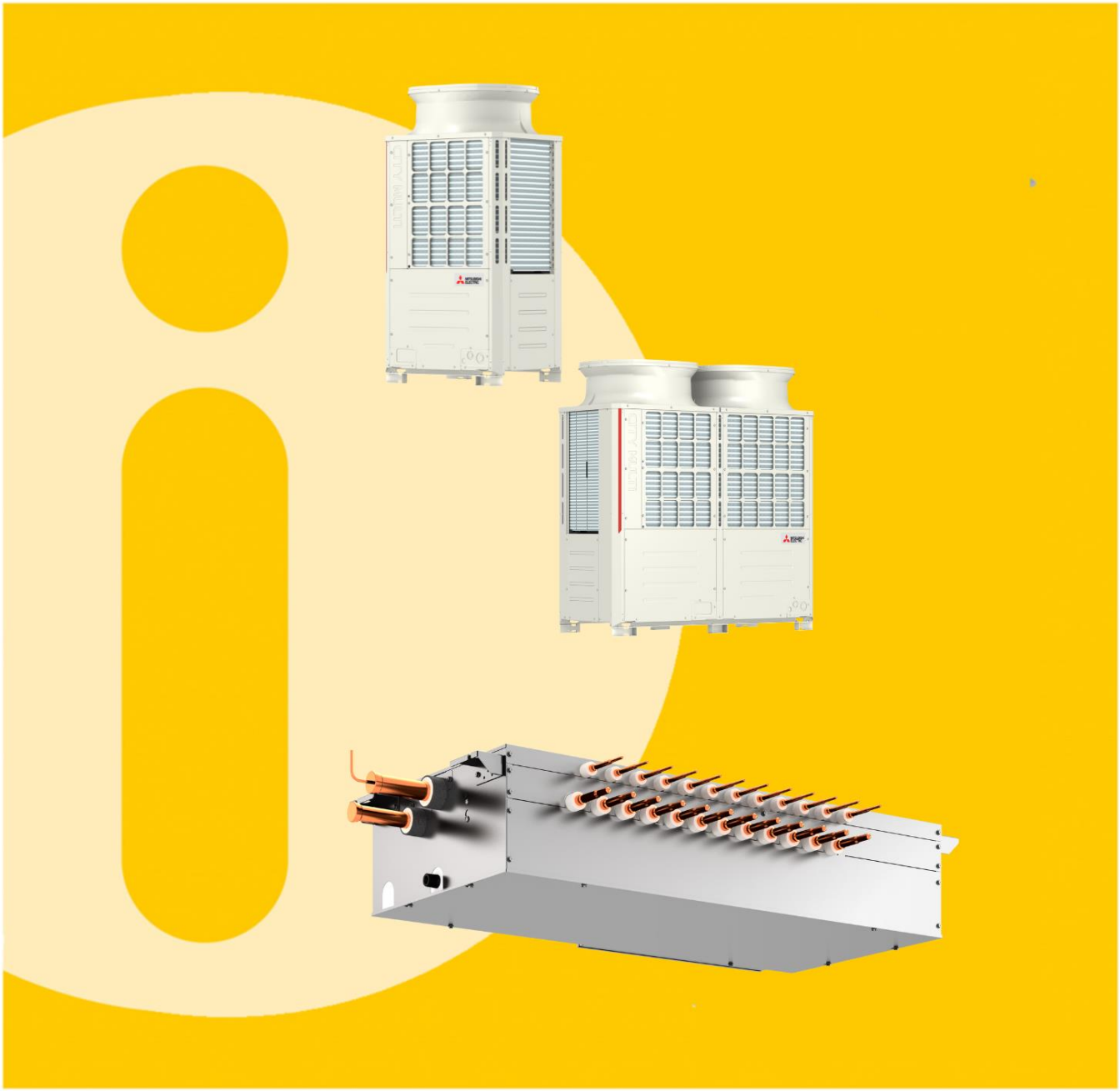
CITY MULTI i

MITSUBISHI ELECTRIC

City Multi VRF

Quick Reference Guide 2024-

R410A R2 Series



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1. Heat Recovery (R2) Series

The following sections provides detail on the Piping Restrictions and Pipe Selections:

RANGE	Standard Efficiency R2 Series	Comprising
8 HP	PURY-P200YNW-A2	
10 HP	PURY-P250YNW-A2	
12 HP	PURY-P300YNW-A2	
14 HP	PURY-P350YNW-A2	
16 HP	PURY-P400YNW-A2	
18 HP	PURY-P450YNW-A2	
20 HP	PURY-P500YNW-A2	
22 HP	PURY-P550YNW-A2	
16 HP	PURY-P400YSNW-A2	PURY-P200YNW-A2 PURY-P200YNW-A2
18 HP	PURY-P450YSNW-A2	PURY-P200YNW-A2 PURY-P250YNW-A2
20 HP	PURY-P500YSNW-A2	PURY-P250YNW-A2 PURY-P250YNW-A2
22 HP	PURY-P550YSNW-A2	PURY-P250YNW-A2 PURY-P300YNW-A2
24 HP	PURY-P600YSNW-A2	PURY-P300YNW-A2 PURY-P300YNW-A2
26 HP	PURY-P650YSNW-A2	PURY-P300YNW-A2 PURY-P350YNW-A2
28 HP	PURY-P700YSNW-A2	PURY-P350YNW-A2 PURY-P350YNW-A2
30 HP	PURY-P750YSNW-A2	PURY-P350YNW-A2 PURY-P400YNW-A2
32 HP	PURY-P800YSNW-A2	PURY-P400YNW-A2 PURY-P400YNW-A2
34 HP	PURY-P850YSNW-A2	PURY-P400YNW-A2 PURY-P450YNW-A2
36 HP	PURY-P900YSNW-A2	PURY-P450YNW-A2 PURY-P450YNW-A2
38 HP	PURY-P950YSNW-A2	PURY-P450YNW-A2 PURY-P500YNW-A2
40 HP	PURY-P1000YSNW-A2	PURY-P500YNW-A2 PURY-P500YNW-A2
42 HP	PURY-P1050YSNW-A2	PURY-P500YNW-A2 PURY-P550YNW-A2
44 HP	PURY-P1100YSNW-A2	PURY-P550YNW-A2 PURY-P550YNW-A2

High Efficiency R2 Series	Comprising
PURY-EP200YNW-A2	
PURY-EP250YNW-A2	
PURY-EP300YNW-A2	
PURY-EP350YNW-A2	
PURY-EP400YNW-A2	
PURY-EP450YNW-A2	
PURY-EP500YNW-A2	
PURY-EP550YNW-A2	
PURY-EP400YSNW-A2	PURY-EP200YNW-A2 PURY-EP200YNW-A2
PURY-EP450YSNW-A2	PURY-EP200YNW-A2 PURY-EP250YNW-A2
PURY-EP500YSNW-A2	PURY-EP250YNW-A2 PURY-EP250YNW-A2
PURY-EP550YSNW-A2	PURY-EP250YNW-A2 PURY-EP300YNW-A2
PURY-EP600YSNW-A2	PURY-EP300YNW-A2 PURY-EP300YNW-A2
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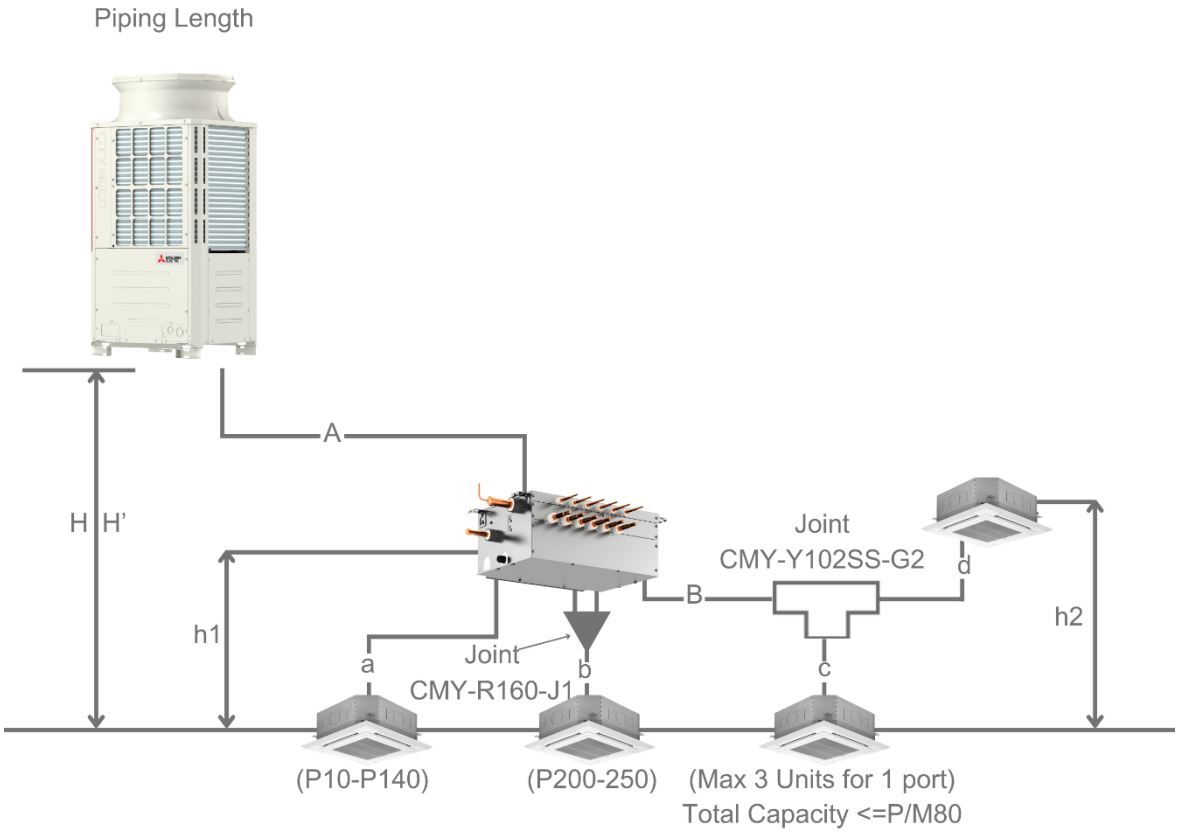
PURY-EP750YSNW-A2	PURY-EP350YNW-A2 PURY-EP400YNW-A2
PURY-EP800YSNW-A2	PURY-EP400YNW-A2 PURY-EP400YNW-A2
PURY-EP850YSNW-A2	PURY-EP400YNW-A2 PURY-EP450YNW-A2
PURY-EP900YSNW-A2	PURY-EP450YNW-A2 PURY-EP450YNW-A2
PURY-EP950YSNW-A2	PURY-EP450YNW-A2 PURY-EP500YNW-A2
PURY-EP1000YSNW-A2	PURY-EP500YNW-A2 PURY-EP500YNW-A2
PURY-EP1050YSNW-A2	PURY-EP500YNW-A2 PURY-EP550YNW-A2
PURY-EP1100YSNW-A2	PURY-EP550YNW-A2 PURY-EP550YNW-A2

PURY- (E)P200-550YNW-A2



If the CMY-R160-J1 joint is not used for P/M100-140, the capacity should be multiplied by the correlation factor 0.97.

Piping Length		
Item	**Pipe Section**	**Max Length**
Total piping length	A+B+a+b+c+d	See Chart 1
Furthest piping length	A+B+d	165 m
Length between OU & BC	A	110 m (See Chart 1 on Page 8)
Length between furthest IU & BC	B+d	60 m *1 (40m *2)
Height between OU & IU (OU above IU)	H	50 m *3
Height between indoor & outdoor units (OU below IU)	H`	40 m *4
Height between IU and BC	h1	15 m *5
Height between IU and IU	h2	30 m *6

*1. See chart 2 for maximum distance based on height difference (Page 8).

*2. When P200 or P250 indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit is 40 m.

*3. 90 m is available depending on the model and installation conditions. Please refer to design tool schematic & 'Height Check' document.

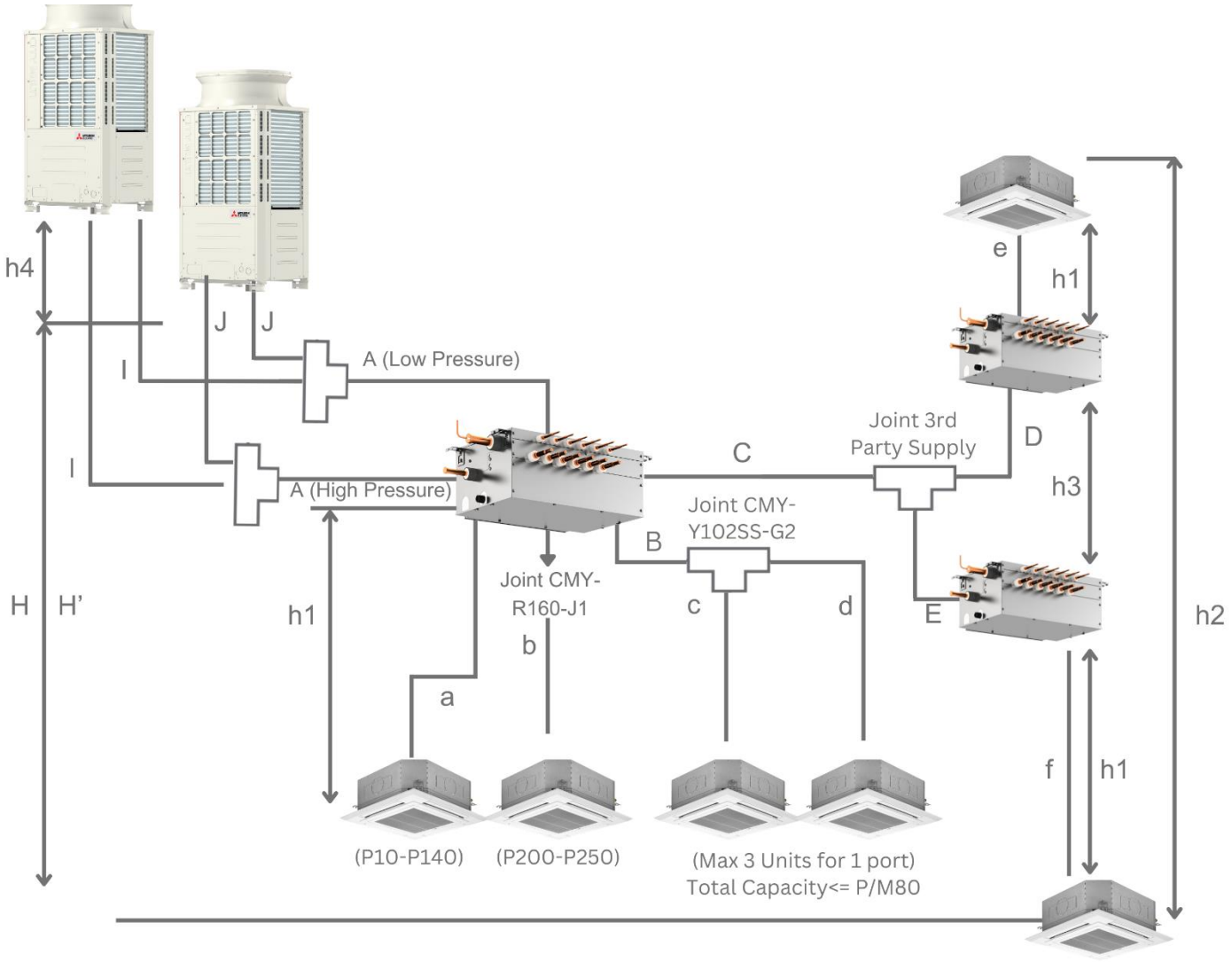
*4. 60 m is available depending on the model and installation conditions. Please refer to design tool schematic & 'Height Check' document.

*5. Distance of Indoor sized P200, P250 from BC must be less than 10 m.

*6. Distance of Indoor sized P200, P250 from BC must be less than 20 m.

PURY- (E)P400-1100YSNW-A2

Outdoor Twinning Kits:



Outdoor Unit YSNW	Twinning Kit
P400 ~ P650	CMY-R100VBK4
P700 ~ P1100	CMY-R200VBK4

When outdoor units equal to or larger than size P950, please ensure to use BC controller CMB-P1016V-KA1.

If the CMY-R160-J1 Joint is not used for P/M 100-140, the capacity should be multiplied by a correction factor 0.97.

Piping Length		
Item	**Pipe Section**	**Max Length**
Total piping length	I+J+A+B+C+D+ E+ a+b+c+d+e+f	See Chart 1
Furthest piping length	I(J)+A+C+E+f	165 m
Length between OU & BC	I(J)+A	110 m (See Chart 1 on Page 8)
Length between furthest IU & Main BC	B+d	60 m *1 (40m *2)
Length between furthest IU & Main BC via Sub-BC	C+E+f	60 (90) m *7
Height between OU & IU (OU above IU)	H	50 m *3
Height between indoor & outdoor units (OU below IU)	H`	40 m *4
Height between IU and BC	h1	15 m *5
Height between IU and IU	h2	30 m *6
Height between BC (Main or Sub) and BC (Sub)	h3	15 m (10 m *8)
Distance between Main unit and Sub unit (Outdoor)	I+J	5 m
Height between Main unit and Sub unit (Outdoor)	h4	0.1 m

*1. See chart 2 for maximum distance based on height difference (Page 8).

*2. When P200 or P250 indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit is 40 m.

*3. 90 m is available depending on the model and installation conditions. Please refer to design tool schematic & ‘Height Check’ document.

*4. 60 m is available depending on the model and installation conditions. Please refer to design tool schematic & ‘Height Check’ document.

*5. Distance of Indoor sized P200, P250 from BC must be less than 10 m.

*6. Distance of Indoor sized P200, P250 from BC must be less than 20 m.

*7. If height difference between BC Controller and indoor unit is zero, then 90 m is possible (Refer to Chart 3 On page 9). Increase the size of the high-

pressure pipe and the liquid pipe between the main BC and sub BC by one size.

When using P/M32, P/M40, P/M50, P/M100, or P/M125 model of indoor units, increase the size of the liquid branch pipe between the Sub BC and indoor unit by one size. When using indoor models P/M140 or larger and if height difference between BC Controller and indoor unit is zero, then the restrictions of 60 m cannot be exceeded.

*8. When using 2 Sub BC controllers, max. height ‘’h3’’ is 10m.

Outdoor Unit – BC Controller (Pipe A)

Outdoor Unit – BC Controller (Pipe A)		
Outdoor Unit	**Liquid – mm (in)**	**Gas – mm (in)**
P200	15.88 (5/8”)	19.05 (3/4”)
P250-P300	19.05 (3/4”)	22.20 (7/8”)
P350	19.05 (3/4”)	28.58 (1-1/8”)
P400-P600	22.20 (7/8”) *9	28.58 (1-1/8”)
P650	28.58 (1-1/8”)	28.58 (1-1/8”)
P700-P800	28.58 (1-1/8”)	34.93 (1-3/8”)
P850-P950	28.58 (1-1/8”)	41.28 (1-5/8”)
P1000	28.58 (1-1/8”)	41.28 (1-5/8”)
P1000	28.58 (1-1/8”)	41.28 (1-5/8”)
P1050-P1100	34.93 (1-3/8”)	41.28 (1-5/8”)

*9 For P550 Y(S)NW & P600 Y(S)NW OU when the high-pressure piping length exceeds 65 m, use ø22.2 (ø7/8) pipe until 65 m and then after use ø28.58 (ø1-1/8).

BC Controller – Branch (Pipe B)

Outdoor Unit – BC Controller (Pipe B) BC to Branch Joint		
Total Capacity of Indoor Units	**Liquid – mm (in)**	**Gas – mm (in)**
≤P/M140	9.52 (3/8”)	15.88 (5/8”)
P/M141-P/M200	9.52 (3/8”)	19.05 (3/4")
P/M201-P/M250	9.52 (3/8”)	22.20 (7/8")

BC Controller – BC Controller (Pipe C, D, E)

BC Controller – BC Controller (Pipe C, D, E)			
Total Capacity of Indoor Units	**Liquid – mm (in)**	**High Pressure Gas HP– mm (in)**	**Low Pressure Gas LP – mm (in)**
≤P/M200	9.52 (3/8”)	15.88 (5/8”)	19.05 (3/4”)
P/M201 ~ P/M300	9.52 (3/8”)	19.05 (3/4”)	22.20 (7/8”)
P/M301 ~ P/M350	12.70 (1/2”)	19.05 (3/4”)	28.58 (1-1/8”)
P/M351 ~ P/M400	12.70 (1/2”)	22.20 (7/8”)	28.58 (1-1/8”)
P/M401 ~ P/M600	15.88 (5/8”)	22.20 (7/8”)	28.58 (1-1/8”)
P/M601 ~ P/M650	15.88 (5/8”)	28.58 (1-1/8”)	28.58 (1-1/8”)
P/M651 ~ P/M800	19.05 (3/4”)	28.58 (1-1/8”)	34.93 (1-3/8”)
P/M801 ~ P/M1000	19.05 (3/4”)	28.58 (1-1/8”)	41.28 (1-5/8”)
>P/M1001	19.05 (3/4”)	34.93 (1-3/8”)	41.28 (1-5/8”)

BC Controller or Branch –Indoor Unit (Pipe a, b, c, d, e, f)

BC Controller or Branch – Indoor Unit (Pipe a, b, c, d, e, f)		
Total Capacity of Indoor Units	**Liquid – mm (in)**	**Gas – mm (in)**
P10 ~ P50, M20 to M50	6.35 (1/4”)	12.70 (1/2”)
P63 ~ P140, M63 to M140	9.52 (3/8”)	15.88 (5/8”)
P200	9.52 (3/8”)	19.05 (3/4”)
P250	9.52 (3/8”)	22.70 (7/8”)

Outdoor Unit – Outdoor Unit (Pipe I,J)

Outdoor Unit – Outdoor Unit (Pipe I,J)		
Outdoor Unit	**Liquid – mm (in)**	**Gas – mm (in)**
P200	15.88 (5/8”)	19.05 (3/4”)
P250-P300	19.05 (3/4”)	22.20 (7/8”)
P350	19.05 (3/4”)	28.58 (1-1/8”)
P400-P550	22.20 (7/8”)	28.58 (1-1/8”)

Chart 1

GRAPH 1: TOTAL PIPING LENGTH RESTRICTIONS

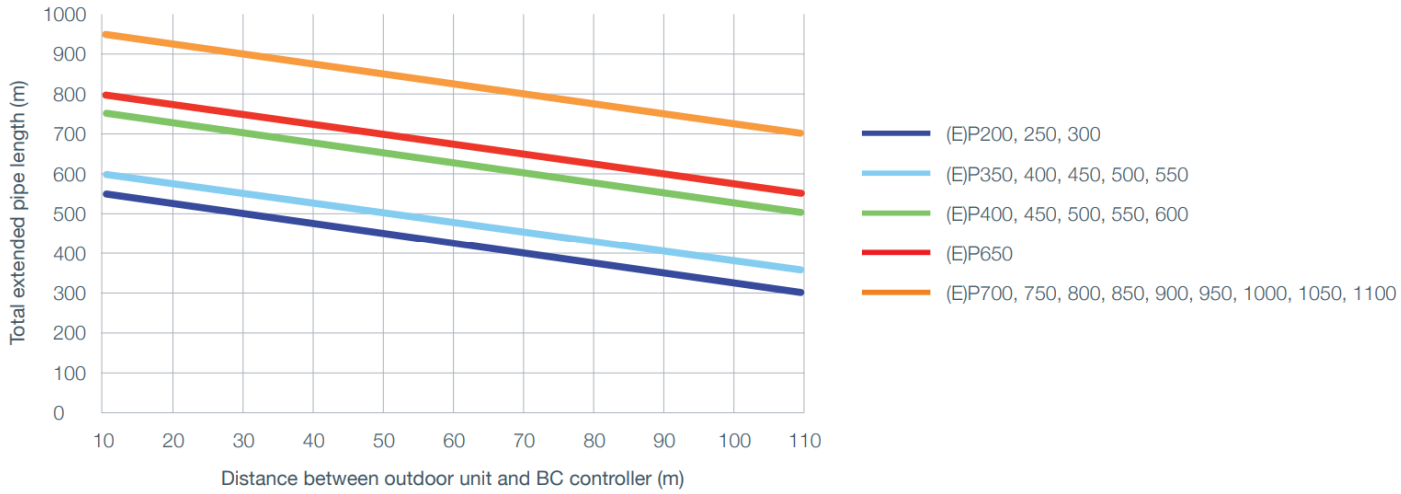


Chart 2

GRAPH 2: PIPE LENGTH BETWEEN BC CONTROLLER & INDOOR UNIT

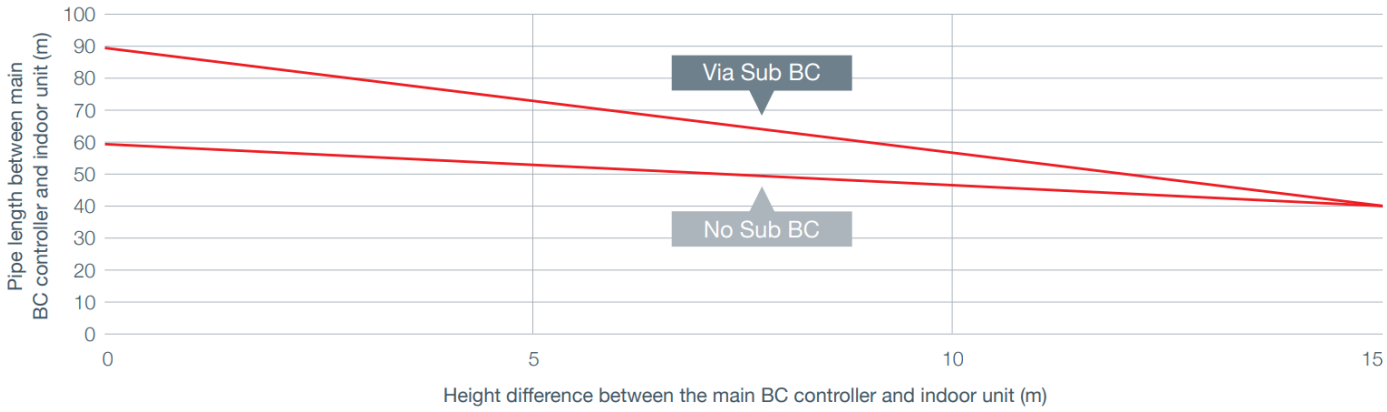
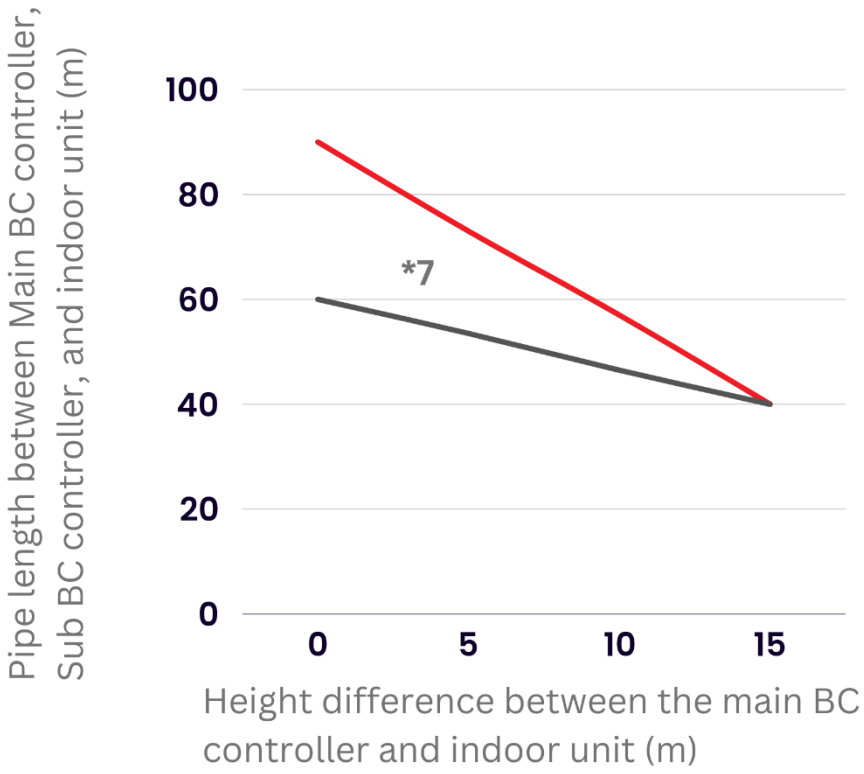


Chart 3

GRAPH 3



*7 Increase the size of the high-pressure pipe and the liquid pipe between the main BC and sub BC by one size.

When using P/M32, P/M40, P/M50, P/M100, or P/M125 model of indoor units, increase the size of the liquid branch pipe between the sub BC and indoor unit by one size.

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Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

Effective as of January 2022

Green Gateway
www.greengateway.mitsubishielectric.co.uk
Mitsubishi Electric UK's commitment to the environment

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