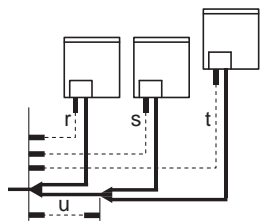


### Example 3: with standard multi layout



#### Maximum allowable length

- Between outdoor and indoor units (standard multi/free multi combinations)

<b>Actual piping length</b>	165 m/135 m	<u>Example 1.1</u> unit 8: $a+b+c+d+e+f+g+p \leq 165$ m	<u>Example 1.2</u> unit 6: $a+b+h \leq 165$ m unit 8: $a+i+k \leq 165$ m	<u>Example 1.3</u> unit 8: $a+i \leq 165$ m
<b>Equivalent length<sup>(2)</sup></b>	190 m/160 m	—	—	—
<b>Total piping length</b>	1000 m/500 m	<u>Example 1.1</u> $a+b+c+d+e+f+g+h+i+j+k+l+m+n+p \leq 1000$ m <u>Example 2.1</u> $a+b+c+d+e+f+g+h+i+j+k+l+m+n+p \leq 500$ m	—	—

- Between outdoor branch and outdoor unit (only in case >20 HP)

<b>Actual piping length</b>	10 m	<u>Example 3</u> $r, s, t \leq 10$ m; $u \leq 5$ m
<b>Equivalent length</b>	13 m	—

#### Maximum allowable height difference

H1	$\leq 50$ m (40 m) <sup>(a)</sup> (if outdoor is located below indoor units)
H2	$\leq 30$ m
H3	$\leq 5$ m

- (a) Conditional extension up till 90 m is possible without additional option kit:  
In case the outdoor location is higher than indoor: extension is possible up till 90 m and following 2 conditions must be fulfilled:  
Liquid piping size up (see table "Size up").  
Dedicated setting on outdoor unit is required (see "[2-49]").
- In case the outdoor location is lower than indoor: extension is possible up till 90 m and following 6 conditions must be fulfilled:  
40–60 m: minimum connection ratio connected: 80%.  
60–65 m: minimum connection ratio connected: 90%.  
65–80 m: minimum connection ratio connected: 100%.  
80–90 m: minimum connection ratio connected: 110%.  
Liquid piping size up (see table "Size up").  
Dedicated setting on outdoor unit is required (see "[2-35]").

#### Maximum allowable length after branch

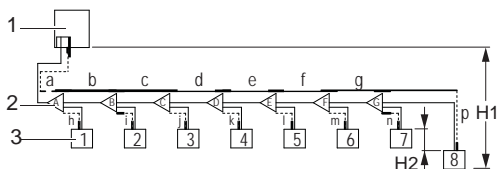
The pipe length from the first refrigerant branch kit to the indoor unit  $\leq 40$  m.

Example 1.1: unit 8:  $b+c+d+e+f+g+p \leq 40$  m

Example 1.2: unit 6:  $b+h \leq 40$  m, unit 8:  $i+k \leq 40$  m

Example 1.3: unit 8:  $i \leq 40$  m

However, extension is possible if all below conditions are met. In this case limitation can be extended up to 90 m.



- Outdoor units
- Refnet joints (A–G)
- Indoor unit (1–8)

- The piping length between all indoor to the nearest branch kit is  $\leq 40$  m.

Example: h, l, j ...  $p \leq 40$  m

- It is necessary to increase the pipe size of the gas and liquid piping if the pipe length between the first and the final branch kit is over 40 m.

If the increased pipe size is larger than the pipe size of the main pipe, then the pipe size of the main pipe has to be increased as well.

Increase the pipe size as follows:

9.5 → 12.7; 12.7 → 15.9; 15.9 → 19.1; 19.1 → 22.2; 22.2 → 25.4<sup>(1)</sup>; 28.6 → 31.8<sup>(3)</sup>; 34.9 → 38.1<sup>(3)</sup>

Example: unit 8:  $b+c+d+e+f+g+p \leq 90$  m and  $b+c+d+e+f+g > 40$  m; increase the pipe size of b, c, d, e, f, g.

(1) If available on the site. Otherwise it cannot be increased.