

Date: 08/02/2017  
 Subject: Partial DVM S System Startup  
 Models: All DVM S models

**Partial DVM S System Startup**

Some DVM S projects may require partial system startup. Caution must be taken with ball valve placement on the refrigerant system, and also the combination ratio (indoor / outdoor ratio) of the partially installed system. Potential problems that may occur are oil stagnation in the refrigerant piping, and excessive refrigerant flow when the system is operated in heating mode. The pipe system must be designed with future anticipated indoor units that may not be installed initially to ensure proper pipe diameters throughout.

**Ball valve placement**

Ball valves should be placed to limit the amount of idle pipe on the system. Full port ball valves must be placed no further than 1.5 feet from a Y-branch to limit the amount of oil that may collect in idle sections of pipe. Please see the sample pipe diagrams on page 2.

Outdoor option setting for oil recovery interval (option number 04) should be set during commissioning to reduce oil collection interval time in half. Please see the outdoor unit installation manual for full option setting details.

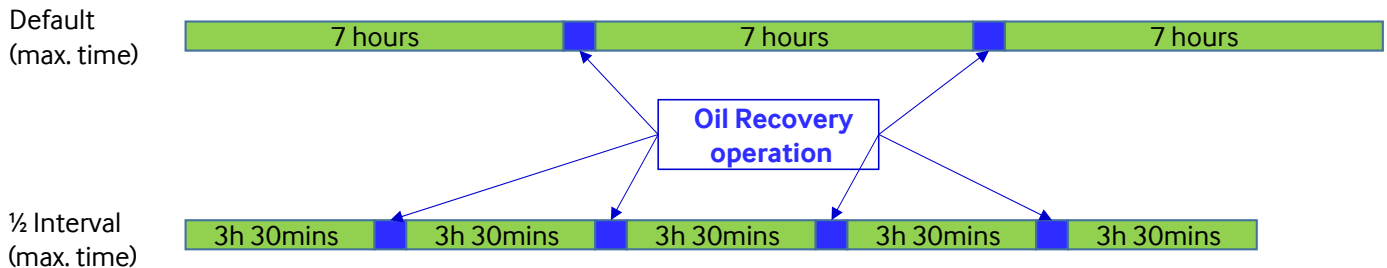
**Systems with under 50% combination ratio**

Systems with under 50% indoor /outdoor combination ratio should only be operated in Cooling Mode. The system should be programmed to "Cooling Only". This can be done via wired controllers, central control options, or an Outdoor Mode Selector switch. Outdoor option setting for oil recovery interval (option number 04) should be field set to reduce time between oil collection operations in half. Please see the outdoor unit installation manual for full option setting details.

**Outdoor Option Setting 04**

Optional item	Input unit	SEG1	SEG2	SEG3	SEG4	Function of the option
Oil collection interval	Main	0	4	0	0	Factory default
				0	1	Shorten the interval by 1/2

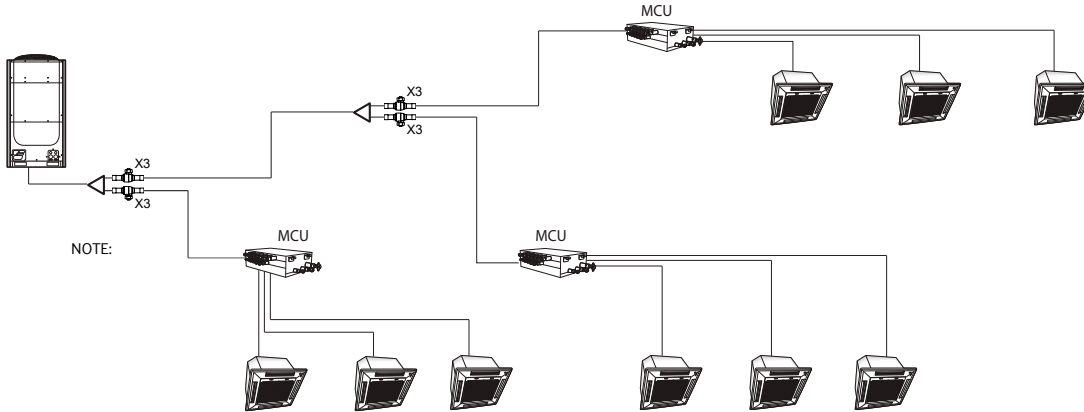
Purpose: To shorten the Oil recovery interval by 1/2 (temporary service use only)



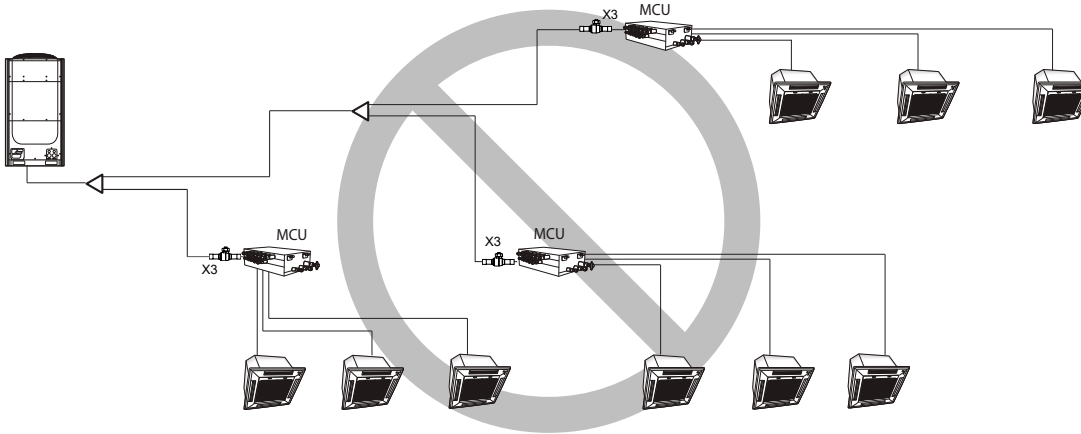
**Ball Valve Placement Examples**

**Heat Recovery Example**

CORRECT - Isolation valves installed immediately after Y-joint

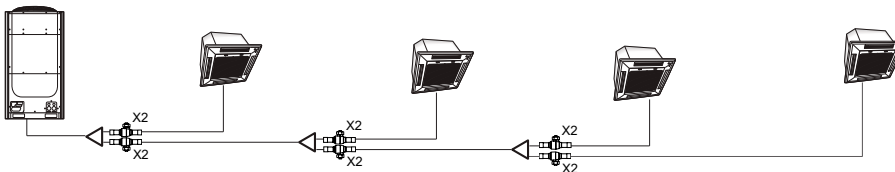


INCORRECT - Isolation valves installed immediately before MCU



**Heat Pump Example**

CORRECT - Isolation valves installed immediately after Y-joint



INCORRECT - Isolation valves installed immediately before each indoor unit

