



Product Bulletin

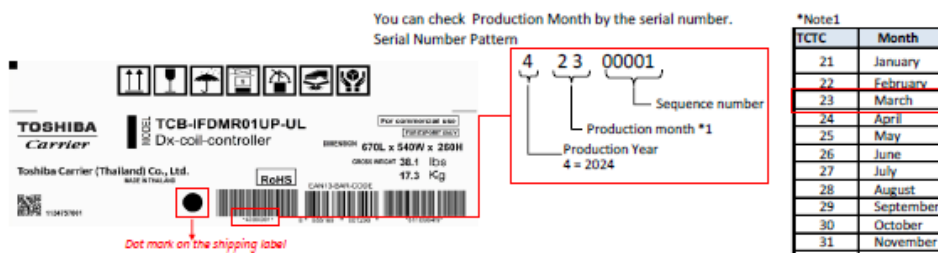
Date	Subject	Department
4/15/2024	u-Series DX Kit Update	Ductless & VRF
Bulletin Number	Product Model Number(s)	Author Name/Phone/Email
VRF-24-006	TCB-IFDMR01UP-UL	Steven Hunt steven.hunt2@carrier.com

Toshiba Carrier u-Series DX Kit Update

In the initial bulletin for the new u-Series DX kits, we stated that they were NOT compatible with single phase heat pumps and u-Series heat recovery units. DX kits that have been produced as of March 2024 will have the compatibility with both the single-phase heat pumps, as well as the new u-Series heat recovery units.

To verify whether the DX kit you purchased has this capability, please check your nameplate for the information listed below to determine the date when the DX kit was manufactured.

Figure 1 – DX Kit Controller (TCB-IFDMR01UP) Nameplate



When installing the new u-Series DX kit, please see below for the compatibility and connected capacity limits with both u-Series and e-Series systems.

Figure 2 – u-Series DX Kit Compatibility

Type	SMMSu Elite Heat	SMMSu	SMMS-e	SHRM-e*1	SHRMu Elite Heat	SHRMu	Mini VRF
TA type	80-110%	60-110%			80-110%	70-110%	60-110%*2
DDC type	80-100%	75-100%			x	x	x
TF type	80-100%		x	x	80-110%		x

Note:

*1: 6 and 8Ton only.

*2: Mini VRF 1 by 1 connection is 100% only



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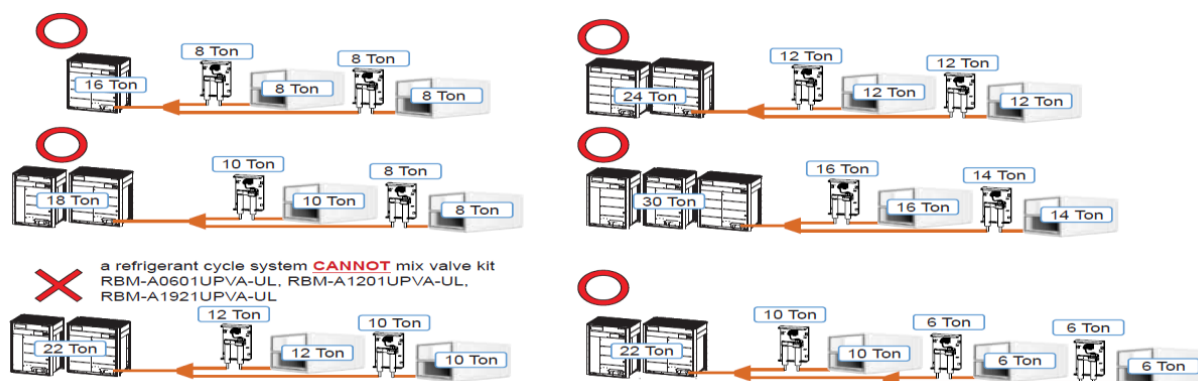
When installing the u-Series DX kit to heat recovery systems, please observe the following piping rules below.

Figure 3 – u-Series DX Kit Piping Rules

Item		6 Ton or more				Less than 6 Ton
		TA type		TF, DDC type		
		ft	m	ft	m	
Main pipe equivalent length		Same as piping length restriction of outdoor unit		Same as piping length restriction of outdoor unit		Standard VRF outdoor unit piping limitations based on model selection apply
Total piping length		656	200	328	100	
Furthest equivalent pipe length L (Real length)		427 (394)	130 (120)	-	-	
Furthest equivalent pipe length from the 1st branch		131	40	-	-	
Furthest equivalent pipe length between outdoor		Same as piping length restriction of outdoor unit		-	-	
Max, real length of pipes connected to indoor units		66	20	-	-	
Maximum equivalent between branching section		98	30	-	-	
Max. Height Difference	Outdoor unit - Indoor unit (Upper outdoor unit) H1		131 (40m) or the outdoor unit spec. whichever shorter.	131	40	
	Outdoor unit - Indoor unit (Lower outdoor unit) H1	H2>3m				
		H2≤3m		-	-	
	Indoor unit - Indoor unit (Upper outdoor unit) H2			-	-	
	Indoor unit - Indoor unit (Lower outdoor unit) H2		-	-		

When designing a system with multiple DX kits, each of the PMV kits used must be the same model. Systems containing more than one (1) of the PMV kit models are prohibited.

Figure 4 – u-Series DX Kits – Systems with Multiple DX Kits

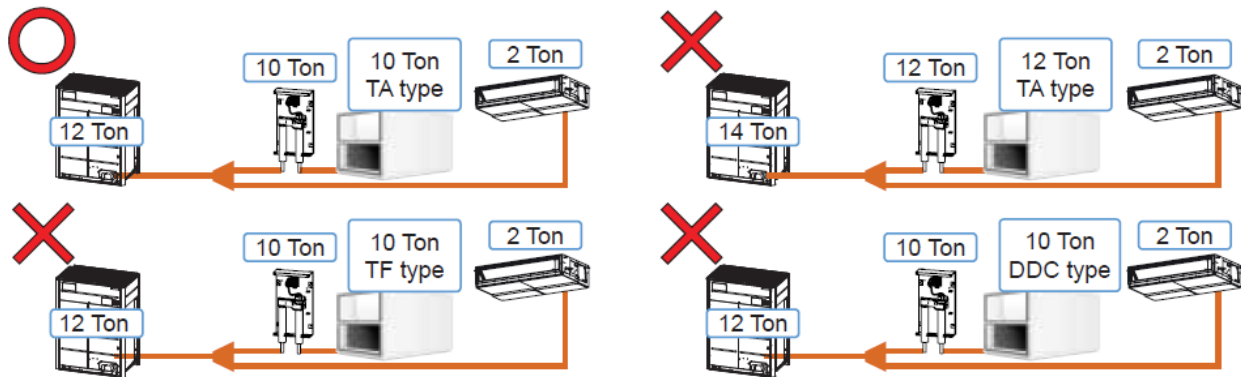




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DX kits may also be used with other indoor units in a single system, but are limited to a maximum size of 10 tons. If combining u-Series DX kits with other indoor units, the DX kit must only operate in TA (return air) control.

Figure 5 – u-Series DX Kits Compatibility with Other VRF IDUs



We are currently in the process of adding this functionality to Vpro. We are targeting having the ability to design heat recovery and single phase heat pump systems in Vpro, May 2024.

For additional support please reach out to vrfapplications@carrier.com.