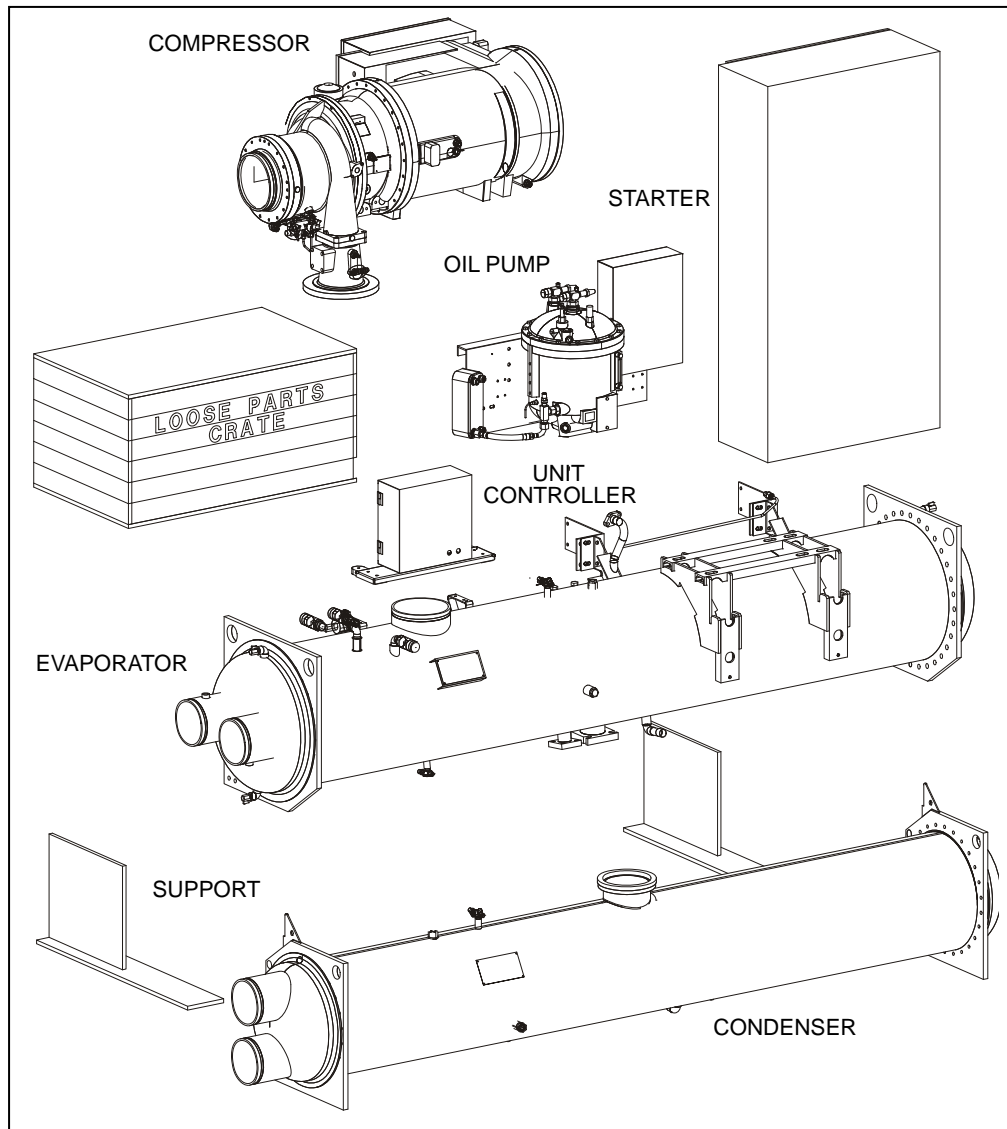


Group: **Chiller**Part Number: **IM1128**

REV: 03

Effective: **October 2017**Supersedes: **July 2015**

## WMC-B Centrifugal Chillers Reassembly of Knockdown Shipments






## Table of Contents

<b>WMC-B Introduction.....</b>	<b>3</b>
Type IV Disassembly-Reassembly .....	4
Type V Disassembly-Reassembly .....	4

### Recognize Safety Symbols, Words, and Labels

The following label is used in this manual to indicate immediate or potential hazards. It is the responsibility of the owner and installer to read and comply with all safety information and instructions accompanying these symbols. Improper installation, operation and maintenance can void the warranty.

 <b>DANGER</b>
Dangers indicate a hazardous situation which will result in death or serious injury if not avoided.
 <b>WARNING</b>
Warnings indicate potentially hazardous situations, which can result in property damage, severe personal injury, or death if not avoided.
 <b>CAUTION</b>
Cautions indicate potentially hazardous situations, which can result in personal injury or equipment damage if not avoided.

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# WMC-B Introduction

It is estimated that fifty percent of retrofit applications require partial or complete disassembly of the chiller. Daikin Applied offers two solutions to the disassembly and reassembly effort on WMC chillers. **NOTE:** A service representative for Daikin Applied must be in attendance during knockdown and reassembly.

WMC chillers are relatively easy to disassembly due to the small compressor size and the absence of a lubrication system with its attendant components and piping.

**TYPE IV Knockdown:** The compressor(s), control panel, compressor power panel(s) are removed at the factory and put on skids. The stripped vessel stack is shipped as a single piece. Discharge and suction piping, liquid line and the compressor cooling line(s) are removed and crated. All associated wiring and piping possible will remain on the vessel stack.

1. Block-offs will cover all openings on the compressor and vessels.
2. The compressor and vessels will receive a 5-psi helium holding charge.
3. The suction line(s) is not insulated at the factory. An insulation kit will be shipped with the unit.
4. The evaporator will be insulated at the factory.
5. Refrigerant will not be shipped with the unit and must be secured locally and furnished and installed by the installer.
6. All field piping connections will be flanged or copper brazing.
7. All free piping ends will be capped.
8. Touch-up paint will be included.
9. The unit will undergo the rigorous, full Daikin test program at the factory.
10. Contact your service representative for Daikin Applied for pricing and scheduling of required installation supervision.

**TYPE V Knockdown:** The unit ships fully assembled, tested and is ready for field knockdown. This option allows components to be removed as required at the site. The unit dimension drawing gives sufficient dimensions to determine what should be removed. Approximate reduction in unit size for Type IV knockdown is shown below

**Table 1, Dimension Reduction**

WMC Model	Remove			
	Compressor(s)	Compressor(s) & Panels	Panels Only	Separate Vessels
145/150	-7" ht.	-19" ht.	0	30 " max. width
250/290	-7" ht.	-20" ht.	0	39 " max. width
400	-12" ht.	-18" ht.	0	45 " max. width

1. The unit is shipped fully charged with refrigerant. Pump down or remove refrigerant before breaking any refrigerant connection.
2. The unit will be factory insulated and painted.
3. All electrical and sensor wiring will be fastened as usual.
4. Touch up paint and stick-on wire ties will be included.
5. This unit will be fully tested at the factory.
6. Labels will be provided with the instructions to mark piping, electrical wiring and sensor wiring.

## WARNING

Prior to un-sweating any connection in the field, verify that there is no pressure or charge in lines. Failure to do so can result in property damage, severe personal injury, or death.

# Type IV Disassembly-Reassembly

## Disassembly

Type IV Knockdown units are shipped disassembled except for the vessel stack and are shipped less refrigerant. If the stack size or weight dictates further disassembly, the vessels can be separated by disconnecting any interconnecting wiring and tubing and then unbolting them. The vessels and compressors have a helium holding charge that must be released prior to attempting to open any connection.

## Reassembly

1. Reassemble the vessel stack, if disassembled, and reconnect any wiring and tubing.
2. Mount the compressor(s) on the stack. Be careful to avoid damaging lines already mounted on the unit. Mounting bolts, washers and nuts are shipped loose. Leave the mounting bolts loose until the suction and discharge lines are installed and aligned.

During assembly, bolts holding block off plates (suction connection, for example), are used for reassembly of the component. See Figure 1 for the location and description of the block offs.

3. Do not remove block offs until ready to install piping. The compressor and vessels have a Schrader valve on their block off plates to be used for relieving the helium holding charge.

### WARNING

Remove compressor, piping or vessel holding charge through the Schrader valve in the block off plates before attempting to loosen any fittings on them. Failure to do so can cause severe bodily injury.

4. Install the suction and discharge line(s). See Figure 6. Tighten bolts after the entire line has been installed and aligned. Insulate the suction line with the insulation and glue provided.
5. Install the liquid line and motor cooling lines. See Figure 7 and Figure 8.
6. Install control panel and compressor power panels by bolting to the horizontal support members.
7. If the unit has single-point power, connect the power leads from the terminal box under the control panel to each power panel line side connection.
8. Connect any loose wiring.
9. Pressure (leak) test, evacuate, and charge with field supplied R-134a using standard refrigeration practice.

# Type V Disassembly-Reassembly

Type V units are designed for a wide range of disassembly and the degree of knockdown varies. Use instructions and drawings from Type IV Disassembly-Reassembly instructions above. Observe the following recommendations.

1. The chiller is shipped with the full refrigerant charge that must be pumped down into the condenser or removed before breaking any refrigerant connection. Before attempting any disassembly, assume the condenser isolation valves may have leaked and that any component of the chiller may be pressurized with refrigerant. Exert the proper precautions with this caveat in mind.
2. Check that power has been removed from the unit. Before disconnecting any wire, it is prudent to label its function and connection point to facilitate reconnection.
3. The refrigerant charge must be removed from the unit if the vessels are to be separated.
4. Some insulation repair and touch-up painting may be required.
5. See Type IV instructions for reassembly of components.

**Table 2, Component Weight**

WMC-B Model	Compressor	Power Panel (Front End Box)	Control Panel	Evaporator		Condenser	
				Model	Weight	Model	Weight
145S	282	375	125	E2209	2490	C2009	2142
145D	262	310	125	E2209	2490	C2009	2142
150D	262	310	125	E2212	2857	C2012	2615
250D	282	375	125	E2609	3259	C2209	2392
290D	282	375	125	E2612	3812	C2212	2942
400D	282	375	125	E3012	5075	C2612	3900

**NOTES:**

1. All weights in pounds.
2. "S" models have one compressor; "D" models have two compressors.

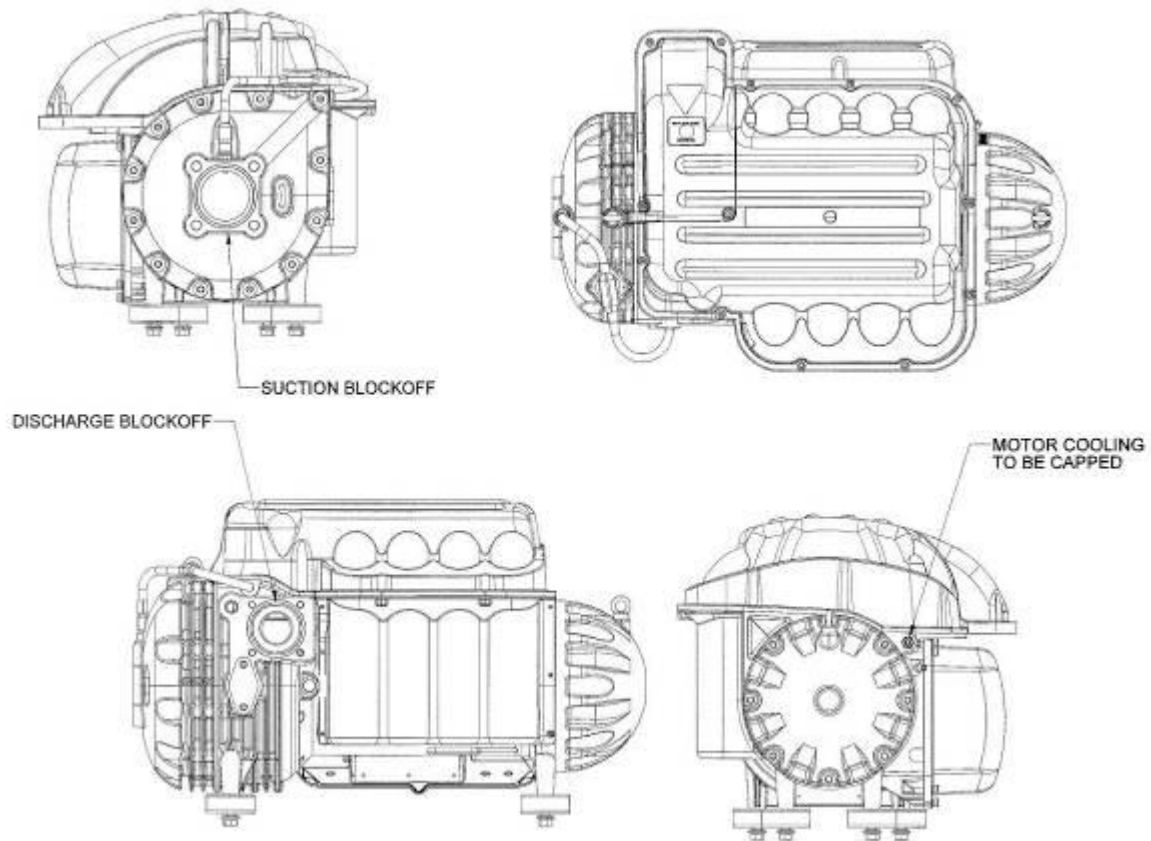
**Table 3, Component Dimensions**

WMC-B Model	Depth x Width x Height			Length x Width x Height				
	Compressor	Power Panel (Front End Box)	Control Panel	Evaporator		Condenser		Stack
				Model		Model		
145S	32 x 22 x 18	17 x 40 x 67	9 x 19 x 33	2209	135 x 28 x 29	2009	128 x 36 x 33	135 x 36 x 60
145D	32 x 18 x 18	17 x 40 x 67	9 x 19 x 33	2209	135 x 28 x 29	2009	128 x 36 x 33	135 x 36 x 60
150D	32 x 18 x 18	17 x 40 x 67	9 x 19 x 33	2212	170 x 28 x 29	2012	164 x 36 x 33	170 x 36 x 60
250D	32 x 22 x 18	17 x 40 x 67	9 x 19 x 33	2609	130 x 32 x 33	2209	135 x 38 x 33	135 x 38 x 63
290D	32 x 22 x 18	17 x 40 x 67	9 x 19 x 33	2612	165 x 32 x 33	2212	170 x 38 x 33	170 x 38 x 63
400D	32 x 22 x 18	17 x 40 x 67	9 x 19 x 33	3012	169 x 36 x 36	2612	165 x 44 x 36	169 x 44 x 72

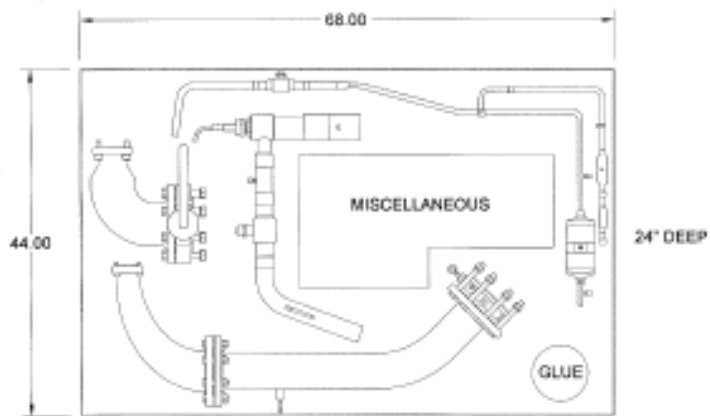
**NOTES:**

1. All dimensions in inches.
2. Dimensions include protuberances such as mounting brackets and disconnect handles.

**Figure 1, Type IV, Compressor Block Offs**



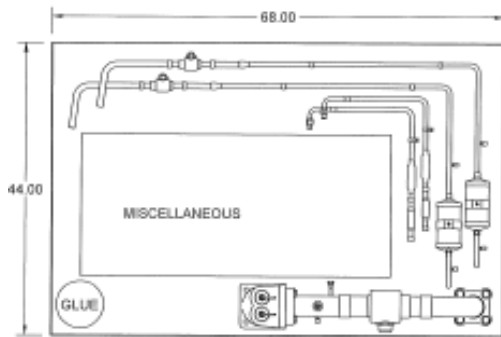
**Figure 2, Type IV, Parts in Crates, WMC 145S (Single Compressor),**



**CRATE 1**

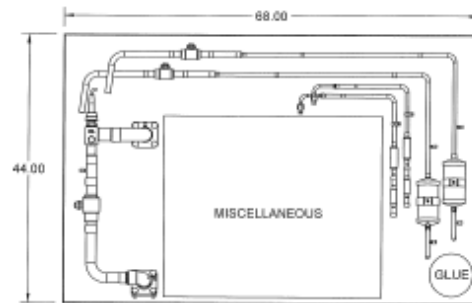
LIQUID LINE  
MOTOR COOLING  
GLUE  
LOOSE INSULATION  
MISCELLANEOUS ITEMS

**Figure 3, Type IV, Parts in Crates, (Dual Compressor)**



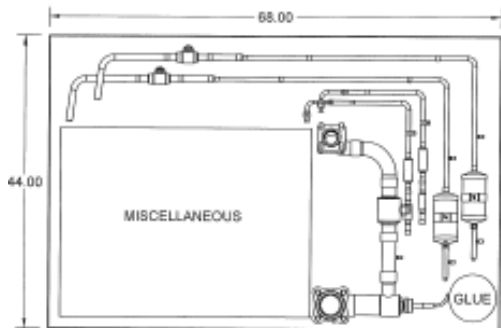
**CRATE 1  
(WMC400 SHOWN)**

LIQUID LINE  
MOTOR COOLING  
GLUE  
LOOSE INSULATION  
MISCELLANEOUS ITEMS



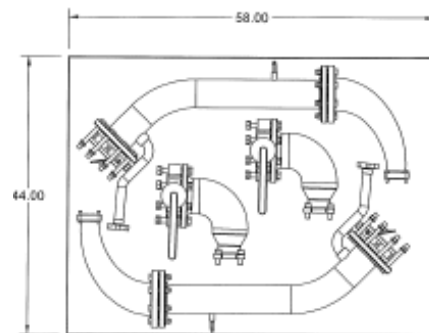
**CRATE 1  
(WMC145/150 SHOWN)**

LIQUID LINE  
MOTOR COOLING  
GLUE  
LOOSE INSULATION  
MISCELLANEOUS ITEMS



**CRATE 1  
(WMC250/290 SHOWN)**

LIQUID LINE  
MOTOR COOLING  
GLUE  
LOOSE INSULATION  
MISCELLANEOUS ITEMS



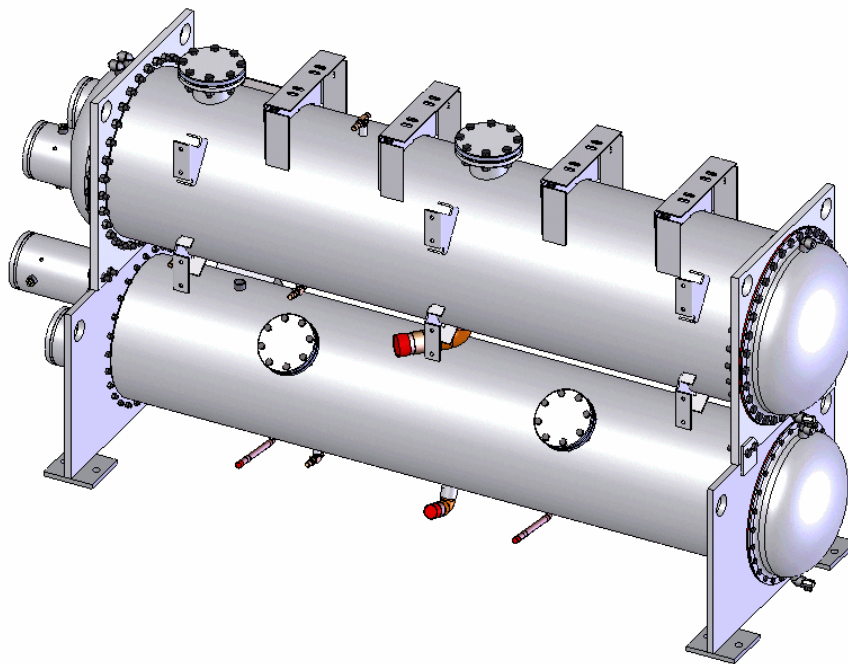
**CRATE 2  
(TYPICAL ALL SIZES)**

SUCTION LINE  
DISCHARGE-PLBY LINE

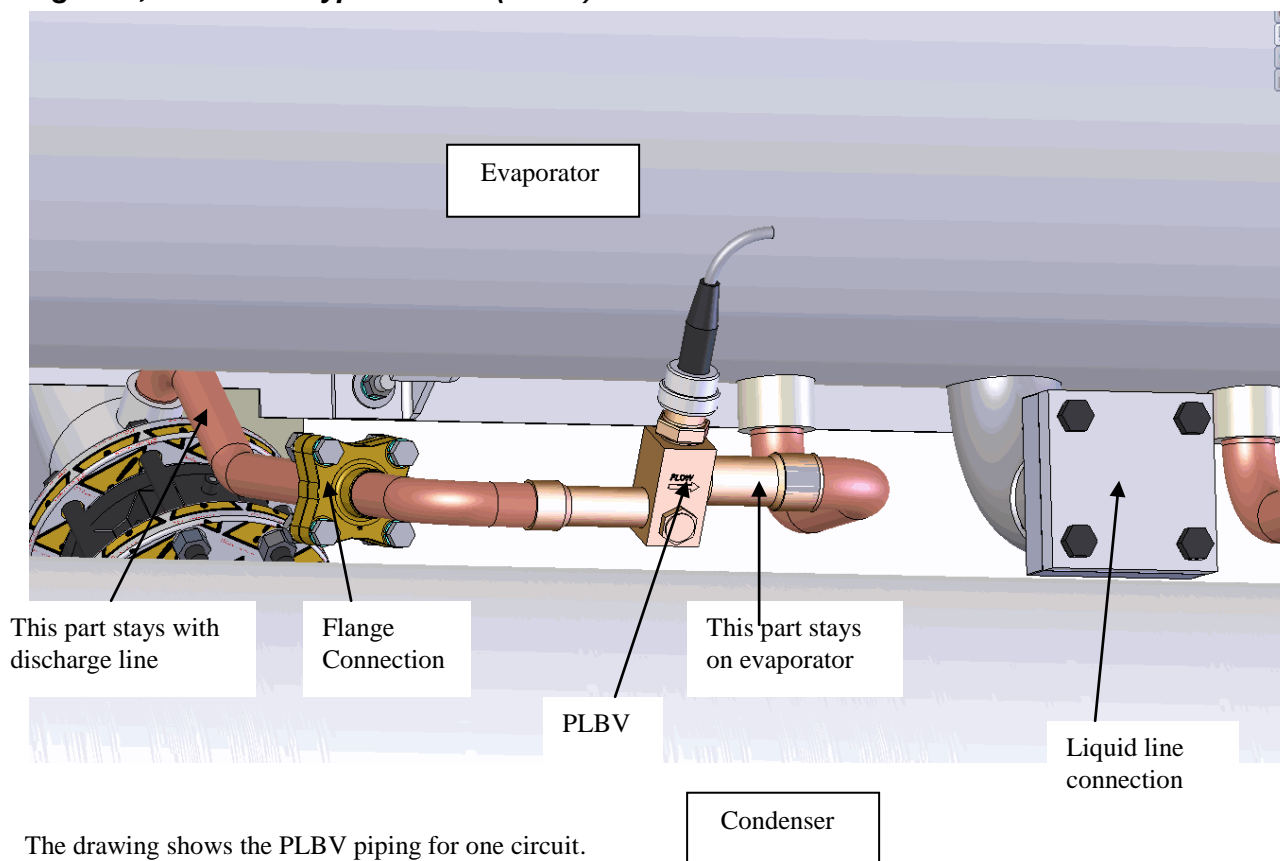
**NOTES:**

1. See previous page for WMC 145S crate
2. Crate 2 will have two sets of suction and discharge lines.

**Figure 4, Type IV, Bare Vessel Stack**

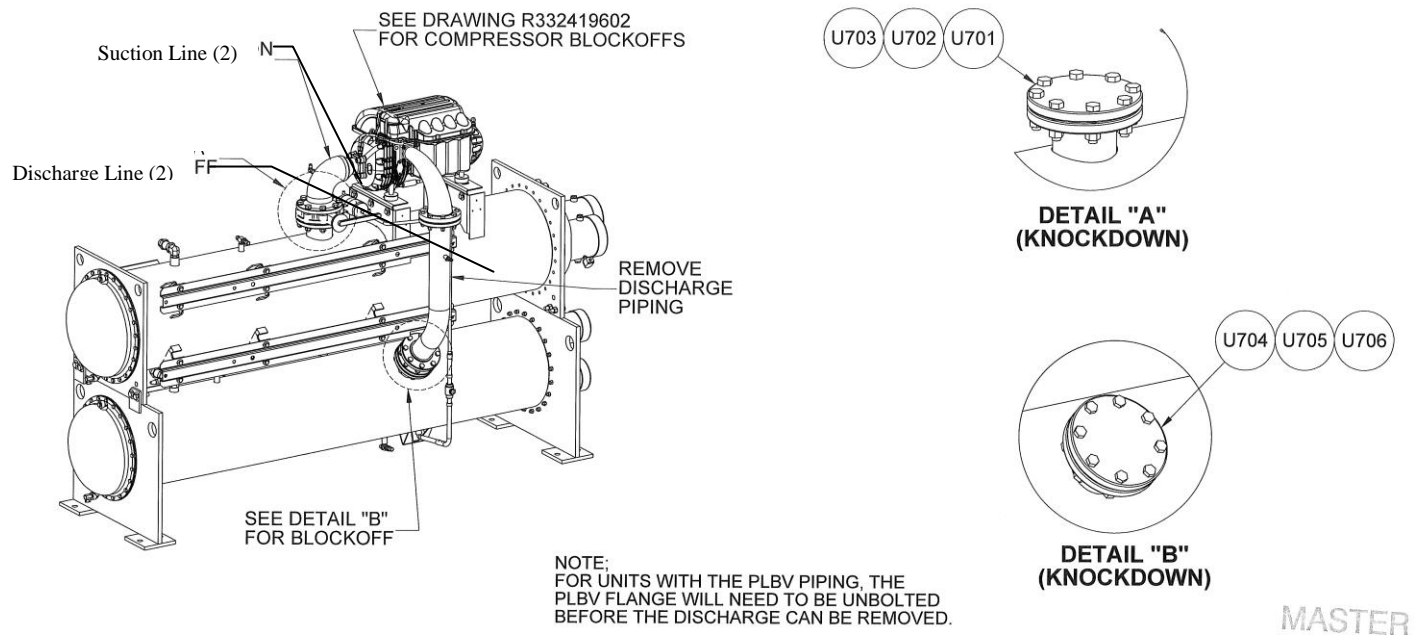


**Figure 5, Part Load Bypass Valve (PLBV)**

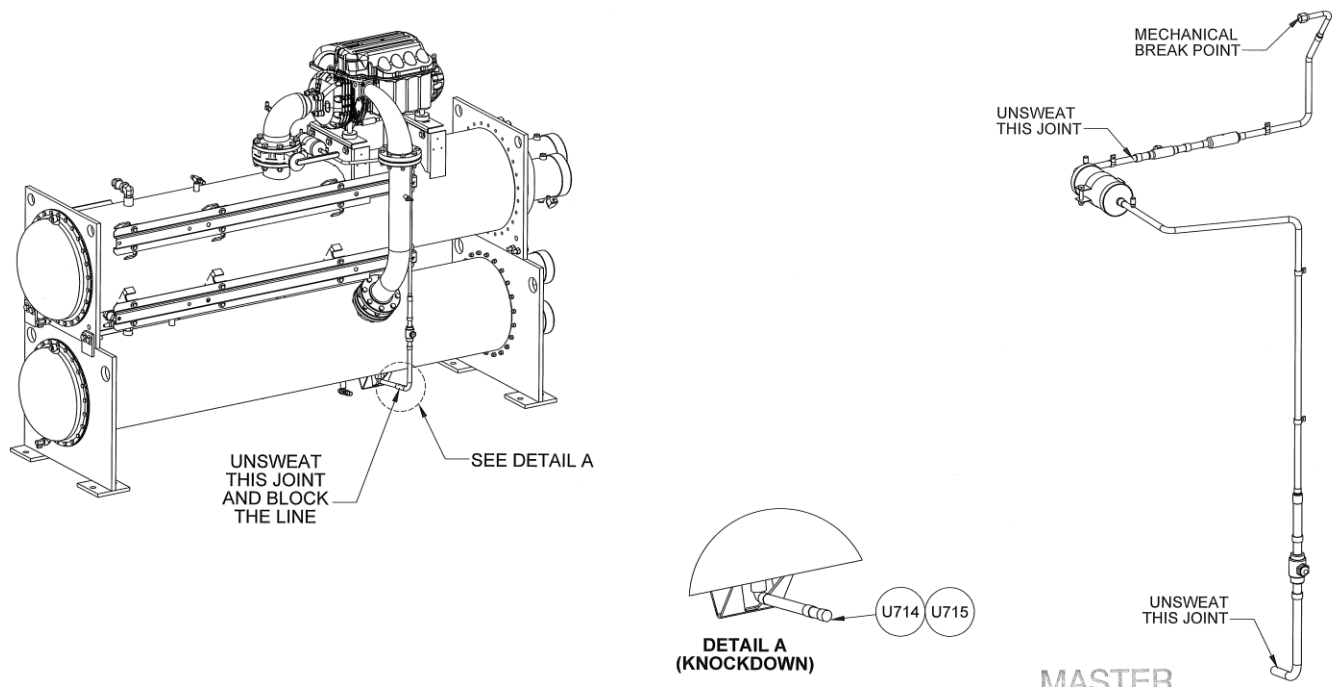




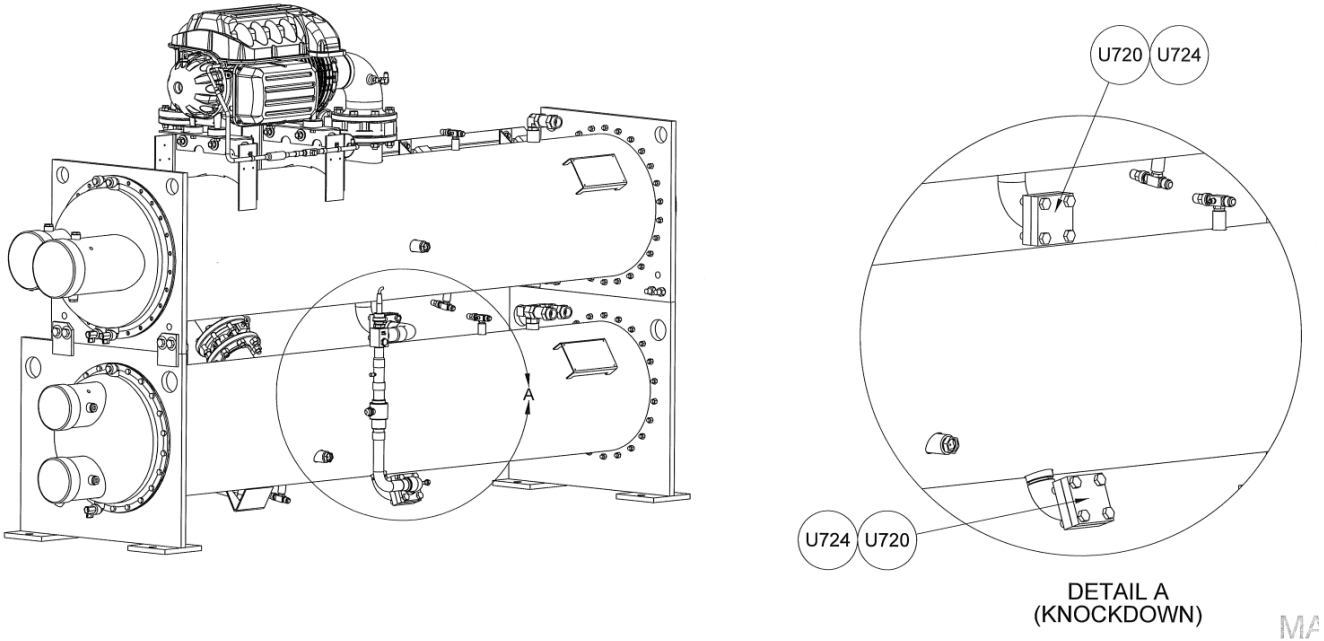
**Figure 6, Type IV, Suction and Discharge Line Removal**



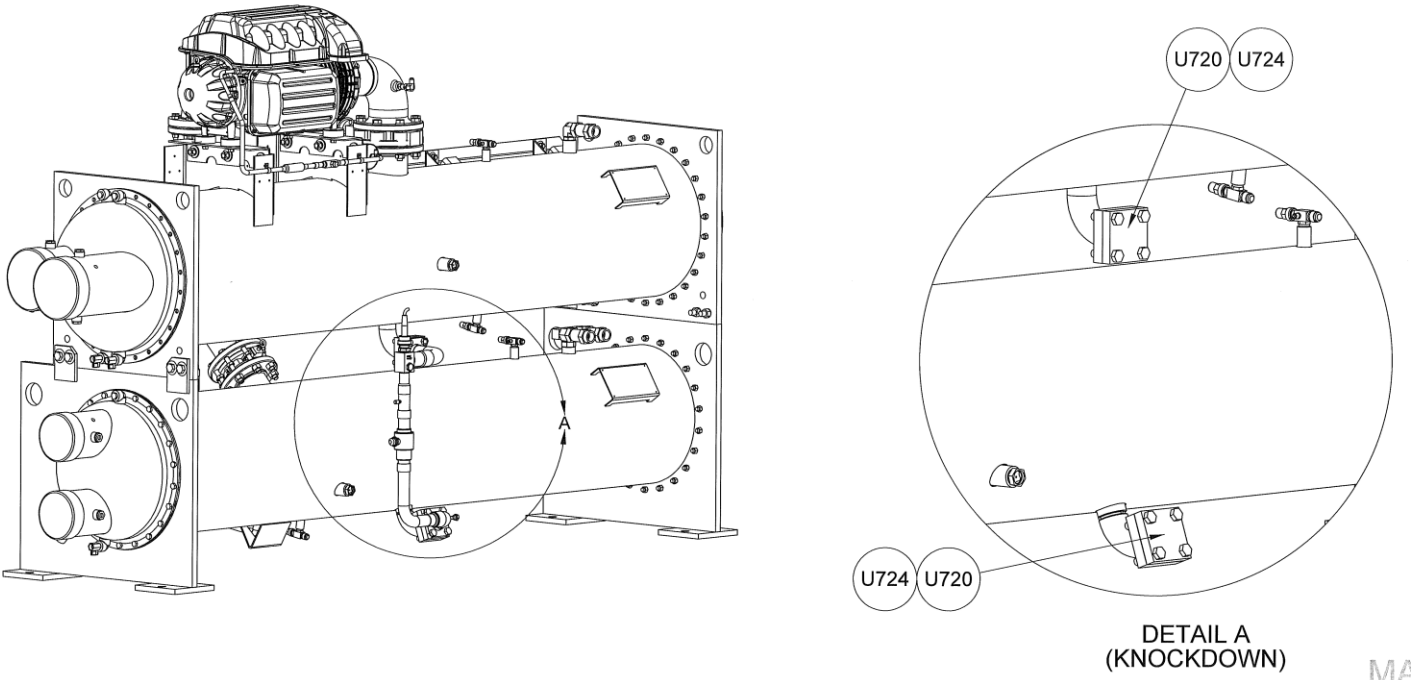
**Figure 7, Type IV, Motor Cooling Line Removal**



**Figure 8, Type IV, Liquid Line Removal**



**Figure 9, Type V, Liquid line Removal**

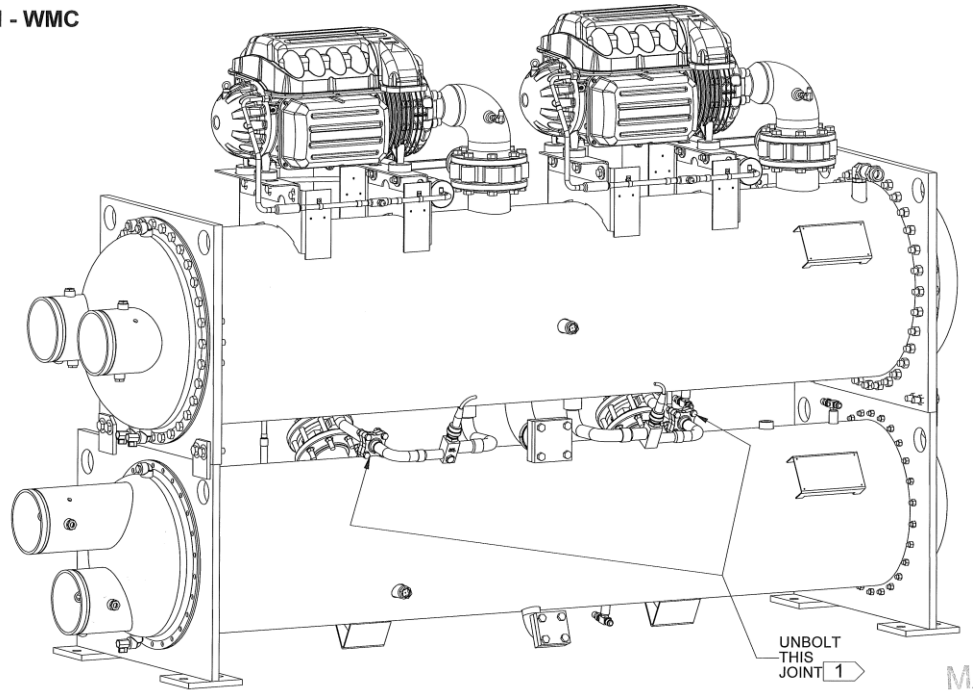


**Figure 10, Type V, Vessel Separation**

**TYPE V KNOCKDOWN - WMC**

**NOTES**

1. UNBOLT THIS JOINT ONLY IF THE VESSEL CHARGE IS PUMPED OUT.





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Now that you have made an investment in modern, efficient Daikin Applied equipment, its care should be a high priority. For training information on all Daikin Applied HVAC products, please visit us at [www.DaikinApplied.com](http://www.DaikinApplied.com) and click on Training, or call 540-248-9646 to speak to the Training Department.

### ***Warranty***

All Daikin Applied equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local Daikin Applied representative for warranty details. To find your local Daikin Applied representative, go to [www.DaikinApplied.com](http://www.DaikinApplied.com).

### ***Aftermarket Services***

To find your local parts office, visit [www.DaikinApplied.com](http://www.DaikinApplied.com) or call 800-37PARTS (800-377-2787). To find your local service office, visit [www.DaikinApplied.com](http://www.DaikinApplied.com) or call 800-432-1342.

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