



Installation Instructions

Location of Parts for R'newal™ Service Program Kit

RTWD and RTUD Chillers



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SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.



Introduction

Read this manual thoroughly before operating or servicing this unit.

Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs and HCFCs such as saturated or unsaturated HFCs and HCFCs.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

⚠ WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury. All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

⚠ WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST** follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians **MUST** put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). **ALWAYS** refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate SDS and OSHA/ GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians **MUST** put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit. **NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

⚠ WARNING**Follow EHS Policies!**

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

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Revision History

Updated for Trane Technologies.



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Model Number Descriptions

RTWD/RTUD R'newal Model Number Breakdown

An example of a typical model number is:

R	R	T	W	D	0	8	0	1	A	D	A	0	0	0	0	0
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Digit 1 — R'newal

R = Trane R'newal

Digit 2, 3, 4, 5 — Chiller Model

RTWD = Water-Cooled Series R Chiller
RTUD = Compressor Series R Chiller

Digit 6, 7, 8 — Unit Tonnage

080 = 80 Unit Tons
090 = 90 Unit Tons
100 = 100 Unit Tons
110 = 110 Unit Tons
120 = 120 Unit Tons
130 = 130 Unit Tons
140 = 140 Unit Tons
150 = 150 Unit Tons
160 = 160 Unit Tons
180 = 180 Unit Tons
200 = 200 Unit Tons
220 = 220 Unit Tons
250 = 250 Unit Tons

Digit 9 — Compressor Circuit

1 = R'newed Circuit 1
2 = R'newed Circuit 2
B = R'newed Both Circuits

Digit 10 — R'newal Design Sequence

A = Initial R'newal Design Sequence
B = R'newal Design Sequence

Digit 11 — Chiller Voltage

A = 200 Volt, 60 Hz, 3-Phase
B = 230 Volt, 60 Hz, 3-Phase
D = 380 Volt, 60 Hz, 3-Phase
F = 460 Volt, 60 Hz, 3-Phase
G = 575 Volt, 60 Hz, 3-Phase

Digit 12 — Original Design Sequence

A = "A" Original Design Sequence
B = "B" Original Design Sequence

Digit 13 — Not Used (Future Use)

0 = Not Used (Future Use)

Digit 14 — Not Used (Future Use)

0 = Not Used (Future Use)

Digit 15 — Not Used (Future Use)

0 = Not Used (Future Use)

Digit 16 — Not Used (Future Use)

0 = Not Used (Future Use)

Digit 17 — Design Special

0 = No Special
1 = Special



Installation

Note: Refer to current unit installation, operation and maintenance literature for maintenance

procedures, rigging instructions, and additional information.

Table 1. Complete contents of RTWD/RTUD R'newal kit 022102530100

Part	Quantity	Description
018503790100	1	LABEL; PRINTED NAMEPLATE W/TRANE LOGO
ADP00372	2	ADAPTER; 0.63 OD TUBE FOR OIL LINE CONNECTION
ADP00909	2	ADAPTER; 0.38 OD TUBE X 7/16-20 SAE, O-RING SEAL HEX
COL03780	4	COIL; HOLDING, 120V, 50/60 HZ (AMG 120/50-60)
COL04723	4	COIL; SOLENOID VALVE, 120V/60 & 110V/50 HZ
COL11934	2	COIL; AMC 120V SOLENOID 36" LEAD
CPL00934	2	COUPLING; (INCLUDES ORING & TEFLON SEAL)
FTG00130	1 carton	FITTING; ACCESS, HALF UNION TYPE, 1/4" MPT OR 5/16" OD SOLDER, 6 PER CARD
GKT02824	4	GASKET-ADAPTER,SUCTION SERVICE VALVE, NON-ASBESTOS R-123 COMPATIBLE, 0.06 THK X 2.84 OD X 2.28 ID. (PIPE SIDE)
GKT03659	2	GASKET; 0.031 X 3.22 X 2.53, CHLOROPRENE (NON-ASBESTOS) W/ANTI-STICK COATING ONE SIDE
GKT03660	6	GASKET; 0.031 X 4.16 X 3.38, CHLOROPRENE (NON-ASBESTOS) W/ANTI STICK COATING ONE SIDE
HTR02047	2	HEATER; ELECTRIC, 150W, 120V
HTR04015	2	HEATER; SUBM.OIL SEP 125W
KIT07614	2	KIT; LIQUID LINE FILTER, (R134A) INCLUDES TWO FILTER SHELL GASKETS (THROW AWAY THE INCORRECT GASKET) AND ONE FILTER CORE.
PART-SVN216*-EN	1	LITERATURE; RTWD/RTUD R'NEWAL
RNG01397	2	O-RING; 0.364 ID X 0.070 RD
RNG01412	2	O-RING; 4.609 ID X 0.139 RD
RNG01414	2	O-RING; 5.109 ID X 0.139 RD
RNG01415	2	O-RING; 6.234 ID X 0.139 RD
RNG01427	1	O-RING; 17.455 ID X 0.275 RD
RNG01428	2	O-RING; 19.455 ID X 0.275 RD
RNG01441	2	O-RING; 1.171 ID X 0.116 RD
RNG01443	2	O-RING; 15.955 ID X 0.275 RD
RNG01553	2	O-RING; 0.755 ID X 0.097 RD
RNG01697	2	O-RING; 0.351ID X 0.072 RD
RNG01764	2	RING-O; 0.924 ID X 0.116 RD
RNG01838	2	O-RING; UNIFORM SIZE #248, 4.734 ID x 0.139 RD
RNG01856	2	O-RING; NEOPRENE, 15.475 ID X 0.275 RD
RNG01921	2	O-RING; 12.975 ID X 0.275 RD, NEOPRENE
RNG01922	3	O-RING; 14.975 ID X 0.275 RD, NEOPRENE
RNG01923	2	O-RING; 1.475 ID X 0.118 RD, NEOPRENE
RNG01938	3	RING; O-RING - NEOPRENE, 17.955 ID X 0.275 RD
RNG01939	2	RING; NEOPRENE O-RING, 5.484 ID X 0.139 RD
RNG01942	2	RING; O-RING NITRILE, 1.359 ID X 0.139 RD, (USE W/R-134A & 'POE' OILS) UNIFORM SIZE #220
SWT02377	2	CONTRL; HIGH PRESS CUTOUT
SWT03177	2	SWITCH; HIGH PRESSURE CUTOUT
—	1	LABEL; NAMEPLATE, SERIES R R'NEWAL (BRASS)

Note: This kit (022102530100) includes parts for a variety of unit sizes; some included parts may not be required for your specific unit.

Table 2. RTWD general component location

Condenser (see Figure 1, p. 10)			
Graphic Callout	Part #	Unit	Quantity
1	RNG01441	All unit sizes	2
2	RNG01856 SUPPLY	080, 090, 100, 110, 120, 130, 140	1
	RNG01938 SUPPLY	150, 160, 180, 200	
	RNG01428 SUPPLY	220, 250	
3	RNG01922 RETURN	080, 090	1
	RNG01856 RETURN	100, 110, 120, 130, 140	
	RNG01938 RETURN	150, 160, 180, 200	
	RNG01428 RETURN	220, 250	
4	RNG01923	All unit sizes	2
Evaporator (see Figure 2, p. 10)			
Graphic Callout	Part #	Unit	Quantity
5	RNG01922 SUPPLY	080, 100, 110, 120, 130, 140, 150	1
	RNG01921 SUPPLY	090	
	RNG01427 SUPPLY	160, 220, 250	
	RNG01443 SUPPLY	180, 200	
5	RNG01922 RETURN	080, 100, 110, 120, 130, 140, 150	1
	RNG01921 RETURN	090	
	RNG01938 RETURN	160, 220, 250	
	RNG01443 RETURN	180, 200	
6	RNG01764	All unit sizes	2
7	ADP00372	All unit sizes	2



Installation

Table 2. RTWD general component location (continued)

Unit Front (see Figure 3, p. 11)			
Graphic Callout	Part #	Unit	Quantity
8	RNG01838	080, 090, 100	1
	RNG01414	110, 120, 130, 140, 150, 200, 220, 250	
	RNG01939	160, 180	
9	RNG01838	080, 090	1
	RNG01414	100, 110, 120, 130, 140, 150	
	RNG01939	160, 180, 220	
	RNG01415	200, 250	
10	COL04723	All unit sizes	2
11	COL11934	All unit sizes	1
12	SWT03177	All unit sizes	1
13	HTR02047	All unit sizes	1
14	COL04723	All unit sizes	2
15	COL11934	All unit sizes	1
16	SWT03177	All unit sizes	1
17	HTR02047	All unit sizes	1
18	GKT02824	080, 090	1
	GKT03660	100, 110, 120, 130, 140, 150, 160, 180, 200, 220, 250	
19	GKT02824	080, 090, 100, 160, 180, 200, 220, 250	1
	GKT03660	110, 120, 130, 140, 150	
20	GKT02824	080, 090	1
	GKT03660	100, 110, 120, 130, 140, 150, 160, 180, 200, 220, 250	
21	GKT02824	080, 090, 100, 160, 180, 200, 220, 250	1
	GKT03660	110, 120, 130, 140, 150	
22	HTR04015	All unit sizes	2
23	GKT03659	080, 090	1
	GKT03660	100, 110, 120, 130, 140, 150, 160, 180, 200, 220, 250	
24	GKT03659	080, 090, 100	1
	GKT03660	110, 120, 130, 140, 150, 160, 180, 200, 220, 250	
Unit Back (see Figure 4, p. 12)			
Graphic Callout	Part #	Unit	Quantity
25	KIT07614	All unit sizes	2
26	FTG00130	All unit sizes	1
27	COL03780	All unit sizes	2
28	COL03780	All unit sizes	2
29	ADP00909	All unit sizes	2
30	CPL00934	All unit sizes	2

Table 3. RTUD general component location

Evaporator (see Figure 2, p. 10)			
Graphic Callout	Part #	Unit	Quantity
5	RNG01921 SUPPLY	080, 090, 100	1
	RNG01922 SUPPLY	110, 120, 130, 140, 150	
	RNG01443 SUPPLY	160, 180, 200, 220, 250	
5	RNG01921 RETURN	080, 090, 100	1
	RNG01922 RETURN	110, 120, 130, 140, 150	
	RNG01443 RETURN	160, 180, 200, 220, 250	
6	RNG01764	All unit sizes	2
7	ADP00372	All unit sizes	2
Unit Front (see Figure 3, p. 11)			
Graphic Callout	Part #	Unit	Quantity
8	RNG01412	080, 090	1
	RNG01414	100, 110, 120, 130, 140, 150, 160	
	RNG01939	180, 200	
	RNG01415	220, 250	
9	RNG01412	080, 090	1
	RNG01414	100, 110, 120, 130, 140, 150, 160, 180	
	RNG01939	200, 220	
	RNG01415	250	
10	COL04723	All unit sizes	2
11	COL11934	All unit sizes	1
12	SWT02377	All unit sizes	1
13	HTR02047	All unit sizes	1
14	COL04723	All unit sizes	2
15	COL11934	All unit sizes	1
16	SWT02377	All unit sizes	1
17	HTR02047	All unit sizes	1
18	GKT02824	080, 090	1
	GKT03660	100, 110, 120, 130, 140, 150, 160, 180, 200, 220, 250	
19	GKT02824	080, 090, 100	1
	GKT03660	110, 120, 130, 140, 150, 160, 180, 200, 220, 250	
20	GKT02824	080, 090	1
	GKT03660	100, 110, 120, 130, 140, 150, 160, 180, 200, 220, 250	
21	GKT02824	080, 090, 100	1
	GKT03660	110, 120, 130, 140, 150, 160, 180, 200, 220, 250	
22	HTR04015	All unit sizes	2
23	GKT03659	080, 090	1
	GKT03660	100, 110, 120, 130, 140, 150, 160, 180, 200, 220, 250	
24	GKT03659	080, 090, 100	1
	GKT03660	110, 120, 130, 140, 150, 160, 180, 200, 220, 250	



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Table 3. RTUD general component location (continued)

Unit Back (see Figure 4, p. 12)			
Graphic Callout	Part #	Unit	Quantity
25	KIT07614	All unit sizes	2
26	FTG00130	All unit sizes	1
27	COL03780	All unit sizes	2
28	COL03780	All unit sizes	2
29	ADP00909	All unit sizes	2
30	CPL00934	All unit sizes	2

Figure 1. Condenser (RTWD only)

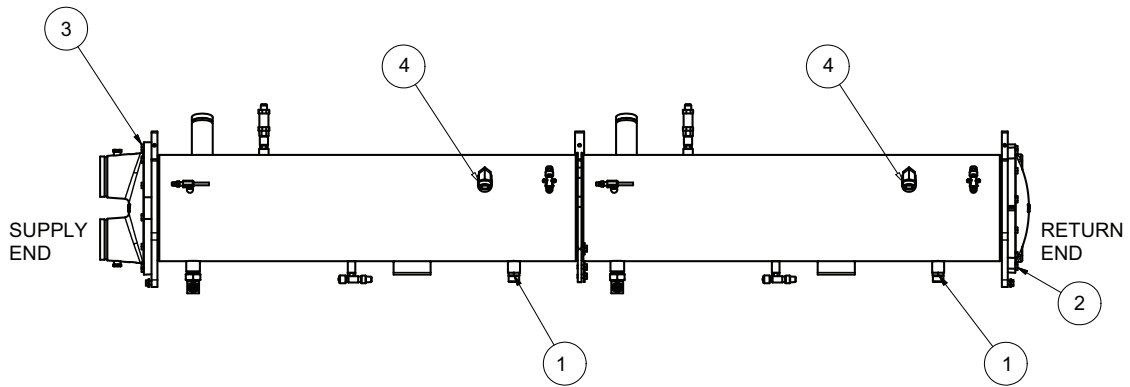


Figure 2. Evaporator (RTWD shown; RTUD is similar)

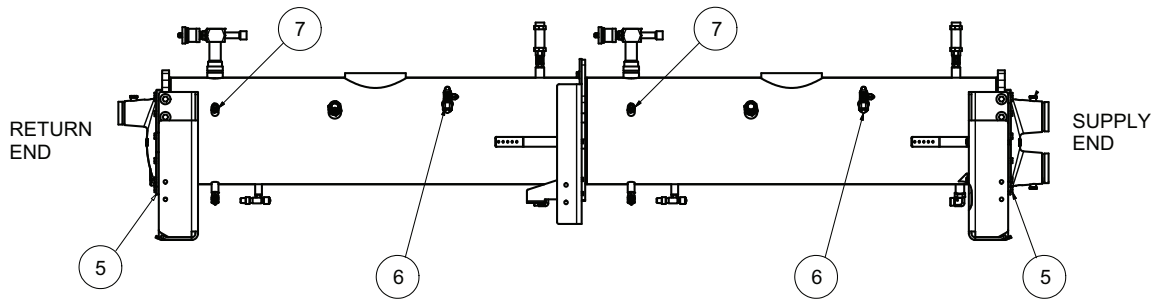


Figure 3. Unit front (RTWD shown; RTUD is similar)

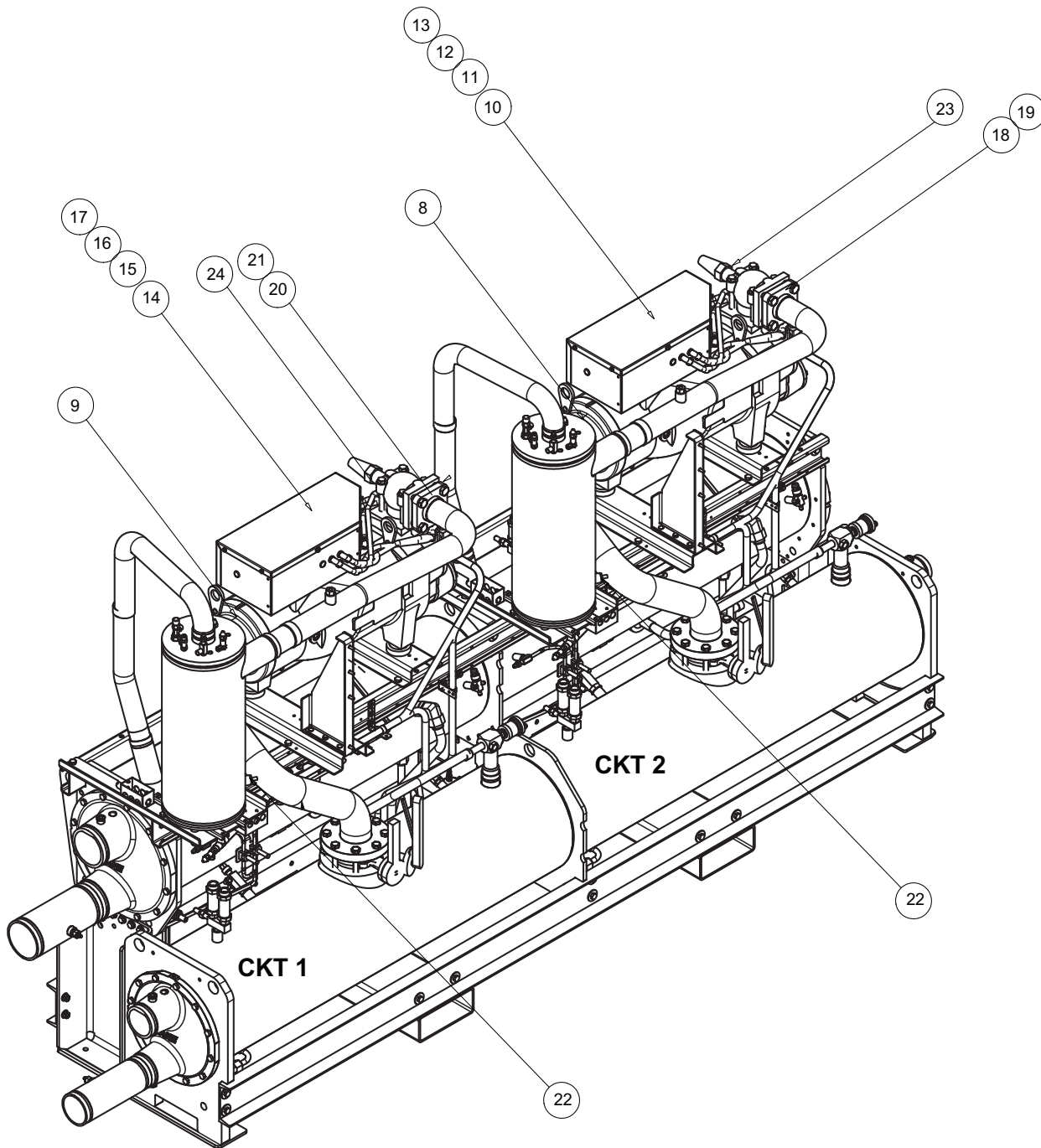
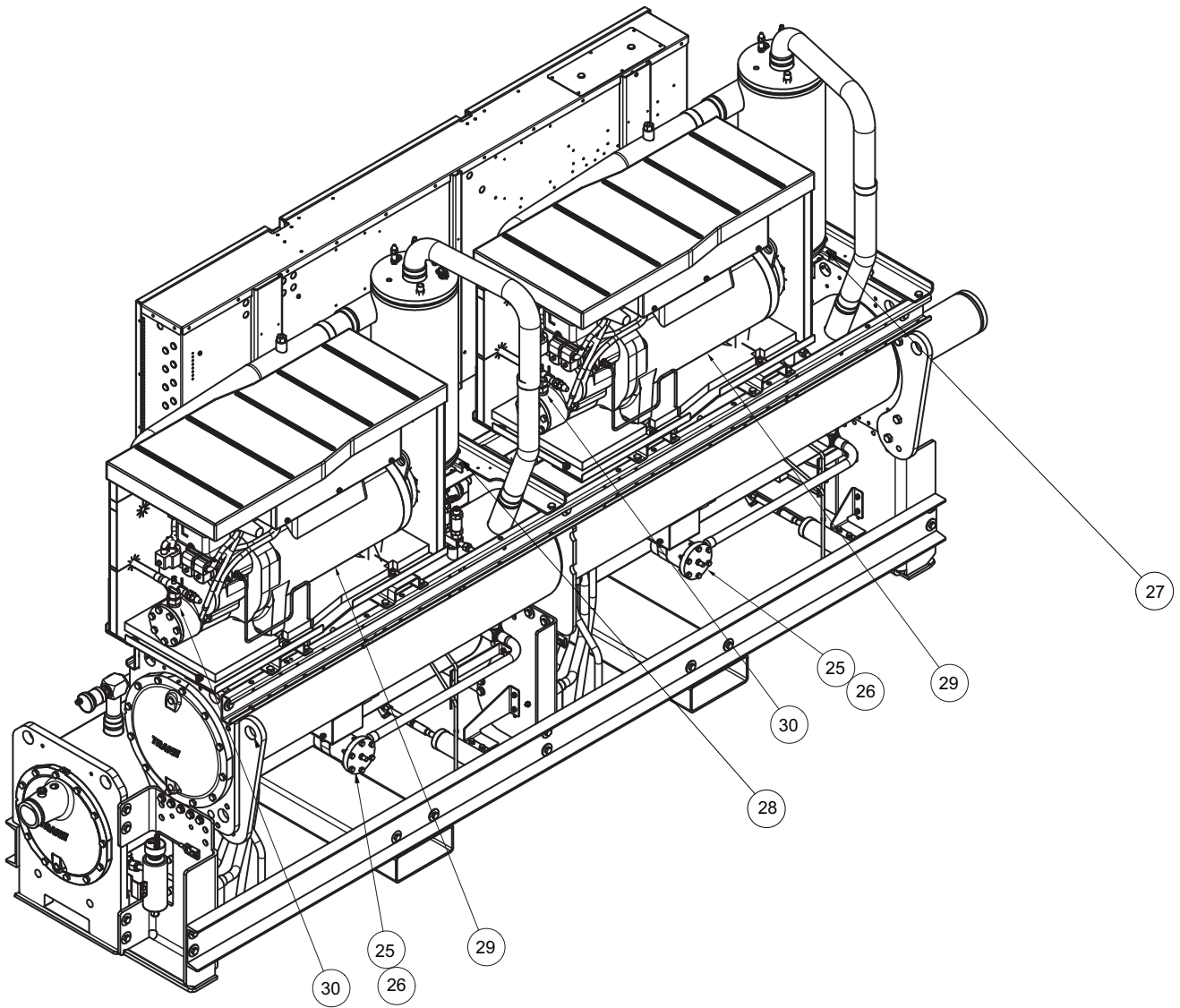


Figure 4. Unit back (RTWD shown; RTUD is similar)





Notes

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