



Reference Guide

Semi-Hermetic Cast Iron Compressors

Trane Respect

Trane Series 6000

Copeland

Carrier

Carlyle

Totaline

York



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 such as HCFCs and HFCs.

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. 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 electrical codes.

⚠ WARNING

Personal Protective Equipment (PPE) Required!

Installing/servicing this unit could result in exposure to electrical, mechanical and chemical hazards.

- 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 Material Safety Data Sheets (MSDS)/Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate MSDS/SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling 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.**

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

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Cross Reference

Trane Reciprocating Compressors - Respect Series 6000 Cross Reference

Model A and B Compressors - Series 6000 only

Better

Series 6000 COM #	Obsolete COM #	Compressor Model #	Capacity (Tons)	Shipping Weight (Lbs.)
COM06366	COM 0001	B514	10	460
COM06367	COM 0002	B516	15	500
COM06368	COM 0003	B518	20	520
COM06369	COM 0004	A514	25	755
COM06370	COM 0005	A516	40	780
COM06371	COM 0006	A518	50	810
COM06372	COM 0008	A518R	50	810
COM06373	COM 0022	2B514	15	460
COM06374	COM 0023	2B516	25	500
COM06375	COM 0024	2B518	30	520
COM06000	COM 0025	2A514	40	755
COM06376	COM 0026	2A516	60	780
COM06001	COM 0027	2A518	75	810
COM06377	COM 0028	2A516R	60	780
COM06378	COM 0029	2A518R	75	810
-	COM 2492	A516R	40	780
-	COM 2501	2B514L	15	460

Model E - Open Drive Compressors

Best

Better

ReSpecT COM #	Series 6000 COM #	Compressor Model #	Capacity (Tons)	Shipping Weight (Lbs.)
COM01447	COM06002	3E5*40W	50	784
COM01448	COM06003	3E5*50W	60	884
COM01449	COM06004	3E5*60W	75	916
COM02109	COM06005	3E5*80W	100	1005

Model E - Semihermetic Compressors

Best

Better

ReSpecT COM #	Series 6000 COM #	Compressor Model #	Capacity (Tons)	Shipping Weight (Lbs.)	Voltage
COM01443	COM06006	2E5*48	50	1298	200-230-460/60/3
COM02092	COM06007	2E5*48N 115 V	50	1298	200-230-460/60/3
COM01860	COM06139	2E5*45	50	1298	575/60/3
COM01444	COM06008	2E5*58	60	1406	200-230-460/60/3
COM02093	COM06010	2E5*58N 115 V	60	1704	200-230-460/60/3
COM02073	COM06009	2E5*51	60	1406	460/60/3
COM01861	COM06140	2E5*55	60	1406	575/60/3
COM01445	COM06011	2E5*68	75	1444	200-230-460/60/3
COM02094	COM06012	2E5*68N 115 V	75	1444	200-230-460/60/3
COM02244	COM06013	2E5*61N 115 V	75	1444	460/60/3
COM01862	COM06141	2E5*65	75	1444	575/60/3
COM01446	COM06014	2E5*88	100	1704	200-230-460/60/3
COM02095	COM06015	2E5*88N 115 V	100	1704	200-230-460/60/3
COM02075	COM06016	2E5*81	100	1704	460/60/3
COM02245	COM06017	2E5*81N 115 V	100	1704	460/60/3
COM01863	COM06142	2E5*85	100	1704	575/60/3



Cross Reference

Model F - Open Drive Compressors

Best	Better			
ReSpecT COM #	Series 6000 COM #	Compressor Model #	Capacity (Tons)	Shipping Weight (Lbs.)
COM01456	COM06028	3F5*30W	15	424
COM01457	COM06029	3F5*40W	20	476
COM02110	COM06030	3F5*50W	25	532
COM02111	COM06031	3F5*60W	30	568
COM02112	COM06032	3F5*80W	30	592

Model F - Semihermetic Compressors

Best	Better				
ReSpecT COM #	Series 6000 COM #	Compressor Model # (1)	Capacity (Tons)	Shipping Weight (Lbs.)	Voltage
COM01451	COM06023	2F5B38	15	522	200-230-460/60/3
COM01864	COM06130	2F5B35	15	522	575/60/3
COM01452	COM06018	2F5D48	20	626	200-230-460/60/3
COM01662	COM06024	2F5B48	20	710	200-230-460/60/3
COM01865	COM06131	2F5B45	20	710	575/60/3
COM01869	COM06135	2F5D45	20	626	575/60/3
COM01453	COM06019	2F5D58	25	694	200-230-460/60/3
COM01663	COM06025	2F5B58	25	790	200-230-460/60/3
COM01870	COM06136	2F5D55	25	694	575/60/3
COM01866	COM06132	2F5B55	25	790	575/60/3
COM01454	COM06020	2F5D68	30	690	200-230-460/60/3
COM01664	COM06026	2F5B68	30	810	200-230-460/60/3
COM01867	COM06133	2F5B65	30	810	575/60/3
COM01871	COM06137	2F5D65	30	690	575/60/3
COM01455	COM06021	2F5D88	40	776	200-230-460/60/3
COM01665	COM06027	2F5B88	40	922	200-230-460/60/3
COM02108	COM06022	2F5D88N 115V	40	776	200-230-460/60/3
COM01868	COM06134	2F5B85	40	922	575/60/3
COM01872	COM06138	2F5D85	40	776	575/60/3

Notes: (1) Motor barrel size: All 3 cylinder, Model F, Semihermetic compressors utilize a small barrel motor, 8.77" in diameter. Using the "Original Model Number" ("Model Number" for the Series 6000) the compressor may be identified as design sequences A through C. All other Model F, Semihermetic compressors with a design sequence of A through B, utilize a large barrel motor, 12.375" in diameter. Design sequences C through E, utilize a small barrel motor, 8.77" in diameter.

Model M - Semihermetic Compressors

Best	Better				
ReSpecT COM #	Series 6000 COM #	Compressor Model #	Capacity (Tons)	Shipping Weight (Lbs.)	Voltage
COM01508	COM06033	CRHM-150C-2*AT	15	454	460/60/3
COM01463	COM06034	CRHM-200A-3*AT	20	466	200/60/3
COM01465	COM06035	CRHM-200C-3*AT	20	466	460/60/3
COM02123	COM06037	CRHM-200C-3*AS	20	466	460/60/3
COM01850	COM06124	CRHM-200D-3*AT	20	466	575/60/3
COM01469	COM06038	CRHM-250A-4*AT	25	548	200/60/3
COM01473	COM06041	CRHM-250A-4*AS	25	548	200/60/3
COM01471	COM06039	CRHM-250C-4*AT	25	548	460/60/3
COM01472	COM06040	CRHM-250C-4*AS	25	548	460/60/3
COM01852	COM06125	CRHM-250D-4*AT	25	548	575/60/3
COM01475	COM06042	CRHM-300A-4*AT	30	548	200/60/3
COM01479	COM06045	CRHM-300A-4*AS	30	548	200/60/3
COM01513	COM06046	CRHM-300W-4*AT	30	548	230/60/3
COM01477	COM06043	CRHM-300C-4*AT	30	548	460/60/3
COM01478	COM06044	CRHM-300C-4*AS	30	548	460/60/3

Model R Semihermetic Compressors

Best	Better				
ReSpecT COM #	Series 6000 COM #	Compressor Model #	Capacity (Tons)	Shipping Weight (Lbs.)	Voltage
COM01619	COM06047	CRHR-400A-3*AT	40	860	200/60/3
COM01622	COM06049	CRHR-400A-3*AS	40	860	200/60/3
COM02155	COM06069	CRHR-400C-2*AT	40	860	400-460/50-60/3
COM01856	COM06127	CRHR-400D-3*AT	40	860	575/60/3
COM01620	COM06066	CRHR-400W-3*AT	40	860	200-230/50-60/3
COM01621	COM06048	CRHR-400C-3*AT	40	860	400-460/50-60/3
COM01624	COM06050	CRHR-400C-3*AS	40	860	400-460/50-60/3
COM01625	COM06051	CRHR-500A-4*AT	50	1070	200/60/3
COM01858	COM06128	CRHR-500D-4*AT	50	1070	575/60/3
COM01627	COM06052	CRHR-500C-4*AT	50	1070	400-460/50-60/3
COM01628	COM06053	CRHR-600A-4*AT	60	1084	200/60/3
COM01859	COM06129	CRHR-600D-4*AT	60	1084	575/60/3
COM01630	COM06054	CRHR-600C-4*AT	60	1084	400-460/50-60/3

ReSpecT® Model E - Open Drive Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
3E5*40W	COM01447	50	-	784
3E5*40WN 115 V	COM02431	50	-	784
3E5*40LW	COM02432	50	-	784
3E5*40R	COM02658	50	-	784
3E5*40WN 230 V	COM02948	50	-	784
3E5*50W	COM01448	60	-	884
3E5*50R	COM01817	60	-	884
3E5*50WN 115 V	COM02435	60	-	884
3E5*50LW	COM02436	60	-	884
3E5*50RN 115 V	COM02438	60	-	884
3E5*50RW	COM02439	60	-	884
3E5*50LWN 115 V	COM02441	60	-	884
3E5*50WN 230 V	COM05564	60	-	884
3E5*60W	COM01449	75	-	916
3E5*60R	COM02336	75	-	916
3E5*60LWN 115 V	COM02344	75	-	916
3E5*60WN 115 V	COM02443	75	-	916
3E5*60LW	COM02444	75	-	916
3E5*60RN 115 V	COM02446	75	-	916
3E5*60RW	COM02447	75	-	916
3E5*60WN 230 V	COM04367	75	-	916
3E5*60N 230 V	COM05561	75	-	916
3E5*60WN 230 V	COM05563	75	-	916
3E5*80	COM01450	100	-	1005
3E5*80W	COM02109	100	-	1005
3E5*80N 115 V	COM02337	100	-	1005
3E5*80WN 115 V	COM02450	100	-	1005
3E5*80LW	COM02451	100	-	1005
3E5*80RN 115 V	COM02453	100	-	1005
3E5*80RW	COM02454	100	-	1005
3E5*80LWN 115 V	COM02455	100	-	1005
3E5*80WN 230 V	COM05553	100	-	1005

Series 6000

3E5*40W	COM06002	50	-	784
3E5*50W	COM06003	60	-	884
3E5*60W	COM06004	75	-	916
3E5*80W	COM06005	100	-	1005



Cross Reference

ReSpecT® Model E - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
1E5*48	COM01813	30	200-230-460/60/3	1298
1E5*48N 115 V	COM02389	30	200-230-460/60/3	1298
1E5*48N 230 V	COM02872	30	200-230-460/60/3	1298
1E5*41N 115 V	COM02394	30	400-460/50-60/3	1298
1E5*41	COM02640	30	400-460/50-60/3	1298
1E5*45	COM01878	30	575/60/3	1406
1E5*58	COM01814	40	200-230-460/60/3	1298
1E5*58N 115 V	COM02390	40	200-230-460/60/3	1406
1E5*51N 115 V	COM02395	40	400-460/50-60/3	1406
1E5*51	COM02641	40	400-460/50-60/3	1406
1E5*55	COM01879	40	575/60/3	1406
2E5*48	COM01443	50	200-230-460/60/3	1298
1E5*68	COM01815	50	200-230-460/60/3	1444
2E5*48W	COM02088	50	200-230-460/60/3	1298
2E5*48N 115 V	COM02092	50	200-230-460/60/3	1298
2E5*48L	COM02381	50	200-230-460/60/3	1298
2E5*48LN 115 V	COM02382	50	200-230-460/60/3	1298
2E5*58L 115 V	COM02383	50	200-230-460/60/3	1298
1E5*68N 115 V	COM02391	50	200-230-460/60/3	1444
2E5*48N 230 V	COM02512	50	200-230-460/60/3	1298
2E5*48WN 230V	COM02704	50	200-230-460/60/3	1298
2E5*48WN 115V	COM02727	50	200-230-460/60/3	1298
2E5*48RN 230 V	COM02790	50	200-230-460/60/3	1298
2E5*46	COM02615	50	220/50/3	1298
2E5*49N 115 V	COM03905	50	380/60/3	1298
2E5*41	COM02072	50	400-460/50-60/3	1298
2E5*41N 115 V	COM02242	50	400-460/50-60/3	1298
1E5*61N 115 V	COM02396	50	400-460/50-60/3	1444
2E5*41W	COM02398	50	400-460/50-60/3	1298
2E5*41L	COM02399	50	400-460/50-60/3	1298
2E5*41LN 115 V	COM02400	50	400-460/50-60/3	1298
2E5*41N 230 V	COM02508	50	400-460/50-60/3	1298
2E5*61LN 115V	COM04270	50	400-460/50-60/3	1444
1E5*61	COM02678	50	460/60/3	1298
2E5*45	COM01860	50	575/60/3	1406
1E5*65	COM01880	50	575/60/3	1444
2E5*45N 115 V	COM02136	50	575/60/3	1298
2E5*58	COM01444	60	200-230-460/60/3	1406
1E5*88	COM01816	60	200-230-460/60/3	1704
2E5*58W	COM02089	60	200-230-460/60/3	1406
2E5*58N 115 V	COM02093	60	200-230-460/60/3	1406
2E5*58LN 115 V	COM02384	60	200-230-460/60/3	1406
2E5*58N 230 V	COM02513	60	200-230-460/60/3	1406
2E5*58Z	COM02959	60	200-230-460/60/3	1406
1E5*88N 220 V	COM03948	60	200-230-460/60/3	1704
2E5*51	COM02073	60	460/60/3	1406
2E5*51N 115 V	COM02243	60	460/60/3	1406
1E5*81N 115 V	COM02397	60	460/60/3	1704
2E5*81W	COM02401	60	460/60/3	1406
2E5*51L	COM02402	60	460/60/3	1406
2E5*51LN 115 V	COM02403	60	460/60/3	1406
2E5*51N 230 V	COM02509	60	460/60/3	1406
2E5*55	COM01861	60	575/60/3	1406
1E5*85	COM01881	60	575/60/3	1704
2E5*55N 115 V	COM02135	60	575/60/3	1406

ReSpecT® Model E - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
2E5*55L	COM02393	60	575/60/3	1406
1E5*88N 115V	COM02392	60	200-230-460/60/3	1704
2E5*68	COM01445	75	200-230-460/60/3	1444
2E5*68W	COM02090	75	200-230-460/60/3	1444
2E5*68N 115 V	COM02094	75	200-230-460/60/3	1444
2E5*68L	COM02385	75	200-230-460/60/3	1444
2E5*68LN 115 V	COM02386	75	200-230-460/60/3	1444
2E5*68N 230 V	COM02514	75	200-230-460/60/3	1444
2E5*68LW75	COM02659	75	200-230-460/60/3	1704
2E5*68U	COM02933	75	200-230-460/60/3	1444
2E5*68 REMOTE	COM05556	75	200-230-460/60/3	1444
2E5*62	COM03017	75	200/60/3	1444
2E5*62N 115 V	COM03018	75	200/60/3	1444
2E5*62	COM03019	75	200/60/3	1444
2E5*66N 115 V	COM03013	75	220/50/3	1444
2E5*66N 230 V	COM03015	75	220/50/3	1444
2E5*63	COM03002	75	230/60/3	1444
2E5*63N 115 V	COM03003	75	230/60/3	1444
2E5*63	COM03012	75	230/60/3	1444
2E5*69N 115 V	COM03010	75	363/50/3	1444
2E5*69N 115 V	COM03009	75	380/60/3	1444
2E5*69	COM03016	75	380/60/3	1444
2E5*61	COM02074	75	400-460/50-60/3	1444
2E5*61N 115 V	COM02244	75	400-460/50-60/3	1444
2E5*61W	COM02404	75	400-460/50-60/3	1444
2E5*61L	COM02405	75	400-460/50-60/3	1444
2E5*61LN 115 V	COM02406	75	400-460/50-60/3	1444
2E5*61N 230 V	COM02510	75	400-460/50-60/3	1444
2E5*61N 115 V	COM03004	75	400-460/50-60/3	1444
2E5*61	COM03005	75	400-460/50-60/3	1444
2E5*61	COM03011	75	400-460/50-60/3	1444
2E5*61N 230 V	COM03014	75	400-460/50-60/3	1444
2E5*61Z	COM02650	75	460/60/3	1444
2E5*65	COM01862	75	575/60/3	1444
2E5*65N 115 V	COM02134	75	575/60/3	1444
2E5*65N 115 V	COM03006	75	575/60/3	1444
2E5*65	COM03007	75	575/60/3	1444
2E5*65	COM03008	75	575/60/3	1444
2E5*88	COM01446	100	200-230-460/60/3	1704
2E5*88W	COM02091	100	200-230-460/60/3	1704
2E5*88N 115 V	COM02095	100	200-230-460/60/3	1704
2E5*88L	COM02387	100	200-230-460/60/3	1704
2E5*88LN 115 V	COM02388	100	200-230-460/60/3	1704
2E5*88N 230 V	COM02515	100	200-230-460/60/3	1704
2E5*82	COM03036	100	200/60/3	1704
2E5*82N 115 V	COM03037	100	200/60/3	1704
2E5*82	COM03038	100	200/60/3	1704
L2E5*86N 115V	COM03031	100	220/50/3	1704
L2E5*86N 230V	COM03034	100	220/50/3	1704
2E5*83	COM03021	100	230/60/3	1704
2E5*83N 115 V	COM03022	100	230/60/3	1704
2E5*83	COM03030	100	230/60/3	1704
L2E5*89N 115V	COM03028	100	363/50/3	1704
2E5*89N 115 V	COM03027	100	380/60/3	1704
2E5*89	COM03035	100	380/60/3	1704
2E5*89N 115 V	COM03915	100	380/60/3	1704
2E5*81	COM02075	100	400-460/50-60/3	1704
2E5*81N 115 V	COM02245	100	400-460/50-60/3	1704
2E5*81W	COM02407	100	400-460/50-60/3	1704
2E5*81L	COM02408	100	400-460/50-60/3	1704



Cross Reference

ReSpecT® Model E - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
2E5*81LN 115 V	COM02409	100	400-460/50-60/3	1704
2E5*81N 230 V	COM02511	100	400-460/50-60/3	1704
2E5*81LZ	COM02931	100	400-460/50-60/3	1704
2E5*81N 115 V	COM03023	100	400-460/50-60/3	1704
2E5*81	COM03024	100	400-460/50-60/3	1704
2E5*81	COM03029	100	400-460/50-60/3	1704
2E5*81N 230 V	COM03033	100	400-460/50-60/3	1704
2E5*81LN 115V	COM03800	100	400-460/50-60/3	1704
2E5*81Z	COM05562	100	400-460/50-60/3	1704
2E5*85	COM01863	100	575/60/3	1704
2E5*85N 115 V	COM02133	100	575/60/3	1704
2E5*85N 115 V	COM03025	100	575/60/3	1704
2E5*85	COM03026	100	575/60/3	1704
2E5*85	COM03032	100	575/60/3	1704
2E5*85LN 115V	COM03931	100	575/60/3	1704
2E5*85LN 115V	COM03937	100	575/60/3	1704
2E5*85LX	COM04323	100	575/60/3	1704

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2E5*48	COM06006	50	200-230-460/60/3	1298
2E5*48N 115 V	COM06007	50	200-230-460/60/3	1298
2E5*45	COM06139	50	575/60/3	1298
2E5*58	COM06008	60	200-230-460/60/3	1406
2E5*58N 115 V	COM06010	60	200-230-460/60/3	1704
2E5*51	COM06009	60	460/60/3	1406
2E5*55	COM06140	60	575/60/3	1406
2E5*68	COM06011	75	200-230-460/60/3	1444
2E5*68N 115 V	COM06012	75	200-230-460/60/3	1444
2E5*61N 115 V	COM06013	75	460/60/3	1444
2E5*65	COM06141	75	575/60/3	1444
2E5*88	COM06014	100	200-230-460/60/3	1704
2E5*88N 115 V	COM06015	100	200-230-460/60/3	1704
2E5*81	COM06016	100	460/60/3	1704
2E5*81N 115 V	COM06017	100	460/60/3	1704
2E5*85	COM06142	100	575/60/3	1704

ReSpecT® Model F - Open Drive Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
3F5*30W	COM01456	15	-	424
3F5*30L	COM02457	15	-	424
3F5*30WN 115 V	COM02459	15	-	424
3F5*30N 220 V	COM02622	15	-	424
3F5*30WN 220 V	COM02707	15	-	424
3F5*30LWN 115 V	COM04468	15	-	424
3F5*40W	COM01457	20	-	476
3F5*40L	COM02460	20	-	476
3F5*40WN 115 V	COM02462	20	-	476
3F5*40R	COM02463	20	-	476
3F5*40WN 220V	COM02558	20	-	476
3F5*40N 220 V	COM02623	20	-	476
3F5*40LWN 115 V	COM04373	20	-	476
3F5*50W	COM02110	25	-	532
3F5*50N 115V	COM02345	25	-	532

ReSpecT® Model F - Open Drive Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
3F5*50L	COM02464	25	-	532
3F5*50LN 115V	COM02465	25	-	532
3F5*50R	COM02466	25	-	532
3F5*50N 220 V	COM02624	25	-	532
3F5*50WN 115 V	COM02932	25	-	532
3F5*50WN 220 V	COM03984	25	-	532
3F5*60W	COM02111	30	-	568
3F5*60L	COM02467	30	-	568
3F5*60N 115 V	COM02468	30	-	424
3F5*60WN 220 V	COM02654	30	-	568
3F5*60WN 115 V	COM02718	30	-	568
3F5*80W	COM02112	40	-	592
3F5*80L	COM02469	40	-	592
3F5*80WN 115 V	COM02626	40	-	592
3F5*80N 220V	COM02639	40	-	592
3F5*80WN 220 V	COM03858	40	-	592

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3F5*30W	COM06028	15	-	424
3F5*40W	COM06029	20	-	476
3F5*50W	COM06030	25	-	532
3F5*60W	COM06031	30	-	568
3F5*80W	COM06032	30	-	592

ReSpecT® Model F - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
1F5*38N 115V	COM02410	10	200-230-460/60/3	522
1F5*38LN 115V	COM02411	10	200-230-460/60/3	522
1F5*31N 115V	COM02412	10	460/60/3	522
1F5*31	COM02984	10	460/60/3	522
1F5*35	COM01873	10	575/60/3	790
1F5*48	COM02164	12.5	200-230-460/60/3	710
1F5*48	COM02166	12.5	200-230-460/60/3	626
2F5*38	COM01451	15	200-230-460/60/3	522
2F5*38N 115V	COM02100	15	200-230-460/60/3	522
1F5*58	COM02165	15	200-230-460/60/3	790
1F5*58	COM02167	15	200-230-460/60/3	694
2F5*38N 220V	COM02520	15	200-230-460/60/3	522
2F5*31	COM02173	15	460/60/3	522
2F5*31N 115V	COM02174	15	460/60/3	522
2F5*38L	COM02413	15	460/60/3	522
2F5*35	COM01864	15	575/60/3	522
2F5*35N 115V	COM02132	15	575/60/3	522
S2F5*43	COM01054	20	200-230-460/60/3	522
2F5*48	COM01452	20	200-230-460/60/3	626
2F5*48	COM01662	20	200-230-460/60/3	710
1F5*68	COM01809	20	200-230-460/60/3	810
1F5*68	COM01810	20	200-230-460/60/3	690
2F5*48N 115V	COM02101	20	200-230-460/60/3	710
2F5*48N 115V	COM02105	20	200-230-460/60/3	626
2F5*48L	COM02421	20	200-230-460/60/3	626
2F5*48U	COM02493	20	200-230-460/60/3	626
2F5*48N 220V	COM02516	20	200-230-460/60/3	626
2F5*48N 220V	COM02521	20	200-230-460/60/3	710
2F5*41	COM02076	20	460/60/3	626
2F5*41	COM02096	20	460/60/3	710



Cross Reference

ReSpecT® Model F - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
2F5*41N 115V	COM02416	20	460/60/3	710
2F5*41L	COM02424	20	460/60/3	626
2F5*41N 115V	COM02425	20	460/60/3	626
2F5*45	COM01865	20	575/60/3	710
2F5*45	COM01869	20	575/60/3	626
1F5*65	COM01874	20	575/60/3	790
1F5*65	COM01875	20	575/60/3	694
2F5*45N 115V	COM02940	20	575/60/3	710
2F5*58	COM01453	25	200-230-460/60/3	694
2F5*58	COM01663	25	200-230-460/60/3	790
1F5*88	COM01811	25	200-230-460/60/3	922
1F5*88	COM01812	25	200-230-460/60/3	776
2F5*58N 115V	COM02102	25	200-230-460/60/3	790
2F5*58N 115V	COM02106	25	200-230-460/60/3	694
2F5*58L	COM02422	25	200-230-460/60/3	694
2F5*58LN 115V	COM02502	25	200-230-460/60/3	694
2F5*58N 220V	COM02517	25	200-230-460/60/3	694
2F5*58N 220V	COM02522	25	200-230-460/60/3	790
2F5*55	COM01870	25	460/60/3	694
2F5*51	COM02077	25	460/60/3	694
2F5*51	COM02097	25	460/60/3	790
2F5*51N 115V	COM02182	25	460/60/3	694
2F5*51N 115V	COM02417	25	460/60/3	790
2F5*51L	COM02426	25	460/60/3	694
2F5*55	COM01866	25	575/60/3	790
1F5*85	COM01876	25	575/60/3	922
1F5*85	COM01877	25	575/60/3	776
2F5*68	COM01454	30	200-230-460/60/3	690
2F5*68	COM01664	30	200-230-460/60/3	810
2F5*68N 115V	COM02103	30	200-230-460/60/3	810
2F5*68N 115V	COM02107	30	200-230-460/60/3	690
2F5*68L	COM02371	30	200-230-460/60/3	690
2F5*68N 220V	COM02523	30	200-230-460/60/3	810
2F5*61	COM02078	30	460/60/3	690
2F5*61	COM02098	30	460/60/3	810
2F5*61N 115V	COM02181	30	460/60/3	690
2F5*61N 115V	COM02418	30	460/60/3	790
2F5*61L	COM02427	30	460/60/3	690
2F5*61N 220V	COM03125	30	460/60/3	690
2F5*65	COM01867	30	575/60/3	810
2F5*55	COM01871	30	575/60/3	690
2F5*88	COM01455	40	200-230-460/60/3	776
2F5*88	COM01665	40	200-230-460/60/3	922
2F5*88N 115V	COM02104	40	200-230-460/60/3	922
2F5*88N 115V	COM02108	40	200-230-460/60/3	776
2F5*88L	COM02423	40	200-230-460/60/3	776
2F5*88N 220V	COM02519	40	200-230-460/60/3	776
2F5*88N 220V	COM02524	40	200-230-460/60/3	922
2F5*88W	COM02557	40	200-230-460/60/3	922
2F5*88U	COM05080	40	200-230-460/60/3	922
2F5*88	COM05625	40	200-230-460/60/3	922
2F5*86N 220V	COM02634	40	220/50/3	776
2F5*86N 115V	COM02657	40	220/50/3	776
2F5*81	COM02071	40	460/60/3	776
2F5*81	COM02099	40	460/60/3	922
2F5*81N 115V	COM02180	40	460/60/3	776
2F5*81N 115V	COM02420	40	460/60/3	922
2F5*81L	COM02428	40	460/60/3	776
2F5*81N 220V	COM02717	40	460/60/3	922
2F5*85	COM01868	40	575/60/3	922

ReSpecT® Model F - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
2F5*85	COM01872	40	575/60/3	694
2F5*85N 115V	COM03360	40	575/60/3	776

Series 6000

2F5*38	COM06023	15	200-230-460/60/3	522
2F5*35	COM06130	15	575/60/3	522
2F5*48	COM06018	20	200-230-460/60/3	626
2F5*48	COM06024	20	200-230-460/60/3	710
2F5*45	COM06131	20	575/60/3	710
2F5*45	COM06135	20	575/60/3	626
2F5*58	COM06019	25	200-230-460/60/3	694
2F5*58	COM06025	25	200-230-460/60/3	790
2F5*55	COM06132	25	575/60/3	790
2F5*55	COM06136	25	575/60/3	694
2F5*68	COM06020	30	200-230-460/60/3	690
2F5*68	COM06026	30	200-230-460/60/3	810
2F5*65	COM06133	30	575/60/3	810
2F5*65	COM06137	30	575/60/3	690
2F5*88	COM06021	40	200-230-460/60/3	776
2F5*88N 115V	COM06022	40	200-230-460/60/3	776
2F5*88	COM06027	40	200-230-460/60/3	922
2F5*85	COM06134	40	575/60/3	922
2F5*85	COM06138	40	575/60/3	776

Notes: (1) Motor barrel size: All 3 cylinder, Model F, Semihermetic compressors utilize a small barrel motor, 8.77" in diameter. Using the "Original Model Number" ("Model Number" for the Series 6000) the compressor may be identified as design sequences A through C. All other Model F, Semihermetic compressors with a design sequence of A through B, utilize a large barrel motor, 12.375" in diameter. Design sequences C through E, utilize a small barrel motor, 8.77" in diameter.

ReSpecT® Model M - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
M10C-1E2A-*	COM02334	10	200/60/3	454
M10G-1E2A-*	COM02470	10	230/60/3	454
M10E-1E2A-*	COM02335	10	460/60/3	454
M10F-1E1A-*	COM02369	10	575/60/3	454
M10F-1E2A-*	COM02370	10	575/60/3	454
M13E-1E3A-*	COM01421	13	460/60/3	466
M13E-1E2A-*	COM03799	13	460/60/3	466
M13F-1E2A-*	COM02716	13	575/60/3	466
M15C-2E2A-*	COM01461	15	200/60/3	454
M15E-2E4A-*	COM01786	15	200/60/3	454
-	COM01462	15	230-460/60/3	454
M15D-2E2A-*	COM01507	15	230/60/3	454
M15D-2E2A-*	COM01788	15	230/60/3	454
M15H-2E1B-*	COM04470	15	400/50/3	454
M15E-2E2A-*	COM01508	15	460/60/3	454
M15E-2E2A-*	COM01787	15	460/60/3	454
M15F-2E2A-*	COM01789	15	575/60/3	454
M15F-2E2A-*	COM01849	15	575/60/3	454
M16C-1E2A-*	COM02471	16	200/60/3	466
M16D-1E2A-*	COM02472	16	230/60/3	466
M16D-1E2A-*	COM02473	16	230/60/3	466
M16E-2E2A-*	COM01406	16	460/60/3	466
M16D-1E2A-*	COM02500	16	460/60/3	466
M17C-1E4B-*	COM02596	17	200/60/3	548
M17E-1E4A-*	COM03761	17	460/60/3	548



Cross Reference

ReSpecT® Model M - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
M19E-1E4A-*	COM02597	19	460/60/3	548
-	COM01464	20	230-460-60/3	466
M20C-2E3A-*	COM01463	20	200/60/3	466
-	COM01466	20	200/60/3	-
M20C-2E2A-*	COM02119	20	200/60/3	466
M20C-2E3A-*	COM02120	20	200/60/3	466
M20C-2E3B-*	COM02503	20	200/60/3	466
M20D-2E3A-*	COM01509	20	230/60/3	466
M20D-2E2A-*	COM01510	20	230/60/3	466
-	COM02124	20	230/60/3	466
M20D-2E3A-*	COM02125	20	230/60/3	466
M20G-2E3B-*	COM02930	20	230/60/3	466
M20*-2E2A-*	COM03695	20	380/60/3	466
M20*-2E2A-*	COM03903	20	380/60/3	466
M20E-2E3A-*	COM01465	20	460/60/3	466
-	COM01468	20	460/60/3	-
-	COM02122	20	460/60/3	466
M20E-2E3A-*	COM02123	20	460/60/3	466
M20E-2E3B-*	COM02504	20	460/60/3	466
M20H-2E3B-*	COM03969	20	400/50/3	466
M20H-2E2B-*	COM04271	20	400/50/3	466
M15F-2E2A-*	COM01850	20	575/60/3	466
-	COM01851	20	575/60/3	466
M20F-2E2A-*	COM02127	20	575/60/3	466
M20*-2E2A-*	COM05559	20	200-230/50-60/3	466
M25C-2E4A-*	COM01469	25	200/60/3	548
M25E-2E4A-*	COM01473	25	200/60/3	548
M25C-2E0N-*	COM02023	25	200/60/3	548
-	COM02137	25	200/60/3	548
-	COM02138	25	200/60/3	548
M25C-2E0N-*	COM02474	25	200/60/3	548
M25C-2E4B-*	COM02505	25	200/60/3	548
M25*-2E4B-*	COM05077	25	220/50/3	548
M25M-2E4A-*	COM01470	25	230-460/60/3	548
-	COM02139	25	230-460/60/3	548
M25D-2E4A-*	COM01511	25	230/60/3	548
M25D-2E4A-*	COM01512	25	230/60/3	548
-	COM02142	25	230/60/3	548
M25*-2E4A-*	COM03904	25	380/60/3	548
M25H-2E4B-*	COM02926	25	400/50/3	548
M25E-2E4A-*	COM01471	25	460/60/3	548
M25E-2E4A-*	COM01472	25	460/60/3	548
M25E-2E0N-*	COM02024	25	460/60/3	548
-	COM02140	25	460/60/3	548
-	COM02141	25	460/60/3	548
M25E-2E4B-*	COM02475	25	460/60/3	548
M25F-2E4A-*	COM01852	25	575/60/3	548
M25F-2E4A-*	COM01853	25	575/60/3	548
M30C-2E4A-*	COM01475	30	200/60/3	548
M30C-2E4A-*	COM01479	30	200/60/3	548
M30C-2E0N-*	COM02025	30	200/60/3	548
-	COM02143	30	200/60/3	548
-	COM02144	30	200/60/3	548
M30C-2E4B-*	COM02506	30	200/60/3	548
M30M-2E4A-*	COM01476	30	230-460/60/3	548
M30M-2E4A-*	COM01480	30	230-460/60/3	548
M30D-2E4A-*	COM01513	30	230/60/3	548
M30D-2E4A-*	COM01514	30	230/60/3	548
-	COM02150	30	230/60/3	548
-	COM02151	30	230/60/3	548

ReSpecT® Model M - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
M30D-2E4B-*	COM02476	30	230/60/3	548
M30*-2E4A-*	COM04014	30	380/60/3	548
M30*-2E2A-*	COM04375	30	380/60/3	548
M30H-2E4B-*	COM02927	30	400/50/3	548
M30H-2E2A-*	COM03840	30	400/50/3	548
M30H-2E2B-*	COM04471	30	400/50/3	548
M30E-2E4A-*	COM01477	30	460/60/3	548
M30E-2E4A-*	COM01478	30	460/60/3	548
M30E-2E0N-*	COM02026	30	460/60/3	548
-	COM02147	30	460/60/3	548
-	COM02148	30	460/60/3	548
M30E-2E4B-*	COM02507	30	460/60/3	548
M30F-2E4A-*	COM01854	30	575/60/3	548
M30F-2E4A-*	COM01855	30	575/60/3	548

Series 6000

M15E-2E2A-*	COM06033	15	460/60/3	454
M20C-2E3A-*	COM06034	20	200/60/3	466
M20E-2E3A-*	COM06035	20	460/60/3	466
M20E-2E3A-*	COM06037	20	460/60/3	466
M20F-2E3A-*	COM06124	20	575/60/3	466
M25C-2E4A-*	COM06038	25	200/60/3	548
M25C-2E4A-*	COM06041	25	200/60/3	548
M25E-2E4A-*	COM06039	25	460/60/3	548
M25E-2E4A-*	COM06040	25	460/60/3	548
M25F-2E4A-*	COM06125	25	575/60/3	548
M30C-2E4A-*	COM06042	30	200/60/3	548
M30C-2E4A-*	COM06045	30	200/60/3	548
M30D-2E4A-*	COM06046	30	230/60/3	548
M30E-2E4A-*	COM06043	30	460/60/3	548
M30E-2E4A-*	COM06044	30	460/60/3	548

ReSpecT® Model R - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
CRHR-350A-2*AT	COM03950	35	200/60/3	860
CRHR-350A-2*AS	COM03967	35	200/60/3	860
CRHR-350A-3*AS	COM04376	35	200/60/3	860
CRHR-350A-2*AT	COM05066	35	200/60/3	860
CRHR-350A-2*AS	COM05067	35	200/60/3	860
CRHR-350D-2*AT	COM05554	35	575/60/3	860
CRHR-350W-2*AT	COM05555	35	200-230/50-60/3	860
CRHR-350C-2*AT	COM03939	35	400-460/50-60/3	860
CRHR-350C-2*AS	COM03960	35	400-460/50-60/3	860
CRHR-350C-2*AT	COM04012	35	400-460/50-60/3	860
CRHR-350C-3*AT	COM05079	35	400-460/50-60/3	860
CRHR-380A-4*AT	COM02986	38	200/60/3	860
CRHR-400A-3*AT	COM01619	40	200/60/3	860
CRHR-400A-3*AS	COM01622	40	200/60/3	860
CRHR-400A-2*AT	COM02152	40	200/60/3	-
CRHR-400A-2*AS	COM02153	40	200/60/3	-
CRHR-400A-0*NT	COM02171	40	200/60/3	860
CRHR-401A-3*AT	COM05558	40	200/60/3	860
CRHR-400W-2*AT	COM02157	40	230/60/3	-
CRHR-400W-2*AS	COM02170	40	230/60/3	-



Cross Reference

ReSpecT® Model R - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
-	COM03934	40	380/60/3	860
-	COM03947	40	380/60/3	860
CRHR-400C-2*AT	COM02155	40	460/60/3	-
CRHR-400C-2*AS	COM02156	40	460/60/3	-
CRHR-400D-3*AT	COM01856	40	575/60/3	860
CRHR-400D-3*AS	COM01857	40	575/60/3	860
CRHR-400D-2*AT	COM02168	40	575/60/3	-
CRHR-400D-2*AS	COM02169	40	575/60/3	-
CRHR-400W-3*AT	COM01620	40	200-230/50-60/3	860
CRHR-400W-3*AS	COM01623	40	200-230/50-60/3	860
CRHR-400W-0*NT	COM02172	40	200-230/50-60/3	860
CRHR-400W-2*BT	COM05070	40	200-230/50-60/3	860
CRHR-400C-3*AT	COM01621	40	400-460/50-60/3	860
CRHR-400C-3*AS	COM01624	40	400-460/50-60/3	860
CRHR-400C-3*BT	COM02477	40	400-460/50-60/3	860
CRHR-400G-2*BT	COM02478	40	400-460/50-60/3	860
CRHR-400G-2*AS	COM02928	40	400-460/50-60/3	860
CRHR-401C-3*AS	COM05557	40	400-460/50-60/3	860
CRHR-500A-4*AT	COM01625	50	200/60/3	1070
CRHR-500A-0*NT	COM02178	50	200/60/3	1070
CRHR-500W-2*AT	COM02176	50	230/60/3	-
-	COM04015	50	380/60/3	1080
-	COM05566	50	380/60/3	1070
CRHR-500D-4*AT	COM01858	50	575/60/3	1070
CRHR-500D-2*AT	COM02177	50	575/60/3	-
CRHR-500W-4*AT	COM01626	50	200-230/50-60/3	1070
CRHR-500W-0*NT	COM02179	50	200-230/50-60/3	1070
CRHR-500C-4*AT	COM01627	50	400-460/50-60/3	1070
CRHR-500C-4*BT	COM02479	50	400-460/50-60/3	1070
CRHR-500C-0*NT	COM03040	50	400-460/50-60/3	1070
CRHR-500G-2*BT	COM03198	50	400-460/50-60/3	1070
CRHR-501C-4*AT	COM05078	50	400-460/50-60/3	1084
CRHR-500G-4*AT	COM05565	50	400-460/50-60/3	1070
CRHR-500C-2*AT	COM05623	50	400-460/50-60/3	1070
CRHR-600A-4*AT	COM01628	60	200/60/3	1084
CRHR-600A-0*NT	COM02130	60	200/60/3	1084
CRHR-600W-2*AT	COM02128	60	230/60/3	-
CRHR-600W-0*NT	COM02131	60	230/60/3	1084
CRHR-600X-4*AT	COM03199	60	380/60/3	1084
-	COM05075	60	380/60/3	1084
CRHR-600D-4*AT	COM01859	60	575/60/3	1084
CRHR-600D-2*AT	COM02129	60	575/60/3	-
CRHR-600W-4*AT	COM01629	60	200-230/50-60/3	1084
CRHR-600W-4*BT	COM02480	60	200-230/50-60/3	1084
CRHR-600C-4*AT	COM01630	60	400-460/50-60/3	1084
CRHR-600G-2*AT	COM02999	60	400-460/50-60/3	1084
CRHR-600C-0*OT	COM03952	60	400-460/50-60/3	1084

Series 6000

CRHR-400A-3*AT	COM06047	40	200/60/3	860
CRHR-400A-3*AS	COM06049	40	200/60/3	860
CRHR-400D-4*AT	COM06127	40	575/60/3	860
CRHR-400C-3*AT	COM06048	40	400-460/50-60/3	860
CRHR-400C-3*AS	COM06050	40	400-460/50-60/3	860
CRHR-400W-3*AT	COM06066	40	200-230/50-60/3	860
CRHR-400C-2*AT	COM06069	40	400-460/50-60/3	860
CRHR-500A-4*AT	COM06051	50	200/60/3	1070
CRHR-500D-4*AT	COM06128	50	575/60/3	1070
CRHR-500C-4*AT	COM06052	50	400-460/50-60/3	1070

ReSpecT® Model R - Semihermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
CRHR-600A-4*AT	COM06053	60	200/60/3	1084
CRHR-600D-4*AT	COM06129	60	575/60/3	1084
CRHR-600C-4*AT	COM06054	60	400-460/50-60/3	1084

ReSpecT® Model K - Hermetic Compressors

Original Model #	COM #	Capacity (Tons)	Voltage	Shipping Weight (Lbs.)
CRHK200A2*A	COM01790	20	200/60/3	500
CRHK200W2*A	COM01791	20	230/60/3	500
CRHK200S2*A	COM02497	20	380/60/3	550
CRHK200D2*A	COM01793	20	575/60/3	500
CRHK200T2*A	COM01792	20	400-460/50-60/3	500
CRHK250A4*A	COM01795	25	200/60/3	550
CRHK250W4*A	COM01796	25	230/60/3	550
CRHK250S4*A	COM02498	25	380/60/3	550
CRHK250S4*A	COM04388	25	380/60/3	550
CRHK250V4*A	COM03188	25	346/50/3	550
CRHK250D4*A	COM01798	25	575/60/3	550
CRHK250T4*A	COM01797	25	400-460/50-60/3	550
CRHK300A4*A	COM01800	30	200/60/3	550
CRHK300W4*A	COM01801	30	230/60/3	550
CRHK300S4*A	COM02499	30	380/60/3	550
CRHK300S4*A	COM03132	30	346/50/3	550
CRHK300S4*A	COM04387	30	363/50/3	550
CRHK300D4*A	COM01803	30	575/60/3	550
CRHK300T4*A	COM01802	30	400-460/50-60/3	550

Note: If requirements are such that compressor unloading is required other than the standard configuration, connect only the appropriate number of terminals. See connection diagram pages 72-77 (Included with the Model K compressor submittals.)

Reciprocating Compressors - Copeland/Trane Cross Reference

Model Number	COM Number	Nom Tons	Shipping Weight
3DT3-1500-TFD	COM08877	15	425
4DB3-2200-TSK	COM08501	22	435
4DC3-2200-TSK	COM08502	22	435
4DH1-2500-TSK	COM08503	25	445
4DH3-2500-TSK	COM08504	25	445
4DJ1-3000-TSK	COM08506	30	450
4DJ3-3000-TSK	COM08507	30	450
4DK1-2500-FSD	COM08878	25	445
4DK1-2500-TSK	COM08491	25	445
4DK3-2500-TSK	COM08505	25	445
4DR1-3000-TSK	COM08492	30	450
4DR3-3000-TSK	COM08493	30	450
4RA*2000-TSK	COM06089	20	398
4RA3-2000-TSE	COM06112	20	395
4RE*2000-TSK	COM06090	20	403
4RE2-2000-TSE	COM06113	20	395
4RH*2500-TSK	COM06091	25	410
4RH1-2500-TSE	COM06114	25	415
4RJ*3000-TSK	COM06097	30	470



Cross Reference

Reciprocating Compressors - Copeland/Trane Cross Reference

4RJ1-3000-TSE	COM06116	30	470
Model Number	COM Number	Nom Tons	Shipping Weight
4RK*2500-TSK	COM06092	25	415
4RK2-2500-TSE	COM06115	25	415
4RR*3000-TSK	COM06098	30	470
4RR1-3000-TSE	COM06117	30	470
6DH1-3500-TSK	COM08494	35	520
6DH3-3500-TSK	COM08508	35	520
6DJ1-4000-TSN	COM08510	40	570
6DJ3-4000-TSN	COM08511	40	570
6DK1-3500-TSK	COM08495	35	520
6DK3-3500-TSK	COM08509	35	520
6DP1-3500-TSK	COM08496	35	520
6DP3-3500-FSD	COM08881	35	520
6DP3-3500-TSK	COM08497	35	520
6DR1-4000-TSN	COM08498	40	570
6DR3-4000-FSD	COM08886	40	570
6DR3-4000-TSN	COM08512	40	570
6DS1-4000-TSN	COM08499	40	570
6DS3-4000-FSN	COM08887	40	570
6DS3-4000-TSN	COM08500	40	570
6DW3-3000-FSD	COM08880	30	530
6DW3-3000-TSK	COM08879	30	530
6DY3-3000-RSK	COM08889	30	550
6RA*3000-TSK	COM06093	30	475
6RA4-3000-TSE	COM06118	30	475
6RE*3000-TSK	COM06094	30	480
6RE2-3000-TSE	COM06119	30	475
6RH*3500-TSK	COM06095	35	485
6RH1-3500-TSE	COM06120	35	485
6RJ*4000-TSN	COM06099	40	535
6RJ1-4000-TSE	COM06122	40	535
6RK*3500-TSK	COM06096	35	485
6RK2-3500-TSE	COM06121	35	485
6RK2-350A-TSK	COM08882	35	520
6RP2-3500-TSK	COM08828	35	485
6RP2-350A-TSK	COM08883	35	484
6RR*4000-TSN	COM06100	40	535
6RR2-4000-FSN	COM08885	40	570
6RR2-4000-TSE	COM06123	40	535
6RS2-4000-TSN	COM08888	40	570
6RS2-400A-TSN	COM08884	40	570

Copeland Refrigeration Models (DELTA REED) - Copeland/Trane Cross Reference

Current Model Number	Old Model Number	COM Number
4DL3F63KETSK	4DL3150ETSK	COM09795
4DT3F76KETSK	4DT3220ETSK	COM09796
3DS3F46KETFC	3DS3100ETFC	COM09797

Copeland Refrigeration Models (DELTA REED) - Copeland/Trane Cross Reference

Current Model Number	Old Model Number	COM Number
3DS3R17METFC	3DS3150ETFC	COM09798
3DS3R17METFD	3DS3150ETFD	COM09799
4DK3R22METSK	4DK3250ETSK	COM09800
3DB3F33KETFC	3DB3075ETFC	COM09801
3DS3R17MOTFD	3DS31500TFD	COM09802
3DS3F46KETFD	3DS3100ETFD	COM09803
4DS3F76KETSK	4DS3220ETSK	COM09804
4DA3R12METSK	4DA3100ETSK	COM09805
4DP3F63KETSK	4DP3150ETSK	COM09806
3DA3R10METFC	3DA3075ETFC	COM09807
3DB3R12METFC	3DB3100ETFC	COM09808
3DF3F40KETFC	3DF3090ETFC	COM09809
3DA3F28KETFC	3DA3060ETFC	COM09810
4DE3R18METSK	4DE3200ETSK	COM09811
3DB3R12METFD	3DB3100ETFD	COM09812
3DS3R17MOTFC	3DS31500TFC	COM09813
3DT3R17MOTFD	3DT31500TFD	COM09814
4DR3R28METSK	4DR3300ETSK	COM09815
4DA3F47KETSK	4DA3101ETSK	COM09816
3DF3R15METFC	3DF3120ETFC	COM09817
3DB3F33KETFD	3DB3075ETFD	COM09818
6DL3F93KETSK	6DL3270ETSK	COM09916
6DT3F11METSK	6DT3300ETSK	COM09917

Reciprocating Compressors - Carrier/Trane Cross Reference

Model Number	COM Number	Nom Tons	Shipping Weight
06DA818*AA0600	COM06070	6.5	225
06DA818*AA1200	COM06101	6.5	225
06DA8186AA0100	COM06102	6.5	225
06DG5376DC3600	COM08873	12.7	305
06DM3136AC3200	COM08867	5	200
06DM3136AC3600	COM08866	5	200
06DM3286DC3600	COM08870	9	305
06DM5376DC3600	COM08871	12.7	305
06DM8246BC3600	COM08874	8	275
06DS328613C3600	COM08869	9	305
06DS3286BC3200	COM08868	9	305
06DS5376BC3200	COM08826	12.7	305
06DS5376BC3600	COM08827	12.7	305
06DS5376DC3600	COM08872	12.7	305
06DS8186AC3600	COM08876	6.5	225
06DS8246BC3600	COM08875	8	275
06DX328*BA0600	COM06075	9	305
06DX328*BA1200	COM06076	9	305
06DX3286BA0100	COM06105	9	305
06DX337*BA0600	COM06077	9	305
06DX337*BA1200	COM06078	9	305



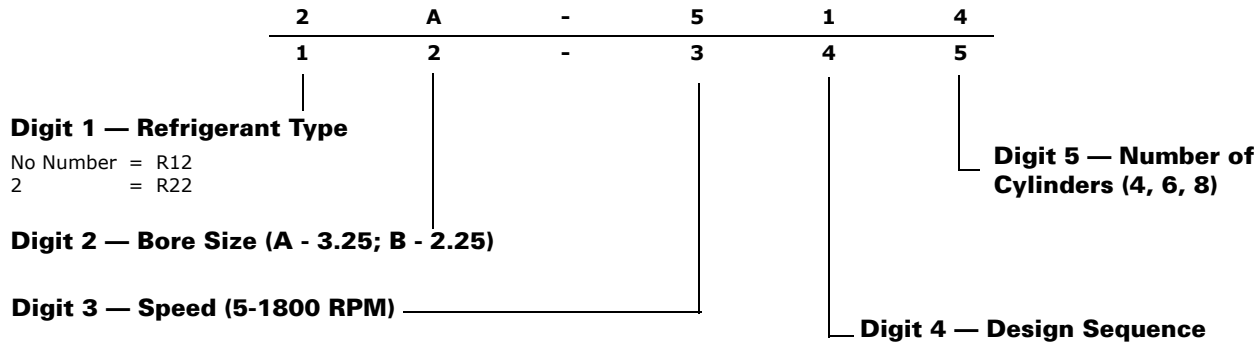
Cross Reference

Reciprocating Compressors - Carrier/Trane Cross Reference

Model Number	COM Number	Nom Tons	Shipping Weight
06DX3376BA0100	COM06106	9	305
06DX537*BA0600	COM06080	12.7	305
06DX537*BA1200	COM06079	12.7	305
06DX5376BA0100	COM06107	12.7	305
06DX824*AA0600	COM06071	8	275
06DX824*AA1200	COM06072	8	275
06DX824*BA0600	COM06073	8	275
06DX824*BA1200	COM06074	8	275
06DX8246AA0100	COM06103	8	275
06DX8246BA0100	COM06104	8	275
06E6175360	COM08855	25	470
06E6175660	COM08854	25	470
06E6265360	COM08856	25	450
06E6275360	COM08859	30	500
06E6275660	COM08858	30	500
06E6299360	COM08862	40	550
06E6299660	COM08861	40	550
06E7275360	COM08860	30	500
06E7299360	COM08863	40	550
06EA250360	COM08852	20	400
06EF175660	COM08853	25	470
06EF265360	COM08829	25	450
06EF275360	COM08830	30	500
06EF275660	COM08857	30	500
06ET2503*0	COM06143	20	400
06ET2506*0	COM06144	20	400
06ET2653*0	COM06145	25	450
06ET2656*0	COM06146	25	450
06ET2753*0	COM06147	30	500
06ET2756*0	COM06148	30	500
06ET2993*0	COM06149	40	550
06ET2996*0	COM06150	40	550
06EX250160	COM06108	20	400
06EX250360	COM06081	20	400
06EX2506*0	COM06082	20	400
06EX265160	COM06109	25	450
06EX265360	COM06083	25	450
06EX2656*0	COM06084	25	450
06EX275160	COM06110	30	500
06EX275360	COM06085	30	500
06EX2756*0	COM06086	30	500
06EX299160	COM06111	40	550
06EX299360	COM06087	40	550
06EX2996*0	COM06088	40	550
5H120	COM06157	120	1500
5H40	COM06154	40	740
5H60	COM06155	60	895
5H80	COM06156	80	1215

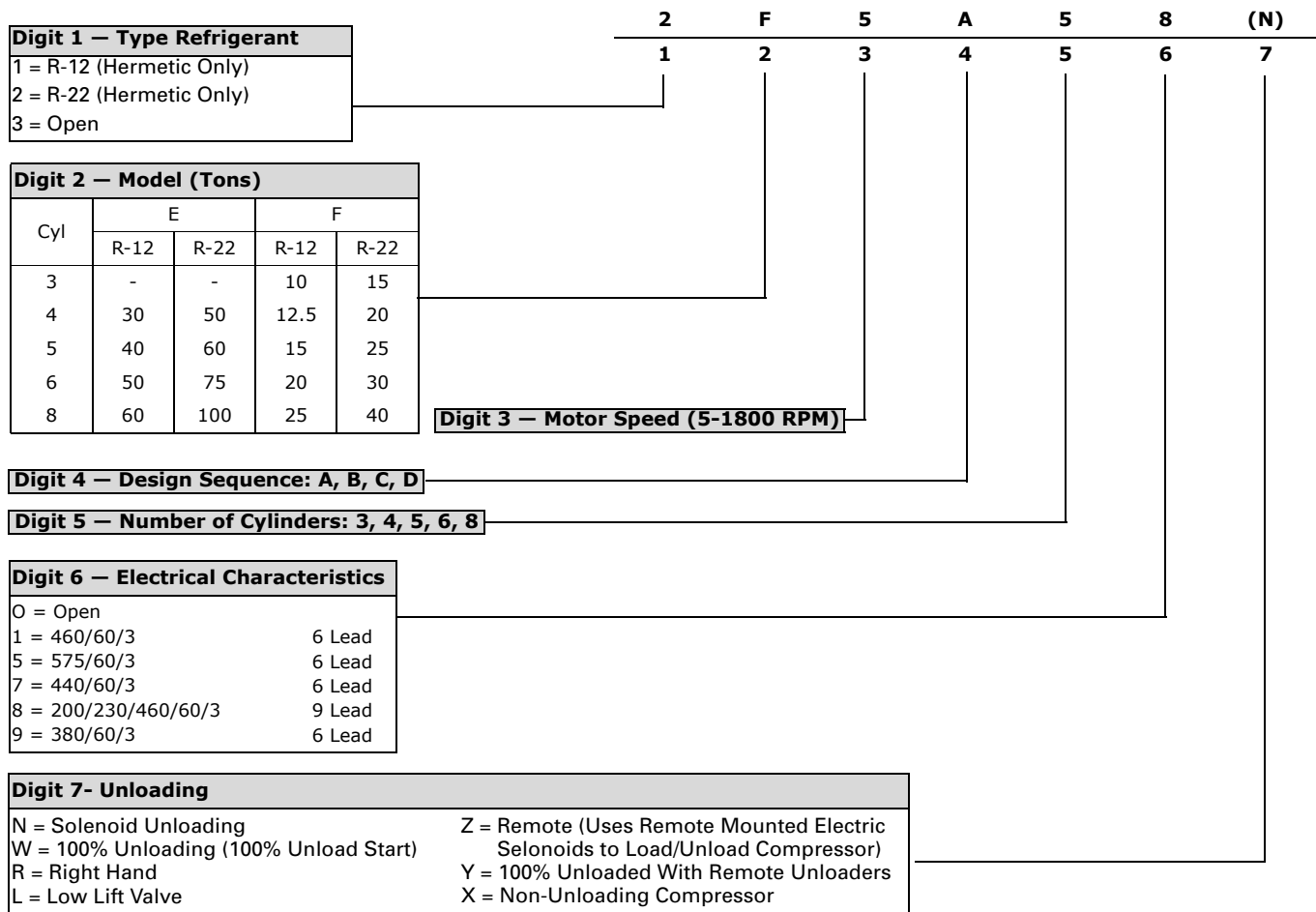
Model Number Descriptions

“Original Model Number” Nomenclature



Models E and F

“Original Model Number”





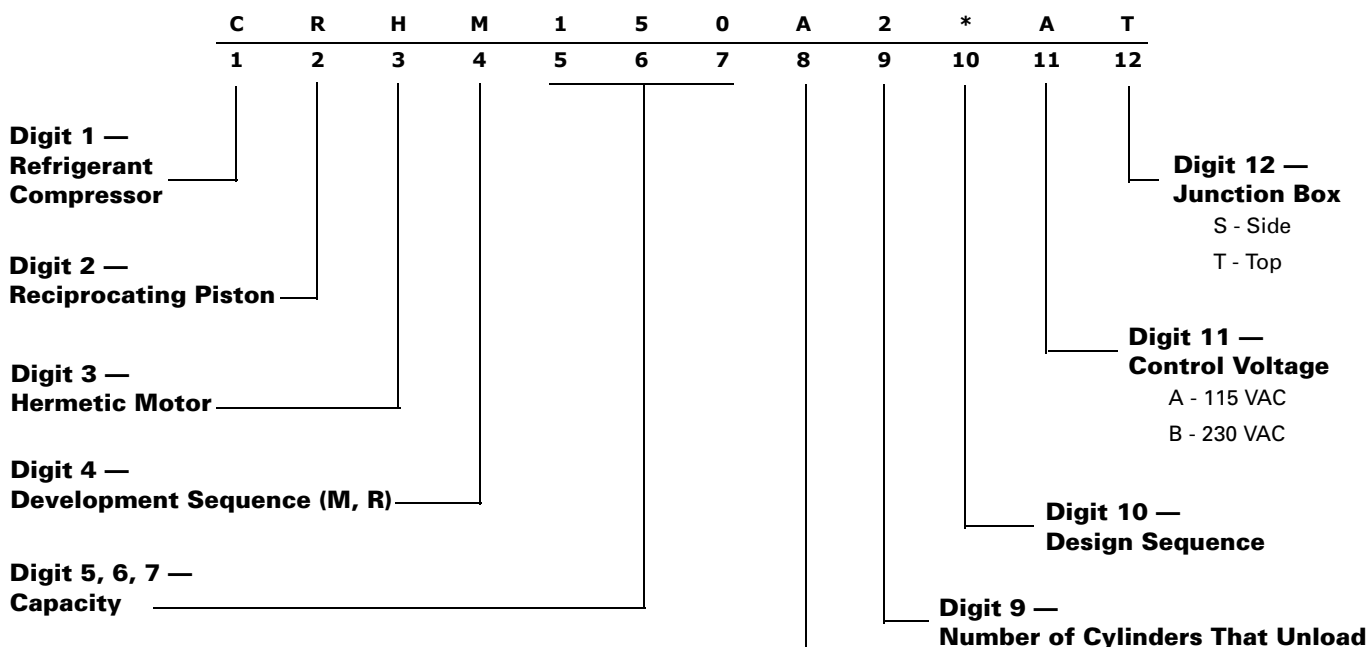
Model Number Descriptions

Models M

“Original Model Number” Nomenclature

	M	3	0	D	-	2	E	4	A	-	A
	1	2	3	4	-	5	6	7	8	-	9
Digit 1 — Compressor Model Type											
Digit 2, 3 — Nominal Size											
10 = 10 Ton											
15 = 15 Ton											
20 = 20 Ton											
25 = 25 Ton											
30 = 30 Ton											
Digit 4 — Type of Refrigerant											
1 = R12											
2 = R22											
Digit 5 — Type of Unloading											
Electric Selenoid on Cylinder Head											
Digit 6 — Electrical											
C = 200/60/3											
D = 230/60/3											
E = 460/60/3											
F = 575/60/3											
G = 230/60/3											
H = 397/50/3											
M = 230-460/60/3											
Digit 7 — Number of Cylinders That Unload											
Digit 8 — Solenoid Voltage											
A = 115 VAC											
B = 230 VAC											
Digit 9 — Design Sequence											
Any Letter A Through Z											

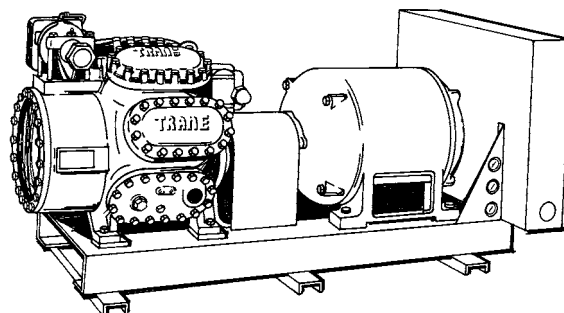
Models M and R



Model M	
100 =	NOM 10 Ton R-12, 3 Cyl.
130 =	NOM 13 Ton R-12, 4 Cyl.
170 =	NOM 17 Ton R-12, 5 Cyl. (Design Sequence A, B, C)
170 =	NOM 17 Ton R-12, 6 Cyl. (Design Sequence D, E, F, G)
190 =	NOM 19 Ton R-12, 6 Cyl.
150 =	NOM 15 Ton R-22, 3 Cyl.
160 =	NOM 16 Ton R-22, 4 Cyl.
200 =	NOM 20 Ton R-22, 4 Cyl.
250 =	NOM 25 Ton R-22, 5 Cyl. (Design Sequence A, B, C)
250 =	Nom 25 Ton R-22, 6 Cyl. (Design Sequence D, E, F, G)
300 =	NOM 30 Ton R-22, 6 Cyl.
Model R	
260 =	NOM 26 Ton R-12, 4 Cyl.
320 =	NOM 32 Ton R-12, 6 Cyl.
380 =	NOM 38 Ton R-12, 6 Cyl.
400 =	NOM 40 Ton R-22, 4 Cyl.
500 =	NOM 50 Ton R-22, 6 Cyl.
600 =	NOM 60 Ton R-22, 6 Cyl.

Digit 8 — Electrical Characteristics

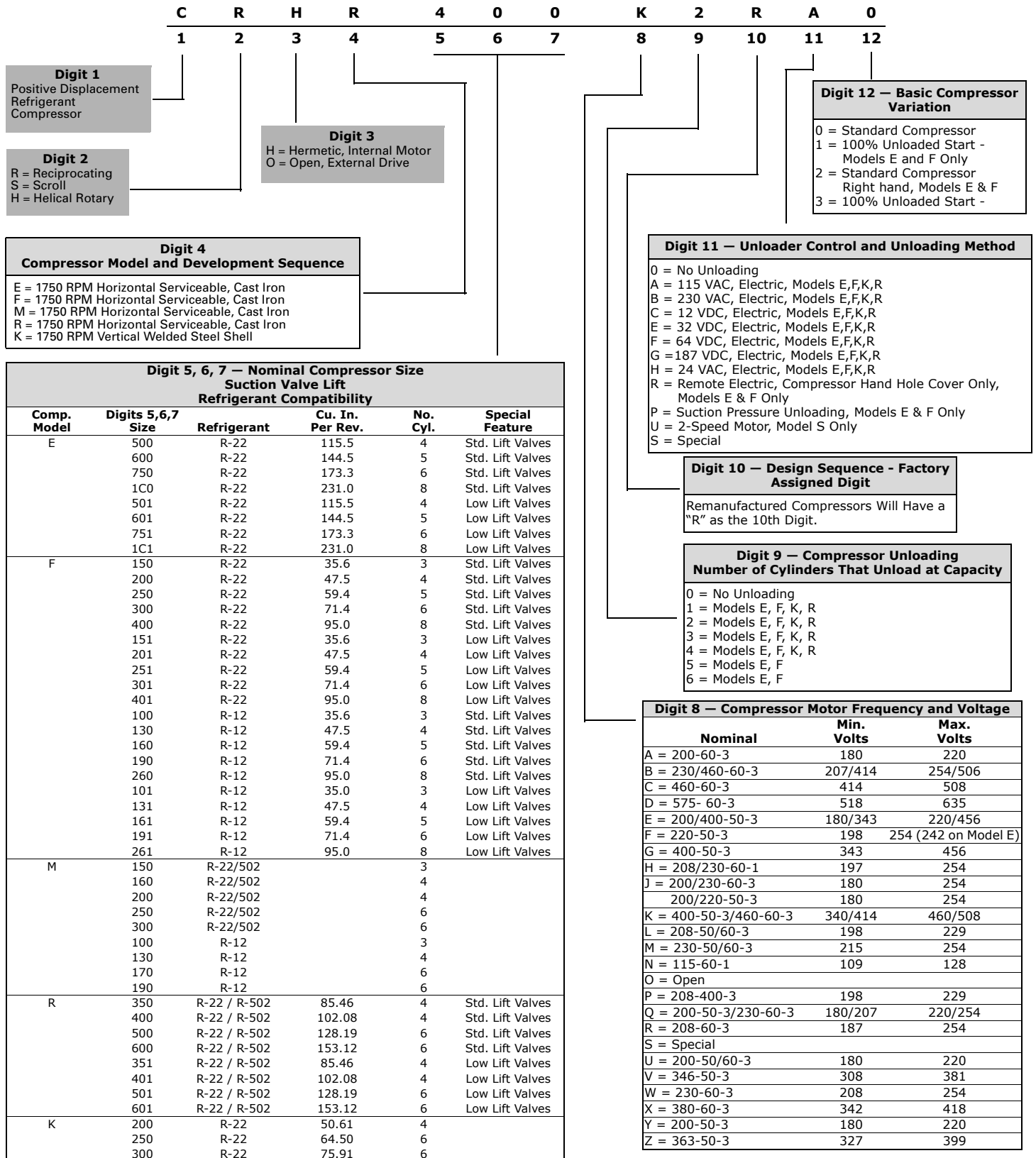
A = 200
 B = 230/460/60/3
 C = 460/60/3
 D = 575/60/3
 E = 200/50/3
 F = 230/50/3
 G = 397/50/3
 W = 230/60/3





Model Number Descriptions

Trane Model E, F, M, R and K Compressors "Original Model Number" Nomenclature



Model Number Descriptions

C	R	H	R	4	0	0	B	2	A0	0	0	R	1	A	1	A	1	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
										Digit 10, 11		Design Sequence A0 = Design Sequence						
										Digit 9		Number of Cylinders That Unload (at Capacity) 0 = No Unloading 2 = 2 Cylinders 3 = 3 Cylinders 4 = 4 Cylinders 5 = 5 Cylinders 6 = 6 Cylinders						
										Digit 8		Motor Voltage and Frequency A = 200-60-3 B = 200/230/460-60-3 C = 460-60-3 D = 575-60-3 E = 200/400-50-3 F = 220-50-3 G = 400-50-3 H = 208-230-60-1 J = 200/230-60-3 K = 400-50-3/460-60-3 L = 208-50/60-3 M = 230-50/60-1 N = 115-60-1 O = Open P = 208-400-3 Q = 200-50-3/230-60-3 R = 208-60-3 S = Special U = 200-50/60-3 V = 346-50-3 W = 230-60-3 X = 380-60-3 Y = 200-50-3 Z = 363-50-3						
										Digit 5, 6, 7		Nominal Tons Model A 400 = 40 Ton, 4 Cyl, R22 600 = 60 Ton, 6 Cyl, R22 750 = 75 Ton, 8 Cyl, R22 250 = 25 Ton, 4 Cyl, R12 350 = 40 Ton, 6 Cyl, R12 500 = 50 Ton, 8 Cyl, R12 Model B 150 = 15 Ton, 4 Cyl, R22 250 = 25 Ton, 6 Cyl, R22 300 = 30 Ton, 8 Cyl, R22 100 = 10 Ton, 4 Cyl, R12 140 = 15 Ton, 6 Cyl, R12 200 = 20 Ton, 8 Cyl, R12 Model E 500 = 50 Ton, 4 Cyl, Std Lift Valves, R22 600 = 60 Ton, 5 Cyl, Std Lift Valves, R22 750 = 75 Ton, 6 Cyl, Std Lift Valves, R22 1C0 = 100 Ton, 8 Cyl, Std Lift Valves, R22 501 = 50 Ton, 4 Cyl, Low Lift Valves, R22 601 = 60 Ton, 5 Cyl, Low Lift Valves, R22 751 = 75 Ton, 6 Cyl, Low Lift Valves, R22 1C1 = 100 Ton, 8 Cyl, Low Lift Valves, R22 300 = 30 Ton, 4 Cyl, Std Lift Valves, R12 400 = 40 Ton, 5 Cyl, Std Lift Valves, R12 450 = 50 Ton, 6 Cyl, Std Lift Valves, R12 550 = 60 Ton, 8 Cyl, Std Lift Valves, R12 301 = 30 Ton, 4 Cyl, Low Lift Valves, R12 401 = 40 Ton, 5 Cyl, Low Lift Valves, R12 451 = 50 Ton, 6 Cyl, Low Lift Valves, R12 551 = 60 Ton, 8 Cyl, Low Lift Valves, R12 Model K 200 = 20 Ton, 4 Cyl, R22 250 = 25 Ton, 6 Cyl, R22 300 = 30 Ton, 6 Cyl, R22 Model R 350 = 35 Ton, 4 Cyl, Std Lift Valves, R22/R502 400 = 40 Ton, 4 Cyl, Std Lift Valves, R22/R502 500 = 50 Ton, 6 Cyl, Std Lift Valves, R22/R502 600 = 60 Ton, 6 Cyl, Std Lift Valves, R22/R502 351 = 35 Ton, 4 Cyl, Low Lift Valves, R22/R502 401 = 40 Ton, 4 Cyl, Low Lift Valves, R22/R502 501 = 50 Ton, 6 Cyl, Low Lift Valves, R22/R502 601 = 60 Ton, 6 Cyl, Low Lift Valves, R22/R502 260 = 26 Ton, 4 Cyl, Std Lift Valves, R12 320 = 32 Ton, 6 Cyl, Std Lift Valves, R12 380 = 38 Ton, 6 Cyl, Std Lift Valves, R12 261 = 26 Ton, 4 Cyl, Low Lift Valves, R12 Model F 150 = 15 Ton, 3 Cyl, Std Lift Valves, R22 200 = 20 Ton, 4 Cyl, Std Lift Valves, R22 250 = 25 Ton, 5 Cyl, Std Lift Valves, R22 300 = 30 Ton, 6 Cyl, Std Lift Valves, R22 400 = 40 Ton, 8 Cyl, Std Lift Valves, R22 151 = 15 Ton, 3 Cyl, Low Lift Valves, R22 201 = 20 Ton, 4 Cyl, Low Lift Valves, R22 251 = 25 Ton, 5 Cyl, Low Lift Valves, R22 301 = 30 Ton, 6 Cyl, Low Lift Valves, R22 401 = 40 Ton, 8 Cyl, Low Lift Valves, R22 100 = 10 Ton, 3 Cyl, Std Lift Valves, R12 130 = 12.5 Ton, 4 Cyl, Std Lift Valves, R12 160 = 15 Ton, 5 Cyl, Std Lift Valves, R12 190 = 20 Ton, 6 Cyl, Std Lift Valves, R12 260 = 25 Ton, 8 Cyl, Std Lift Valves, R12 101 = 10 Ton, 3 Cyl, Low Lift Valves, R12 131 = 12.5 Ton, 4 Cyl, Low Lift Valves, R12 161 = 15 Ton, 5 Cyl, Low Lift Valves, R12 191 = 20 Ton, 6 Cyl, Low Lift Valves, R12 261 = 25 Ton, 8 Cyl, Low Lift Valves, R12 Model M 150 = 15 Ton, 3 Cyl, Std Lift Valves, R22 160 = 16 Ton, 4 Cyl, Std Lift Valves, R22 200 = 20 Ton, 4 Cyl, Std Lift Valves, R22 250 = 25 Ton, 5 or 6 Cyl, Std Lift Valves, R22 300 = 30 Ton, 6 Cyl, Std Lift Valves, R22 151 = 15 Ton, 3 Cyl, low Lift Valves, R22 161 = 16 Ton, 4 Cyl, low Lift Valves, R22 201 = 20 Ton, 4 Cyl, low Lift Valves, R22 251 = 25 Ton, 5 or 6 Cyl, low Lift Valves, R22 301 = 30 Ton, 6 Cyl, low Lift Valves, R22 100 = 10 Ton, 3 Cyl, Std Lift Valves, R12 130 = 13 Ton, 4 Cyl, Std Lift Valves, R12 150 = 15 Ton, 3 Cyl, Std Lift Valves, R22 160 = 16 Ton, 4 Cyl, Std Lift Valves, R22 200 = 20 Ton, 4 Cyl, Std Lift Valves, R22 250 = 25 Ton, 5 or 6 Cyl, Std Lift Valves, R22 300 = 30 Ton, 6 Cyl, Std Lift Valves, R22						
										Digit 1		Unit Type Compressor						
										Digit 2		Compressor Type R = Reciprocating						
										Digit 3		Motor Type H = Hermetic, Internal Drive O = Open, External Drive						
										Digit 4		Compressor Model K =Model K Compressor M =Model M Compressor R =Model R Compressor F =Model F Compressor E =Model E Compressor						



Model Number Descriptions

C	R	H	R	4	0	0	B	2	A0	0	0	R	1	A	1	A	1		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Digit 12 Unloader Control and Method 0 =No Unloading 0 =No Unloading B =230 VAC Electric, Models E, F, K, R C =12 VDC Electric, Models E, F, K, R E =32 VDC Electric, Models E, F, K, R F =64 VDC Electric, Models E, F, K, R G =187 VDC Electric, Models E, F, K, R H =24 VAC Electric, Models E, F, K, R R =Remote Electric, Comp Hand Hole Cover Only, Models E & F Only P =Suction Pressure Unloading, Models A, B, E, & F Only S =Special																			
Digit 13 Basic Compressor Variation 0 =Standard Compressor (Top Locaton Model M Only) 1 =100% Unloaded Start, Model E & F Only 2 =Standard Comp — Right Hand, Models A, B, E, & F 3 =100% Unloaded Start - Right Hand, Models E & F 4 =Side Junction Box Location Model M & R, 4 Cyl Only S =Special																			
Digit 14 R = Remanufactured																			
Digit 15 Crankshaft 1 (STD) = Standard Size 2 (UNDR)=.020 Undersize 3 (NSEL) = No Selection Available																			
Digit 16 Housing A = Old Style (E Open) B = New Style (E Open) C = Old Style, Large Barrel Motor (E Hermetic) D = New Style, Large Barrel Motor (E Hermetic) E = New Style, Small Barrel Motor (E Hermetic) F = Old Style, Large Barrel (F Hermetic) G = New Style, Small Barrel Motor (F Hermetic) H = Old Style (Model R) J = New Style (Model R) K = No Selection Available L = Old Style (F Open, 3 Cylinder) M = New Style (F Open, 3 Cylinder)																			
Digit 17 Valve Cage or Plate 1 (OLDC) = Old Style Valve Cage (Model E & F) 2 (NEWC) = New Style Valve Cage (Model E & F) 3 (OLDP) = Old Style Valve Plate (Model M) 4 (NEWP) = New Style Valve Plate (Model M) 0 (NSEL) = No Selection Available																			
Digit 18 Sight Glass A (SCRW) = Screw-In B (BOLT) = Bolt On C (NSEL) = No Selection Available D (SMAL) = Small 3/4" MPT (Model K) E (LRGE) = Large 1" MPT (Model K)																			
Digit 19 Seal Type 1 (OLD) = Old Style (Model E Open Only) 2 (NEW) = New Style (Model E Open Only) 0 (NSEL) = No Selection Available																			

Model A and B Open Drive Compressors

Description

The Trane Model A and B compressors are unloading, cast iron open drive accessible compressors. The compressor oil pump is reversible for operation in either direction. The compressor unloading is suction pressure actuated.

Basic Variations

There is one optional basic variation to the A and B compressors: it is standard compressor-right hand. This variation moves the unloader handhole cover, which also houses the sightglass, to the right hand side of the compressor, as viewed from the discharge valve end of the compressor. This option is for convenience of viewing the oil sightglass or access to the unloader handhole cover. It was also used on units that had two compressors that were driven from a double extended shaft motor. These units typically used a standard compressor and a right hand compressor.

This variation will also allow the oil sight glass to be on the same side of the unit, should the compressor be applied with a double extended shaft motor.

Lifting and Handling

Both the A and B compressors have tapped holes in the housing that will accommodate lifting lugs for handling of the compressor. During handling it is recommended that the compressor be kept horizontal with the cylinders heads facing up. This will prevent oil from getting into the upper cylinder and causing potential damage when the compressor is started. If tilted from horizontal, it is recommended that the compressor be allowed to set in the horizontal position a minimum of one hour before trying to start the compressor.

Storage

The compressors are shipped with a nitrogen charge and the connections are sealed with closure plates; unless the optional service valves have been ordered for factory installation. The storage of the compressor must be in an enclosed dry space with the temperature and humidity not to exceed 140 F and 95% RH non condensing.

Mounting and Vibration Isolation

Mounting

Since the Model A and B compressors are open drive units, the compressor must not be mounted on isolators. The compressor along with its prime driver should be mounted on a common base. The common base can then be isolated as an assembly from the rest of the unit if desired.

The mounting pads for the compressor and the prime mover must be flat to provide a surface for proper alignment and shimming of the compressor and prime driver. The base must also be rigid to prevent the

compressor shaft and motor shaft from flexing during operation. If flexing occurs, coupling misalignment will occur and result in a failure of the crankshaft. Angular and parallel alignment should not exceed 0.010 inches total indicated reading. See the coupling section for the alignment of the coupling. The compressor mounting feet have .5625 inch diameter holes for mounting.

Refrigeration Connections

Service Valves

Both the A and B compressors are designed to accept optional service valves and are designed for sweat connection utilizing a brass connection. The service valves bolt directly to the compressor. The refrigerant connection size for the individual compressor model is listed on the compressor dimensional data sheets. Whenever brazing refrigerant piping, use a nitrogen purge to prevent the formation of copper oxides. The presence of copper oxides in the compressor is detrimental to the reliability of the compressor.

Pressure Testing

The maximum highside test pressure is 300 psig. The maximum lowside pressure is 200 psig. The differential between highside and lowside should not exceed 300 psig. Never exceed the pressure setting of any relief valves that may be installed in the system.

⚠ WARNING

Never use oxygen or acetylene in place of refrigerant and dry nitrogen for leak testing. A violent explosion may result causing personal injury or death.

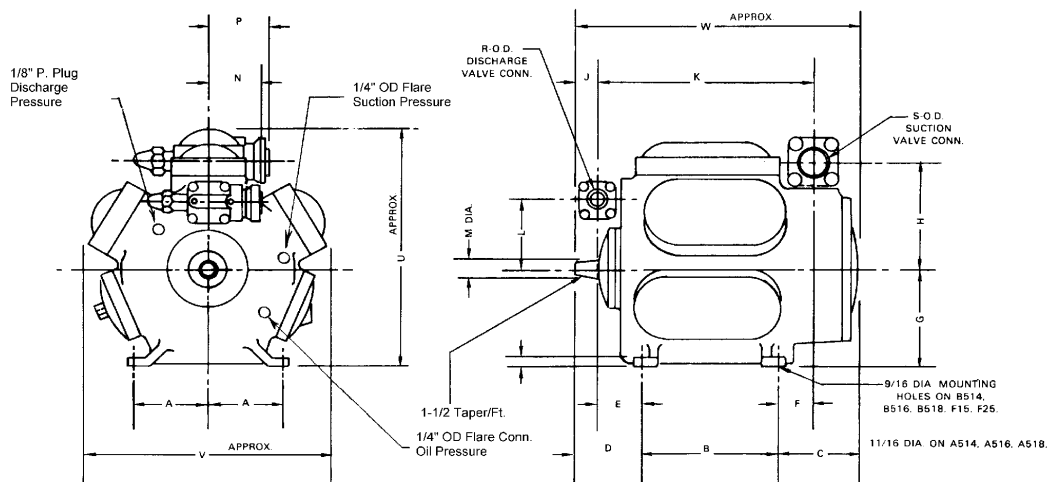
Always use a pressure regulator when using nitrogen to pressure test. Failure to do so will result in extremely high pressure which could exceed the burst pressure of the compressor or other system components and result in personal injury or death.

Model A and B Open Drive Compressors

Table 1. Model A and B Compressors

Compressor Model Number	Capacity (Tons)	Current Rebuild COM Number	Old Remanufactured COM Number	Weight (Lb)
B514	10		COM 0001	460
B516	15		COM 0002	500
B518	20		COM 0003	520
A514	25	COM06369	COM 0004	755
A516	40	COM06370	COM 0005	780
A518	50	COM06371	COM 0006	810
A518R	50	COM06372	COM 0008	810
2B514	15		COM 0022	460
2B516	25		COM 0023	500
2B518	30		COM 0024	520
2A514	40	COM06000	COM 0025	755
2A516	60	COM06376	COM 0026	780
2A518	75	COM06001	COM 0027	810
2A516R	60	COM06377	COM 0028	780
2A518R	75	COM06378	COM 0029	810
A516R	40	-	COM 2492	780
2B514L	15	-	COM 2501	460

Figure 1. Model A and B Dimension and Pressure Ports



Model A and B Open Drive Compressors

Table 2. Model A and B Compressor Dimensional Data

Compressor Model Number	Cap. Tons	Refr	No. Cylinders	A	B	C	D	E
A514	25	12	4	7.500	12.938	9.125	5.688	3.563
2A514	40	22	4	7.500	12.938	9.125	5.688	3.563
B514	10	12	4	6.250	10.750	6.688	4.813	3.125
2B514 (L)	15	22	4	6.250	10.750	6.688	4.813	3.125
A516 (R)	40	12	6	7.500	13.688	9.125	5.688	3.563
2A516 (R)	60	22	6	7.500	13.688	9.125	5.688	3.563
B516	15	12	6	6.250	11.375	6.688	4.813	3.438
2B516	25	22	6	6.250	11.375	6.688	4.813	3.438
A518 (R)	50	12	8	7.500	14.438	9.125	5.688	4.313
2A518 (R)	75	22	8	7.500	14.438	9.125	5.688	4.313
B516	20	12	8	6.250	12.000	6.688	4.813	3.438
2B516	30	22	8	6.250	12.000	6.688	4.813	3.438

Compressor Model Number	F	G	H	J	K	L	M	N
A514	3.875	10.000	11.688	2.375	20.375	6.938	2.000	5.125
2A514	3.875	10.000	11.688	2.375	20.375	6.938	2.000	5.125
B514	2.813	8.250	9.188	1.6875	16.6875	5.875	1.500	4.000
2B514 (L)	2.813	8.250	9.188	1.6875	16.6875	5.875	1.500	4.000
A516 (R)	3.875	10.000	12.250	2.500	21.125	6.938	2.000	5.125
2A516 (R)	3.875	10.000	12.250	2.500	21.125	6.938	2.000	5.125
B516	2.813	8.250	9.188	2.500	17.625	5.875	1.500	5.125
2B516	2.813	8.250	9.188	2.500	17.625	5.875	1.500	5.125
A518 (R)	3.875	10.000	12.250	3.125	22.500	6.938	2.000	5.813
2A518 (R)	3.875	10.000	12.250	3.125	22.500	6.938	2.000	5.813
B516	2.813	8.250	9.188	2.500	18.250	5.875	1.500	5.125
2B516	2.813	8.250	9.188	2.500	18.250	5.875	1.500	5.125

Compressor Model Number	P	T	U	V	W	R OD Disch	S OD Suct
A514	5.813	0.750	24.750	24.500	28.000	2.125	3.125
2A514	5.813	0.750	24.750	24.500	28.000	2.125	3.125
B514	5.125	0.750	19.813	20.125	22.438	1.625	2.125
2B514 (L)	5.125	0.750	19.813	20.125	22.438	1.625	2.125
A516 (R)	7.188	1.000	25.750	26.500	28.875	2.625	4.125
2A516 (R)	7.188	1.000	25.750	26.500	28.875	2.625	4.125
B516	5.813	0.750	20.031	21.875	24.000	2.125	2.125
2B516	5.813	0.750	20.031	21.875	24.000	2.125	2.125
A518 (R)	7.188	1.000	25.750	27.500	30.875	3.125	4.125
2A518 (R)	7.188	1.000	25.750	27.500	30.875	3.125	4.125
B516	5.813	0.750	19.938	22.375	24.625	2.125	2.625
2B516	5.813	0.750	19.938	22.375	24.625	2.125	2.625

Note: For information pertaining to the replacement of a Model A or B compressor with a Model E or F, reference service bulletin HCOM-SB-43.

Shaft diameters and tolerance:

A514, 2A514

A516, 2A516 All 2.000 / 1.999

A518, 2A518

B514, 2B514

B516, 2B516 All 1.500 / 1.499

B518, 2B518

All shafts center tapped for 5/8-18 screw



Model E Open Drive Compressors



Description

The Trane Model E compressor is an unloading, cast iron, open-drive accessible compressor. The compressor oil pump is reversible for operation in either direction. The compressor unloading options are suction pressure-actuated or electric

solenoid-actuated, with electric-actuated available either compressor-mounted or remote mounted.

Basic Variations

There are three optional basic variations to the E compressors:

1. 100 percent unloaded start;
2. Standard compressor-right hand; or
3. 100 percent unloaded start-right hand.

100 Percent Unloaded Start

This variation provides the capability to start the compressor 100 percent unloaded. This lowers the torque required to start the compressor. This variation is typically used on open compressors when it is desirable to reduce the starting torque because the electric motor or other prime mover device does not have sufficient torque to overcome the starting torque of the compressor. The standard non-unloaded starting torque's are listed on the compressor "Data Sheets".

The 100 percent unloaded start compressor has unloaders on all cylinders. The unloaders on the non-capacity controlled cylinders are piped directly to the oil lubrication system and load up as soon as the compressor develops oil pressure and remain so until the compressor is stopped.

Standard Compressor-Right Hand

This variation moves the unloader handhole cover, which also houses the sightglass, to the right hand side of the compressor as viewed from the discharge valve end of the compressor. This is the opposite side as shown on the compressor "Data Sheets".

This option is for convenience of viewing the oil sightglass or access to the unloader handhole cover. If the unit configuration dictates that the standard compressor cannot be mounted so the oil sightglass can be viewed or the unloader handhole cover is easily accessible, then a right hand compressor should be considered.

This variation will also allow the oil sightglass to be on the same side of the unit should the compressor be applied with a double extended shaft motor.

100 Percent Unloaded Start-Right Hand

This variation is a combination of the two previous variation.

Low Temperature Applications - (Low Lift Valves)

When low temperature applications are encountered where the saturated suction temperature design point is below 10 F, the low lift valve option is required. Low lift valves are required to prevent valve flutter which could result in broken suction valves and springs.

Lifting and Handling

The E compressor has tapped holes in the housing that will accommodate lifting lugs for handling of the compressor. During handling it is recommended that the compressor be kept horizontal with the cylinders heads facing up. This will prevent oil from getting into the upper cylinder and causing potential damage when the compressor is started. If tilted from horizontal, it is recommended that the compressor be allowed to set in the horizontal position a minimum of one (1) hour before trying to start the compressor.

Pressure Testing

The maximum highside test pressure is 500 psig. The maximum lowside pressure is 350 psig. The differential between highside and lowside should not exceed 340 psig.

Oil Charge

The E compressor ships with a full oil charge. The compressor data sheet lists the oil charge for each compressor. See the Trane compressor service bulletin; HCOM-SB-4F, "APPLICATION FIELD REPLACEMENT OILS" See pages 122-125 for the replacement oil type.

Operation

The E compressor must be protected from direct exposure to rain and other weather. The operating ambient must not exceed 125 F. This is based on a maximum condensing temperature of 147 F.

⚠ WARNING

Never use oxygen or acetylene in place of refrigerant and dry nitrogen for leak testing. A violent explosion may result causing personal injury or death.

Always use a pressure regulator when using nitrogen to pressure test. Failure to do so will result in extremely high pressure which could exceed the burst pressure of the compressor or other system components and result in personal injury or death.

Model E Open Drive Compressors

ReSpecT®

Table 3. Model E - Open Drive Compressors

COM Number	Remanufactured Model Number	Old Model Number	Original Model Number	Capacity (Tons)	Voltage	Shipping Weight (Lb)
COM01447	CROE50003**P1R*****	CROE-5000-3*P1	3E5*40W	50	-	784
COM02431	CROE50003**A1R*****	CROE-5000-3*A1	3E5*40WN 115 V	50	-	784
COM02432	CROE50103**P1R*****	CROE-5010-3*P1	3E5*40LW	50	-	784
COM02658	CROE50003**P2R*****	CROE-5000-3*P2	3E5*40R	50	-	784
COM02948	CROE50003**B1R*****	CROE-5000-3*B1	3E5*40WN 230 V	50	-	784
COM01448	CROE60003**P1R*****	CROE-6000-3*P1	3E5*50W	60	-	884
COM01817	CROE60003**P2R*****	CROE-6000-3*P2	3E5*50R	60	-	884
COM02435	CROE60003**A1R*****	CROE-6000-3*A1	3E5*50WN 115 V	60	-	884
COM02436	CROE60103**P1R*****	CROE-6010-3*P1	3E5*50LW	60	-	884
COM02438	CROE60003**A2R*****	CROE-6000-3*A2	3E5*50RN 115 V	60	-	884
COM02439	CROE60003**P3R*****	CROE-6000-3*P3	3E5*50RW	60	-	884
COM02441	CROE60103**A1R*****	CROE-6010-3*A1	3E5*50LWN 115 V	60	-	884
COM05564	CROE60003**B1R*****	CROE-6000-3*B1	3E5*50WN 230 V	60	-	884
COM01449	CROE75004**P1R*****	CROE-7500-4*P1	3E5*60W	75	-	916
COM02336	CROE75004**P2R*****	CROE-7500-4*P2	3E5*60R	75	-	916
COM02344	CROE75104**A1R*****	CROE-7510-4*A1	3E5*60LWN 115 V	75	-	916
COM02443	CROE75004**A1R*****	CROE-7500-4*A1	3E5*60WN 115 V	75	-	916
COM02444	CROE75104**P1R*****	CROE-7510-4*P1	3E5*60LW	75	-	916
COM02446	CROE75004**A2R*****	CROE-7500-4*A2	3E5*60RN 115 V	75	-	916
COM02447	CROE75004**P3R*****	CROE-7500-4*P3	3E5*60RW	75	-	916
COM04367	CROE75004**B1R*****	CROE-7500-4*B1	3E5*60WN 230 V	75	-	916
COM05561	CROE75004**B0R*****	CROE-7500-4*B0	3E5*60N 230 V	75	-	916
COM05563	CROE75004**B1R*****	CROE-7500-4*B1	3E5*60WN 230 V	75	-	916
COM01450	CROE1C005**P0R*****	CROE-1C00-5*P0	3E5*80	100	-	1005
COM02109	CROE1C005**P1R*****	CROE-1C00-5*P1	3E5*80W	100	-	1005
COM02337	CROE1C005**A0R*****	CROE-1C00-5*A0	3E5*80N 115 V	100	-	1005
COM02450	CROE1C005**A1R*****	CROE-1C00-5*A1	3E5*80WN 115 V	100	-	1005
COM02451	CROE1C105**P1R*****	CROE-1C10-5*P1	3E5*80LW	100	-	1005
COM02453	CROE1C005**A2R*****	CROE-1C00-5*A2	3E5*80RN 115 V	100	-	1005
COM02454	CROE1C005**P3R*****	CROE-1C00-5*P3	3E5*80RW	100	-	1005
COM02455	CROE1C105**A1R*****	CROE-1C10-5*A1	3E5*80LWN 115 V	100	-	1005
COM05553	CROE1C005**B1R*****	CROE-1C00-5*B1	3E5*80WN 230 V	100	-	1005

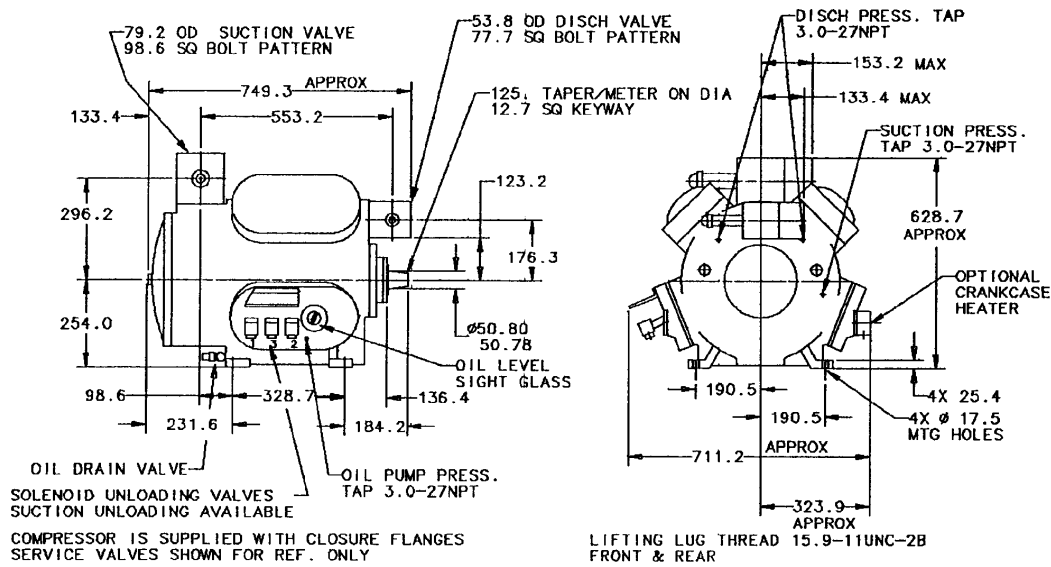
Series 6000

COM Number	Original Model Number	Capacity (Tons)	Voltage	Shipping Weight (Lb)
COM06002	3E5*40W	50	-	784
COM06003	3E5*50W	60	-	884
COM06004	3E5*60W	75	-	916
COM06005	3E5*80W	100	-	1005



Model E Open Drive Compressors

Figure 2. Model CROE500 - 50 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting	25.9 BAR-D
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance	50%	75%	100%
Capacity (KW)	67.9	105.1	141.4
Shaft Power Input (KW)	24.3	32	39.3
Shaft Torque (N-M)	160.9	210.7	258.8
Evaporator Temp(C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

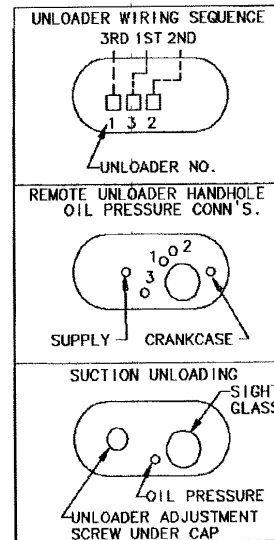
Bore (MM)	92.96
Stroke (IN)	69.85
No. of Cylinders	4
Speed (RPM)	1450
Start Torque (N-M)	271
Pull-Up Torque (N-M)	178

Oil Pressure Switch

Differential Type, Pilot Duty

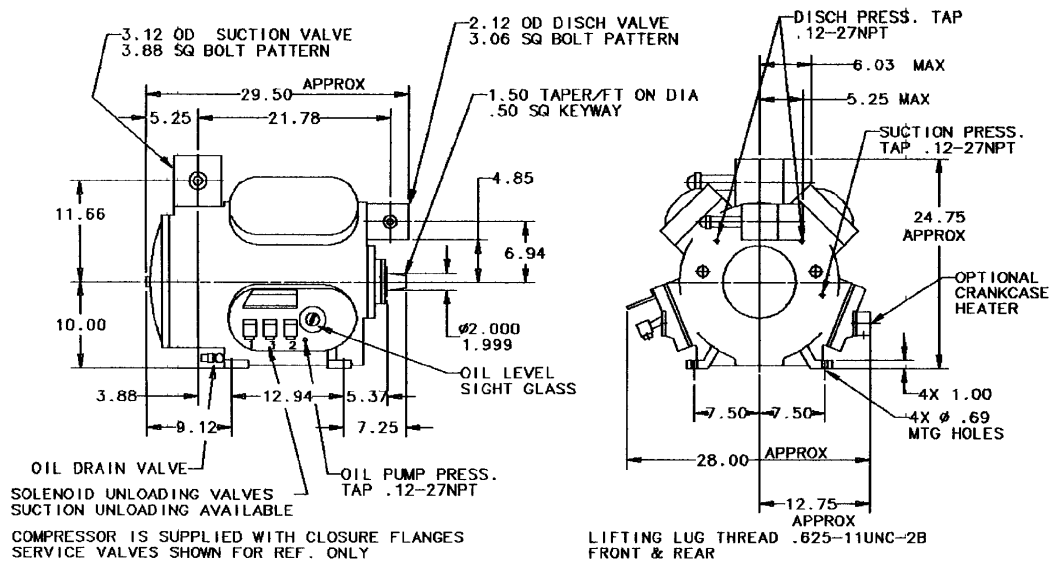
Crankcase Heater

Immersion Type, Rating 140 Watts, 115/230 VAC



Model E Open Drive Compressors

Figure 3. Model CROE500 - 50 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting	375 PSID
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance

	50%	75%	100%
Capacity (BTU/HR)	279,500	433,000	582,000
Shaft Power Input (BHP)	39.5	51.7	63.5
Shaft Torque (LB-FT)	118.7	155.4	190.9
Evaporator Temp	45	45	45
Condenser Temp	130	130	130
Liquid Temp	115	115	115
Superheat	20	20	20

Physical Data

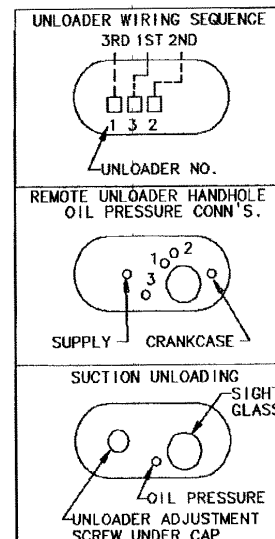
Bore (IN)	3.66
Stroke (IN)	2.75
No. of Cylinders	4
Speed (RPM)	1750
Start Torque (LB-FT)	200
Pull-Up Torque (LB-FT)	131

Oil Pressure Switch

Differential Type, Pilot Duty

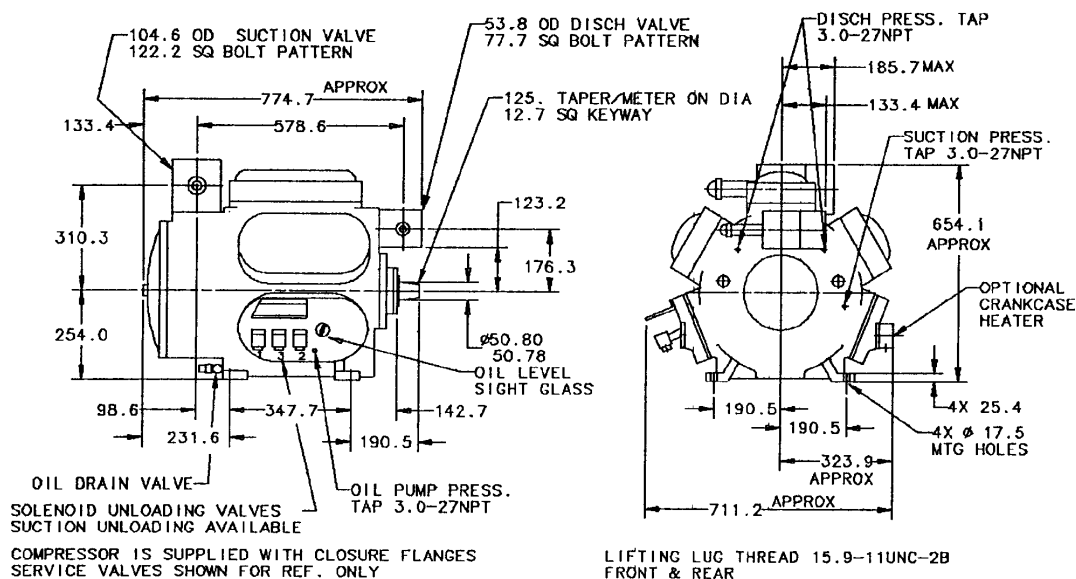
Crankcase Heater

Immersion Type, Rating 140 Watts, 115/230 VAC



Model E Open Drive Compressors

Figure 4. Model CROE600 - 60 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting	25.9 BAR-D
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance	40%	80%	100%
Capacity (KW)	65	139	176
Shaft Power Input (KW)	26.8	41.3	48.6
Shaft Torque (N-M)	176.5	253.5	320.8
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

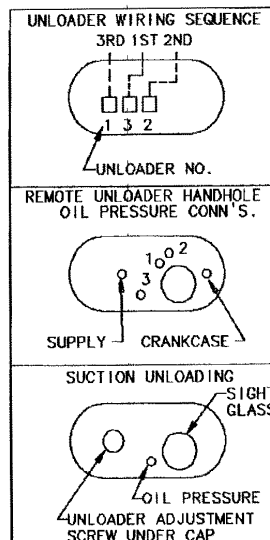
Bore (MM)	92.96
Stroke (IN)	69.85
No. of Cylinders	5
Speed (RPM)	1450
Start Torque (N-M)	305
Pull-Up Torque (N-M)	199

Oil Pressure Switch

Differential Type, Pilot Duty

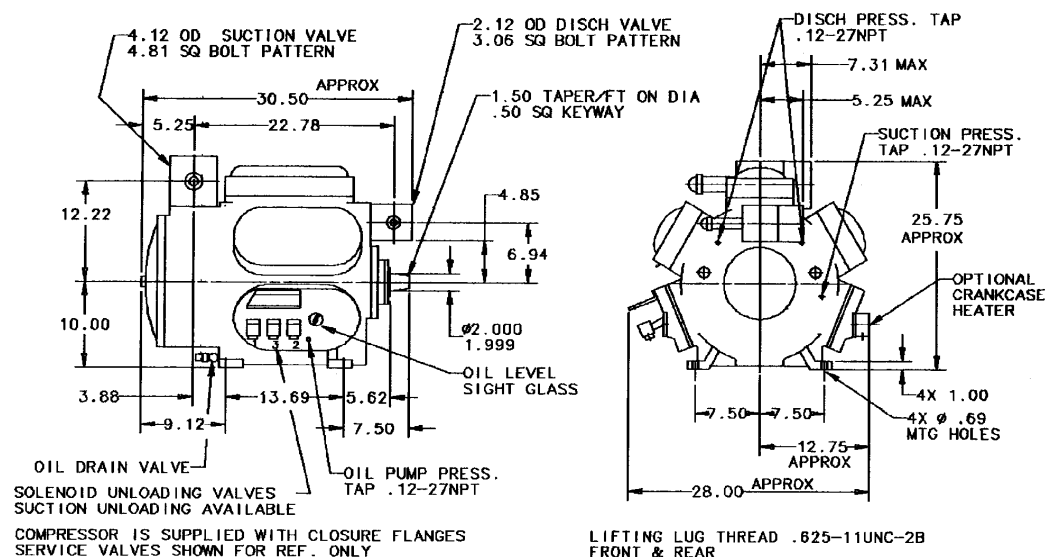
Crankcase Heater

Immersion Type, Rating 140 Watts, 115/230 VAC



Model E Open Drive Compressors

Figure 5. Model CROE600 - 60 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting	375 PSID
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance

	40%	80%	100%
Capacity (KW)	268,000	572,700	724,600
Shaft Power Input (KW)	43.3	66.9	78.7
Shaft Torque (N-M)	130.2	187.0	236.6
Evaporator Temp (C)	45	45	45
Condenser Temp (C)	130	130	130
Liquid Temp (C)	115	115	115
Superheat (C)	20	20	20

Physical Data

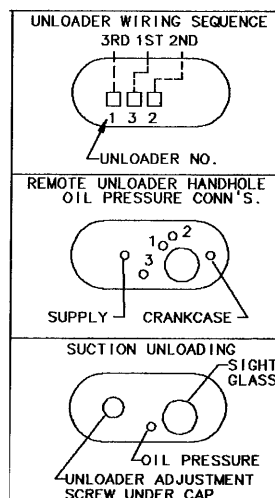
Bore (IN)	3.66
Stroke (IN)	2.75
No. of Cylinders	5
Speed (RPM)	1750
Start Torque (LB-FT)	225
Pull-Up Torque (LB-FT)	147

Oil Pressure Switch

Differential Type, Pilot Duty

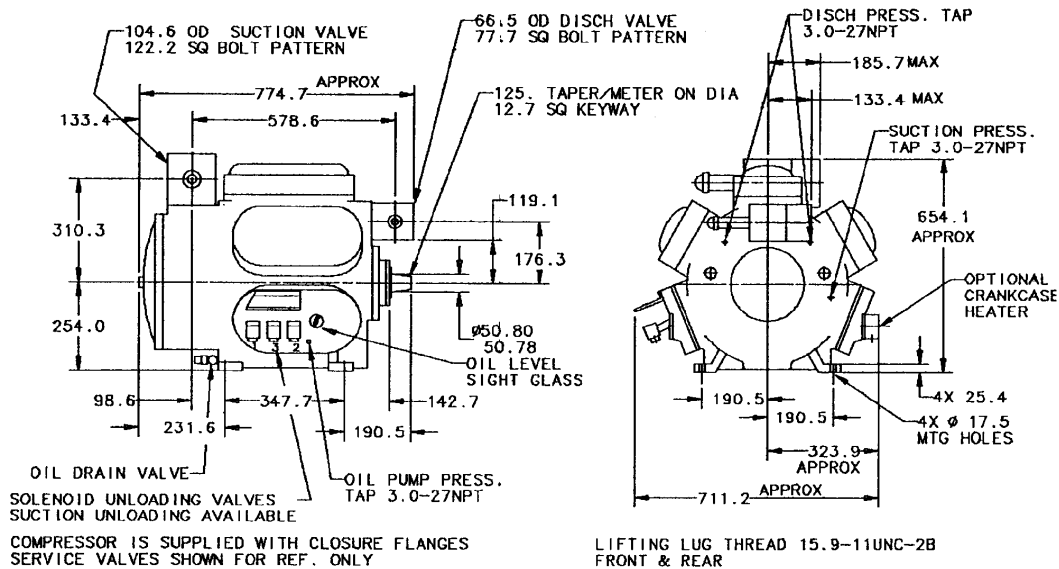
Crankcase Heater

Immersion Type, Rating 140 Watts, 115/230 VAC



Model E Open Drive Compressors

Figure 6. Model CROE750 - 75 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting	25.9 BAR-D
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance	33%	67%	100%
Capacity (KW)	62.4	140.0	212.0
Shaft Power Input (KW)	28.7	43.7	58.6
Shaft Torque (N-M)	189.1	288.1	386.4
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

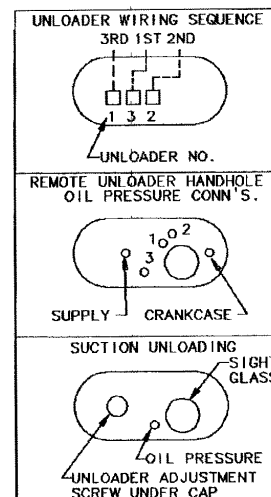
Bore (IN)	92.96
Stroke (IN)	69.85
No. of Cylinders	6
Speed (RPM)	1450
Start Torque (LB-FT)	325
Pull-Up Torque (LB-FT)	213

Oil Pressure Switch

Differential Type, Pilot Duty

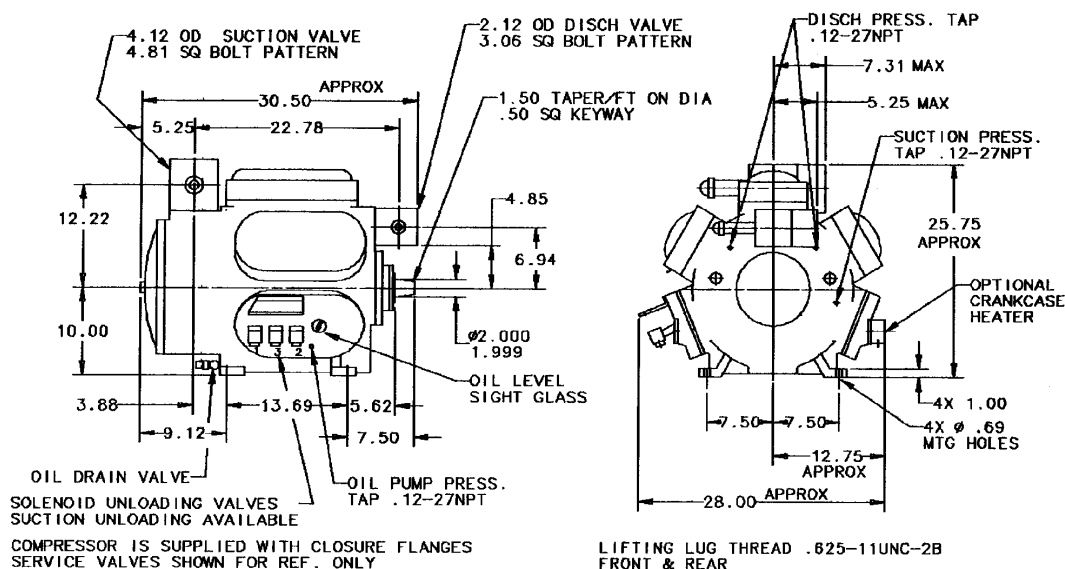
Crankcase Heater

Immersion Type, Rating 140 Watts, 115/230 VAC



Model E Open Drive Compressors

Figure 7. Model CROE750 - 75 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting	375 PSID
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance

	33%	67%	100%
Capacity (BTU/HR)	257,000	576,200	873,000
Shaft Power Input (BHP)	46.4	70.7	94.8
Shaft Torque (LB-FT)	139.5	212.5	285.0
Evaporator Temp	45	45	45
Condenser Temp	130	130	130
Liquid Temp	115	115	115
Superheat	20	20	20

Physical Data

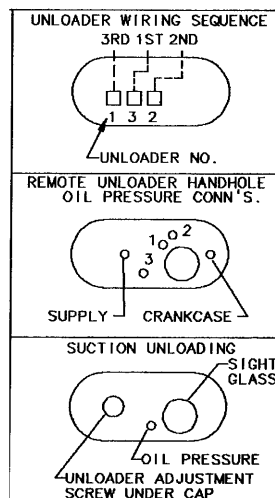
Bore (IN)	3.66
Stroke (IN)	2.75
No. of Cylinders	6
Speed (RPM)	1750
Start Torque (LB-FT)	240
Pull-Up Torque (LB-FT)	157

Oil Pressure Switch

Differential Type, Pilot Duty

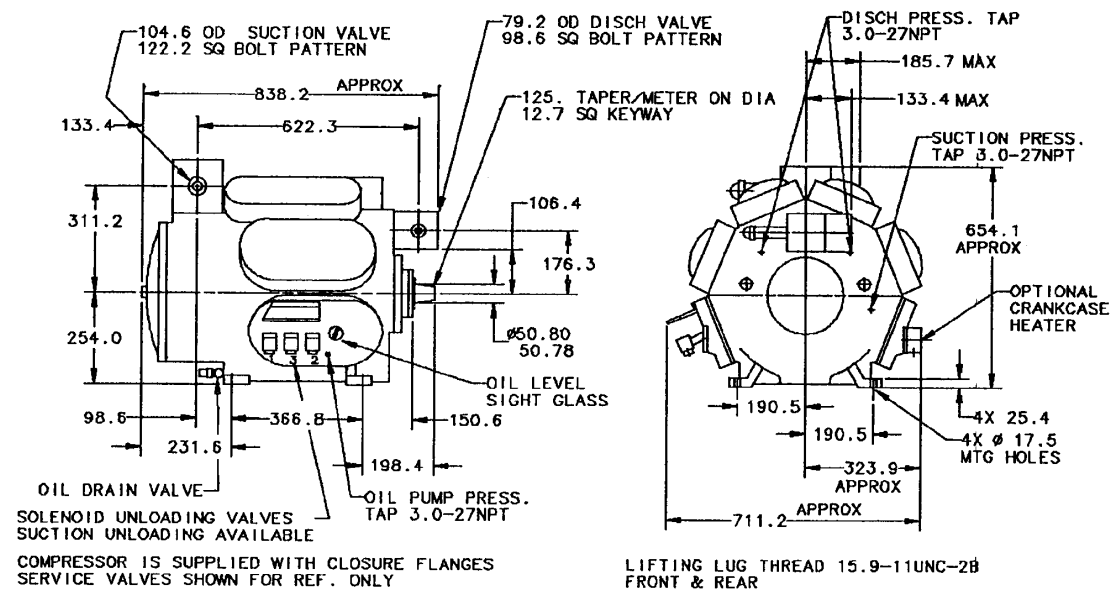
Crankcase Heater

Immersion Type, Rating 140 Watts, 115/230 VAC



Model E Open Drive Compressors

Figure 8. Model CROE1C0 - 100 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting	25.9 BAR-D
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance

	38%	50%	75%	100%
Capacity (KW)	99.3	138.2	213.0	287.8
Shaft Power Input KW)	42.0	49.6	64.3	79.2
Shaft Torque (N-M)	277	322	424	521.7
Evaporator Temp (C)	7.22	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33	8.33
Superheat	11.11	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)				

Physical Data

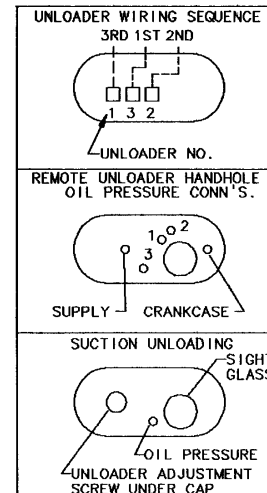
Bore (MM)	92.96
Stroke (MM)	69.85
No. of Cylinders	8
Speed (RPM)	1450
Start Torque (N-M)	373
Pull-Up Torque (N-M)	244

Oil Pressure Switch

Differential Type, Pilot Duty

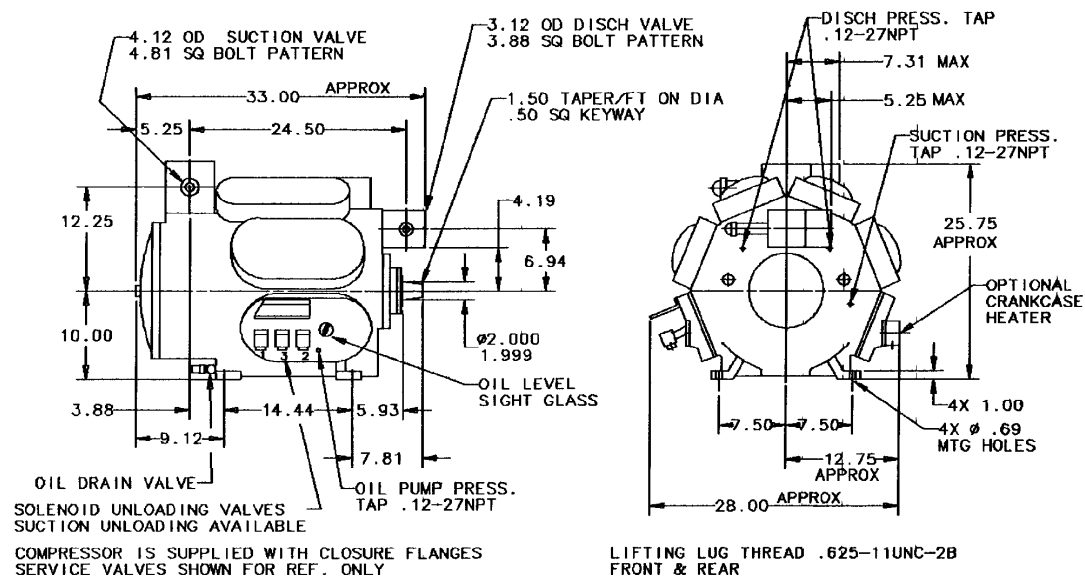
Crankcase Heater

Immersion Type, Rating 140 Watts, 115/230 VAC



Model E Open Drive Compressors

Figure 9. Model CROE1C0 - 100 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting	375 PSID
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance	38%	50%	75%	100%
Capacity (BTU/HR)	409,000	569,000	877,200	1,185,400
Shaft Power Input (BHP)	68	79	1040	128
Shaft Torque (LB-FT)	204.4	237.5	312.9	384.8
Evaporator Temp	45	45	45	45
Condenser Temp	130	130	130	130
Liquid Temp	115	115	115	115
Superheat	20	20	20	20

Physical Data

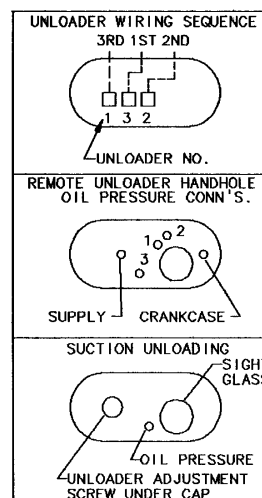
Bore (IN)	3.66
Stroke (IN)	2.75
No. of Cylinders	8
Speed (RPM)	1750
Start Torque (LB-FT)	275
Pull-Up Torque (LB-FT)	180

Oil Pressure Switch

Differential Type, Pilot Duty

Crankcase Heater

Immersion Type, Rating 140 Watts, 115/230 VAC

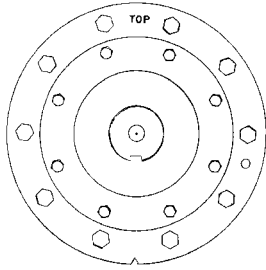


Model E Open Drive Compressors

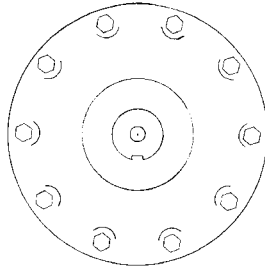
Model E - Compressor Shaft Seal Identification

The Model E Open compressors are produced with two different types of shaft seals. The following diagrams will serve as a guide to identifying which type was used.

Figure 10.



SEL00193 is used with the steel seal cover. Note the bearing head securing bolts are also visible. Two rows of bolts are visible with this type seal.



SEL00022 is used with the cast iron seal cover. Note one circle of bolts holds the cover in place.

Model E Semihermetic Compressors



Model E - Large Barrel

Description

The Trane Model E semihermetic compressor is an unloading, cast iron, semihermetic accessible compressor. The compressor oil pump is reversible for operation in either direction. The compressor unloading options

are suction pressure-actuated or electric solenoid-actuated, with electric-actuated available either compressor-mounted or remote mounted.

Low Temperature Applications - (Low Lift Valves)

When low temperature applications are encountered where the saturated suction temperature design point is below 10 F, the low lift valve option is required. Low lift valves are required to prevent valve flutter which could result in broken suction valves and springs.

Lifting and Handling

The Model E compressor has tapped holes in the housing that will accommodate lifting lugs for handling of the compressor. During handling it is recommended that the compressor be kept horizontal with the cylinders heads facing up. This will prevent oil from getting into the upper cylinder and causing potential damage when the compressor is started. If tilted from horizontal, it is recommended that the compressor be allowed to set in the horizontal position a minimum of one hour before trying to start the compressor.

Storage

The compressors are shipped with a nitrogen charge and the connections are sealed with closure plates; unless the optional service valves have been ordered for factory installation. The storage of the compressor must be in an enclosed dry space with the temperature and humidity not to exceed 140 F and 95% RH non-condensing.



Pressure Testing

The maximum highside test pressure is 500 psig. The maximum lowside pressure is 350 psig. The differential between highside and lowside should not exceed 340

psig. never pressure the system to a higher pressure than the system relief valve.

Oil Charge

The Model E compressor ships with a full oil charge. The compressor data sheet lists the oil charge for each compressor. See the Trane compressor service bulletin; HCOM-SB-4F, "APPLICATION FIELD REPLACEMENT OILS" See pages 122-125 for the replacement oil type.

Operation

The Model E compressor must be protected from direct exposure to rain and other weather. The operating ambient must not exceed 125 F. This is based on a maximum condensing temperature of 147 F.

Compressor Motor Starter Type

The Model E semihermetic, compressor is suitable for across the line start or part winding start only.

Part winding start systems require the use of 0.5 to 1.0 seconds between contactors.

⚠ WARNING

Never use oxygen or acetylene in place of refrigerant and dry nitrogen for leak testing. A violent explosion may result causing personal injury or death.

Always use a pressure regulator when using nitrogen to pressure test. Failure to do so will result in extremely high pressure which could exceed the burst pressure of the compressor or other system components and result in personal injury or death.



Model E Semihermetic Compressors

ReSpecT®

Table 4. Model E - Semihermetic Compressors

COM Number	Remanufactured Model Number	Old Model Number (1)	Original Model Number	Capacity (Tons)	Voltage	Shipping Weight (Lb)
COM01813	CRHE300B3**P0R*****	NA	1E5*48	30	200-230-460/60/3	1298
COM02389	CRHE300B3**A0R*****	NA	1E5*48N 115 V	30	200-230-460/60/3	1298
COM02872	CRHE300B3**B0R*****	NA	1E5*48N 230 V	30	200-230-460/60/3	1298
COM02394	CRHE300K3**A0R*****	NA	1E5*41N 115 V	30	400-460/50-60/3	1298
COM02640	CRHE300K3**P0R*****	NA	1E5*41	30	400-460/50-60/3	1298
COM01878	CRHE300D3**P0R*****	NA	1E5*45	30	575/60/3	1406
COM01814	CRHE400B3**P0R*****	NA	1E5*58	40	200-230-460/60/3	1298
COM02390	CRHE400B3**A0R*****	NA	1E5*58N 115 V	40	200-230-460/60/3	1406
COM02395	CRHE400K3**A0R*****	NA	1E5*51N 115 V	40	400-460/50-60/3	1406
COM02641	CRHE400K3**P0R*****	NA	1E5*51	40	400-460/50-60/3	1406
COM01879	CRHE400D3**P0R*****	NA	1E5*55	40	575/60/3	1406
COM01443	CRHE500B3**P0R*****	CRHE-500B-3*P0	2E5*48	50	200-230-460/60/3	1298
COM01815	CRHE450B4**P0R*****	NA	1E5*68	50	200-230-460/60/3	1444
COM02088	CRHE500B3**P1R*****	CRHE-500B-3*P1	2E5*48W	50	200-230-460/60/3	1298
COM02092	CRHE500B3**A0R*****	CRHE-500B-3*A0	2E5*48N 115 V	50	200-230-460/60/3	1298
COM02381	CRHE501B3**P0R*****	CRHE-501B-3*P0	2E5*48L	50	200-230-460/60/3	1298
COM02382	CRHE501B3**A0R*****	CRHE-501B-3*A0	2E5*48LN 115 V	50	200-230-460/60/3	1298
COM02383	CRHE601B3**A0R*****	CRHE-601B-3*A0	2E5*58L 115 V	50	200-230-460/60/3	1298
COM02391	CRHE450B4**A0R*****	NA	1E5*68N 115 V	50	200-230-460/60/3	1444
COM02512	CRHE500B3**B0R*****	CRHE-500B-3*B0	2E5*48N 230 V	50	200-230-460/60/3	1298
COM02704	CRHE500B3**B0R*****	CRHE-500B-3*B1	2E5*48WN 230V	50	200-230-460/60/3	1298
COM02727	CRHE500B3**A0R*****	CRHE-500B-3*A1	2E5*48WN 115V	50	200-230-460/60/3	1298
COM02790	CRHE500B3**B2R*****	CRHE-500B-3*B2	2E5*48RN 230 V	50	200-230-460/60/3	1298
COM02615	CRHE500F3**P0R*****	CRHE-500F-3*P0	2E5*46	50	220/50/3	1298
COM03905	CRHE500X3**A0R*E***	CRHE-500X-3*A0	2E5*49N 115 V	50	380/60/3	1298
COM02072	CRHE500K3**P0R*****	CRHE-500K-3*P0	2E5*41	50	400-460/50-60/3	1298
COM02242	CRHE500K3**A0R*****	CRHE-500K-3*A0	2E5*41N 115 V	50	400-460/50-60/3	1298
COM02396	CRHE450K4**A0R*****	NA	1E5*61N 115 V	50	400-460/50-60/3	1444
COM02398	CRHE500K3**P1R*****	CRHE-500K-3*P1	2E5*41W	50	400-460/50-60/3	1298
COM02399	CRHE501K3**P0R*****	CRHE-501K-3*P0	2E5*41L	50	400-460/50-60/3	1298
COM02400	CRHE501K3**A0R*****	CRHE-501K-3*A0	2E5*41LN 115 V	50	400-460/50-60/3	1298
COM02508	CRHE500K3**B0R*****	CRHE-500K-3*B0	2E5*41N 230 V	50	400-460/50-60/3	1298
COM04270	CRHE751K4**A0R*****	CRHE-751K-4*A0	2E5*61LN 115V	50	400-460/50-60/3	1444
COM02678	CRHE450C4**P0R*****	NA	1E5*61	50	460/60/3	1298
COM01860	CRHE500D3**P0R*****	CRHE-500D-3*P0	2E5*45	50	575/60/3	1406
COM01880	CRHE450D4**P0R*****	NA	1E5*65	50	575/60/3	1444
COM02136	CRHE500D3**A0R*****	CRHE-500D-3*A0	2E5*45N 115 V	50	575/60/3	1298
COM01444	CRHE600B3**P0R*****	CRHE-600B-3*P0	2E5*58	60	200-230-460/60/3	1406
COM01816	CRHE550B5**P0R*****	NA	1E5*88	60	200-230-460/60/3	1704
COM02089	CRHE600B3**P1R*****	CRHE-600B-3*P1	2E5*58W	60	200-230-460/60/3	1406
COM02093	CRHE600B3**A0R*****	CRHE-600B-3*A0	2E5*58N 115 V	60	200-230-460/60/3	1406
COM02384	CRHE601B3**A0R*****	CRHE-601B-3*A0	2E5*58LN 115 V	60	200-230-460/60/3	1406
COM02513	CRHE600B3**B0R*****	CRHE-600B-3*B0	2E5*58N 230 V	60	200-230-460/60/3	1406
COM02959	CRHE600B3**P0R*****	CRHE-600B-3*P0	2E5*58Z	60	200-230-460/60/3	1406
COM03948	CRHE550B5**A0R*E***	NA	1E5*88N 220 V	60	200-230-460/60/3	1704
COM02073	CRHE600C3**P0R*****	CRHE-600C-3*P0	2E5*51	60	460/60/3	1406
COM02243	CRHE600C3**A0R*****	CRHE-600C-3*A0	2E5*51N 115 V	60	460/60/3	1406
COM02397	CRHE550C5**A0R*****	NA	1E5*81N 115 V	60	460/60/3	1704
COM02401	CRHE600C3**P1R*****	CRHE-600C-3*P1	2E5*81W	60	460/60/3	1406
COM02402	CRHE601C3**P0R*****	CRHE-601C-3*P0	2E5*51L	60	460/60/3	1406
COM02403	CRHE601C3**A0R*****	CRHE-601C-3*A0	2E5*51LN 115 V	60	460/60/3	1406
COM02509	CRHE600C3**B0R*****	CRHE-600C-3*B0	2E5*51N 230 V	60	460/60/3	1406
COM01861	CRHE600D3**P0R*****	CRHE-600D-3*P0	2E5*55	60	575/60/3	1406
COM01881	CRHE550D3**P0R*****	NA	1E5*85	60	575/60/3	1704
COM02135	CRHE600D3**A0R*****	CRHE-600D-3*A0	2E5*55N 115 V	60	575/60/3	1406

Model E Semihermetic Compressors

COM Number	Remanufactured Model Number	Old Model Number (1)	Original Model Number	Capacity (Tons)	Voltage	Shipping Weight (Lb)
COM02393	CRHE601D3**P0R*****	CRHE-601D-3*P0	2E5*55L	60	575/60/3	1406
COM02392	CRHE550B5**A0R*****	NA	1E5*88N 115V	60	200-230-460/60/3	1704
COM01445	CRHE750B4**P0R*****	CRHE-750B-4*P0	2E5*68	75	200-230-460/60/3	1444
COM02090	CRHE750B4**P1R*****	CRHE-750B-4*P1	2E5*68W	75	200-230-460/60/3	1444
COM02094	CRHE750B4**A0R*****	CRHE-750B-4*A0	2E5*68N 115 V	75	200-230-460/60/3	1444
COM02385	CRHE751B4**P0R*****	CRHE-751B-4*P0	2E5*68L	75	200-230-460/60/3	1444
COM02386	CRHE751B4**A0R*****	CRHE-751B-4*A0	2E5*68LN 115 V	75	200-230-460/60/3	1444
COM02514	CRHE750B4**B0R*****	CRHE-750B-4*B0	2E5*68N 230 V	75	200-230-460/60/3	1444
COM02659	CRHE751B4**P1R*****	CRHE-751B-4*P1	2E5*68LW75	75	200-230-460/60/3	1704
COM02933	CRHE750B4**P0R*****	CRHE-750B-4*P0	2E5*68U	75	200-230-460/60/3	1444
COM05556	CRHE750B4**R0R*****	CRHE-750B-4*R0	2E5*68 REMOTE	75	200-230-460/60/3	1444
COM03017	CRHE750A4**P0R*E***	CRHE-750A-4*P0	2E5*62	75	200/60/3	1444
COM03018	CRHE750A4**A0R*E***	CRHE-750A-4*A0	2E5*62N 115 V	75	200/60/3	1444
COM03019	CRHE750A4**R0R*E***	CRHE-750A-4*R0	2E5*62	75	200/60/3	1444
COM03013	CRHE750F4**A0R*E***	CRHE-750F-4*A0	2E5*66N 115 V	75	220/50/3	1444
COM03015	CRHE750F4**B0R*E***	CRHE-750F-4*B0	2E5*66N 230 V	75	220/50/3	1444
COM03002	CRHE750W4**P1R*E***	CRHE-750W-4*P0	2E5*63	75	230/60/3	1444
COM03003	CRHE750W4**A1R*E***	CRHE-750W-4*A0	2E5*63N 115 V	75	230/60/3	1444
COM03012	CRHE750W4**R0R*E***	CRHE-750W-4*R0	2E5*63	75	230/60/3	1444
COM03010	CRHE750Z4**A0R*E***	CRHE-750Z-4*A0	2E5*69N 115 V	75	363/50/3	1444
COM03009	CRHE750X4**A0R*E***	CRHE-750X-4*A0	2E5*69N 115 V	75	380/60/3	1444
COM03016	CRHE750X4**P0R*E***	CRHE-750X-4*P0	2E5*69	75	380/60/3	1444
COM02074	CRHE750K4**P0R*****	CRHE-750K-4*P0	2E5*61	75	400-460/50-60/3	1444
COM02244	CRHE750K4**A0R*****	CRHE-750K-4*A0	2E5*61N 115 V	75	400-460/50-60/3	1444
COM02404	CRHE750K4**P1R*****	CRHE-750K-4*P1	2E5*61W	75	400-460/50-60/3	1444
COM02405	CRHE751K4**P0R*****	CRHE-751K-4*P0	2E5*61L	75	400-460/50-60/3	1444
COM02406	CRHE751K4**A0R*****	CRHE-751K-4*A0	2E5*61LN 115 V	75	400-460/50-60/3	1444
COM02510	CRHE750K4**B0R*****	CRHE-750K-4*B0	2E5*61N 230 V	75	400-460/50-60/3	1444
COM03004	CRHE750K4**A0R*E***	CRHE-750K-4*A0	2E5*61N 115 V	75	400-460/50-60/3	1444
COM03005	CRHE750K4**P0R*E***	CRHE-750K-4*P0	2E5*61	75	400-460/50-60/3	1444
COM03011	CRHE750K4**R0R*E***	CRHE-750K-4*R0	2E5*61	75	400-460/50-60/3	1444
COM03014	CRHE750K4**B0R*E***	CRHE-750K-4*B0	2E5*61N 230 V	75	400-460/50-60/3	1444
COM02650	CRHE750C4**P0R*****	CRHE-750C-4*P0	2E5*61Z	75	460/60/3	1444
COM01862	CRHE750D4**P0R*****	CRHE-750D-4*P0	2E5*65	75	575/60/3	1444
COM02134	CRHE750D4**A0R*****	CRHE-750D-4*A0	2E5*65N 115 V	75	575/60/3	1444
COM03006	CRHE750D4**A0R*E***	CRHE-750D-4*A0	2E5*65N 115 V	75	575/60/3	1444
COM03007	CRHE750D4**R0R*E***	CRHE-750D-4*R0	2E5*65	75	575/60/3	1444
COM03008	CRHE750D4**P0R*E***	CRHE-750D-4*P0	2E5*65	75	575/60/3	1444
COM01446	CRHE1C0B5**P0R*****	CRHE-1C0B-5*P0	2E5*88	100	200-230-460/60/3	1704
COM02091	CRHE1C0B5**P1R*****	CRHE-1C0B-5*P1	2E5*88W	100	200-230-460/60/3	1704
COM02095	CRHE1C0B5**A0R*****	CRHE-1C0B-5*A0	2E5*88N 115 V	100	200-230-460/60/3	1704
COM02387	CRHE1C1B5**P0R*****	CRHE-1C1B-5*P0	2E5*88L	100	200-230-460/60/3	1704
COM02388	CRHE1C1B5**A0R*****	CRHE-1C1B-5*A0	2E5*88LN 115 V	100	200-230-460/60/3	1704
COM02515	CRHE1C0B5**B0R*****	CRHE-1C0B-5*B0	2E5*88N 230 V	100	200-230-460/60/3	1704
COM03036	CRHE1C0A5**P0R*E***	CRHE-1C0A-5*P0	2E5*82	100	200/60/3	1704
COM03037	CRHE1C0A5**A0R*E***	CRHE-1C0A-5*A0	2E5*82N 115 V	100	200/60/3	1704
COM03038	CRHE1C0A5**R0R*E***	CRHE-1C0A-5*R0	2E5*82	100	200/60/3	1704
COM03031	CRHE1C0F5**A0R*E***	CRHE-1C0F-5*A0	L2E5*86N 115V	100	220/50/3	1704
COM03034	CRHE1C0F5**B0R*E***	CRHE-1C0F-5*B0	L2E5*86N 230V	100	220/50/3	1704
COM03021	CRHE1C0W5**P0R*E***	CRHE-1C0W-5*P0	2E5*83	100	230/60/3	1704
COM03022	CRHE1C0W5**A0R*E***	CRHE-1C0W-5*A0	2E5*83N 115 V	100	230/60/3	1704
COM03030	CRHE1C0W5**R0R*E***	CRHE-1C0W-5*R0	2E5*83	100	230/60/3	1704
COM03028	CRHE1C0Z5**A0R*E***	CRHE-1C0Z-5*A0	L2E5*89N 115V	100	363/50/3	1704
COM03027	CRHE1C0X5**A0R*E***	CRHE-1C0X-5*A0	2E5*89N 115 V	100	380/60/3	1704
COM03035	CRHE1C0X5**P0R*E***	CRHE-1C0X-5*P0	2E5*89	100	380/60/3	1704
COM03915	CRHE1C0X5**A0R*E***	CRHE-1C0X-5*A0	2E5*89N 115 V	100	380/60/3	1704
COM02075	CRHE1C0K5**P0R*****	CRHE-1C0K-5*P0	2E5*81	100	400-460/50-60/3	1704
COM02245	CRHE1C0K5**A0R*****	CRHE-1C0K-5*A0	2E5*81N 115 V	100	400-460/50-60/3	1704
COM02407	CRHE1C0K5**P1R*****	CRHE-1C0K-5*P1	2E5*81W	100	400-460/50-60/3	1704
COM02408	CRHE1C1K5**P0R*****	CRHE-1C1K-5*P0	2E5*81L	100	400-460/50-60/3	1704



Model E Semihermetic Compressors

COM Number	Remanufactured Model Number	Old Model Number (1)	Original Model Number	Cap.(Tons)	Voltage	Shipping Weight (Lb)
COM02409	CRHE1C1K5**A0R*****	CRHE-1C1K-5*A0	2E5*81LN 115 V	100	400-460/50-60/3	1704
COM02511	CRHE1C0K5**B0R*****	CRHE-1C0K-5*B0	2E5*81N 230 V	100	400-460/50-60/3	1704
COM02931	CRHE1C1K5**P0R*****	CRHE-1C1K-5*P0	2E5*81LZ	100	400-460/50-60/3	1704
COM03023	CRHE1C0K5**A0R***E***	CRHE-1C0K-5*A0	2E5*81N 115 V	100	400-460/50-60/3	1704
COM03024	CRHE1C0K5**P0R***E***	CRHE-1C0K-5*P0	2E5*81	100	400-460/50-60/3	1704
COM03029	CRHE1C0K5**R0R***E***	CRHE-1C0K-5*R0	2E5*81	100	400-460/50-60/3	1704
COM03033	CRHE1C0K5**B0R***E***	CRHE-1C0K-5*B0	2E5*81N 230 V	100	400-460/50-60/3	1704
COM03800	CRHE1C1K5**A0R***E***	CRHE-1C1K-5*A0	2E5*81LN 115V	100	400-460/50-60/3	1704
COM05562	CRHE1C0K5**P0R*****	CRHE-1C0K-5*P0	2E5*81Z	100	400-460/50-60/3	1704
COM01863	CRHE1C0D5**P0R*****	CRHE-1C0D-5*P0	2E5*85	100	575/60/3	1704
COM02133	CRHE1C0D5**A0R*****	CRHE-1C0D-5*A0	2E5*85N 115 V	100	575/60/3	1704
COM03025	CRHE1C0D5**A0R***E***	CRHE-1C0D-5*A0	2E5*85N 115 V	100	575/60/3	1704
COM03026	CRHE1C0D5**R0R***E***	CRHE-1C0D-5*R0	2E5*85	100	575/60/3	1704
COM03032	CRHE1C0D5**P0R***E***	CRHE-1C0D-5*P0	2E5*85	100	575/60/3	1704
COM03931	CRHE1C1D5**A0R*****	CRHE-1C1D-5*A0	2E5*85LN 115V	100	575/60/3	1704
COM03937	CRHE1C1D5**A0R***E***	CRHE-1C1D-5*A0	2E5*85LN 115V	100	575/60/3	1704
COM04323	CRHE1C1D0**O0R*****	CRHE-1C1D-0*00	2E5*85LX	100	575/60/3	1704

Series 6000

COM Number	Original Model Number	Cap.(Tons)	Voltage	Shipping Weight (Lb)
COM06006	2E5*48	50	200-230-460/60/3	1298
COM06007	2E5*48N 115	50	200-230-460/60/3	1298
COM06139	2E5*45	50	575/60/3	1298
COM06008	2E5*58	60	200-230-460/60/3	1406
COM06010	2E5*58N 115	60	200-230-460/60/3	1704
COM06009	2E5*51	60	460/60/3	1406
COM06140	2E5*55	60	575/60/3	1406
COM06011	2E5*68	75	200-230-460/60/3	1444
COM06012	2E5*68N 115 V	75	200-230-460/60/3	1444
COM06013	2E5*61N 115 V	75	460/60/3	1444
COM06141	2E5*65	75	575/60/3	1444
COM06014	2E5*88	100	200-230-460/60/3	1704
COM06015	2E5*88N 115 V	100	200-230-460/60/3	1704
COM06016	2E5*81	100	460/60/3	1704
COM06017	2E5*81N 115 V	100	460/60/3	1704
COM06142	2E5*85	100	575/60/3	1704

Model E Semihermetic Compressors

Figure 11. Series 6000

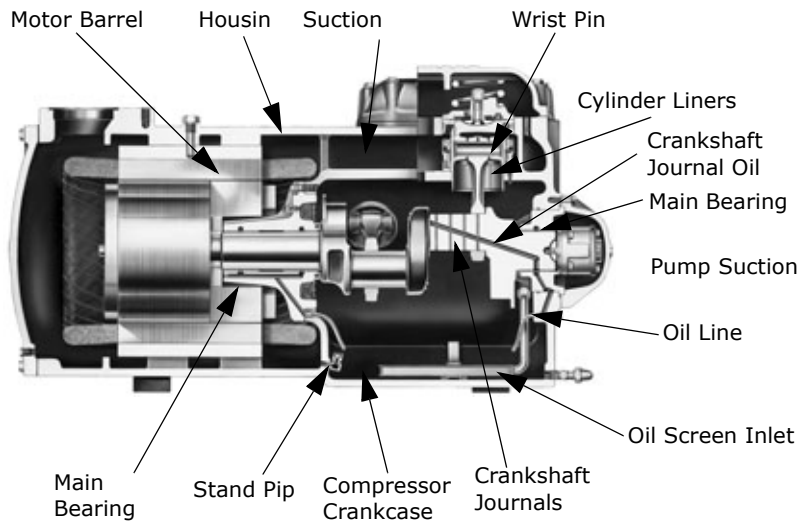


Table 5. Model E - Semihermetic Interchangeability Chart

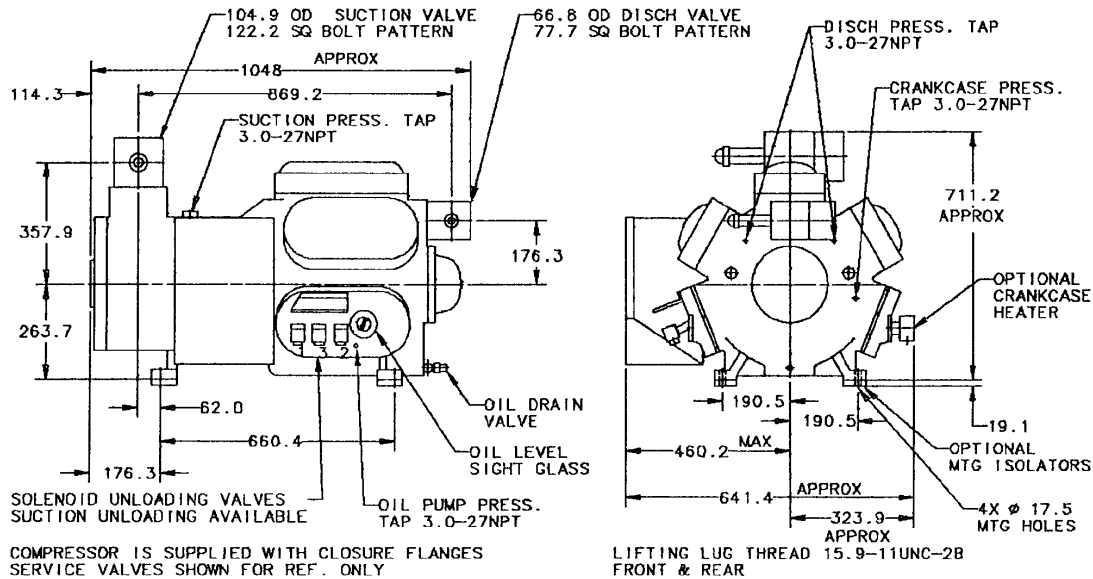
12.375" Motor Model Number	Voltage	12.375" Motor Reman COM NBR	15" Motor Reman COM NBR	Voltage	Buss Bars
2E5M61 CRHE-750K-4*PO	6 lead 460-60-3/400-50-3	COM 3005	COM 2074	6 Lead 460/60-3/400/50-3	(3) BAR 6**
2E5M61N-115V CRHE-705K-4*AO	6 Lead 460-60-3/400-50-3	COM 3004	COM 2244	6 Lead 460-60-3/440-50-3	(3) BAR 6**
2E5M61N-230V CRHE-750K-4*BO	6 Lead 460-60-3/400-50-3	COM 3014	COM 2510	6 Lead 460-60-3/440-50-3	(3) bar 6**
2E5M62 CRHE-750A-4*PO	6 Lead 200-60-3	COM 3017	COM 1445	9 Lead 200-230/460-60-3	(3) BAR 6** (2) BAR 7
2E5M62N-115V CRHE-750A-4*AO	6 Lead 200-60-3	COM 3018	COM 2094	9 Lead 200-230/40-60-3	(3) BAR 6** (2) BAR 7
2E5M63 CRHE-750W-4*PO	6 Lead 230-60-3	COM 3002	COM 1445	9 Lead 200-230/460-60-3	(3) BAR 6** (2) BAR 7
2E5M63N-115V CRHE-750W-4*AO	6 Lead 230-60-3	COM 3003	COM 2094	9 Lead 200-230/460-60-3	(3) BAR 6** (2) BAR 7
2E5M65 CRHE-750D-4*PO	6 Lead 575-60-3	COM 3008	COM 1862	6 Lead 575-60-3	(3) BAR 6**
2E5M65N-115V CRHE-750D-4*AO	6 Lead 575-60-3	COM 3006	COM 2134	6 Lead 575-60-3	(3) BAR 6**
2E5M81 CRHE-1COK-5*PO	6 Lead 460-60-3/400-50-3	COM 3024	COM 2075	6 Lead 460-60-3/400-50-3	(3) BAR 6**
2E5M81N-115V CRHE-1COK-5*AO	6 Lead 460-60-3/400-50-3	COM 3023	COM 2245	6 Lead 460-60-3/400-50-3	(3) BAR 6**
2E5M81N-230V CRHE-1COK-5*BO	6 Lead 460-60-3/400-50-3	COM 3033	COM 2511	6 Lead 460-60-3/400-50-3	(3) BAR 6**
2E5M82 CRHE-1COA-5*PO	6 Lead 200-60-3	COM 3036	COM 1446	9 Lead 200-230/460-60-3	(3) BAR 6** (2) BAR 7
2E5M82N-115V CRHE-1COA-5*AO	6 Lead 200-60-3	COM 3037	COM 2095	9 Lead 200-230/460-60-3	(3) BAR 6** (2) BAR 7
2E5M82 CRHE-1COW-5*PO	6 Lead 230-60-3	COM 3021	COM 1446	9 Lead 200-230/460-60-3	(3) BAR 6** (2) BAR 7
2E5M83N-115V CRHE-1COW-5*AO	6 Lead 230-60-3	COM 3022	COM 2095	9 Lead 200-230/460-60-3	(3) BAR 6** (2) BAR
2E5M85 CRHE-1COD-5*PO	6 Lead 575-60-3	COM 3032	COM 1863	6 Lead 575-60-3	(3) BAR 6**
2E5M85N-115 CRHE-1COD-5*AO	6 Lead 575-60-3	COM 3025	COM 2133	6 Lead 575-60-3	(3) BAR 6**

**Not needed if operating part wind start

*Design sequence letter - may be any letter

Model E Semihermetic Compressors

Figure 12. Model CRHE750 - 75 Ton / R-22 / 50 Hz

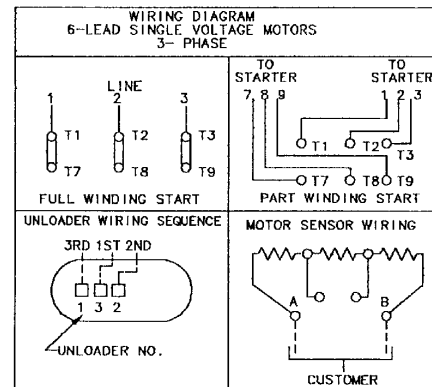


Application	25.9 BAR-D		
Internal Relief Valve Setting	R-22		
Refrigerant			
UL Recognized			
Rated Performance	33%	67%	100%
Capacity (KW)	68.2	149.2	226.2
Power Input (KW)	32.9	49.6	65.5
Current (400V) (Amps)	61.8	87.5	106.5
C.O.P.	20.8	30.1	34.5
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			
Physical Data			
Bore (MM)	92.96		
Stroke (MM)	69.85		
No. of Cylinders (MM)	6		
Speed (RPM)	1450		

Motor Protection	Internal Thermostat
Type (Pilot Duty)	Klixon
Manufacturer	
External Overcurrent Protection Required	

Crankcase Heater
Immersion Type, Rating 100 Watts

Oil Pressure Switch
Differential Type, Pilot Duty



Motor Data Max Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-200	256	210	1141
230-60-3	207-253	222	182	1054
380-60-3	342-418	137	114	631
460-60-3	414-506	112	90	521
575-60-3	517-633	88	73	426
220-50-3	198-242	197	166	953
346-50-3	311-381	124	103	605
363-50-3	327-399	118	98	577
400-50-3	342-456	108	90	524

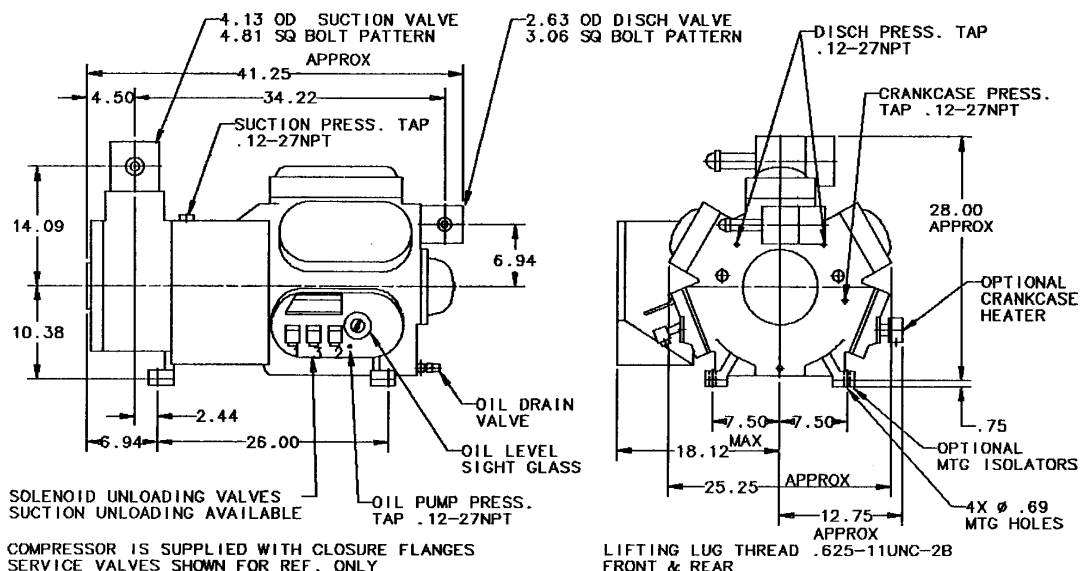
At Minimum Utilization Voltage

*At 8.3 C Sat. Suction, 63.9 C Sat. Condensing, 8.3 C Superheat, Full Load

**At 4.4 C Sat. Suction, 51.7 C Sat. Condensing, 8.3 C Superheat, Full Load

Model E Semihermetic Compressors

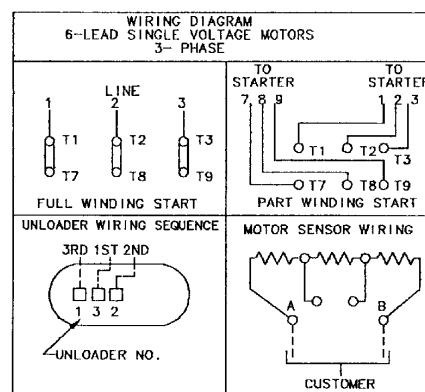
Figure 13. Model CRHE750 - 75 Ton / R-22 / 60 Hz



Application	375 PSID
Internal Relief Valve Setting	R-22
Refrigerant	
UL Recognized	
Rated Performance	33%
Capacity (BTU/HR)	276,700
Power Input (KW)	39.8
Current (460V) (Amps)	64.4
EER (BTU/W-HR)	6.9
Evaporator Temp (C)	45
Condenser Temp (C)	130
Liquid Temp (C)	115
Superheat (C)	20
Physical Data	
Bore	3.66
Stroke	2.75
No. of Cylinders	6
Speed	1750 RPM
Motor Protection	Internal Thermostat
Type (Pilot Duty)	Klixon
Manufacturer	
External Overcurrent Protection Required	

Crankcase Heater
Immersion Type, Rating 100 Watts

Oil Pressure Switch
Differential Type, Pilot Duty



Motor Data Max Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-200	256	210	1141
230-60-3	207-253	222	182	1054
380-60-3	342-418	137	114	631
460-60-3	414-506	112	90	521
575-60-3	517-633	88	73	426
220-50-3	198-242	197	166	953
363-50-3	311-381	124	103	605
363-50-3	327-399	115	98	577
400-50-3	342-456	108	90	524

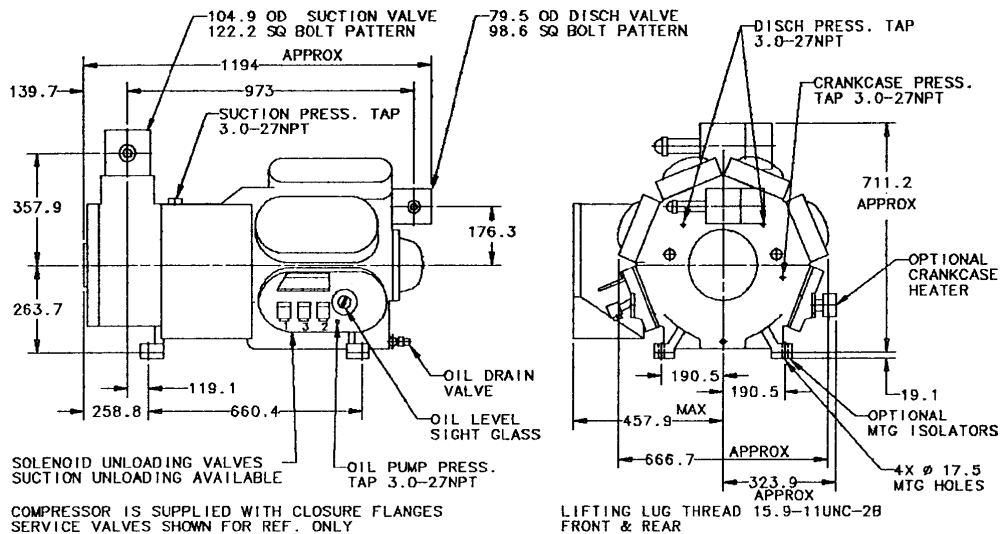
At Minimum Utilization Voltage

*At 47 F Sat. Suction, 147 F Sat. Condensing, 15F Superheat, Full Load

**At 40 F Sat. Suction, 125 F Sat. Condensing, 15F Superheat, Full Load

Model E Semihermetic Compressors

Figure 14. Model CRHE1C0 - 100 Ton / R-22 / 50 Hz



Application
Internal Relief Valve Setting 25.9 BAR-D
Refrigerant R-22
UL Recognized

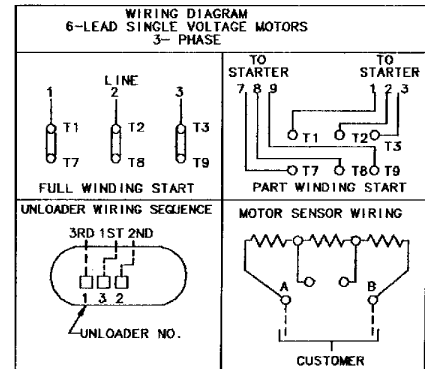
Rated Performance	37.5%	50%	75%	100%
Capacity (KW)	102.6	141.6	223.3	301.8
Power Input (KW)	47.2	55.2	72.3	87.9
Current (400V) (Amps)	94.9	104.5	123.5	142.6
C.O.P.	2.17	2.56	3.09	3.43
Evaporator Temp (C)	7.22	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11	11.11

Physical Data
Bore (MM) 92.96
Stroke (MM) 69.85
No. of Cylinders 8
Speed (RPM) 1450

Motor Protection
Type (Pilot Duty) Internal Thermostat
Manufacturer Klixon
External Overcurrent Protection Required

Crankcase Heater
Immersion Type, Rating 100 Watts

Oil Pressure Switch
Differential Type, Pilot Duty



Motor Data Max Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-200	344	282	1600
230-60-3	207-253	299	244	1390
380-60-3	342-418	178	141	841
460-60-3	414-506	148	118	695
575-60-3	517-633	118	94	556
220-50-3	198-242	265	212	1253
346-50-3	311-381	166	132	796
363-50-3	327-399	159	126	759
400-50-3	342-456	144	114	689

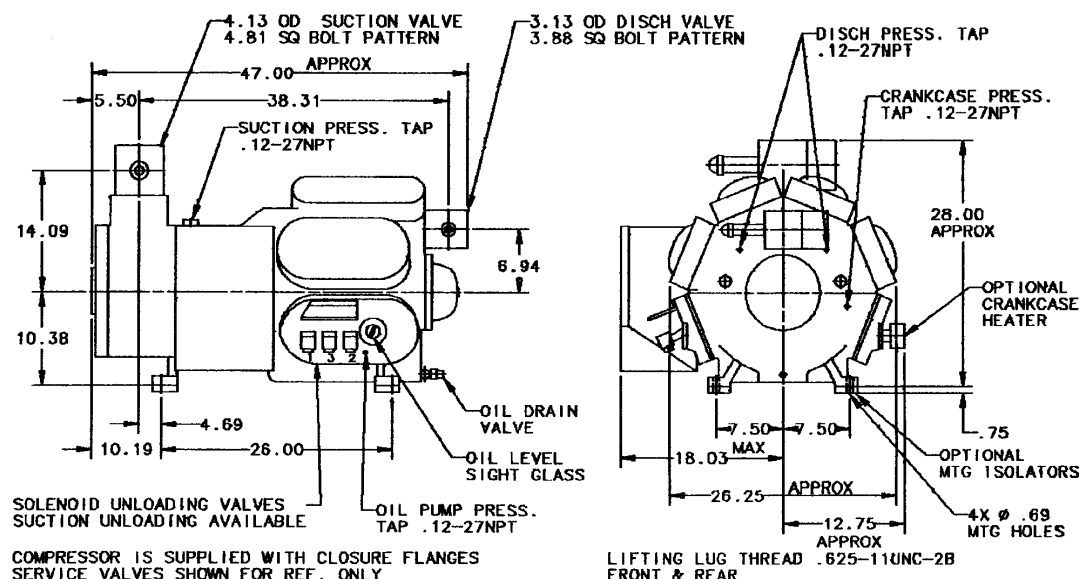
At Minimum Utilization Voltage

* At 8.3 C Sat. Suction, 63.9 C Sat. Condensing, 8.3 C Superheat, Full Load

** At 4.4 C Sat. Suction, 51.7 C Sat. Condensing, 8.3 C Superheat, Full Load

Model E Semihermetic Compressors

Figure 15. Model CRHE1C0 - 100 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized

375 PSID
R-22

Rated Performance

37.5%
Capacity (BTU/HR) 412,000
Power Input (KW) 56.7
Current (460V) (Amps) 99
EER (BTU/W-HR) 7.3
Evaporator Temp 45
Condenser Temp 130
Liquid Temp 115
Superheat 20

	50%	75%	100%
Capacity (BTU/HR)	568,600	885,800	1,196,900
Power Input (KW)	66.3	86.6	106
Current (460V) (Amps)	109	128.7	148.5
EER (BTU/W-HR)	8.6	10.2	11.3
Evaporator Temp	45	45	45
Condenser Temp	130	130	130
Liquid Temp	115	115	115
Superheat	20	20	20

Physical Data

Bore 3.66
Stroke 2.75
No. of Cylinders 8
Speed 1750 RPM

Motor Protection

Type (Pilot Duty)
Manufacturer
External Overcurrent Protection Required

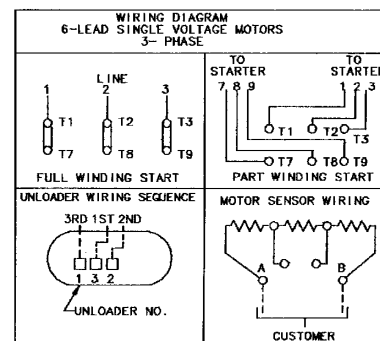
Internal Thermostat
Klixon

Crankcase Heater

Immersion Type, Rating 100 Watts

Oil Pressure Switch

Differential Type, Pilot Duty



Motor Data Max Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-200	344	282	1600
230-60-3	207-253	299	244	1390
380-60-3	342-418	178	141	841
460-60-3	414-506	148	118	695
575-60-3	517-633	118	94	556
220-50-3	198-242	265	212	1253
346-50-3	311-381	166	132	796
363-50-3	327-399	159	126	759
400-50-3	342-456	144	114	689

At Minimum Utilization Voltage

*At 47 F Sat. Suction, 147 F Sat. Condensing, 15F Superheat, Full Load

**At 40 F Sat. Suction, 125 F Sat. Condensing, 15F Superheat, Full Load



Model E Oil Pressure

Note: Information Obtained from HCOM-SB-59A

Introduction

There is a lot of confusion concerning the proper oil pressure for a Model E (2E5***, CRHE) compressor. The purpose of this service bulletin is to clear up the confusion and state the actual minimum required oil pressure.

Discussion

Over the years, there have been several design changes that have resulted in reduced measured net oil pressure for the Model E compressor. The design changes involved the crankshaft and connecting rods, which resulted in higher oil flow rates and lower oil pressures.

Compressors built prior to 1978 normally had 80 psig or above net oil pressures. Then in 1978 the Model E compressor had its first major change to the lubrication system. The bearing clearances, both connecting rods and main bearings, were increased, the oil passages in the crankshaft were enlarged and the crankshaft journals were drilled through to allow oil to flow out of the crankshaft in two locations 180 degrees apart from each other. The result of this change was a drop in oil pressure from 80 to 60 psig.

In 1982, the offset connecting rod was introduced into the Model E compressor. The clearances were again increased and the oil pressure again was reduced slightly due to the increased oil flow rate caused by the increased oil clearances.

In 1985, changes were made to the compressor to improve its ability to handle dirt and improve oil return. Included in these changes were modifications to the crankshaft. The oil passages were enlarged again and the oil feed holes increased in size, but they were not drilled through the journal.

In addition to these changes, oil bleed ports with orifices were drilled into the transfer sections of the crankshaft to act as a contamination and liquid refrigerant bleed. Again the oil flow was increased and the oil pressure reduced to the 40 to 50 psig range.

All the above changes were implemented on both the semihermetic and open compressors. The changes were all designed to improve reliability by increasing the quantity and quality of the oil being fed to the bearings.

Now the question becomes how much oil pressure is actually required to properly lubricate the compressor and operate the hydraulic unloader system.

The net oil pressure that is measured is the supply pressure of the oil to the bearings of the compressor and not the oil pressure inside the bearing. This is important to understand because the actual oil pressure that supports the shaft in the bearing is created by the hydrodynamic forces in the bearing and this pressure is in the thousands

of psi. The oil pressure needs only to be high enough to supply the proper amount of oil to the bearings.

Examples of compressors with lower oil pressures are the Model R (CRHR) and the Model M (CRHM), which have normal oil pressures of 20 to 30 psig net. Hermetic compressors which use centrifugal oil pumps, such as the Model H (CRHH), Model L (CRHL), Climatuff™, the scroll compressor, have oil pressure measured in the range of 1 to 2 psi.

The minimum oil supply pressure for the Model E compressor is 25 psig net. Oil pressure is also required to actuate the hydraulic unloaders. The oil pressure required to operate the unloaders is approximately 10 to 15 psig.

Adding the minimum oil supply pressure and the minimum oil pressure to operate the unloaders yields 35 psig net oil pressure, which is the minimum allowable oil pressure for the Model E compressor to operate the unloaders and properly lubricate the compressor.

If the oil pressure is below 35 psig net oil pressure, the compressor should be disassembled and inspected for the cause of the low oil pressure. Refer to Service Bulletin HCOM-SB-39A "Diagnosis of Model E and F Compressor Low Oil Pressure and Oil Loss Problems."

Model F Open Drive Compressors



Description

The Trane Model F compressor is an unloading, cast iron, open-drive accessible compressor. The compressor oil pump is reversible for operation in either direction. The compressor unloading options are suction pressure-actuated or electric solenoid-actuated, with electric-

actuated available either compressor-mounted or remote mounted.

Basic Variations

There are three optional basic variations to the Model F compressor:

1. 100 percent unloaded start;
2. Standard compressor-right hand;
3. 100 percent unloaded start-right hand.

100 Percent Unloaded Start

This variation provides the capability to start the compressor 100 percent unloaded. This lowers the torque required to start the compressor. This variation is typically used on open compressors when it is desirable to reduce the starting torque because the electric motor or other prime mover device does not have sufficient torque to overcome the starting torque of the compressor. The standard non-unloaded starting torques are listed on the compressor Data Sheets.

The 100 percent unloaded start compressor has unloaders on all cylinders. The unloaders on the non-capacity controlled cylinders are piped directly to the oil lubrication system and load up as soon as the compressor develops oil pressure and remain so until the compressor is stopped.

Standard Compressor-Right Hand

This variation moves the unloader handhole cover, which also houses the sightglass, to the right hand side of the compressor as viewed from the discharge valve end of the compressor. This is the opposite side as shown on the compressor "Data Sheets".

This option is for convenience of viewing the oil sightglass or access to the unloader handhole cover. If the unit configuration dictates that the standard compressor cannot be mounted so the oil sightglass can be viewed or the unloader handhole cover is easily accessible, then a right hand compressor should be considered.

This variation will also allow the oil sightglass to be on the same side of the unit should the compressor be applied with a double extended shaft motor.

100 Percent Unloaded Start-Right Hand

This variation is a combination of the two previous variation.

Low Temperature Applications - (Low Lift Valves)

When low temperature applications are encountered where the saturated suction temperature design point is below 10 F, the low lift valve option is required. Low lift valves are required to prevent valve flutter which could result in broken suction valves and springs.

Lifting and Handling

The Model F compressor has tapped holes in the housing that will accommodate lifting lugs for handling of the compressor. During handling it is recommended that the compressor be kept horizontal with the cylinders heads facing up. This will prevent oil from getting into the upper cylinder and causing potential damage when the compressor is started. If tilted from horizontal, it is recommended that the compressor be allowed to set in the horizontal position a minimum of one (1) hour before trying to start the compressor.

Pressure Testing

The maximum highside test pressure is 500 psig. The maximum lowside pressure is 350 psig. The differential between highside and lowside should not exceed 340 psig.

Oil Charge

The Model F compressor ships with a full oil charge. The compressor data sheet lists the oil charge for each compressor. See the Trane compressor service bulletin; HCOM-SB-4F, "APPLICATION FIELD REPLACEMENT OILS" See pages 122-125 for the replacement oil type.

Operation

The Model F compressor must be protected from direct exposure to rain and other weather. The operating ambient must not exceed 125 F. This is based on a maximum condensing temperature of 147 F.

⚠ WARNING

Never use oxygen or acetylene in place of refrigerant and dry nitrogen for leak testing. A violent explosion may result causing personal injury or death.

Always use a pressure regulator when using nitrogen to pressure test. Failure to do so will result in extremely high pressure which could exceed the burst pressure of the compressor or other system components and result in personal injury or death.



Model F Open Drive Compressors

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Table 6. Model F - Open Drive Compressors

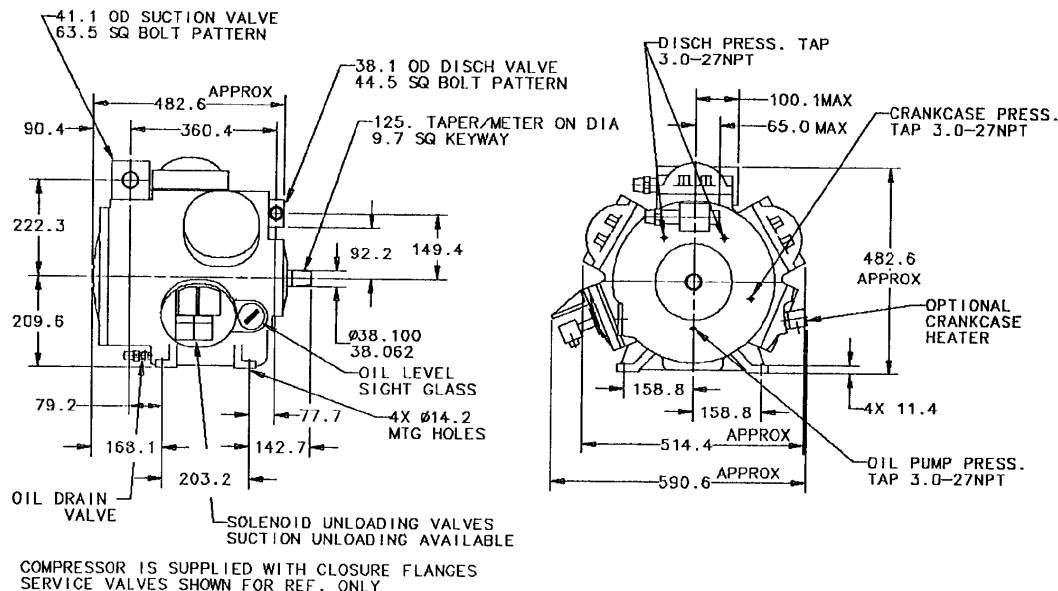
Original Model Number	COM Number	Capacity (Tons)	Voltage	Shipping Weight (Lb)
3F5*30W	COM01456	15	-	424
3F5*30L	COM02457	15	-	424
3F5*30WN 115 V	COM02459	15	-	424
3F5*30N 220 V	COM02622	15	-	424
3F5*30WN 220 V	COM02707	15	-	424
3F5*30LWN 115 V	COM04468	15	-	424
3F5*40W	COM01457	20	-	476
3F5*40L	COM02460	20	-	476
3F5*40WN 115 V	COM02462	20	-	476
3F5*40R	COM02463	20	-	476
3F5*40WN 220V	COM02558	20	-	476
3F5*40N 220 V	COM02623	20	-	476
3F5*40LWN 115 V	COM04373	20	-	476
3F5*50W	COM02110	25	-	532
3F5*50N 115V	COM02345	25	-	532
3F5*50L	COM02464	25	-	532
3F5*50LN 115V	COM02465	25	-	532
3F5*50R	COM02466	25	-	532
3F5*50N 220 V	COM02624	25	-	532
3F5*50WN 115 V	COM02932	25	-	532
3F5*50WN 220 V	COM03984	25	-	532
3F5*60W	COM02111	30	-	568
3F5*60L	COM02467	30	-	568
3F5*60N 115 V	COM02468	30	-	424
3F5*60WN 220 V	COM02654	30	-	568
3F5*60WN 115 V	COM02718	30	-	568
3F5*80W	COM02112	40	-	592
3F5*80L	COM02469	40	-	592
3F5*80WN 115 V	COM02626	40	-	592
3F5*80N 220V	COM02639	40	-	592
3F5*80WN 220 V	COM03858	40	-	592

Series 6000

Original Model Number	COM Number	Capacity (Tons)	Voltage	Shipping Weight (Lb)
3F5*30W	COM06028	15	-	424
3F5*40W	COM06029	20	-	476
3F5*50W	COM06030	25	-	532
3F5*60W	COM06031	30	-	568
3F5*80W	COM06032	30	-	592

Model F Open Drive Compressors

Figure 16. Model CROF150 - 15 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting	26.5 BAR-D
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance

	33%	67%	100%
Capacity (KW)	12.5	27.9	42.3
Shaft Power Input (KW)	5.7	8.8	11.8
Shaft Torque (N-M)	38.0	57.9	77.8
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	3
Speed (RPM)	1450
Start Torque (N-M)	94
Pull-Up Torque (N-M)	80

Oil Pressure Switch

Differential Type, Pilot Duty

Crankcase Heater

Immersion Type, Rating 100 Watts

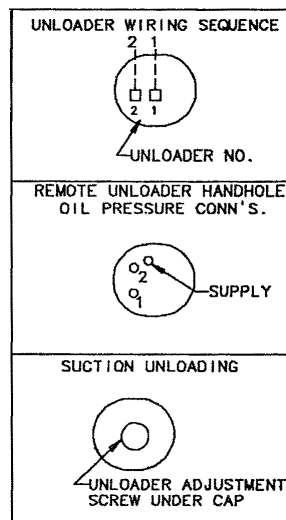
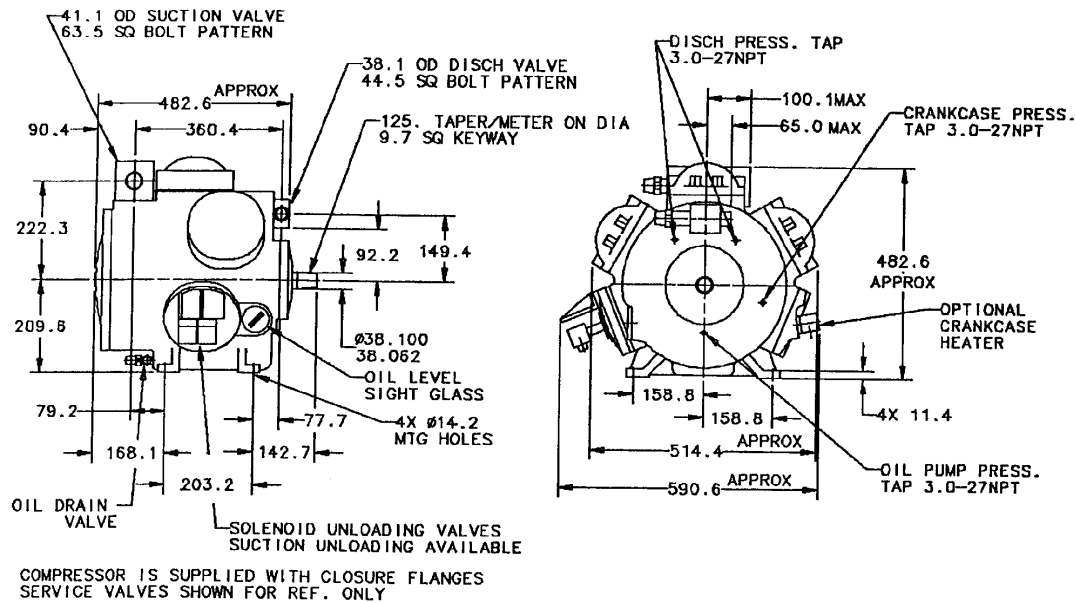


Figure 17. Model CROF150 - 15 Ton / R-22 / 60 Hzz



Application

Internal Relief Valve Setting	26.5 BAR-D
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance

	33%	67%	100%
Capacity (KW)	15.1	33.7	51
Shaft Power Input (KW)	6.9	10.6	14.2
Shaft Torque (N-M)	38.0	57.9	77.8
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	3
Speed (RPM)	1750
Start Torque (N-M)	94
Pull-Up Torque (N-M)	80

Oil Pressure Switch

Differential Type, Pilot Duty

Crankcase Heater

Immersion Type, Rating 100 Watts

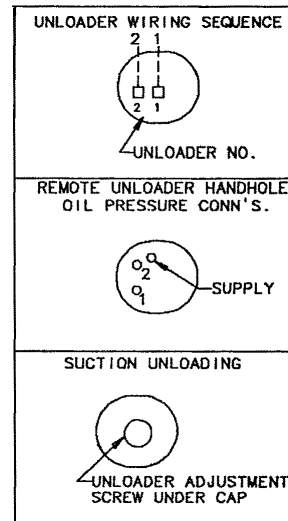
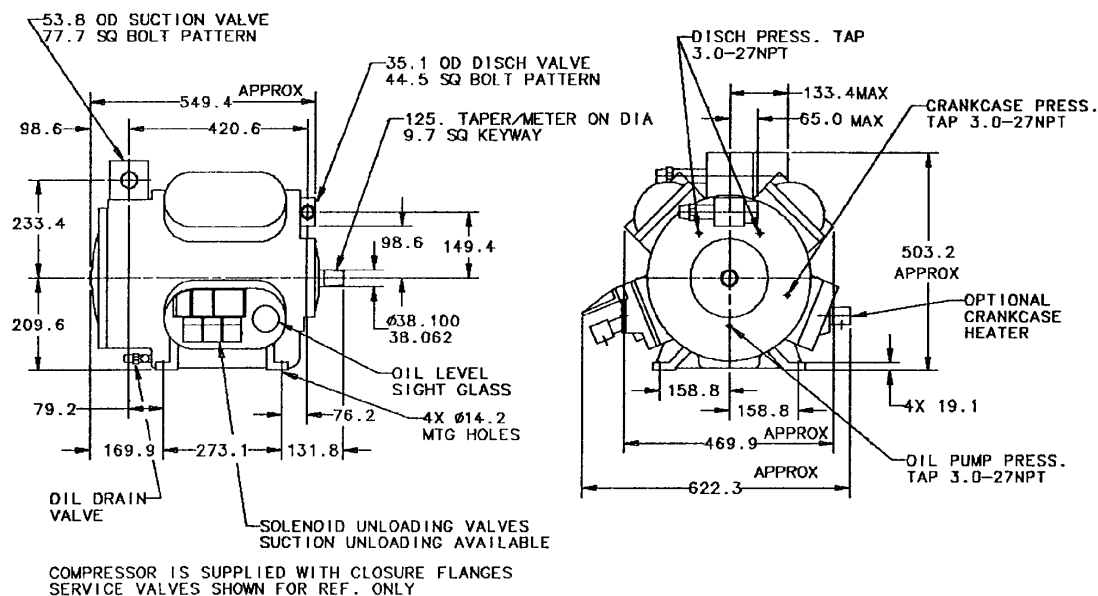


Figure 18. Model CROF200 - 20 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting	26.5 BAR-D
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance

	50%	75%	100%
Capacity (KW)	27.7	42.8	57.6
Shaft Power Input (KW)	9.4	12.3	15
Shaft Torque (N-M)	61.6	80.7	99
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

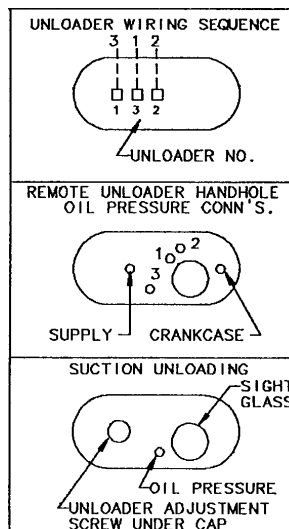
Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	4
Speed (RPM)	1450
Start Torque (N-M)	98
Pull-Up Torque (N-M)	85

Oil Pressure Switch

Differential Type, Pilot Duty

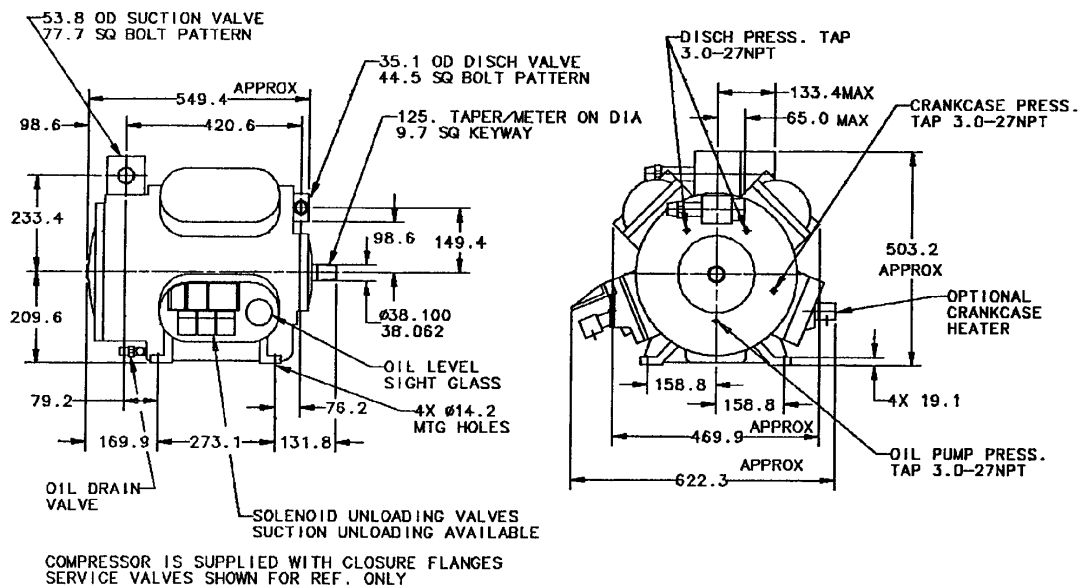
Crankcase Heater

Immersion Type, Rating 100 Watts



Model F Open Drive Compressors

Figure 19. Model CROF200 - 20 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting

26.5 BAR-D

Refrigerant

R-22

UL Recognized

Direct Coupled Only

Rated Performance

	50%	75%	100%
Capacity (KW)	33.4	51.7	69.5
Shaft Power Input (KW)	11.3	14.8	18.1
Shaft Torque (N-M)	61.6	80.7	99
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

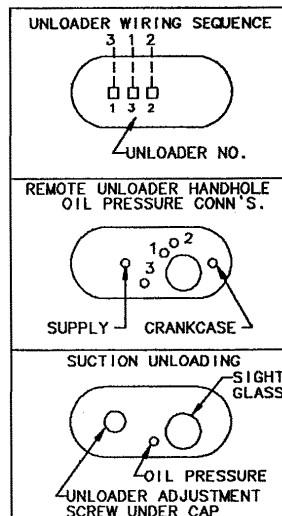
Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	4
Speed (RPM)	1750
Start Torque (N-M)	98
Pull-Up Torque (N-M)	85

Oil Pressure Switch

Differential Type, Pilot Duty

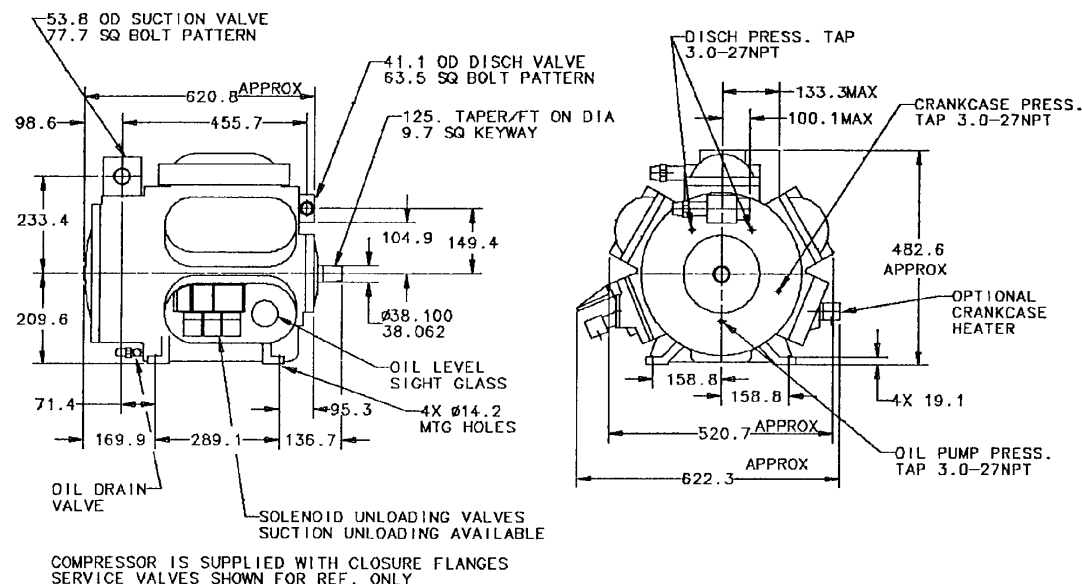
Crankcase Heater

Immersion Type, Rating 100 Watts



Model F Open Drive Compressors

Figure 20. Model CROF250 - 25 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized
Direct Coupled Only

26.5 BAR-D
R-22

Rated Performance

	40%	80%	100%
Capacity (KW)	27.0	57.6	72.9
Shaft Power Input (KW)	10.9	16.8	19.8
Shaft Torque (N-M)	71.7	110.9	130.4
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11

(45F/130F/15F SC/20F SH-ARI)

Physical Data

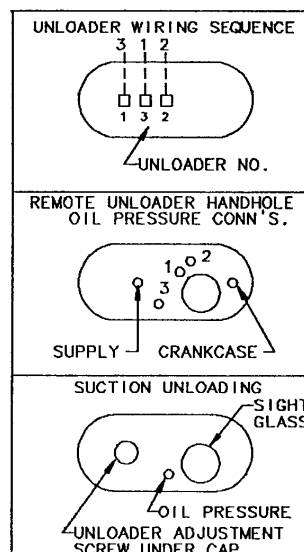
Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	5
Speed (RPM)	1450
Start Torque (N-M)	109
Pull-Up Torque (N-M)	95

Oil Pressure Switch

Differential Type, Pilot Duty

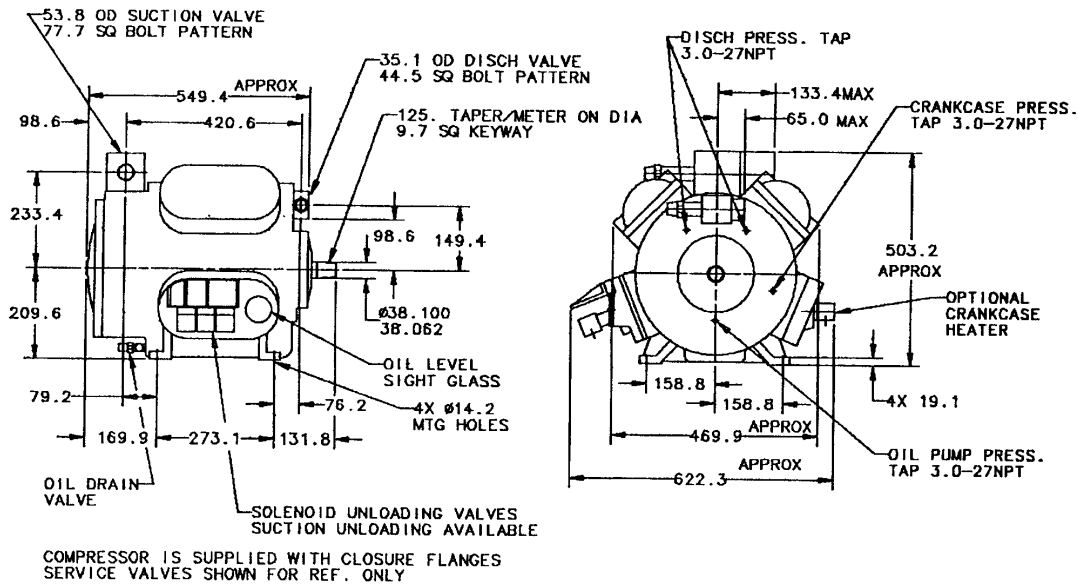
Crankcase Heater

Immersion Type, Rating 100 Watts



Model F Open Drive Compressors

Figure 21. Model CROF250 - 25 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting	26.5 BAR-D
Refrigerant	R-22
UL Recognized	
Direct Coupled Only	

Rated Performance

	40%	80%	100%
Capacity (KW)	32.6	69.5	88
Shaft Power Input (KW)	13.1	20.3	23.9
Shaft Torque (N-M)	71.7	110.9	130.4
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

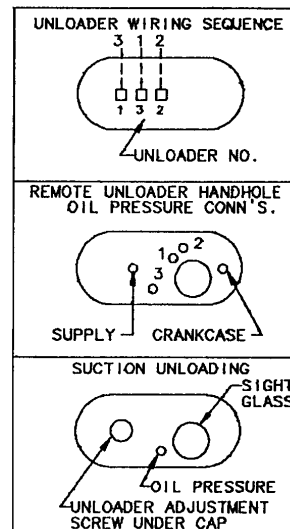
Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	5
Speed (RPM)	1750
Start Torque (N-M)	109
Pull-Up Torque (N-M)	95

Oil Pressure Switch

Differential Type, Pilot Duty

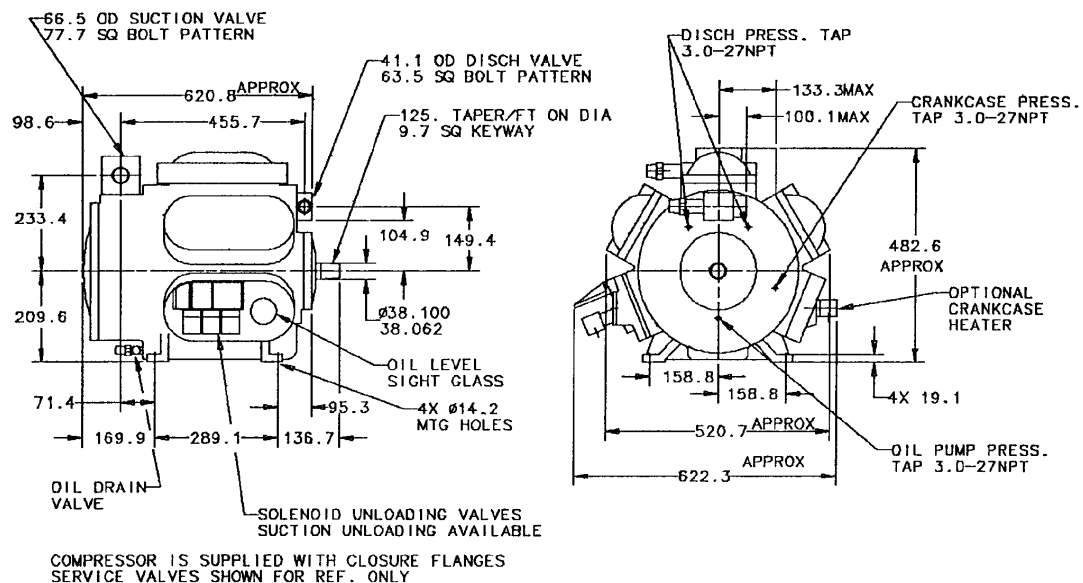
Crankcase Heater

Immersion Type, Rating 100 Watts



Model F Open Drive Compressors

Figure 22. Model CROF300 - 30 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized
Direct Coupled Only

26.5 BAR-D
R-22

Rated Performance

	33%	67%	100%
Capacity (KW)	25.5	57	86.4
Shaft Power Input (KW)	11.4	17.5	23.4
Shaft Torque (N-M)	75.4	115.4	154.4
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

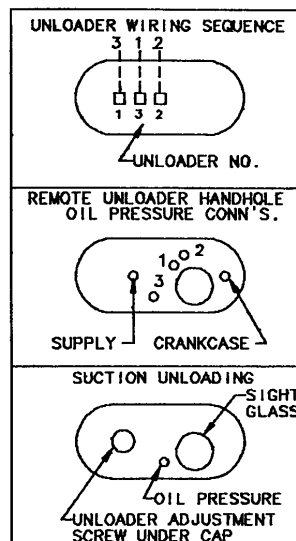
Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	5
Speed (RPM)	1450
Start Torque (N-M)	118
Pull-Up Torque (N-M)	102

Oil Pressure Switch

Differential Type, Pilot Duty

Crankcase Heater

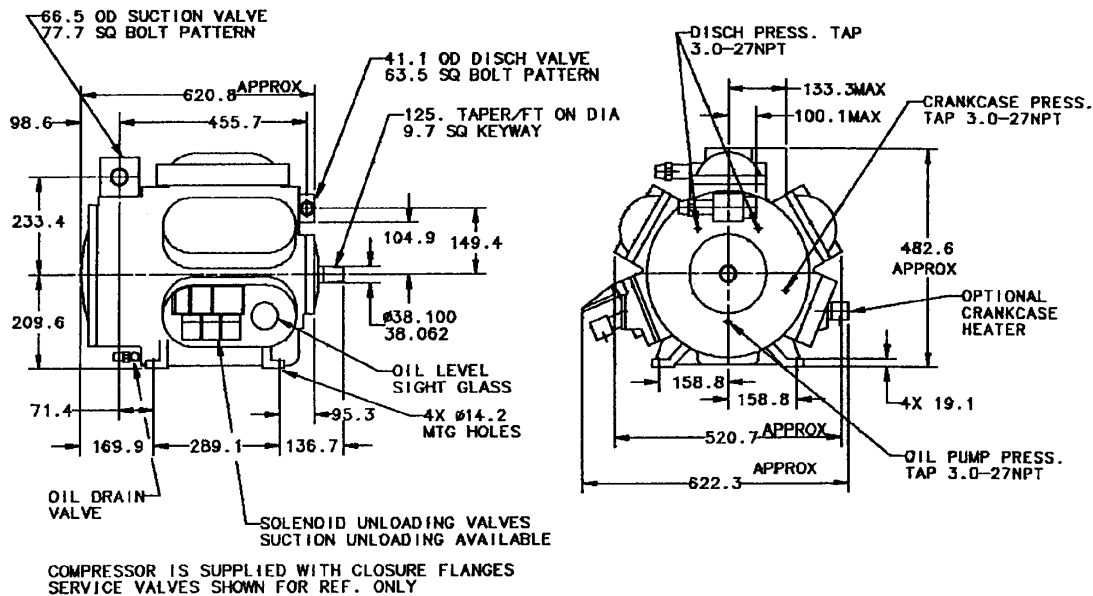
Immersion Type, Rating 100 Watts





Model F Open Drive Compressors

Figure 23. Model CROF300 - 30 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting

26.5 BAR-D

Refrigerant

R-22

UL Recognized

Direct Coupled Only

Rated Performance

	33%	67%	100%
Capacity (KW)	30.8	68.8	104.3
Shaft Power Input (KW)	13.8	21.1	28.3
Shaft Torque (N-M)	75.4	115.4	154.4
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

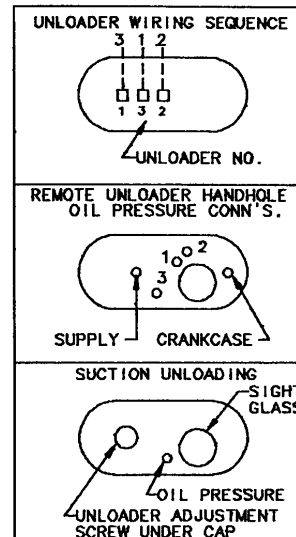
Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	6
Speed (RPM)	1750
Start Torque (N-M)	118
Pull-Up Torque (N-M)	102

Oil Pressure Switch

Differential Type, Pilot Duty

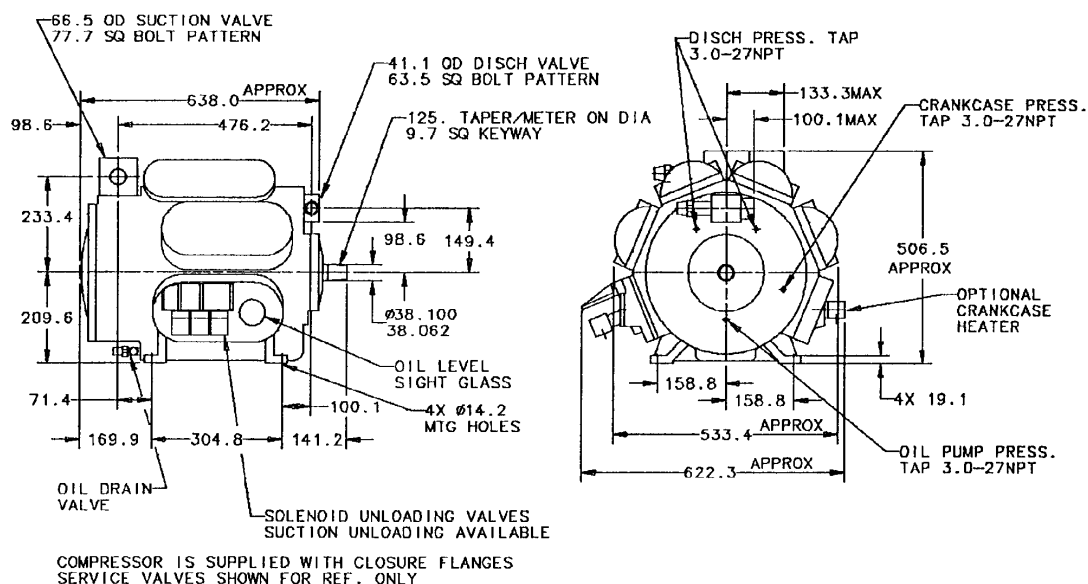
Crankcase Heater

Immersion Type, Rating 100 Watts



Model F Open Drive Compressors

Figure 24. Model CROF400 - 40 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized

26.5 BAR-D
R-22

Rated Performance

	37.5%	50%	75%	100%
Capacity (KW)	37.7	51.9	80.0	109.2
Shaft Power Input (KW)	16.7	19.3	25.6	31.4
Shaft Torque (N-M)	108.7	127.6	168.7	207
Evaporator Temp (C)	7.22	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)				

Physical Data

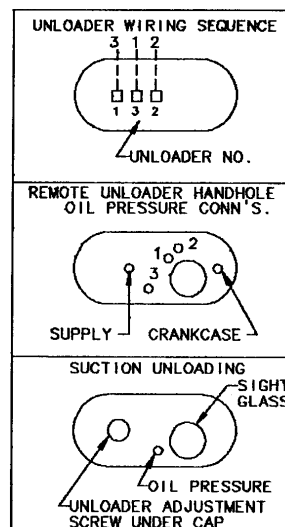
Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	8
Speed (RPM)	1450
Start Torque (N-M)	149
Pull-Up Torque (N-M)	117

Oil Pressure Switch

Differential Type, Pilot Duty

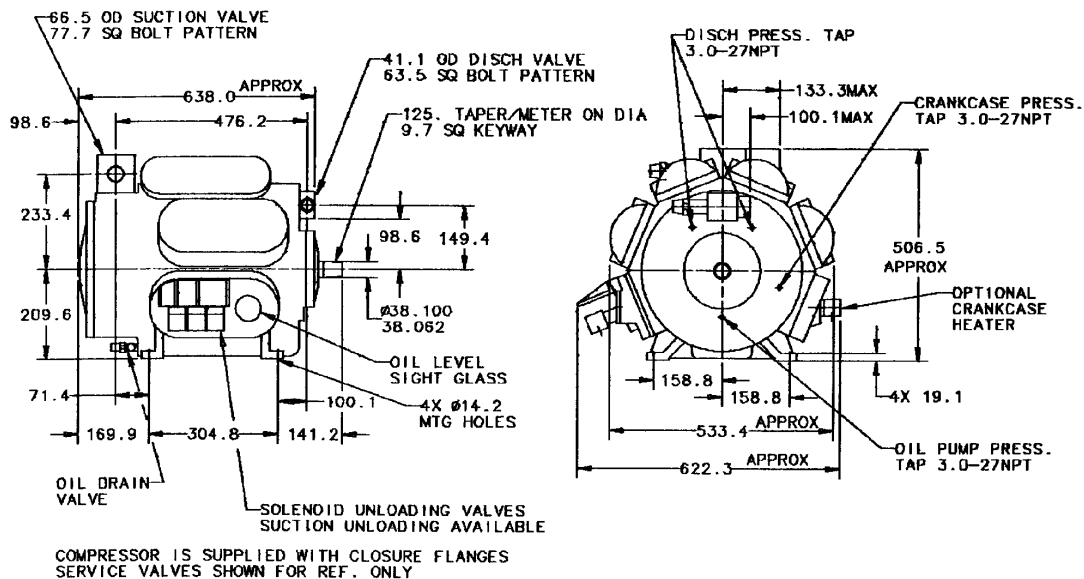
Crankcase Heater

Immersion Type, Rating 100 Watts



Model F Open Drive Compressors

Figure 25. Model CROF400 - 40 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting 26.5 BAR-D
 Refrigerant R-22
 UL Recognized
 Direct Coupled Only

Rated Performance

	37.5%	50%	75%	100%
Capacity (KW)	45.5	62.6	97.5	131.8
Shaft Power Input (KW)	20.1	23.3	30.9	37.9
Shaft Torque (N-M)	108.7	127.6	168.7	207
Evaporator Temp (C)	7.22	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)				

Physical Data

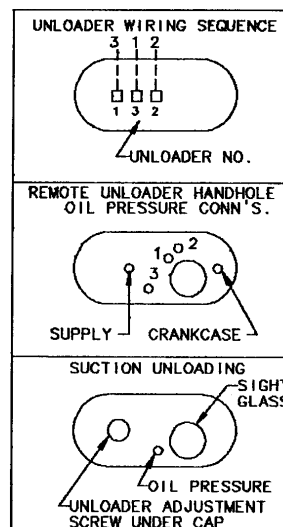
Bore (MM)	69.85
Stroke (MM)	50.8
No. of Cylinders	8
Speed (RPM)	1750
Start Torque (N-M)	149
Pull-Up Torque (N-M)	117

Oil Pressure Switch

Differential Type, Pilot Duty

Crankcase Heater

Immersion Type, Rating 100 Watts



Model F Semihermetic Compressors



Model F - Large Barrel



Model F - Small Barrel

Description

The Trane Model F semihermetic compressor is an unloading, cast iron, open-drive accessible compressor. The compressor oil pump is reversible for operation in either direction. The compressor unloading options are suction pressure-actuated or electric solenoid-actuated, with electric-actuated available either compressor-mounted or remote mounted.

Low Temperature Applications - (Low Lift Valves)

When low temperature applications are encountered where the saturated suction temperature design point is below 10 F, the low lift valve option is required. Low lift valves are required to prevent valve flutter which could result in broken suction valves and springs.

Lifting and Handling

The Model F compressor has tapped holes in the housing that will accommodate lifting lugs for handling of the compressor. During handling it is recommended that the compressor be kept horizontal with the cylinders heads facing up. This will prevent oil from getting into the upper cylinder and causing potential damage when the compressor is started. If tilted from horizontal, it is recommended that the compressor be allowed to set in the horizontal position a minimum of one hour before trying to start the compressor.

Storage

The Model F compressor is shipped with a nitrogen charge and the connections are sealed with closure plates; unless the optional service valves have been ordered for factory installation. The storage of the compressor must be in an enclosed dry space with the temperature and humidity not to exceed 165 F and 95% RH non condensing.

Pressure Testing

The maximum highside test pressure is 500 psig. The maximum lowside pressure is 350 psig. The differential between highside and lowside should not exceed 340 psig. Never pressure the system to a higher pressure than the system relief valve.

Oil Charge

The Model E compressor ships with a full oil charge. The compressor data sheet lists the oil charge for each compressor. See the Trane compressor service bulletin; HCOM-SB-4F, "APPLICATION FIELD REPLACEMENT OILS" See pages 122-125 for the replacement oil type.

Operation

The Model F compressor must be protected from direct exposure to rain and other weather. The operating ambient must not exceed 125 F. This is based on a maximum condensing temperature of 147 F.

WARNING

Never use oxygen or acetylene in place of refrigerant and dry nitrogen for leak testing. A violent explosion may result causing personal injury or death.

Always use a pressure regulator when using nitrogen to pressure test. Failure to do so will result in extremely high pressure which could exceed the burst pressure of the compressor or other system components and result in personal injury or death.



Model F Semihermetic Compressors

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Table 7. Model F - Semihermetic Compressors

COM Number	Remanufactured Model Number	Old Model Number	Original Model Number (1)	Cap. (Tons)	Voltage	Shipping Weight (Lb)
COM02410	CRHF100B2**AOR*G***	CRHF-100B-2*A0	1F5*38N 115V	10	200-230-460/60/3	522
COM02411	CRHF101B2**AOR*G***	CRHF-101B-2*A0	1F5*38LN 115V	10	200-230-460/60/3	522
COM02412	CRHF100C2**AOR*G***	CRHF-100C-2*A0	1F5*31N 115V	10	460/60/3	522
COM02984	CRHF100C2**POR*G***	CRHF-100C-2*P0	1F5*31	10	460/60/3	522
COM01873	CRHF100D2**POR*G***	CRHF-100D-2*P0	1F5*35	10	575/60/3	790
COM02164	CRHF130B3**POR*F***	CRHF-130B-3*P0	1F5*48	12.5	200-230-460/60/3	710
COM02166	CRHF130B3**POR*G***	CRHF-130B-3*P0	1F5*48	12.5	200-230-460/60/3	626
COM01451	CRHF150B2**POR*G***	CRHF-150B-2*P0	2F5*38	15	200-230-460/60/3	522
COM02100	CRHF150B2**AOR*G***	CRHF-150B-2*A0	2F5*38N 115V	15	200-230-460/60/3	522
COM02165	CRHF160B3**POR*F***	CRHF-160B-3*P0	1F5*58	15	200-230-460/60/3	790
COM02167	CRHF160B3**POR*G***	CRHF-160B-3*P0	1F5*58	15	200-230-460/60/3	694
COM02520	CRHF150B2**BOR*G***	CRHF-150B-2*B0	2F5*38N 220V	15	200-230-460/60/3	522
COM02173	CRHF150C2**POR*G***	CRHF-150C-2*P0	2F5*31	15	460/60/3	522
COM02174	CRHF150C2**AOR*G***	CRHF-150C-2*A0	2F5*31N 115V	15	460/60/3	522
COM02413	CRHF151C2**AOR*G***	CRHF-151C-2*A0	2F5*38L	15	460/60/3	522
COM01864	CRHF150D2**POR*G***	CRHF-150D-2*P0	2F5*35	15	575/60/3	522
COM02132	CRHF150D2**AOR*G***	CRHF-150D-2*A0	2F5*35N 115V	15	575/60/3	522
COM01054	CRHF200B3**POR*****	CRHF-200B-3*P0	S2F5*43	20	200-230-460/60/3	522
COM01452	CRHF200B3**POR*G***	CRHF-200B-3*P0	2F5*48	20	200-230-460/60/3	626
COM01662	CRHF200B3**POR*F***	CRHF-200B-3*P0	2F5*48	20	200-230-460/60/3	710
COM01809	CRHF190B4**POR*F***	CRHF-190B-4*P0	1F5*68	20	200-230-460/60/3	810
COM01810	CRHF190B4**POR*G***	CRHF-190B-4*P0	1F5*68	20	200-230-460/60/3	690
COM02101	CRHF200B3**AOR*F***	CRHF-200B-3*A0	2F5*48N 115V	20	200-230-460/60/3	710
COM02105	CRHF200B3**AOR*G***	CRHF-200B-3*A0	2F5*48N 115V	20	200-230-460/60/3	626
COM02421	CRHF201B3**POR*G***	CRHF-201B-3*P0	2F5*48L	20	200-230-460/60/3	626
COM02493	CRHF200B3**POR*G***	CRHF-200B-3*P0	2F5*48U	20	200-230-460/60/3	626
COM02516	CRHF200B3**BOR*G***	CRHF-200B-3*B0	2F5*48N 220V	20	200-230-460/60/3	626
COM02521	CRHF200B3**BOR*F***	CRHF-200B-3*B0	2F5*48N 220V	20	200-230-460/60/3	710
COM02076	CRHF200C3**POR*G***	CRHF-200C-3*P0	2F5*41	20	460/60/3	626
COM02096	CRHF200C3**POR*F***	CRHF-200C-3*P0	2F5*41	20	460/60/3	710
COM02416	CRHF200C3**AOR*F***	CRHF-200C-3*A0	2F5*41N 115V	20	460/60/3	710
COM02424	CRHF201C3**POR*G***	CRHF-201C-3*P0	2F5*41L	20	460/60/3	626
COM02425	CRHF200C3**AOR*G***	CRHF-200C-3*A0	2F5*41N 115V	20	460/60/3	626
COM01865	CRHF200D3**POR*F***	CRHF-200D-3*P0	2F5*45	20	575/60/3	710
COM01869	CRHF200D3**POR*G***	CRHF-200D-3*P0	2F5*45	20	575/60/3	626
COM01874	CRHF190D4**POR*F***	CRHF-190D-4*P0	1F5*65	20	575/60/3	790
COM01875	CRHF190D4**POR*G***	CRHF-190D-4*P0	1F5*65	20	575/60/3	694
COM02940	CRHF200D3**AOR*F***	CRHF-200D-3*A0	2F5*45N 115V	20	575/60/3	710
COM01453	CRHF250B3**POR*G***	CRHF-250B-3*P0	2F5*58	25	200-230-460/60/3	694
COM01663	CRHF250B3**POR*F***	CRHF-250B-3*P0	2F5*58	25	200-230-460/60/3	790
COM01811	CRHF260B6**POR*F***	CRHF-260B-6*P0	1F5*88	25	200-230-460/60/3	922
COM01812	CRHF260B6**POR*G***	CRHF-260B-6*P0	1F5*88	25	200-230-460/60/3	776
COM02102	CRHF250B3**AOR*F***	CRHF-250B-3*A0	2F5*58N 115V	25	200-230-460/60/3	790
COM02106	CRHF250B3**AOR*G***	CRHF-250B-3*A0	2F5*58N 115V	25	200-230-460/60/3	694
COM02422	CRHF251B3**POR*G***	CRHF-251B-3*P0	2F5*58L	25	200-230-460/60/3	694
COM02502	CRHF251B3**AOR*G***	CRHF-251B-3*A0	2F5*58LN 115V	25	200-230-460/60/3	694
COM02517	CRHF250B3**BOR*G***	CRHF-250B-3*B0	2F5*58N 220V	25	200-230-460/60/3	694
COM02522	CRHF250B3**BOR*F***	CRHF-250B-3*B0	2F5*58N 220V	25	200-230-460/60/3	790
COM01870	CRHF250C3**POR*G***	CRHF-250C-3*P0	2F5*55	25	460/60/3	694
COM02077	CRHF250C3**POR*G***	CRHF-250C-3*P0	2F5*51	25	460/60/3	694
COM02097	CRHF250C3**POR*F***	CRHF-250C-3*P0	2F5*51	25	460/60/3	790
COM02182	CRHF250C3**AOR*G***	CRHF-250C-3*A0	2F5*51N 115V	25	460/60/3	694
COM02417	CRHF250C3**AOR*F***	CRHF-250C-3*A0	2F5*51N 115V	25	460/60/3	790
COM02426	CRHF251C3**POR*G***	CRHF-251C-3*P0	2F5*51L	25	460/60/3	694
COM01866	CRHF250D3**POR*F***	CRHF-250D-3*P0	2F5*55	25	575/60/3	790
COM01876	CRHF260D6**POR*F***	CRHF-260D-6*P0	1F5*85	25	575/60/3	922
COM01877	CRHF260D6**POR*G***	CRHF-260D-6*P0	1F5*85	25	575/60/3	776
COM01454	CRHF300B4**POR*G***	CRHF-300B-4*P0	2F5*68	30	200-230-460/60/3	690
COM01664	CRHF300B4**POR*F***	CRHF-300B-4*P0	2F5*68	30	200-230-460/60/3	810
COM02103	CRHF300B4**AOR*F***	CRHF-300B-4*A0	2F5*68N 115V	30	200-230-460/60/3	810

Model F Semihermetic Compressors

COM Number	Remanufactured Model Number	Old Model Number	Original Model Number (1)	Cap. (Tons)	Voltage	Shipping Weight (Lb)
COM02107	CRHF300B4**A0R*G***	CRHF-300B-4*A0	2F5*68N 115V	30	200-230-460/60/3	690
COM02371	CRHF301B4**P0R*G***	CRHF-301B-4*P0	2F5*68L	30	200-230-460/60/3	690
COM02523	CRHF300B4**B0R*F***	CRHF-300B-4*B0	2F5*68N 220V	30	200-230-460/60/3	810
COM02078	CRHF300C4**P0R*G***	CRHF-300C-4*P0	2F5*61	30	460/60/3	690
COM02098	CRHF300C4**P0R*F***	CRHF-300C-4*P0	2F5*61	30	460/60/3	810
COM02181	CRHF300C4**A0R*G***	CRHF-300C-4*A0	2F5*61N 115V	30	460/60/3	690
COM02418	CRHF300C4**A0R*F***	CRHF-300C-4*A0	2F5*61N 115V	30	460/60/3	790
COM02427	CRHF301C4**P0R*G***	CRHF-301C-4*P0	2F5*61L	30	460/60/3	690
COM03125	CRHF300C4**B0R*G***	CRHF-300C-4*B0	2F5*61N 220V	30	460/60/3	690
COM01867	CRHF300D4**P0R*F***	CRHF-300D-4*P0	2F5*65	30	575/60/3	810
COM01871	CRHF300D4**P0R*G***	CRHF-300D-4*P0	2F5*55	30	575/60/3	690
COM01455	CRHF400B6**P0R*G***	CRHF-400B-6*P0	2F5*88	40	200-230-460/60/3	776
COM01665	CRHF400B6**P0R*F***	CRHF-400B-6*P0	2F5*88	40	200-230-460/60/3	922
COM02104	CRHF400B6**A0R*F***	CRHF-400B-6*A0	2F5*88N 115V	40	200-230-460/60/3	922
COM02108	CRHF400B6**A0R*G***	CRHF-400B-6*A0	2F5*88N 115V	40	200-230-460/60/3	776
COM02423	CRHF401B6**P0R*G***	CRHF-401B-6*P0	2F5*88L	40	200-230-460/60/3	776
COM02519	CRHF400B6**B0R*G***	CRHF-400B-6*B0	2F5*88N 220V	40	200-230-460/60/3	776
COM02524	CRHF400B6**B0R*F***	CRHF-400B-6*B0	2F5*88N 220V	40	200-230-460/60/3	922
COM02557	CRHF400B6**B1R*F***	CRHF-400B-6*B1	2F5*88W	40	200-230-460/60/3	922
COM05080	CRHF400B6**PSR*F***	CRHF-400B-6*P0	2F5*88U	40	200-230-460/60/3	922
COM05625	CRHF400B6**R0R*F***	CRHF-400B-6*R0	2F5*88	40	200-230-460/60/3	922
COM02634	CRHF400F6**B0R*G***	CRHF-400F-6*B0	2F5*86N 220V	40	220/50/3	776
COM02657	CRHF400F6**A0R*G***	CRHF-400F-6*A0	2F5*86N 115V	40	220/50/3	776
COM02071	CRHF400C6**P0R*G***	CRHF-400C-6*P0	2F5*81	40	460/60/3	776
COM02099	CRHF400C6**P0R*F***	CRHF-400C-6*P0	2F5*81	40	460/60/3	922
COM02180	CRHF400C6**A0R*G***	CRHF-400C-6*A0	2F5*81N 115V	40	460/60/3	776
COM02420	CRHF400C6**A0R*F***	CRHF-400C-6*A0	2F5*81N 115V	40	460/60/3	922
COM02428	CRHF401C6**P0R*G***	CRHF-401C-6*P0	2F5*81L	40	460/60/3	776
COM02717	CRHF400C6**B0R*F***	CRHF-400C-6*B0	2F5*81N 220V	40	460/60/3	922
COM01868	CRHF400D6**P0R*F***	CRHF-400D-6*P0	2F5*85	40	575/60/3	922
COM01872	CRHF400D6**P0R*G***	CRHF-400D-6*P0	2F5*85	40	575/60/3	694
COM03360	CRHF400D6**A0R*G***	CRHF-400D-6*A0	2F5*85N 115V	40	575/60/3	776

Series 6000

COM Number	Remanufactured Model Number	Old Model Number	Original Model Number (1)	Cap. (Tons)	Voltage	Shipping Weight (Lb)
COM06023			2F5*38	15	200-230-460/60/3	522
COM06130			2F5*35	15	575/60/3	522
COM06018			2F5*48	20	200-230-460/60/3	626
COM06024			2F5*48	20	200-230-460/60/3	710
COM06131			2F5*45	20	575/60/3	710
COM06135			2F5*45	20	575/60/3	626
COM06019			2F5*58	25	200-230-460/60/3	694
COM06025			2F5*58	25	200-230-460/60/3	790
COM06132			2F5*55	25	575/60/3	790
COM06136			2F5*55	25	575/60/3	694
COM06020			2F5*68	30	200-230-460/60/3	690
COM06026			2F5*68	30	200-230-460/60/3	810
COM06133			2F5*65	30	575/60/3	810
COM06137			2F5*65	30	575/60/3	690
COM06021			2F5*88	40	200-230-460/60/3	776
COM06022			2F5*88N 115V	40	200-230-460/60/3	776
COM06027			2F5*88	40	200-230-460/60/3	922
COM06134			2F5*85	40	575/60/3	922
COM06138			2F5*85	40	575/60/3	776

Note: (1) Motor barrel size: All 3 cylinder, Model F, Semihermetic compressors utilize a small barrel motor, 8.77" in diameter. Using the "Original Model Number" ("Model Number" for the Series 6000) the compressor may be identified as design sequences A through C. All other Model F, Semihermetic compressors with a design sequence of A through B, utilize a large barrel motor, 12.375" in diameter. Design sequences C through E, utilize a small barrel motor, 8.77" in diameter.



Model F Semihermetic Compressors

Model F Approximate Electrical and Capacity Information

15 Ton

Rated Performance

	33%	67%	100%
Capacity (BTU/HR)	51,400	114,900	174,100
Power Input (KW)	9.0	14.4	17.7
Current (460V) (Amps)	16.3	21.0	25.0
Evaporator Temp	45	45	45
Condensor Temp	130	130	130
Liquid Temp	115	115	115
Superheat	20	20	20

20 Ton

Rated Performance

	25%	50%	75%	100%
Capacity (BTU/HR)	42,660	106,650	170,640	237,000
Power Input (KW)	10.5	15.0	20.1	23.4
Current (460V) (Amps)	20.1	24.4	29.0	33.0
Evaporator Temp	45	45	45	45
Condensor Temp	130	130	130	130
Liquid Temp	115	115	115	115
Superheat	20	20	20	20

25 Ton

Rated Performance

	40%	60%	80%	100%
Capacity (BTU/HR)	102,068	168,112	234,156	300,200
Power Input (KW)	15.9	21.0	25.5	28.4
Current (460V) (Amps)	27.2	31.6	36.0	40.0
Evaporator Temp	45	45	45	45
Condensor Temp	130	130	130	130
Liquid Temp	115	115	115	115
Superheat	20	20	20	20

30 Ton

Rated Performance

	33%	50%	75%	100%
Capacity (BTU/HR)	116,896	202,320	368,672	449,600
Power Input (KW)	17.0	21.8	29.3	34.0
Current (460V) (Amps)	31.2	35.5	42.2	48.0
Evaporator Temp	45	45	45	45
Condensor Temp	130	130	130	130
Liquid Temp	115	115	115	115
Superheat	20	20	20	20

40 Ton

Rated Performance

	25%	50%	75%	100%
Capacity (BTU/HR)	64,044	160,110	291,756	355,800
Power Input (KW)	20.7	29.5	39.6	46.1
Current (460V) (Amps)	39.7	48.1	57.2	65.0
Evaporator Temp	45	45	45	45
Condensor Temp	130	130	130	130
Liquid Temp	115	115	115	115
Superheat	20	20	20	20

Model F Semihermetic Compressors

Figure 28. MODEL F 4 CYL - LARGE DIA. MOTOR

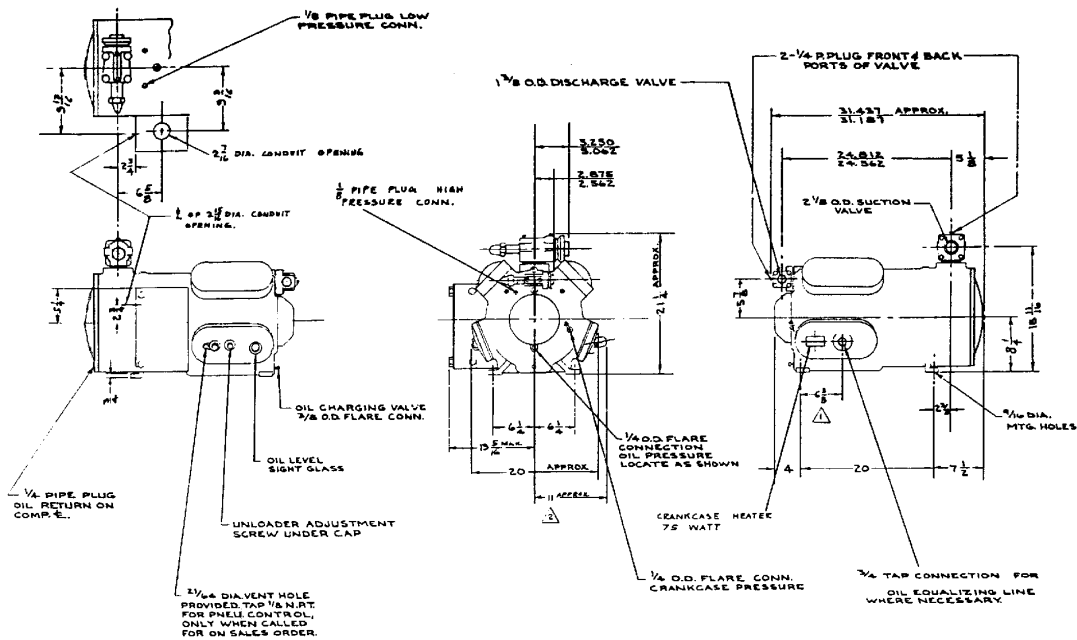
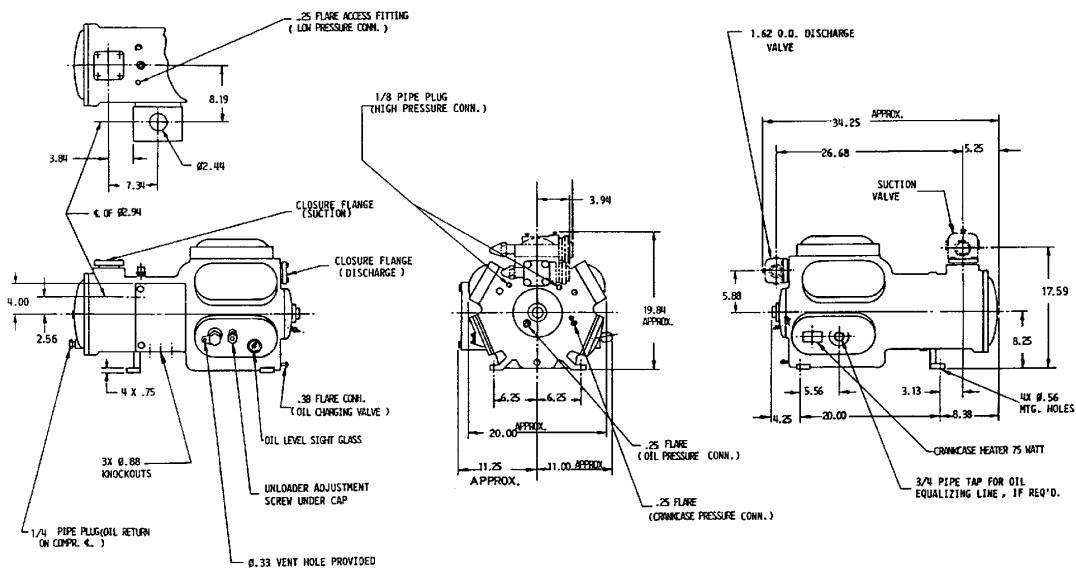


Figure 29. MODEL F 5 & 6 CYL - SMALL DIA. MOTOR



NOTE:
1. VALVES ARE SHOWN FOR REF. ONLY. COMP. SUPPLIED WITH CLOSURE FLANGES.

Model F Semihermetic Compressors

Figure 30. MODEL F 5 & 6 CYL - LARGE DIA. MOTOR

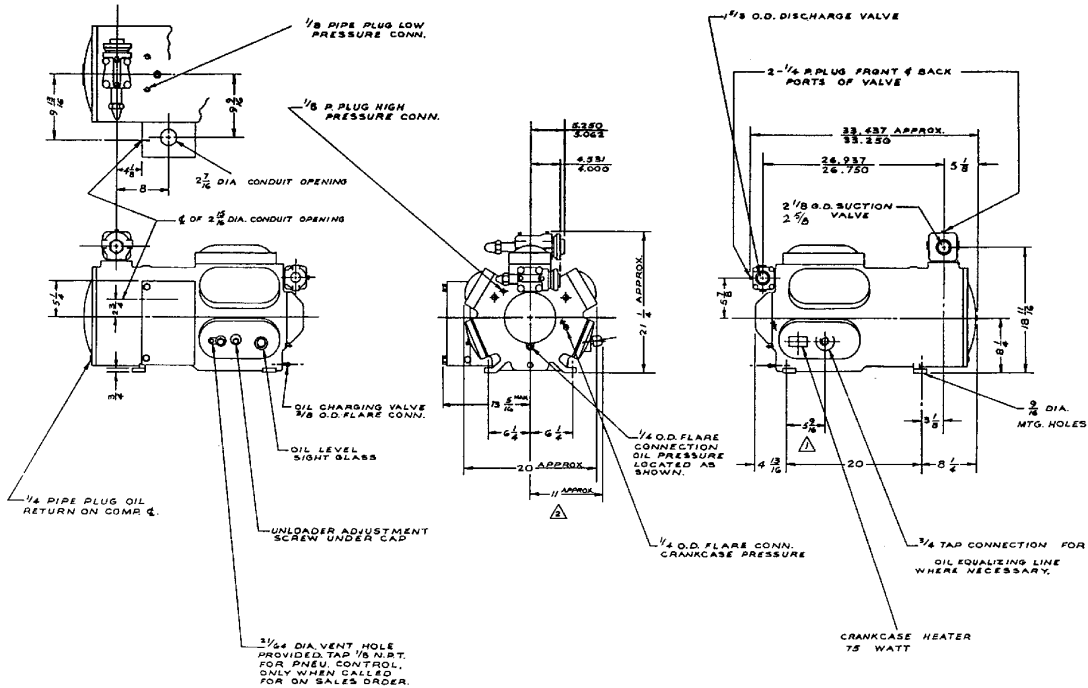
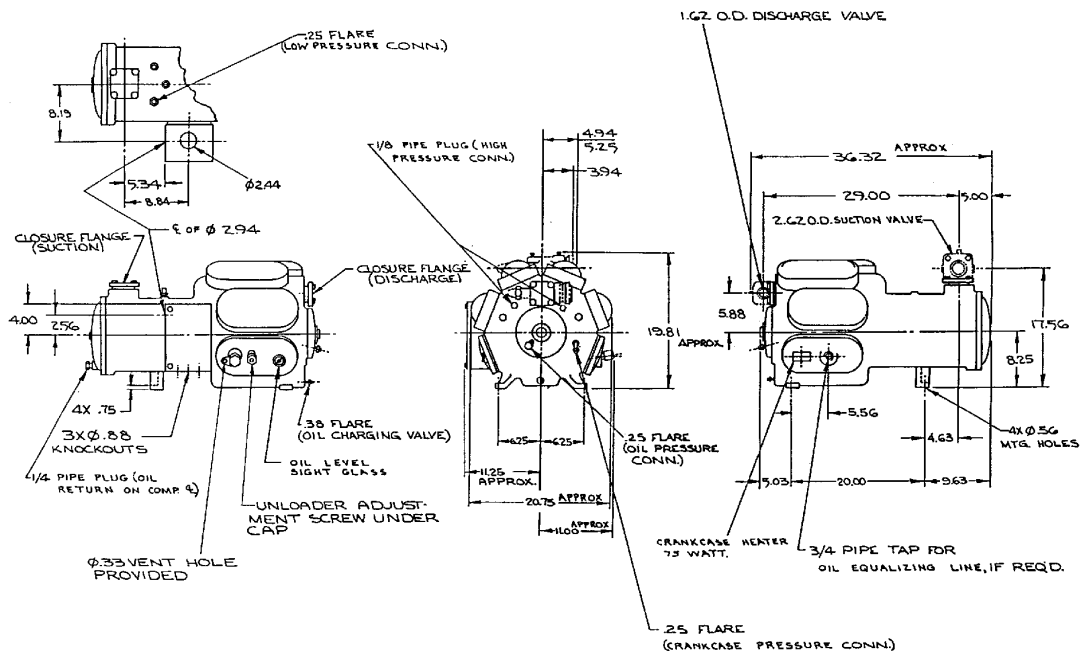


Figure 31. MODEL F 8 CYL - SMALL DIA. MOTOR

NOTE:

1. VALVES ARE SHOWN FOR REF ONLY. COMP SUPPLIED WITH CLOSURE FLANGES





1/2 P. PLUG LOW PRESSURE CONN.

1/8 P. PLUG HIGH PRESSURE CONN.

2-7/16 DIA. CONDUIT OPENING.

2-1/2 DIA. CONDUIT OPENING

1/4 P. PLUG OIL RETURN ON COMPE.

OIL CHARGING VALVE 3/8 O.D. FLARE CONN.

OIL LEVEL SIGHT GLASS

UNLOADER ADJUSTMENT SCREW UNDER CAP

2 1/4 DIA. VENT HOLE PROVIDED. TAP 1/8 NPT. FOR PNEU. CONTROL, ONLY WHEN CALLED FOR ON SALES ORDER.

1/4 O.D. FLARE CONN. OIL PRESSURE LOCATE AS SHOWN.

CRANKCASE HEATER 75 WATT.

1/4 O.D. FLARE CONN. CRANKCASE PRESSURE

3/4 TAP CONNECTION FOR OIL EQUALIZING LINE WHERE NECESSARY

2 3/8 O.D. SUCTION VALVE.

2-1/2 P. PLUG FRONT & BACK PORTS OF VALVES.

1/2 O.D. DISCHARGE VALVE.

36.250 APPROX. 36.062

25.230 25.062

5 1/8

10 1/2

80 1/4

4 5/8

20

9 3/4

5 3/8

5 3/8

14 1/2

2 1/4 APPROX.

5.250 4.812 4.531 4.000

6 1/4 6 1/2

13 5/16 MAX.

20 3/4

11 APPROX.

Model M Semihermetic Compressors



Description

The Trane Model M compressor is an unloading, cast iron semihermetic accessible compressor. The compressor motor and oil pump are reversible for operation in either direction. The compressor unloading is electric solenoid actuated.

Basic Variations

There is only one basic variation available on the Model M compressor. The Model M is available with a side mounted junction box. See the outline drawings for dimensions of compressors with the side terminal box.

Low Temperature Applications (Low Lift Valves)

When low temperature applications are encountered where the saturated suction temperature design point is below 10 F, the low lift valve option is required.

Lifting and Handling

The Model M has topped holes in the housing that will accommodate a lifting lug for handling of the compressor. During handling it is recommended that the compressor be kept horizontal with the cylinder heads facing up. This will prevent oil from getting into the upper cylinder and causing potential damage when the compressor is started. If tilted from horizontal, it is recommended that the compressor be allowed to set in the horizontal position a minimum of one hour before trying to start the compressor.

Storage

Model M compressor are shipped with a nitrogen charge and the connections sealed with closure plates unless the optional service valves have been ordered for factory installation. The storage of the compressor must be in an enclosed dry space with the temperature and humidity not to exceed 140 F and 95% RH non-condensing.

Oil Charge

Model M compressors ship with a full oil charge. The compressor data sheet lists the oil charge for each compressor. See the Trane service bulletin; HCOM-SB-4F, APPLICATION FIELD REPLACEMENT OILS" See pages 122-125 for the replacement oil type.

Pressure Testing

The maximum high side test pressure is 500 psig. The maximum low side pressure is 350 psig. The differential between the high side and low side should not exceed 340 psig. Never pressure the system to a pressure higher than the system relief valve.

⚠ WARNING

Never use oxygen or acetylene in place of refrigerant and dry nitrogen for leak testing. A violent explosion may result causing personal injury or death.

Always use a pressure regulator when using nitrogen to pressure test. Failure to do so will result in extremely high pressure which could exceed the burst pressure of the compressor or other system components and result in personal injury or death.



Model M Semihermetic Compressors

ReSpecT®

Table 8. Model M - Semihermetic Compressors

COM Number	Remanufactured Model Number	Old Model Number	Original Model Number	Cap. (Tons)	Voltage	Shipping Weight (Lb)
COM02334	CRHM100A2**A0R*****	CRHM-100A-2*AT	M10C-1E2A-*	10	200/60/3	454
COM02470	CRHM100W2**A0R*****	CRHM-100W-2*AT	M10G-1E2A-*	10	230/60/3	454
COM02335	CRHM100C2**A0R*****	CRHM-100C-2*AT	M10E-1E2A-*	10	460/60/3	454
COM02369	CRHM100D1**A0R*****	CRHM-100D-1*AT	M10F-1E1A-*	10	575/60/3	454
COM02370	CRHM100D2**A0R*****	CRHM-100D-2*AT	M10F-1E2A-*	10	575/60/3	454
COM01421	CRHM130C3**A0R*****	CRHM-130C-3*AT	M13E-1E3A-*	13	460/60/3	466
COM03799	CRHM130C2**A0R*****	CRHM-130C-2*AT	M13E-1E2A-*	13	460/60/3	466
COM02716	CRHM130D2**A0R*****	CRHM-130D-2*AT	M13F-1E2A-*	13	575/60/3	466
COM01461	CRHM150A2**A0R*****	CRHM-150A-2*AT	M15C-2E2A-*	15	200/60/3	454
COM01786	CRHM150A2**A4R*****	CRHM-150A-2*AS	M15E-2E4A-*	15	200/60/3	454
COM01462	COM01507 or COM1508	CRHM-150B-2*AT	-	15	230-460/60/3	454
COM01507	CRHM150W2**A0R*****	CRHM-150W-2*AT	M15D-2E2A-*	15	230/60/3	454
COM01788	CRHM150W1**A4R*****	CRHM-150W-2*AS	M15D-2E2A-*	15	230/60/3	454
COM04470	CRHM150G1**B0R*****	CRHM-150G-1*BT	M15H-2E1B-*	15	400/50/3	454
COM01508	CRHM150C2**A0R*****	CRHM-150C-2*AT	M15E-2E2A-*	15	460/60/3	454
COM01787	CRHM150C2**A4R*****	CRHM-150C-2*AS	M15E-2E2A-*	15	460/60/3	454
COM01789	CRHM150D2**A4R*****	CRHM-150D-2*AS	M15F-2E2A-*	15	575/60/3	454
COM01849	CRHM150D2**A0R*****	CRHM-150D-2*AT	M15F-2E2A-*	15	575/60/3	454
COM02471	CRHM160A2**A4R*****	CRHM-160A-2*AS	M16C-1E2A-*	16	200/60/3	466
COM02472	CRHM160W2**A0R*****	CRHM-160W-2*AT	M16D-1E2A-*	16	230/60/3	466
COM02473	CRHM160W2**A4R*****	CRHM-160W-2*AS	M16D-1E2A-*	16	230/60/3	466
COM01406	CRHM160C2**A4R*****	CRHM-160C-2*AS	M16E-2E2A-*	16	460/60/3	466
COM02500	CRHM160C2**A0R*****	CRHM-160C-2*AT	M16D-1E2A-*	16	460/60/3	466
COM02596	CRHM170A4**A0R*****	CRHM-170A-4*AT	M17C-1E4B-*	17	200/60/3	548
COM03761	CRHM170C4**A0R*****	CRHM-170C-4*AT	M17E-1E4A-*	17	460/60/3	548
COM02597	CRHM190C4**A0R*****	CRHM-190C-4*AT	M19E-1E4A-*	19	460/60/3	548
COM01464	COM01509 or COM1465	CRHM-200B-3*AT	-	20	230-460-60/3	466
COM01463	CRHM200A3**A0R*****	CRHM-200A-3*AT	M20C-2E3A-*	20	200/60/3	466
COM01466	USE COM02120	CRHM-200A-2*AS	-	20	200/60/3	-
COM02119	CRHM200A0**A2R*****	CRHM-200A-2*AT	M20C-2E2A-*	20	200/60/3	466
COM02120	CRHM200A3**A4R*****	CRHM-200A-3*AS	M20C-2E3A-*	20	200/60/3	466
COM02503	CRHM200A3**B0R*****	CRHM-200A-3*BT	M20C-2E3B-*	20	200/60/3	466
COM01509	CRHM200W3**A0R*****	CRHM-200W-3*AT	M20D-2E3A-*	20	230/60/3	466
COM01510	USE COM02125	CRHM-200W-2*AS	M20D-2E2A-*	20	230/60/3	466
COM02124	USE COM01509	CRHM-200W-2*AT	-	20	230/60/3	466
COM02125	CRHM200W3**A4R*****	CRHM-200W-3*AS	M20D-2E3A-*	20	230/60/3	466
COM02930	CRHM200W3**B4R*****	CRHM-200W-3*BS	M20G-2E3B-*	20	230/60/3	466
COM03695	CRHM200X2**A0R*****	CRHM-200X-2*AT	M20*-2E2A-*	20	380/60/3	466
COM03903	CRHM200X2**A4R*****	CRHM-200X-2*AS	M20*-2E2A-*	20	380/60/3	466
COM01465	CRHM200C3**A0R*****	CRHM-200C-3*AT	M20E-2E3A-*	20	460/60/3	466
COM01468	USE COM02123	CRHM-200C-2*AS	-	20	460/60/3	-
COM02122	USE COM01465	CRHM-200C-2*AT	-	20	460/60/3	466
COM02123	CRHM200C3**A4R*****	CRHM-200C-3*AS	M20E-2E3A-*	20	460/60/3	466
COM02504	CRHM200C3**B0R*****	CRHM-200C-3*BT	M20E-2E3B-*	20	460/60/3	466
COM03969	CRHM200G3**B0R*****	CRHM-200G-3*BT	M20H-2E3B-*	20	400/50/3	466
COM04271	CRHM200G2**B0R*****	CRHM-200G-2*BT	M20H-2E2B-*	20	400/50/3	466
COM01850	CRHM200D3**A0R*****	CRHM-200D-3*AT	M15F-2E2A-*	20	575/60/3	466
COM01851	USE COM02127	CRHM-200D-2*AS	-	20	575/60/3	466
COM02127	CRHM200D3**A4R*****	CRHM-200D-3*AS	M20F-2E2A-*	20	575/60/3	466
COM05559			M20*-2E2A-*	20	200-230/50-60/3	466
COM01469	CRHM250A4**A0R*****	CRHM-250A-4*AT	M25C-2E4A-*	25	200/60/3	548
COM01473	CRHM250A4**A4R*****	CRHM-250A-4*AS	M25E-2E4A-*	25	200/60/3	548
COM02023	CRHM250A0**O4R*****	CRHM-250A-0*NS	M25C-2E0N-*	25	200/60/3	548
COM02137	USE COM01469	CRHM-250A-2*AT	-	25	200/60/3	548
COM02138	USE COM01473	CRHM-250A-2*AS	-	25	200/60/3	548

Model M Semihermetic Compressors

COM Number	Remanufactured Model Number	Old Model Number	Original Model Number	Cap. (Tons)	Voltage	Shipping Weight (Lb)
COM02474	CRHM250A0**O4R*****	CRHM-250A-0*NS	M25C-2E0N-*	25	200/60/3	548
COM02505	CRHM250A4**B0R*****	CRHM-250A-4*BT	M25C-2E4B-*	25	200/60/3	548
COM05077	CRHM250F4**B0R*****	CRHM-250F-4*BT	M25*-2E4B-*	25	220/50/3	548
COM01470	COM01511 or COM1471	CRHM-250B-4*AT	M25M-2E4A-*	25	230-460/60/3	548
COM02139	COM01511 or COM1471	CRHM-250B-2*AT	-	25	230-460/60/3	548
COM01511	CRHM250W4**A0R*****	CRHM-250W-4*AT	M25D-2E4A-*	25	230/60/3	548
COM01512	CRHM250W4**A4R*****	CRHM-250W-4*AS	M25D-2E4A-*	25	230/60/3	548
COM02142	USE COM01511	CRHM-250W-2*AT	-	25	230/60/3	548
COM03904	CRHM250X4**A4R*****	CRHM-250X-4*AS	M25*-2E4A-*	25	380/60/3	548
COM02926	CRHM250G4**B0R*****	CRHM-250G-4*BT	M25H-2E4B-*	25	400/50/3	548
COM01471	CRHM250C4**A0R*****	CRHM-250C-4*AT	M25E-2E4A-*	25	460/60/3	548
COM01472	CRHM250C4**A4R*****	CRHM-250C-4*AS	M25E-2E4A-*	25	460/60/3	548
COM02024	CRHM250C0**O4R*****	CRHM-250C-0*NS	M25E-2E0N-*	25	460/60/3	548
COM02140	USE COM01471	CRHM-250C-2*AT	-	25	460/60/3	548
COM02141	USE COM01472	CRHM-250C-2*AS	-	25	460/60/3	548
COM02475	CRHM250C4**B0R*****	CRHM-250C-4*BT	M25E-2E4B-*	25	460/60/3	548
COM01852	CRHM250D4**A0R*****	CRHM-250D-4*AT	M25F-2E4A-*	25	575/60/3	548
COM01853	CRHM250D4**A4R*****	CRHM-250D-4*AS	M25F-2E4A-*	25	575/60/3	548
COM01475	CRHM300A4**A0R*****	CRHM-300A-4*AT	M30C-2E4A-*	30	200/60/3	548
COM01479	CRHM300A4**A4R*****	CRHM-300A-4*AS	M30C-2E4A-*	30	200/60/3	548
COM02025	CRHM300A0**O4R*****	CRHM-300A-0*NS	M30C-2E0N-*	30	200/60/3	548
COM02143	USE COM01475	CRHM-300A-2*AT	-	30	200/60/3	548
COM02144	USE COM01479	CRHM-300A-2*AS	-	30	200/60/3	548
COM02506	CRHM300A4**B0R*****	CRHM-300A-4*BT	M30C-2E4B-*	30	200/60/3	548
COM01476	COM01513 or COM1477	CRHM-300B-4*AT	M30M-2E4A-*	30	230-460/60/3	548
COM01480	COM01514 or COM1478	CRHM-300B-4*AS	M30M-2E4A-*	30	230-460/60/3	548
COM01513	CRHM300W4**A0R*****	CRHM-300W-4*AT	M30D-2E4A-*	30	230/60/3	548
COM01514	CRHM300W4**A4R*****	CRHM-300W-4*AS	M30D-2E4A-*	30	230/60/3	548
COM02150	USE COM01513	CRHM-300W-2*AT	-	30	230/60/3	548
COM02151	USE COM01514	CRHM-300W-2*AS	-	30	230/60/3	548
COM02476	CRHM300W4**B0R*****	CRHM-300W-4*BT	M30D-2E4B-*	30	230/60/3	548
COM04014	CRHM300X4**A4R*****	CRHM-300X-4*AS	M30*-2E4A-*	30	380/60/3	548
COM04375	CRHM300X2**A0R*****	CRHM-300X-2*AT	M30*-2E2A-*	30	380/60/3	548
COM02927	CRHM300G4**B0R*****	CRHM-300G-4*BT	M30H-2E4B-*	30	400/50/3	548
COM03840	CRHM300G2**A0R*****	CRHM-300G-2*AT	M30H-2E2A-*	30	400/50/3	548
COM04471	CRHM300G2**B0R*****	CRHM-300G-2*BT	M30H-2E2B-*	30	400/50/3	548
COM01477	CRHM300C4**A0R*****	CRHM-300C-4*AT	M30E-2E4A-*	30	460/60/3	548
COM01478	CRHM300C4**A4R*****	CRHM-300C-4*AS	M30E-2E4A-*	30	460/60/3	548
COM02026	CRHM300C0**O4R*****	CRHM-300C-0*NS	M30E-2E0N-*	30	460/60/3	548
COM02147	USE COM01477	CRHM-300C-2*AT	-	30	460/60/3	548
COM02148	USE COM01478	CRHM-300C-2*AS	-	30	460/60/3	548
COM02507	CRHM300C4**B0R*****	CRHM-300C-4*BT	M30E-2E4B-*	30	460/60/3	548
COM01854	CRHM300D4**A0R*****	CRHM-300D-4*AT	M30F-2E4A-*	30	575/60/3	548
COM01855	CRHM300D4**A4R*****	CRHM-300D-4*AS	M30F-2E4A-*	30	575/60/3	548

Model M Semihermetic Compressors

Series 6000

COM Number	Model Number	Original Model Number	Cap. (Tons)	Voltage	Shipping Weight (Lb)
COM06033	CRHM-150C-2*AT	M15E-2E2A-*	15	460/60/3	454
COM06034	CRHM-200A-3*AT	M20C-2E3A-*	20	200/60/3	466
COM06035	CRHM-200C-3*AT	M20E-2E3A-*	20	460/60/3	466
COM06037	CRHM-200C-3*AS	M20E-2E3A-*	20	460/60/3	466
COM06124	CRHM-200D-3*AT	M20F-2E3A-*	20	575/60/3	466
COM06038	CRHM-250A-4*AT	M25C-2E4A-*	25	200/60/3	548
COM06041	CRHM-250A-4*AS	M25C-2E4A-*	25	200/60/3	548
COM06039	CRHM-250C-4*AT	M25E-2E4A-*	25	460/60/3	548
COM06040	CRHM-250C-4*AS	M25E-2E4A-*	25	460/60/3	548
COM06125	CRHM-250D-4*AT	M25F-2E4A-*	25	575/60/3	548
COM06042	CRHM-300A-4*AT	M30C-2E4A-*	30	200/60/3	548
COM06045	CRHM-300A-4*AS	M30C-2E4A-*	30	200/60/3	548
COM06046	CRHM-300W-4*AT	M30D-2E4A-*	30	230/60/3	548
COM06043	CRHM-300C-4*AT	M30E-2E4A-*	30	460/60/3	548
COM06044	CRHM-300C-4*AS	M30E-2E4A-*	30	460/60/3	548

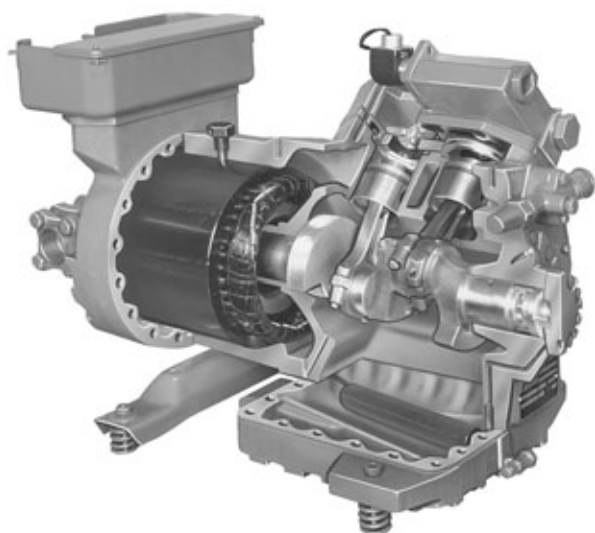
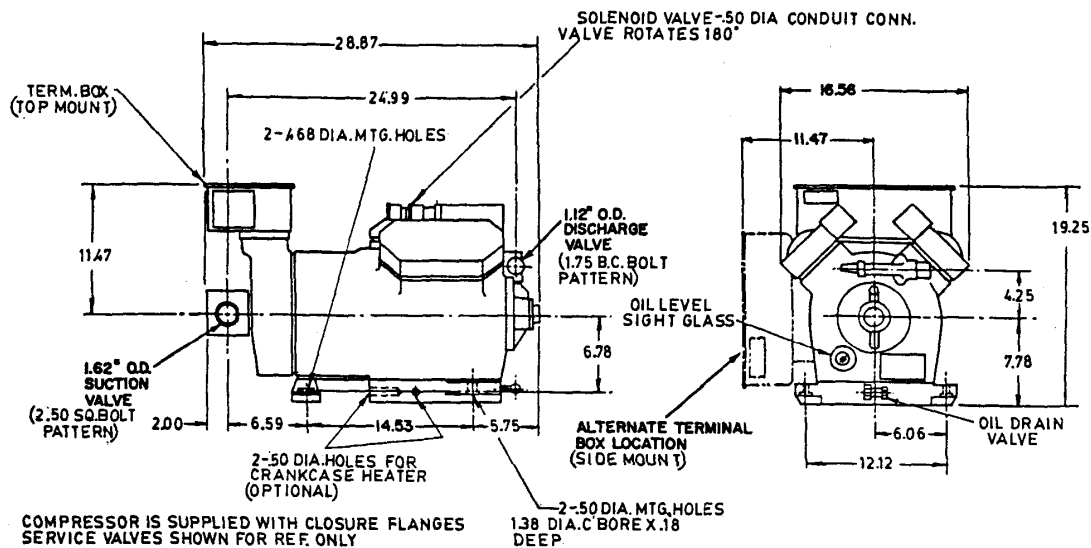


Figure 33. Model CRHM150 - 15 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized

385 PSIG
R-22

Rated Performance

Capacity (BTU/HR) 185,700
Power Input (KW) 20
Current (230V) (Amps) 64
EER (BTU/W-HR) 9.3
Evaporator Temp 45F
Condenser Temp 130F
Liquid Temp 115F
Superheat 20F

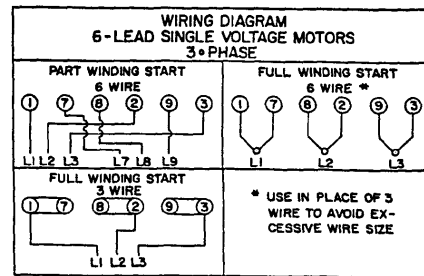
100%

Physical Data

Bore 2.688 In.
Stroke 2.250 In.
No. of Cylinders 3
Speed 1750 RPM

Motor Protection

Type(Pilot Duty) Internal Thermostat
Manufacturer Robertshaw



Motor Data Max Current (Amp)±

Utilization			
Voltage	Range	Air-Cooled*	Water-Cooled**
200-60-3	180-200	95	78
230-60-3	208-254	83	68
460-60-3	416-508	42	34
575-60-3	520-635	33	27
200-50-3	180-220	83	68
230-50-3	198-264	75	62
363-50-3	311-381	44	36
400-50-3	343-456	43	36

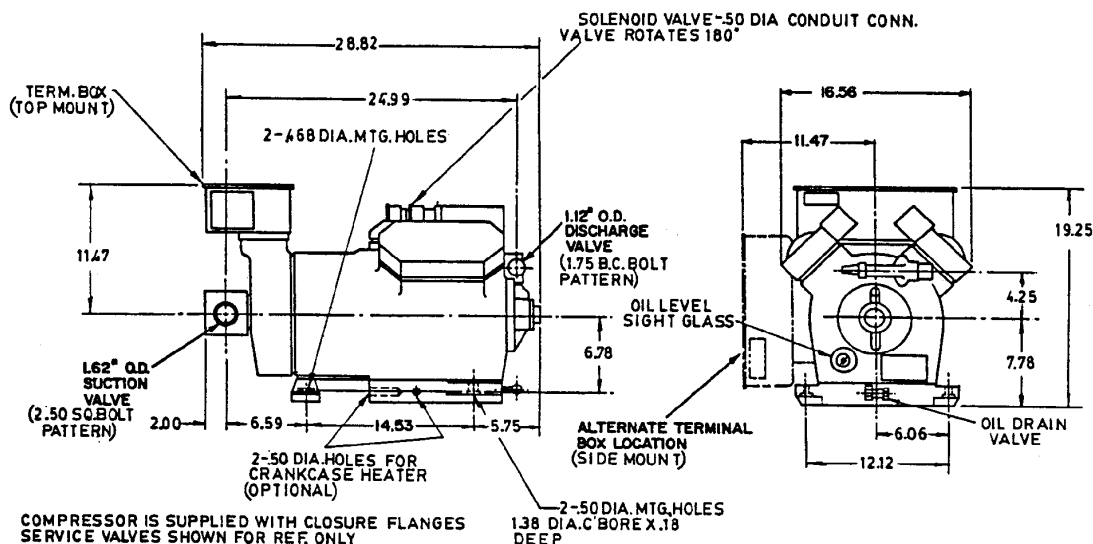
± At Minimum Utilization Voltage

* At 50F Sat. Suction, 150 F Sat. Condensing, 15F Superheat, Full Load

** At 40 F Sat. Suction, 125 F Sat. Condensing, 15F Superheat, Full Load

Model M Semihermetic Compressors

Figure 34. Model CRHM200 - 20 Ton / R-22 / 60 Hz

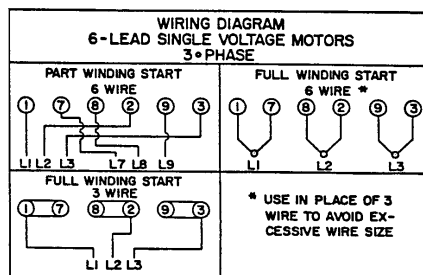


Application
Internal Relief Valve Setting 385 PSIG
Refrigerant R-22

Rated Performance	50%	100%
Capacity (BTU/HR)	118,100	251,300
Power Input (KW)	16.1	25.5
Current (230V) (Amps)	51	81
EER (BTU/W-HR)	7.4	9.9
Evaporator Temp	45F	45F
Condenser Temp	130F	130F
Liquid Temp	115F	115F
Superheat	20F	20F

Physical Data
Bore 2.688 In.
Stroke 2.250 In.
No. of Cylinders 3
Speed 1750 RPM

Motor Protection
Type (Pilot Duty) Internal Thermostat
Manufacturer Robertshaw



Motor Data Max Load Current (Amp)±

Utilization			
Voltage	Range	Air-Cooled*	Water-Cooled**
200-60-3	180-200	106	86
230-60-3	208-254	92	75
460-60-3	416-508	46	38
575-60-3	520-635	42	34
200-50-3	180-220	104	85
230-50-3	198-264	94	77
346-50-3	311-381	57	47
400-50-3	343-456	54	44
363-50-3	327-399	54	43

± At Minimum Utilization Voltage

* At 50F Sat. Suction, 150F Sat. Condensing, 15F Superheat, Full Load

** At 40F Sat. Suction, 125F Sat. Condensing, 15F Superheat, Full Load

Technical drawing of a 1/2 HP 180° Solenoid Valve, showing side and front views with dimensions and labels.

Dimensions:

- Top view (left): 31.90 (total width), 28.88 (width to center of discharge valve).
- Top view (right): 11.47 (width to center of oil level sight glass), 18.56 (width to center of alternate terminal box location).
- Side view (left): 17.40 (width to center of crankcase heater holes), 5.75 (width to center of alternate terminal box location).
- Side view (right): 6.06 (width to center of alternate terminal box location), 12.12 (width to center of alternate terminal box location).
- Front view (bottom): 6.78 (height to center of oil level sight glass).

Labels:

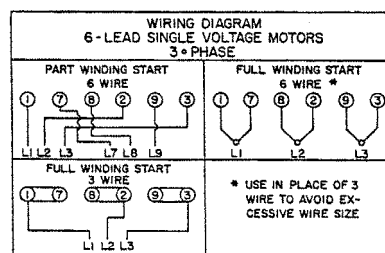
- SOLENOID VALVE - 50 DIA. CONDUIT CONN. VALVE ROTATES 180°
- 1.68 DIA. MTG. HOLES
- 1.38" O.D. DISCHARGE VALVE (2.75 B.C. BOLT PATTERN)
- OIL LEVEL SIGHT GLASS
- ALTERNATE TERMINAL BOX LOCATION (SIDE MOUNT)
- 2-50 DIA. HOLES FOR CRANKCASE HEATER (OPTIONAL)
- 2-50 DIA. MTG. HOLES 1.38 DIA. C BORE X .18 DEEP
- ED WITH CLOSURE FLANGES N FOR REF ONLY

Application	385 PSIG
Internal Relief Valve Setting	R-22
Refrigerant	

Rated Performance	33%	66%	100%
Capacity (BTU/HR)	92,100	199,600	303,309
Power Input (KW)	14.6	22.4	30
Current (230V) (Amps)	51	67	95
EER (BTU/W-HR)	6.3	8.9	10.1
Evaporator Temp	45F	45F	45F
Condenser Temp	130F	130F	130F
Liquid Temp	115F	115F	115F
Superheat	20F	20F	20F

Bore	2.688 In.
Stroke	1.880 In.
No. of Cylinders	6
Speed	1750 RPM

Type (Pilot Duty)	Internal Thermostat
Manufacturer	Robertshaw



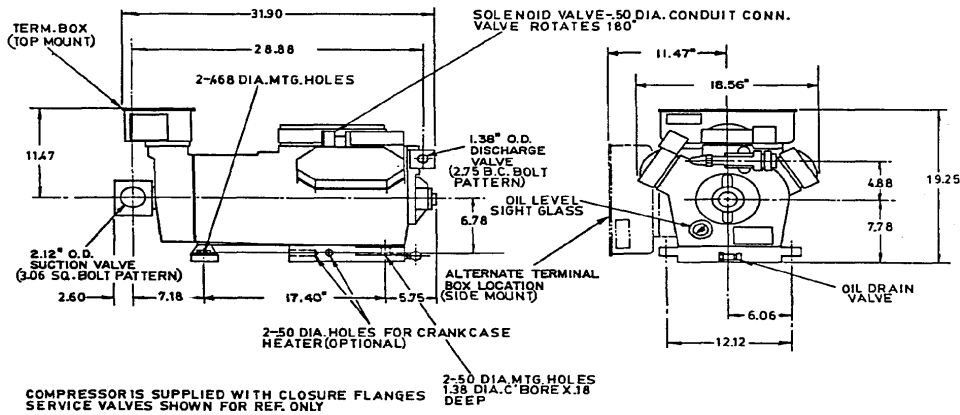
Utilization			
Voltage	Range	Air-Cooled*	Water-Cooled**
200-60-3	180-220	158	129
230-60-3	208-254	137	112
460-60-3	416-508	69	56
575-60-3	520-635	55	45
200-50-3	180-220	137	112
230-50-3	198-264	124	101
346-50-3	311-381	73	60
400-50-3	343-456	72	58
363-50-3	327-399	70	57

** At 40F Sat. Suction, 125F Sat. Condensing, 15F Superheat, Full Load



Model M Semihermetic Compressors

Figure 36. Model CRHM300 - 30 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting 385 PSIG
Refrigerant R-22

Rated Performance

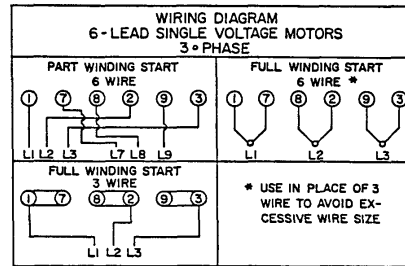
	33%	66%	100%
Capacity (BTU/HR)	112,700	243,000	360,100
Power Input (KW)	18.1	27.7	37.2
Current (230V) (Amps)	59	81	115
EER (BTU/W-HR)	6.2	8.8	9.7
Evaporator Temp	45F	45F	45F
Condenser Temp	130F	130F	130F
Liquid Temp	115F	115F	115F
Superheat	20F	20F	20F

Physical Data

Bore 2.688 In.
Stroke 2.250 In.
No. of Cylinders 6
Speed 1750 RPM

Motor Protection

Type (Pilot Duty) Internal Thermostat
Manufacturer Robertshaw



Motor Data Max Load Current (Amp)±

Utilization			
Voltage	Range	Air-Cooled*	Water-Cooled**
200-60-3	180-220	179	147
230-60-3	208-254	156	128
460-60-3	416-508	78	64
575-60-3	520-635	62	51
200-50-3	180-220	156	128
230-50-3	198-264	141	116
346-50-3	311-381	85	70
400-50-3	343-456	81	67
363-50-3	327-399	81	67

± At Minimum Utilization Voltage

* At 50F Sat. Suction, 150F Sat. Condensing, 15F Superheat, Full Load

** At 40F Sat. Suction, 125F Sat. Condensing, 15F Superheat, Full Load

Model R Semihermetic Compressors



Description

The Trane Model R compressor is an unloading, cast iron, Semihermetic accessible compressor. The compressor motor and oil pump are reversible for operation in either direction. The compressor unloading is electric solenoid-actuated.

Basic Variations

There is only one basic variation available on the Model CRHR compressor. The CRHR 350 and 400 are available with a side mounted junction box. See Figure 50 for dimensions on the CRHR 350 and 400 with the side mounted terminal box.

Low Temperature Applications - (Low Lift Valves)

When low temperature applications are encountered where the saturated suction temperature design point is below 10 F, the low lift valve option is required. Low lift valves are required to prevent valve flutter which could result in broken suction valves and springs.

Lifting and Handling

The Model R compressor has tapped holes in the housing that will accommodate lifting lugs for handling of the compressor. During handling it is recommended that the compressor be kept horizontal with the cylinders heads facing up. This will prevent oil from getting into the upper cylinder and causing potential damage when the compressor is started. If tilted from horizontal, it is recommended that the compressor be allowed to set in the horizontal position a minimum of one (1) hour before trying to start the compressor.

Storage

The Model R compressor is shipped with a nitrogen charge and the connections are sealed with closure plates; unless the optional service valves have been ordered for factory installation. The storage of the compressor must be in an enclosed dry space with the temperature and humidity not to exceed 140 F and 95% RH non condensing.

Pressure Testing

The maximum highside test pressure is 500 psig. The maximum lowside pressure is 350 psig. The differential between highside and lowside should not exceed 340 psig. Never pressure the system to a higher pressure than the system relief valve.

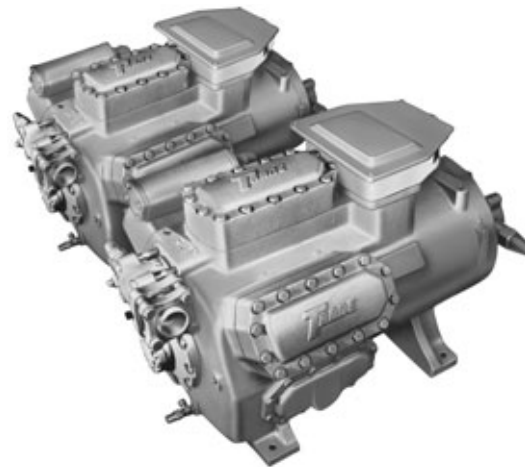
Oil Charge

The Model R compressor ships with a full oil charge. The compressor data sheet lists the oil charge for each compressor. See the Trane compressor service bulletin; HCOM-SB-4F, "APPLICATION FIELD REPLACEMENT OILS" See pages 122-125 for the replacement oil type.

⚠ WARNING

Never use oxygen or acetylene in place of refrigerant and dry nitrogen for leak testing. A violent explosion may result causing personal injury or death.

Always use a pressure regulator when using nitrogen to pressure test. Failure to do so will result in extremely high pressure which could exceed the burst pressure of the compressor or other system components and result in personal injury or death.





Model R Semihermetic Compressors

ReSpecT®

Table 9. Model R Semihermetic Compressors

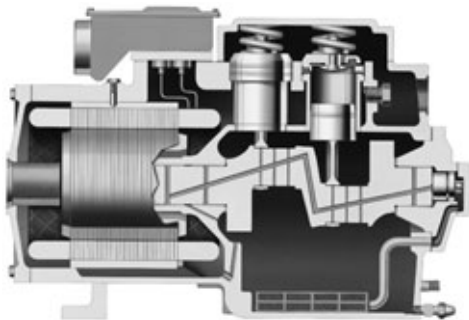
COM Number	Remanufactured Model Number	Old Model Number	Original Model Number	Capacity (Tons)	Voltage	Shipping Weight (Lb)
COM03950	CRHR350A2**A0R*****	CRHR-350A-2*A0	CRHR-350A-2*AT	35	200/60/3	860
COM03967	CRHR350A2**A4R*****	CRHR-350A-2*A4	CRHR-350A-2*AS	35	200/60/3	860
COM04376	CRHR350A3**A0R*****	CRHR-350A-3*A4	CRHR-350A-3*AS	35	200/60/3	860
COM05066	USE COM03950	CRHR-350A-2*A0	CRHR-350A-2*AT	35	200/60/3	860
COM05067	CRHR350A2**A4R*****	CRHR-350A-2*A4	CRHR-350A-2*AS	35	200/60/3	860
COM05554	CRHR350D2**A0R*****	CRHR-350D-2*A0	CRHR-350D-2*AT	35	575/60/3	860
COM05555	CRHR350Q2**A0R*****	CRHR-350W-2*A0	CRHR-350W-2*AT	35	200-230/50-60/3	860
COM03939	CRHR350K2**A0R*****	CRHR-350C-2*A0	CRHR-350C-2*AT	35	400-460/50-60/3	860
COM03960	CRHR350K2**A4R*****	CRHR-350C-2*A4	CRHR-350C-2*AS	35	400-460/50-60/3	860
COM04012	CRHR350K2**A0R*****	CRHR-350K-2*A0	CRHR-350C-2*AT	35	400-460/50-60/3	860
COM05079	CRHR350K3**A0R*****	CRHR-350C-3*A0	CRHR-350C-3*AT	35	400-460/50-60/3	860
COM02986	CRHR380A4**A4R*****	-	CRHR-380A-4*AT	38	200/60/3	860
COM01619	CRHR400A3**A0R*****	CRHR-400A-3*A0	CRHR-400A-3*AT	40	200/60/3	860
COM01622	CRHR400A3**A4R*****	CRHR-400A-3*A4	CRHR-400A-3*AS	40	200/60/3	860
COM02152	USE COM01619	CRHR-400A-2*A0	CRHR-400A-2*AT	40	200/60/3	-
COM02153	USE COM01622	CRHR-400A-2*A4	CRHR-400A-2*AS	40	200/60/3	-
COM02171	CRHR400A0**O0R*****	CRHR-400A-0*O0	CRHR-400A-0*NT	40	200/60/3	860
COM05558	CRHR401A3**A0R*****	CRHR-401A-3*A0	CRHR-401A-3*AT	40	200/60/3	860
COM02157	USE COM01630	CRHR-400W-2*A0	CRHR-400W-2*AT	40	230/60/3	-
COM02170	USE COM01623	CRHR-400W-2*A4	CRHR-400W-2*AS	40	230/60/3	-
COM03934	CRHR400X3**A4R*****	CRHR-400X-3*A4	-	40	380/60/3	860
COM03947	CRHR400X3**A0R*****	CRHR-400X-3*A0	-	40	380/60/3	860
COM02155	USE COM01621	CRHR-400C-2*A0	CRHR-400C-2*AT	40	460/60/3	-
COM02156	USE COM01624	CRHR-400C-2*A4	CRHR-400C-2*AS	40	460/60/3	-
COM01856	CRHR400D3**A0R*****	CRHR-400D-3*A0	CRHR-400D-3*AT	40	575/60/3	860
COM01857	CRHR400D3**A4R*****	CRHR-400D-3*A4	CRHR-400D-3*AS	40	575/60/3	860
COM02168	USE COM01856	CRHR-400D-2*A0	CRHR-400D-2*AT	40	575/60/3	-
COM02169	USE COM01857	CRHR-400D-2*A4	CRHR-400D-2*AS	40	575/60/3	-
COM01620	CRHR400Q3**A0R*****	CRHR-400Q-3*A0	CRHR-400W-3*AT	40	200-230/50-60/3	860
COM01623	CRHR400Q3**A4R*****	CRHR-400W-3*A4	CRHR-400W-3*AS	40	200-230/50-60/3	860
COM02172	CRHR400Q0**O0R*****	CRHR-400W-0*O0	CRHR-400W-0*NT	40	200-230/50-60/3	860
COM05070	CRHR400Q2**B0R*****	CRHR-400W-2*B0	CRHR-400W-2*BT	40	200-230/50-60/3	860
COM01621	CRHR400K3**A0R*****	CRHR-400K-3*A0	CRHR-400C-3*AT	40	400-460/50-60/3	860
COM01624	CRHR400K3**A4R*****	CRHR-400C-3*A4	CRHR-400C-3*AS	40	400-460/50-60/3	860
COM02477	CRHR400K3**B0R*****	CRHR-400C-3*B0	CRHR-400C-3*BT	40	400-460/50-60/3	860
COM02478	CRHR400K2**B0R*****	CRHR-400G-2*B0	CRHR-400G-2*BT	40	400-460/50-60/3	860
COM02928	CRHR400K2**A4R*****	CRHR-400G-2*A4	CRHR-400G-2*AS	40	400-460/50-60/3	860
COM05557	CRHR401K3**A4R*****	CRHR-401C-3*A4	CRHR-401C-3*AS	40	400-460/50-60/3	860
COM01625	CRHR500A4**A0R*****	CRHR-500A-4*A0	CRHR-500A-4*AT	50	200/60/3	1070
COM02178	CRHR500A0**O0R*****	CRHR-500A-0*O0	CRHR-500A-0*NT	50	200/60/3	1070
COM02176	USE COM01626	CRHR-500W-2*A0	CRHR-500W-2*AT	50	230/60/3	-
COM04015	CRHR350K2**A0R*****	CRHR-500X-4*B0	-	50	380/60/3	1080
COM05566	CRHR500X4**A0R*****	CRHR-500X-4*A0	-	50	380/60/3	1070
COM01858	CRHR500D4**A0R*****	CRHR-500D-4*A0	CRHR-500D-4*AT	50	575/60/3	1070
COM02177	USE COM01858	CRHR-500D-2*A0	CRHR-500D-2*AT	50	575/60/3	-
COM01626	CRHR500Q4**A0R*****	CRHR-500Q-4*A0	CRHR-500W-4*AT	50	200-230/50-60/3	1070
COM02179	CRHR500Q0**A0R*****	CRHR-500W-0*O0	CRHR-500W-0*NT	50	200-230/50-60/3	1070
COM01627	CRHR500K4**A0R*****	CRHR-500C-4*A0	CRHR-500C-4*AT	50	400-460/50-60/3	1070
COM02479	CRHR500K4**B0R*****	CRHR-500C-4*B0	CRHR-500C-4*BT	50	400-460/50-60/3	1070
COM03040	CRHR500K0**O0R*****	CRHR-500C-0*O0	CRHR-500C-0*NT	50	400-460/50-60/3	1070
COM03198	CRHR500K2**B0R*****	CRHR-500G-2*B0	CRHR-500G-2*BT	50	400-460/50-60/3	1070
COM05078	CRHR501K4**A0R*****	CRHR-501C-4*A0	CRHR-501C-4*AT	50	400-460/50-60/3	1084
COM05565	CRHR500K4**A0R*****	CRHR-500G-4*A0	CRHR-500G-4*AT	50	400-460/50-60/3	1070
COM05623	CRHR500K2**A0R*****	CRHR-500C-2*A0	CRHR-500C-2*AT	50	400-460/50-60/3	1070
COM01628	CRHR600A4**A0R*****	CRHR-600A-4*A0	CRHR-600A-4*AT	60	200/60/3	1084

Model R Semihermetic Compressors

COM02130	CRHR600A0**O0R*****	CRHR-600A-0*O0	CRHR-600A-0*NT	60	200/60/3	1084
COM02128	USE COM01629	CRHR-600W-2*A0	CRHR-600W-2*AT	60	230/60/3	-
COM02131	CRHR600Q0**O0R*****	CRHR-600W-0*O0	CRHR-600W-0*NT	60	230/60/3	1084
COM03199	CRHR600X4**A0R*****	CRHR-600X-4*A0	CRHR-600X-4*AT	60	380/60/3	1084
COM05075	CRHR600X2**A0R*****	CRHR-600X-2*A0	-	60	380/60/3	1084
COM01859	CRHR600D4**A0R*****	CRHR-600D-4*A0	CRHR-600D-4*AT	60	575/60/3	1084
COM02129	USE COM01859	CRHR-600D-2*A0	CRHR-600D-2*AT	60	575/60/3	-
COM01629	CRHR600Q4**A0R*****	CRHR-600Q-4*A0	CRHR-600W-4*AT	60	200-230/50-60/3	1084
COM02480	CRHR600Q4**B0R*****	CRHR-600W-4*B0	CRHR-600W-4*BT	60	200-230/50-60/3	1084
COM01630	CRHR600K4**A0R*****	CRHR-600K-4*A0	CRHR-600C-4*AT	60	400-460/50-60/3	1084
COM02999	CRHR600K2**A0R*****	CRHR-600G-2*A0	CRHR-600G-2*AT	60	400-460/50-60/3	1084
COM03952	CRHR600K0**O0R*****	CRHR-600C-0*O0	CRHR-600C-0*OT	60	400-460/50-60/3	1084

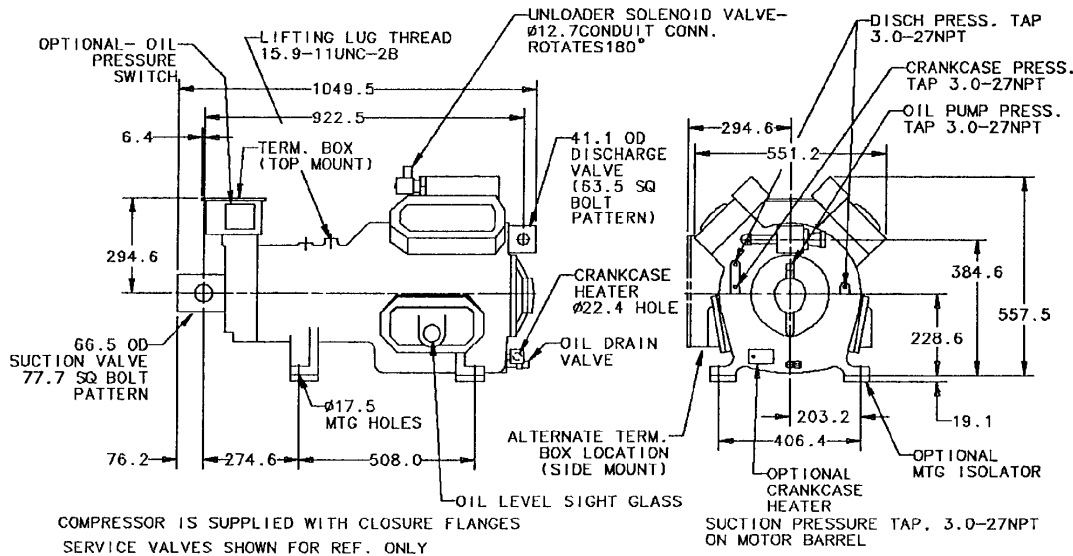
Series 6000

COM Number	Model Number	Cap. (Tons)	Voltage	Shipping Weight (Lb)
COM06047	CRHR-400A-3*AT	40	200/60/3	860
COM06049	CRHR-400A-3*AS	40	200/60/3	860
COM06127	CRHR-400D-4*AT	40	575/60/3	860
COM06048	CRHR-400C-3*AT	40	400-460/50-60/3	860
COM06050	CRHR-400C-3*AS	40	400-460/50-60/3	860
COM06066	CRHR-400W-3*AT	40	200-230/50-60/3	860
COM06069	CRHR-400C-2*AT	40	400-460/50-60/3	860
COM06051	CRHR-500A-4*AT	50	200/60/3	1070
COM06128	CRHR-500D-4*AT	50	575/60/3	1070
COM06052	CRHR-500C-4*AT	50	400-460/50-60/3	1070
COM06053	CRHR-600A-4*AT	60	200/60/3	1084
COM06129	CRHR-600D-4*AT	60	575/60/3	1084
COM06054	CRHR-600C-4*AT	60	400-460/50-60/3	1084



Model R Semihermetic Compressors

Figure 37. Model CRHR350 - 35 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized & CSA Accepted

26.5 BAR-D
R-22 & R502

Rated Performance

	50%	100%
Capacity (KW) (R-22)	50.1	103.3
Power Input (KW)	19.1	21.4
Current (400V) (Amps)	39.0	55.1
C.O.P.	2.62	3.3
Evaporator Temp (C)	7.22	7.22
Condenser Temp (C)	54.44	54.44
Liquid Temp (C)	8.33	8.33
Superheat (C)	11.11	11.11

Physical Data

Bore (MM)	87.5
Stroke (MM)	58.42
No. of Cylinders	4
Speed (RPM)	1450

Motor Protection

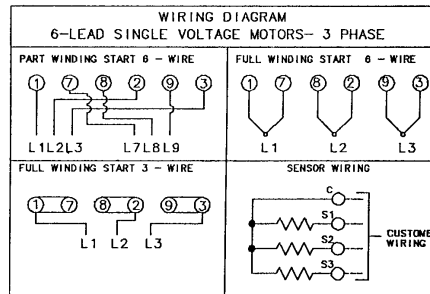
Type (Pilot Duty)	Internal Thermostat
Manufacturer	Robershaw
External Overcurrent Protection Required	

Crankcase Heater

Immersion Type - 140 Watts, 120 or 240 Volts

Oil Pressure Switch

Differential Type, Pilot Duty, 24 VAC Contacts



Motor Data Max Load Current (Amp)±

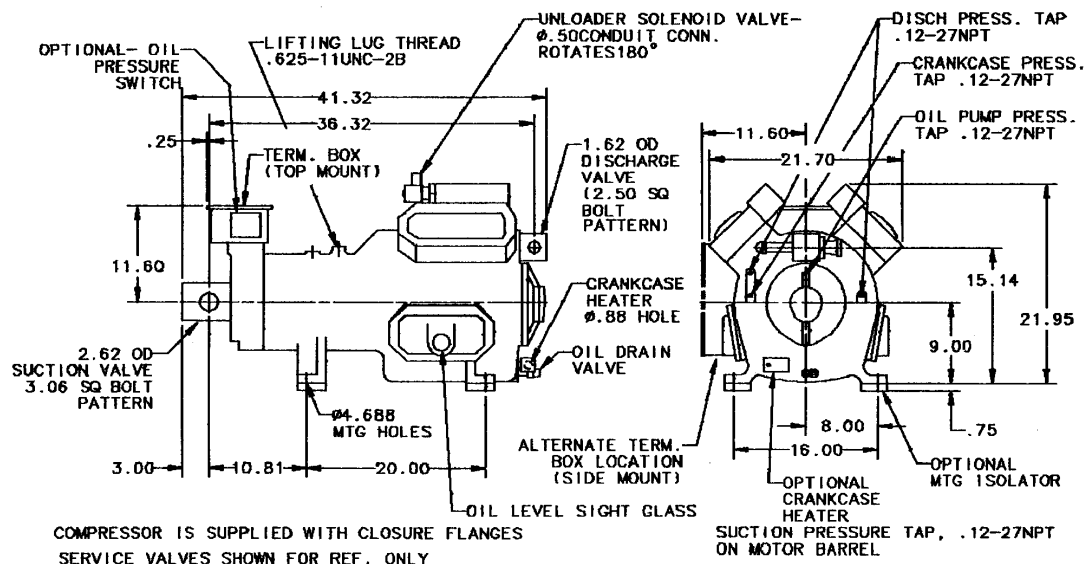
Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	175	140	729
230-60-3	208-254	148	125	631
460-60-3	416-508	74	61	315
575-60-3	520-635	60	48	245
200-50-3	180-220	150	115	605
230-50-3	207-253	130	100	525
363-50-3	327-399	85	66	330
400-50-3	340-440	75	60	315

± At Minimum Utilization Voltage

* Sat. Suction, 65.6C Sat. Condensing, 8.3C Superheat, Full Load

** At 4.4C Sat. Suction, 51.7C Sat. Condensing, 8.3C Superheat, Full Load

Figure 38. Model CRHR350 - 35 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized & CSA Accepted

3815 PSID
R-22 R502

Rated Performance

	50%	100%
Capacity (BTU/HR)	203,400	419,600
Power Input (KW)	22.8	37.7
Current (230) (Amps)	40.6	57.4
EER (BTU/W-HR)	8.8	11.1
Evaporator Temp (C)	45F	45F
Condenser Temp (C)	130F	130F
Liquid Temp (C)	115F	115F
Superheat (C)	20F	20F

Physical Data

Bore 3.445 In.
Stroke 2.300 In.
No. of Cylinders 4
Speed 1750 RPM

Motor Protection

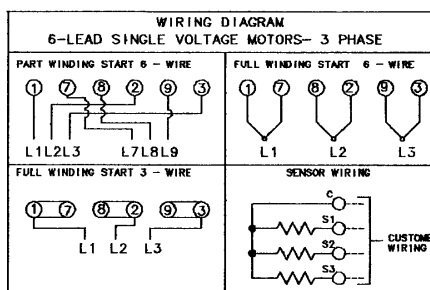
Type (Pilot Duty)
Manufacturer Internal Thermostat
External Overcurrent Protection
Required Robersshaw

Crankcase Heater

Immersion Type - 140 Watts, 120 or 240 Volts

Oil Pressure Switch

Differential Type, Pilot Duty, 24 VAC Contacts



Motor Data Max Load Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	175	140	729
230-60-3	208-254	148	125	631
460-60-3	416-508	74	61	315
575-60-3	520-635	60	48	245
200-50-3	180-220	150	115	605
230-50-3	207-253	130	100	525
363-50-3	327-399	85	66	330
400-50-3	340-440	75	60	315

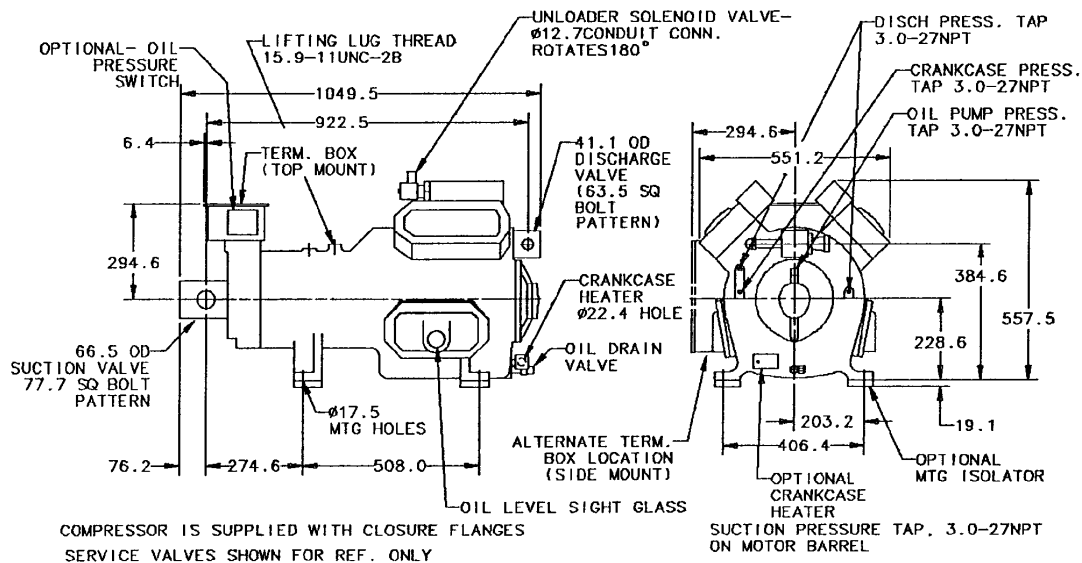
± At Minimum Utilization Voltage

* Sat. Suction, 150F Sat. Condensing, 15F Superheat, Full Load

** At 40F Sat. Suction, 125FSat. Condensing, 15F Superheat, Full Load

Model R Semihermetic Compressors

Figure 39. Model CRHR400 - 40 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting 26.5 BAR-D
Refrigerant R-22 R502
UL Recognized & CSA Accepted

Rated Performance

	50%	100%
Capacity (KW) (R-22)	62.2	124.3
Power Input (KW)	24.5	38.2
Current (400V) (Amps)	48.5	67.5
C.O.P.	2.54	3.25
Evaporator Temp (C)	7.22	7.22
Condenser Temp (C)	54.44	54.44
Liquid Temp (C)	8.33	8.33
Superheat (C)	11.11	11.11

Physical Data

Bore (MM)	87.5
Stroke (MM)	69.85
No. of Cylinders	4
Speed (RPM)	1450

Motor Protection

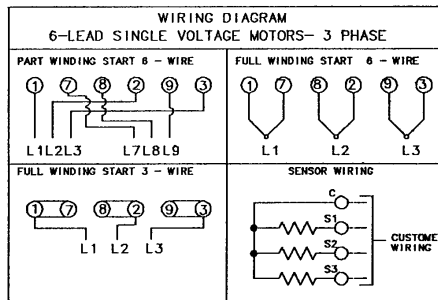
Type (Pilot Duty)	Internal Thermostat
Manufacturer	Robershaw
External Overcurrent Protection Required	

Crankcase Heater

Immersion Type - 140 Watts, 120 or 240 Volts

Oil Pressure Switch

Differential Type, Pilot Duty, 24 VAC Contacts



Motor Data Max Load Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	230	187	729
230-60-3	208-254	195	170	631
460-60-3	416-508	100	85	315
575-60-3	520-635	80	68	245
200-50-3	180-220	200	170	605
230-50-3	198-264	174	148	525
363-50-3	327-399	125	93	330
400-50-3	343-456	100	85	315

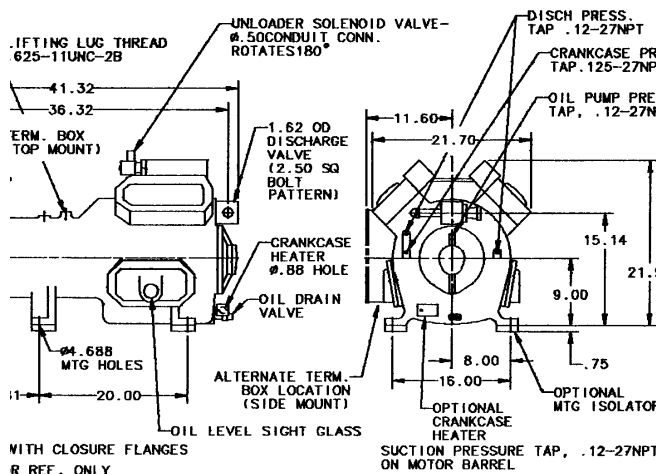
± At Minimum Utilization Voltage at 10C

* Sat. Suction, 65.6C Sat. Condensing, 8.3C Superheat, Full Load

** At 4.4C Sat. Suction, 51.7C Sat. Condensing, 8.3C Superheat, Full Load

Model R Semihermetic Compressors

Figure 40. Model CRHR400 - 40 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized & CSA Accepted

Rated Performance

	50%	100%
Capacity (BTU/HR)	252,600	505,300
Power Input (KW)	29.8	45.8
Current (230) (Amps)	50.5	70.3
EER (BTU/W-HR)	8.5	11.0
Evaporator Temp	45F	45F
Condenser Temp	130F	130F
Liquid Temp	115F	115F
Superheat	20F	20F

Physical Data

Bore	3.445 In.
Stroke	2.750 In.
No. of Cylinders	4
Speed	1750 RPM

Motor Protection

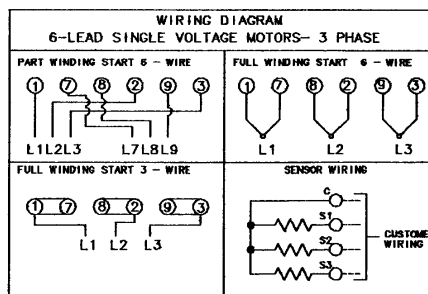
Type (Pilot Duty)	Internal Thermostat
Manufacturer	Robersshaw
External Overcurrent Protection Required	

Crankcase Heater

Immersion Type - 140 Watts, 120 or 240 Volts

Oil Pressure Switch

Differential Type, Pilot Duty, 24 VAC Contacts



Motor Data Max Load Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	230	187	729
230-60-3	208-254	195	170	631
460-60-3	416-508	100	85	315
575-60-3	520-635	80	68	245
200-50-3	180-220	200	170	605
230-50-3	198-264	174	148	525
363-50-3	327-399	125	93	330
400-50-3	343-456	100	85	315

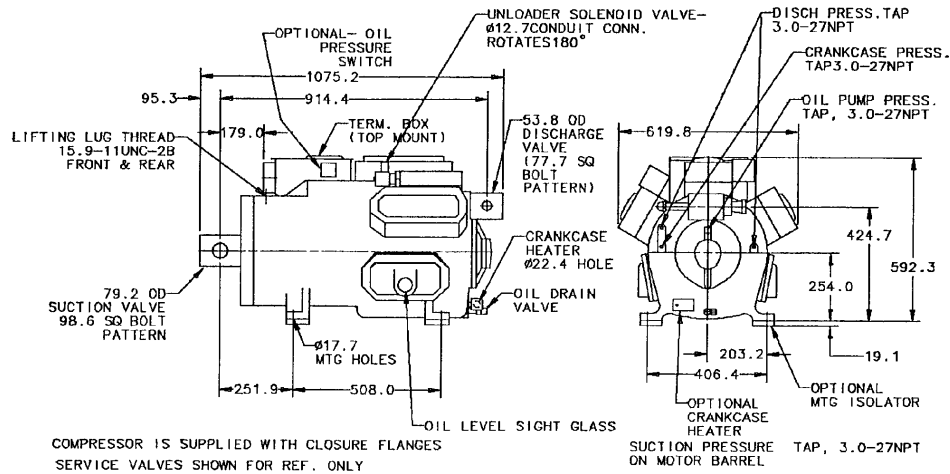
± At Minimum Utilization Voltage At 50F

* Sat. Suction, 150F Sat. Condensing, 15F Superheat, Full Load

** At 40F Sat. Suction, 125FSat. Condensing, 15F Superheat, Full Load

Model R Semihermetic Compressors

Figure 41. Model CRHR500 - 50 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting 26.5 BAR-D
Refrigerant R-22 & R502
UL Recognized & CSA Accepted

Rated Performance

	33%	67%	100%
Capacity (KW) (R-22)	51.0	101.9	154.4
Power Input (KW)	23.4	34.1	44.2
Current (400V) (Amps)	43.7	58	73.2
C.O.P.	2.17	2.99	3.49
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130/15F SC/20F SH-ARI)			

Physical Data

Bore (MM)	87.5
Stroke (MM)	58.4
No. of Cylinders	6
Speed (RPM)	1450

Motor Protection

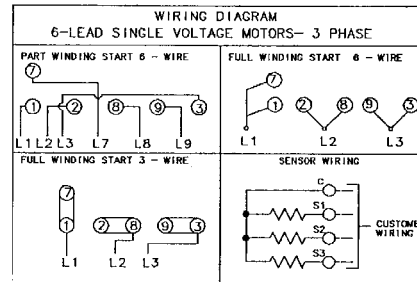
Type (Pilot Duty) Internal Thermostat
Manufacturer Robersshaw
External Overcurrent Protection Required

Crankcase Heater

Immersion Type - 140 Watts, 120 or 240 Volts

Oil Pressure Switch

Differential Type, Pilot Duty, 24 VAC Contacts



Motor Data Max Load Current (Amp)±

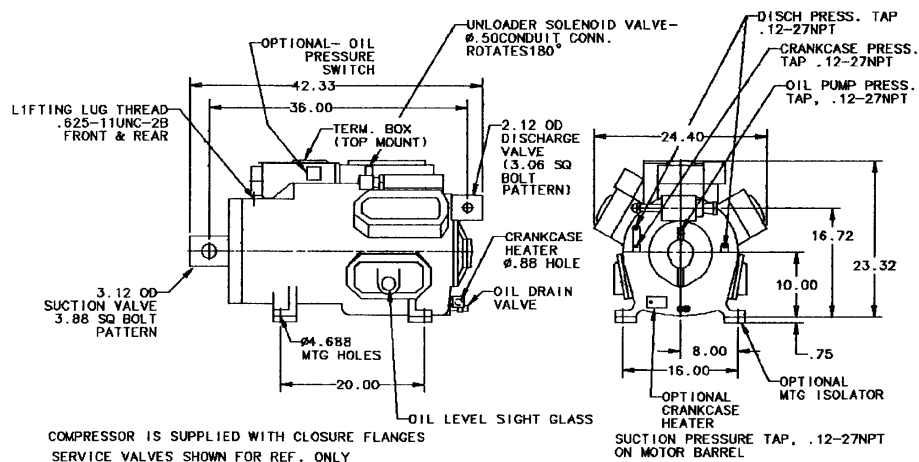
Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	258	234	910
230-60-3	208-254	226	212	792
460-60-3	416-508	113	106	396
575-60-3	520-635	90	85	315
200-50-3	180-220	226	212	755
230-50-3	198-264	196	184	660
363-50-3	327-399	149	120	420
400-50-3	343-456	113	106	395

± At Minimum Utilization Voltage At 10C

* Sat. Suction, 65.6C Sat. Condensing, 8.3C Superheat, Full Load

** At 4.4C Sat. Suction, 51.7C Sat. Condensing, 8.3C Superheat, Full Load

Figure 42. Model CRHR500 - 50 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting 385 PSID
 Refrigerant R-22 R502
 UL Recognized & CSA Accepted

Rated Performance

	33%	67%	100%
Capacity (BTU/HR))	206,900	413,200	627,000
Power Input (KW)	28.3	41.1	53.4
Current (230) (Amps)	45.5	60.4	76.3
EER (BTU/W-HR)	7.3	10.1	11.7
Evaporator Temp (C)	45F	45F	45F
Condenser Temp (C)	130F	130F	130F
Liquid Temp (C)	115F	115F	115F
Superheat (C)	20F	20F	20F

Physical Data

Bore 3.445 IN.
 Stroke 2.300 In.
 No. of Cylinders 6
 Speed 1750 RPM

Motor Protection

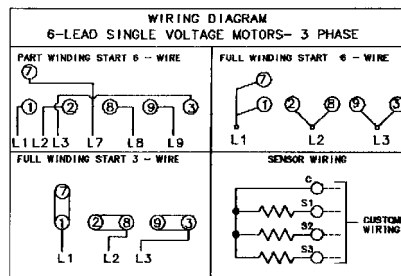
Type (Pilot Duty) Internal Thermostat
 Manufacturer Robersshaw
 External Overcurrent Protection Required

Crankcase Heater

Immersion Type - 140 Watts, 120 or 240 Volts

Oil Pressure Switch

Differential Type, Pilot Duty, 24 VAC Contacts



Motor Data Max Load Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	258	234	910
230-60-3	208-254	226	212	792
460-60-3	416-508	113	106	396
575-60-3	520-635	90	85	315
200-50-3	180-220	226	212	755
230-50-3	198-264	196	184	660
363-50-3	327-399	149	120	420
400-50-3	343-456	113	106	395

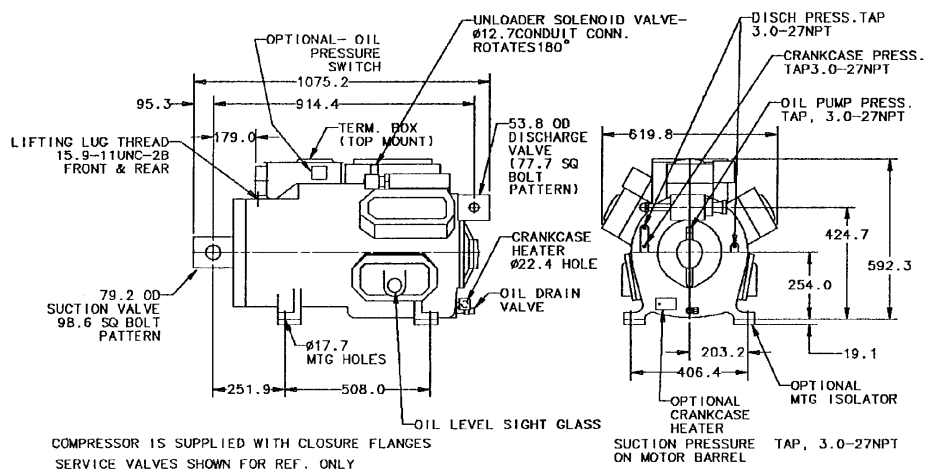
± At Minimum Utilization Voltage At 50F

* Sat. Suction, 150F Sat. Condensing, 15F Superheat, Full Load

** At 40F Sat. Suction, 125FSat. Condensing, 15F Superheat, Full Load

Model R Semihermetic Compressors

Figure 43. Model CRHR600 - 60 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting 26.5 BAR-D
Refrigerant R-22 R502
UL Recognized & CSA Accepted

Rated Performance

	33%	67%	100%
Capacity (KW) (R-22)	61.7	123.4	187.0
Power Input (KW)	28.8	41.8	55.2
Current (400V) (Amps)	55.1	74.1	93
C.O.P.	2.15	2.94	3.39
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	554.44
Liquid Temp (C)	8.33	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130/15F SC/20F SH-ARI)			

Physical Data

Bore (MM) 87.5
Stroke (MM) 69.85
No. of Cylinders 6
Speed (RPM) 1450

Motor Protection

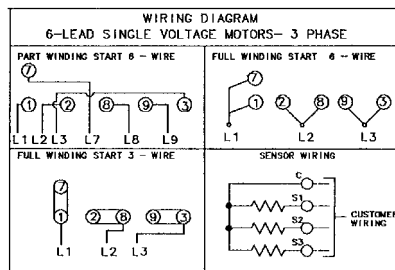
Type (Pilot Duty) Internal Thermostat
Manufacturer Robersshaw
External Overcurrent Protection Required

Crankcase Heater

Immersion Type - 140 Watts, 120 or 240 Volts

Oil Pressure Switch

Differential Type, Pilot Duty, 24 VAC Contacts



Motor Data Max Load Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	316	280	990
230-60-3	208-254	275	252	860
460-60-3	416-508	138	126	430
575-60-3	520-635	110	101	346
200-50-3	180-220	275	252	825
230-50-3	198-264	239	220	720
363-50-3	327-399	152	139	455
400-50-3	343-456	138	126	430

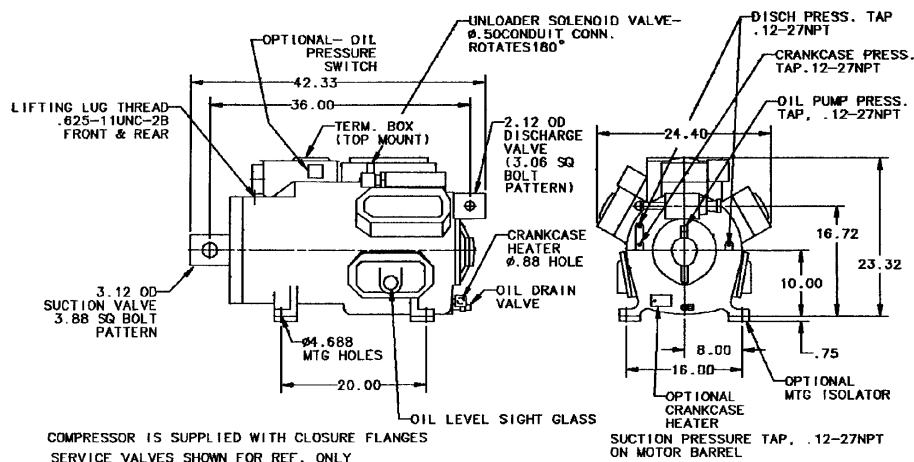
± At Minimum Utilization Voltage At 10C

* Sat. Suction, 65.5C Sat. Condensing, 8.3C Superheat, Full Load

** At 4.4C Sat. Suction, 51.7C Sat. Condensing, 8.3C Superheat, Full Load

Model R Semihermetic Compressors

Figure 44. Model CRHR600 - 60 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized & CSA Accepted

385 PSID
R-22 R502

Rated Performance

	33%	67%	100%
Capacity (BTU/HR)	250,000	501,100	759,300
Power Input (KW)	35.0	51.0	66.2
Current (230) (Amps)	57.4	77.2	98.0
EER (BTU/W-HR)	7.1	9.8	11.5
Evaporator Temp (C)	45F	45F	45F
Condenser Temp (C)	130F	130F	130F
Liquid Temp (C)	115F	115F	115F
Superheat (C)	20F	20F	20F

Physical Data

Bore (MM)	3.445 In.
Stroke (MM)	2.750 In.
No. of Cylinders	6
Speed (RPM)	1750

Motor Protection

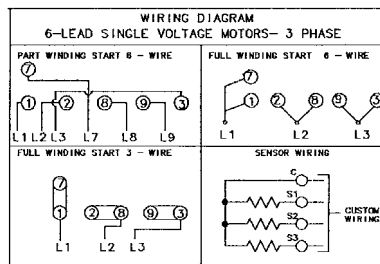
Type (Pilot Duty)	Internal Thermostat
Manufacturer	Robershaw
External Overcurrent	Protection Required

Crankcase Heater

Immersion Type - 140 Watts, 120 or 240 Volts

Oil Pressure Switch

Differential Type, Pilot Duty, 24 VAC Contacts



Motor Data Max Load Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	316	280	990
230-60-3	208-254	275	252	860
460-60-3	416-508	138	126	430
575-60-3	520-635	110	101	346
200-50-3	180-220	275	252	825
230-50-3	198-264	239	220	720
363-50-3	327-399	152	139	455
400-50-3	343-456	138	126	430

± At Minimum Utilization Voltage At 50F

* Sat. Suction, 150F Sat. Condensing, 15F Superheat, Full Load

** At 40F Sat. Suction, 125F Sat. Condensing, 15F Superheat, Full Load



Model K Hermetic Compressors

Description

The Trane Model K is an unloading, industrial designed hermetic compressor designed to operate on R-22. The compressor utilizes a reversible centrifugal oil pump for operation in either direction. The compressor also has an integral suction accumulator to enhance the compressors ability to handle liquid flood back to the compressor. The Model K compressor also has an oil sightglass and oil charging valve for ease of servicing the compressor.

Lifting and Handling

The Model K compressor has two lifting straps mounted on the upper shell. During handling it is recommended that the compressor be kept with the top of the shell above horizontal to prevent the oil from running into the compressor cylinders and causing potential damage to the compressor when it is started. If the top of the compressor is tilted below horizontal it is recommended that the compressor be allowed to set in the vertical position for a minimum of one (1) hour before trying to start the compressor.

Storage

The Model K compressor is shipped with a nitrogen holding charge and the connections are sealed tight with closure plates or service valves. The storage of the compressor must be in an enclosed dry space with the temperature and humidity not to exceed 140 F and 95% RH non-condensing.

The Model K compressor ships with a full oil charge. The amount and type is listed in the section on compressor oils.

Mounting

It is recommended that the Model K compressor be mounted on the rubber isolators as listed in the compressor mounting hardware section.

Pressure Testing

The maximum high side test pressure is 500 psig. The maximum lowside test pressure is 350 psig. The differential between high side and low side should never exceed 340 psig. When pressure testing never exceeds the pressure on the safety relief valves that are on the system



⚠ WARNING

Never use oxygen or acetylene in place of refrigerant and dry nitrogen for leak testing. A violent explosion may result causing personal injury or death.

Always use a pressure regulator when using nitrogen to pressure test. Failure to do so will result in extremely high pressure which could exceed the burst pressure of the compressor or other system components and result in personal injury or death.

Model K Hermetic Compressors

ReSpecT[®]

Table 10. Model K - Hermetic Compressors

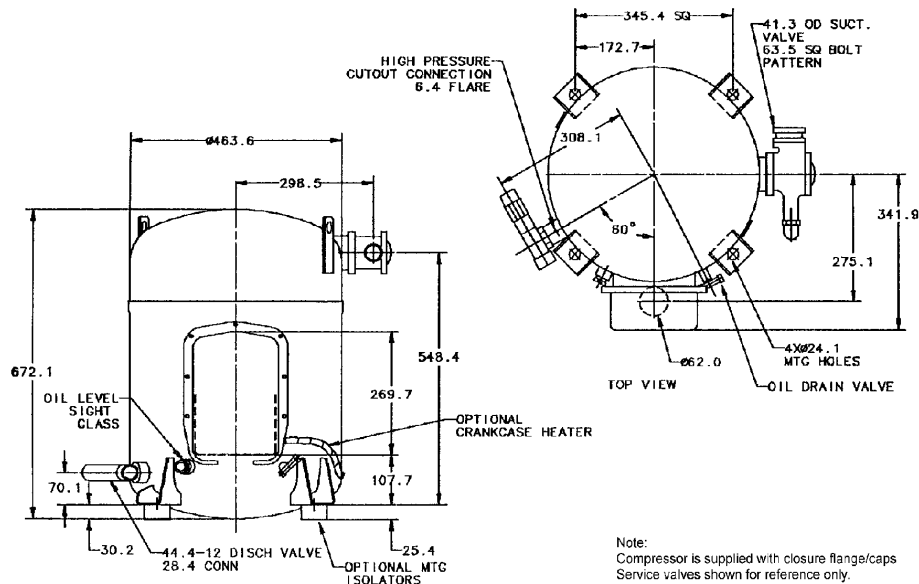
COM Number	Remanufactured Model Number	Old Model Number	Original Model Number 1)	Cap. (Tons)	Voltage	Shipping Weight (lb)
COM01790	CRHK200A2**A0R0K0*0 <i>USE COM01790</i>	CRHK-200A-2*A0 CRHK-200A-0*A0	CRHK200A2*A	20	200/60/3	500
COM01791	CRHK200W2**A0R0K0*0 <i>USE COM01791</i>	CRHK-200W-2*A0 CRHK-200W-A*A0	CRHK200W2*A	20	230/60/3	500
COM02497	CRHK200X2**A0R0K0*0	CRHK-200X-2*A0	CRHK200S2*A	20	380/60/3	550
COM01793	CRHK200W2**A0R0K0*0 <i>USE COM01793</i>	CRHK-200D-2*A0 CRHK-200D-0*A0	CRHK200D2*A	20	575/60/3	500
COM01792	CRHK200K2**A0R0K0*0 <i>USE COM01792</i>	CRHK-200T-2*A0 CRHK-200T-0*A0	CRHK200T2*A	20	400-460/50-60/3	500
COM01795	CRHK250A4**A0R0K0*0 <i>USE COM01795</i> <i>USE COM01795</i>	CRHK-250A-4*A0 CRHK-250A-2*A0 CRHK-250A-0*A0	CRHK250A4*A	25	200/60/3	550
COM01796	CRHK250W4**A0R0K0*0 <i>USE COM01796</i> <i>USE COM01796</i>	CRHK-250W-4*A0 CRHK-250W-2*A0 CRHK-250W-0*A0	CRHK250W4*A	25	230/60/3	550
COM02498	CRHK250X4**A0R0K0*0	CRHK-250X-4*A0	CRHK250S4*A	25	380/60/3	550
COM04388	CRHK250X4**A0R0K0*0	CRHK-250X-4*A0	CRHK250S4*A	25	380/60/3	550
COM03188	CRHK250V4**A0R0K0*0	CRHK-250V-4*A0	CRHK250V4*A	25	346/50/3	550
COM01798	CRHK250D4**A0R0K0*0 <i>USE COM01798</i> <i>USE COM01798</i>	CRHK-250D-4*A0 CRHK-250D-2*A0 CRHK-250D-0*A0	CRHK250D4*A	25	575/60/3	550
COM01797	CRHK250K4**A0R0K0*0 <i>USE COM01797</i> <i>USE COM01797</i>	CRHK-250T-4*A0 CRHK-250T-2*A0 CRHK-250T-0*A0	CRHK250T4*A	25	400-460/50-60/3	550
COM01800	CRHK300A4**A0R0K0*0 <i>USE COM01800</i> <i>USE COM01800</i>	CRHK-300A-4*A0 CRHK-300A-2*A0 CRHK-300A-0*A0	CRHK300A4*A	30	200/60/3	550
COM01801	CRHK300W4**A0R0K0*0 <i>USE COM01801</i> <i>USE COM01801</i>	CRHK-300W-4*A0 CRHK-300W-2*A0 CRHK-300W-0*A0	CRHK300W4*A	30	230/60/3	550
COM02499	CRHK300X4**A0R0K0*0	CRHK-300X-4*A0	CRHK300S4*A	30	380/60/3	550
COM03132	CRHK300V4**A0R0K0*0	CRHK-300V-4*A0	CRHK300S4*A	30	346/50/3	550
COM04387	CRHK300Z4**A0R0K0*0	CRHK-300Z-4*A0	CRHK300S4*A	30	363/50/3	550
COM01803	CRHK300D4**A0R0K0*0 <i>USE COM01803</i> <i>USE COM01803</i>	CRHK-300D-4*A0 CRHK-300D-2*A0 CRHK-300D-0*A0	CRHK300D4*A	30	575/60/3	550
COM01802	CRHK300K4**A0R0K0*0 <i>USE COM01802</i> <i>USE COM01802</i>	CRHK-300T-4*A0 CRHK-300T-2*A0 CRHK-300T-0*A0	CRHK300T4*A	30	400-460/50-60/3	550

Note: If requirements are such that compressor unloading is required other than the standard configuration, connect only the appropriate number of terminals. See connection diagram pages 101-106 (Included with the Model K compressor submittals.)



Model K Hermetic Compressors

Figure 45. Model CRHK200 - 20 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting
Refrigerant
UL Recognized & CSA Accepted

31 BAR-D
R-22

Rated Performance

	50%	100%
Capacity (KW)	27.9	57.2
Power Input (KW)	9.6	17.3
Current (220) (Amps)	36.5	54
C.O.P.	2.9	3.31
Evaporator Temp (C)	7.22	7.22
Condenser Temp (C)	54.44	54.44
Liquid Temp (C)	8.3	8.33
Superheat (C)	11.11	11.11

(45F/130F/15F SC/20F SH-ARI)

Physical Data

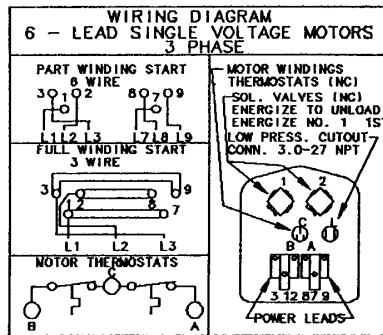
Bore (MM)	69.85
Stroke (MM)	53.98
No. of Cylinders	4
Speed (RPM)	1450

Motor Protection

Type (Pilot Duty)	Internal Thermostat
Manufacturer	Klixon
External Overcurrent Protection Required	

Crankcase Heater

Insert Type - Accessible Inside Terminal Box
Rating - 150 Watts, 120 Volts



Motor Data Max Load Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	96	80	394
230-60-3	208-254	83	70	343
380-60-3	342-418	50	42	208
460-60-3	416-508	42	35	172
575-60-3	520-635	33	28	138
230-50-3	198-253	68	57	285
346-50-3	311-381	46	38	190
363-50-3	327-399	43	37	185
400-50-3	340-460	39	33	

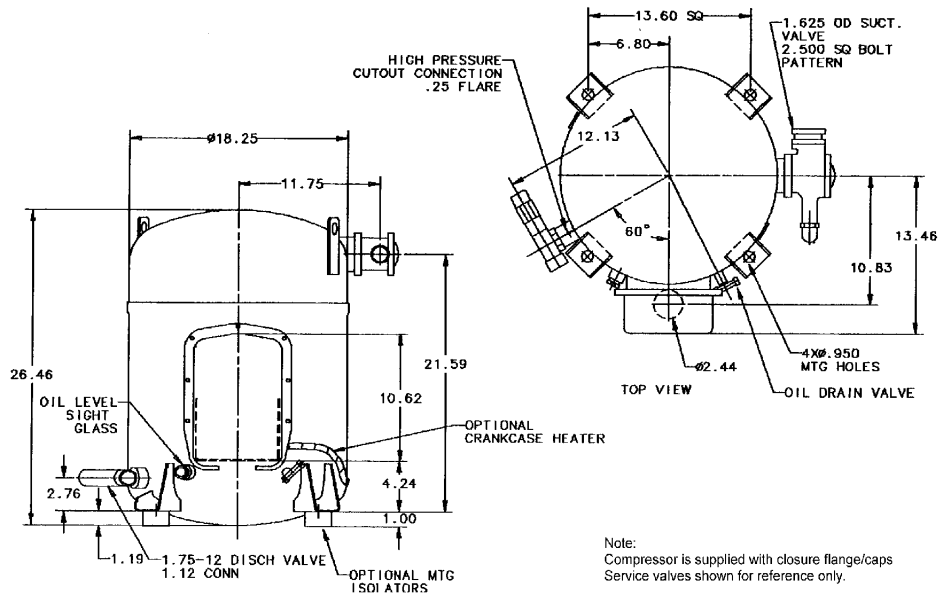
± At Minimum Utilization Voltage

* At 10C Sat. Suction, 65.6C Sat. Condensing, 8.3C Superheat, Full Load

** At 4.4C Sat. Suction, 51.7C Sat. Condensing, 8.3C Superheat, Full Load

Model K Hermetic Compressors

Figure 46. Model CRHK200 - 20 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting 450 PSID
Refrigerant R-22
UL Recognized & CSA Accepted

Rated Performance

	50%	100%
Capacity (BTU/HR)	113,400	232,500
Power Input (KW)	11.5	20.7
Current (230) (Amps)	42	62
EER (BTU/W-HR)	9.8	11.2
Evaporator Temp	45	45
Condenser Temp	130	130
Liquid Temp	115	115
Superheat	20	20

Physical Data

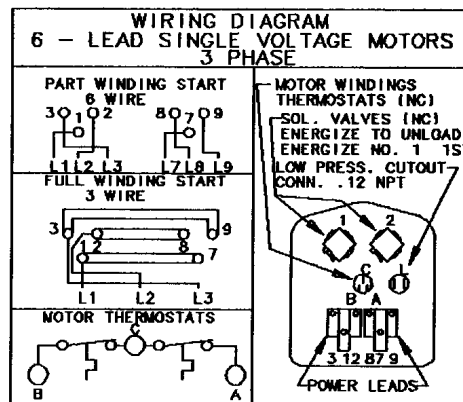
Bore	2.75
Stroke	2.125
No. of Cylinders	4
Speed	1750 RPM

Motor Protection

Type (Pilot Duty) Internal Thermostat
Manufacturer Klixon
External Overcurrent Protection Required

Crankcase Heater

Insert Type - Accessible Inside Terminal Box
Rating - 150 Watts, 120 Volts



Motor Data Max Load Current (Amp)±

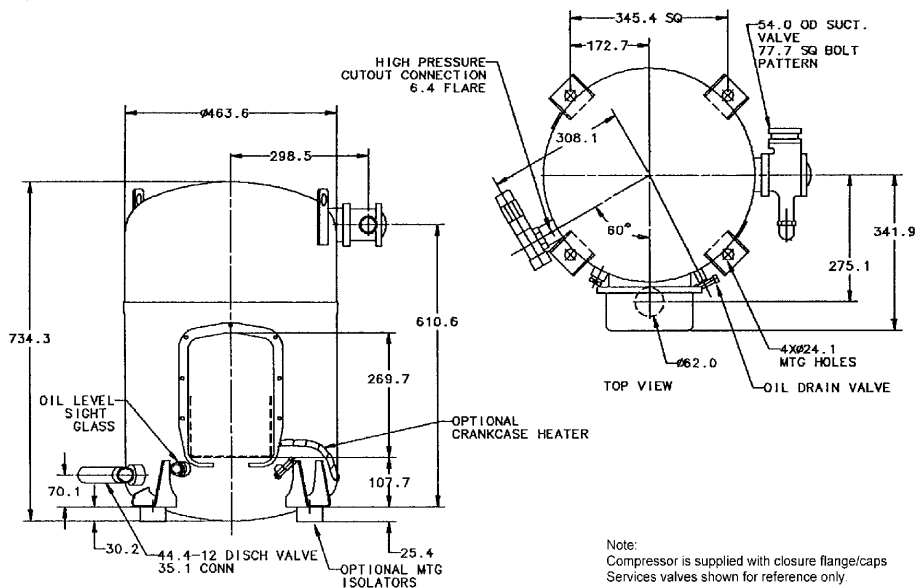
Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	96	80	394
230-60-3	208-254	83	70	343
380-60-3	342-418	50	42	208
460-60-3	416-508	42	35	172
575-60-3	520-635	33	28	138
230-50-3	198-253	68	57	285
346-50-3	311-381	46	38	190
363-50-3	327-399	43	37	185
400-50-3	340-460	39	33	175

± At Minimum Utilization Voltage

* At 50F Sat. Suction, 150F Sat. Condensing, 15F Superheat, Full Load

** At 40F Sat. Suction, 125F Sat. Condensing, 15F Superheat, Full Load

Figure 47. Model CRHK250 - 25 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting 31 BAR-D
 Refrigerant R-22
 UL Recognized & CSA Accepted

Rated Performance

	33%	67%	100%
Capacity (KW)	23.4	46.4	68.4
Power Input (KW)	8.5	14.5	20.7
Current (220) (Amps)	37	49	64
C.O.P.	2.75	3.2	3.31
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.3	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

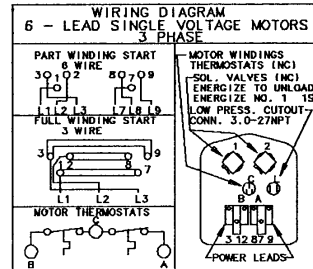
Bore (MM)	69.85
Stroke (MM)	45.97
No. of Cylinders	6
Speed (RPM)	1450

Motor Protection

Type (Pilot Duty)	Internal Thermostat
Manufacturer	Klixon
External Overcurrent Protection Required	

Crankcase Heater

Insert Type - Accessible Inside Terminal Box
 Rating - 150 Watts, 120 Volts



Motor Data Max Load Current (Amp)±

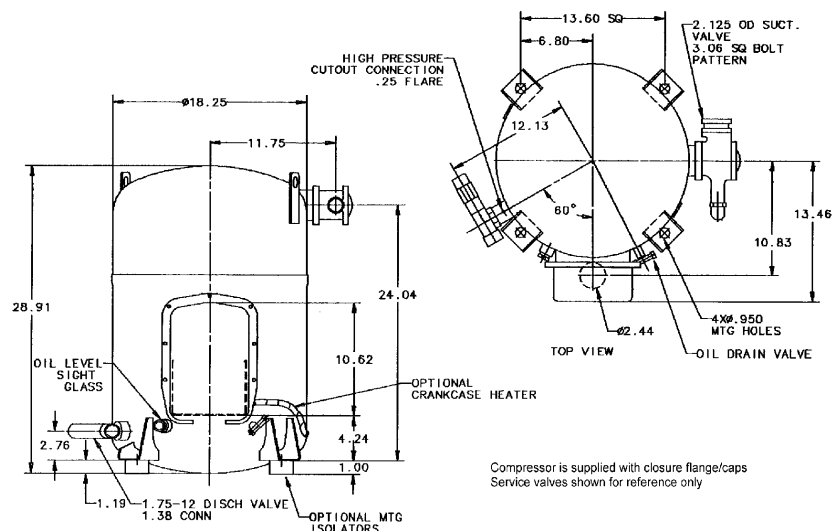
Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	115	96	426
230-60-3	208-254	100	83	370
380-60-3	342-418	61	50	224
460-60-3	416-508	50	42	185
575-60-3	520-635	40	33	148
230-50-3	198-253	83	70	310
346-50-3	311-381	56	47	205
363-50-3	327-399	53	44	195
400-50-3	340-460	48	40	185

± At Minimum Utilization Voltage

* At 10C Sat. Suction, 65.6C Sat. Condensing, 8.3C Superheat, Full Load

** At 4.4C Sat. Suction, 51.7C Sat. Condensing, 8.3C Superheat, Full Load

Figure 48. Model CRHK250 - 25 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting 450 PSID

Refrigerant R-22

UL Recognized & CSA Accepted

Rated Performance

	33%	67%	100%
Capacity (BTU/HR)	95,200	188,700	278,000
Power Input (KW)	10.2	17.5	24.9
Current (230) (Amps)	42	56	75
EER (BTU/W-HR)	9.3	10.8	11.2
Evaporator Temp	45	45	45
Condenser Temp	130	130	130
Liquid Temp	115	115	115
Superheat	20	20	20

Physical Data

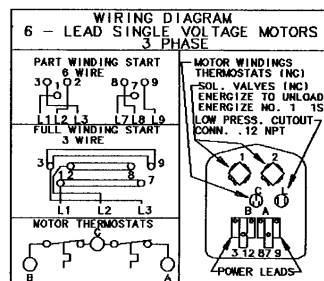
Bore	2.75
Stroke	1.81
No. of Cylinders	6
Speed	1750 RPM

Motor Protection

Type (Pilot Duty)	Internal Thermostat
Manufacturer	Klixon
External Overcurrent Protection Required	

Crankcase Heater

Insert Type - Accessible Inside Terminal Box
Rating - 150 Watts, 120 Volts



Motor Data Max Load Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	115	96	426
230-60-3	208-254	100	83	370
380-60-3	342-418	61	50	224
460-60-3	416-508	50	42	185
575-60-3	520-635	40	33	148
230-50-3	198-253	83	70	310
346-50-3	311-381	56	47	205
363-50-3	327-399	53	44	195
400-50-3	340-460	48	40	185

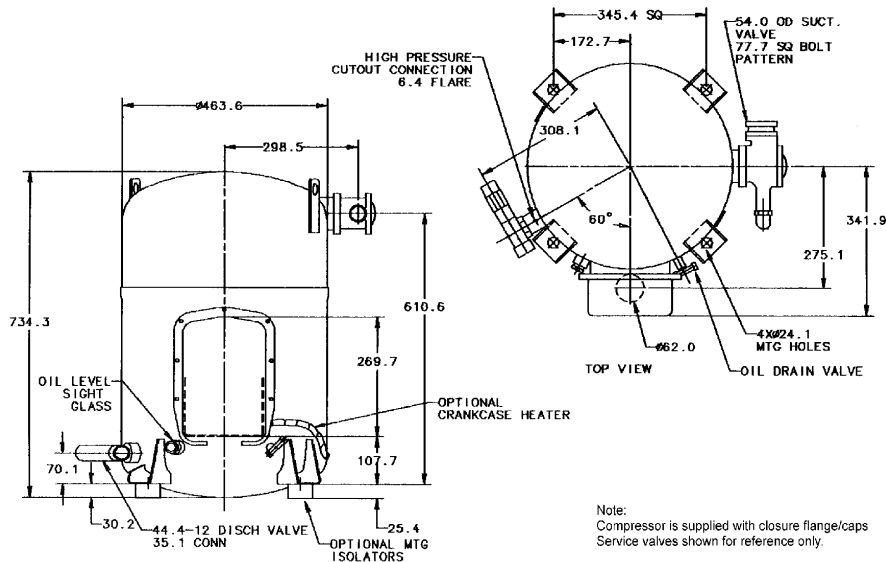
± At Minimum Utilization Voltage

* At 50F Sat. Suction, 150F Sat. Condensing, 15F Superheat, Full Load

** At 40F Sat. Suction, 125F Sat. Condensing, 15F Superheat, Full Load

Model K Hermetic Compressors

Figure 49. Model CRHK300 - 30 Ton / R-22 / 50 Hz



Application

Internal Relief Valve Setting 31 BAR-D
 Refrigerant R-22
 UL Recognized & CSA Accepted

Rated Performance

	33%	67%	100%
Capacity (KW)	28.9	57.2	83.6
Power Input (KW)	10.3	18.3	25.9
Current (220) (Amps)	42	59	80
C.O.P	2.8	3.13	3.23
Evaporator Temp (C)	7.22	7.22	7.22
Condenser Temp (C)	54.44	54.44	54.44
Liquid Temp (C)	8.3	8.33	8.33
Superheat (C)	11.11	11.11	11.11
(45F/130F/15F SC/20F SH-ARI)			

Physical Data

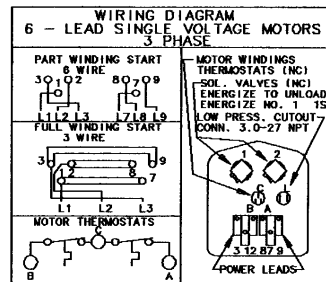
Bore (MM)	69.85
Stroke (MM)	53.98
No. of Cylinders	6
Speed (RPM)	1450

Motor Protection

Type (Pilot Duty)	Internal Thermostat
Manufacturer	Klixon
External Overcurrent Protection Required	

Crankcase Heater

Insert Type - Accessible Inside Terminal Box
 Rating - 150 Watts, 120 Volts



Motor Data Max Load Current (Amp)±

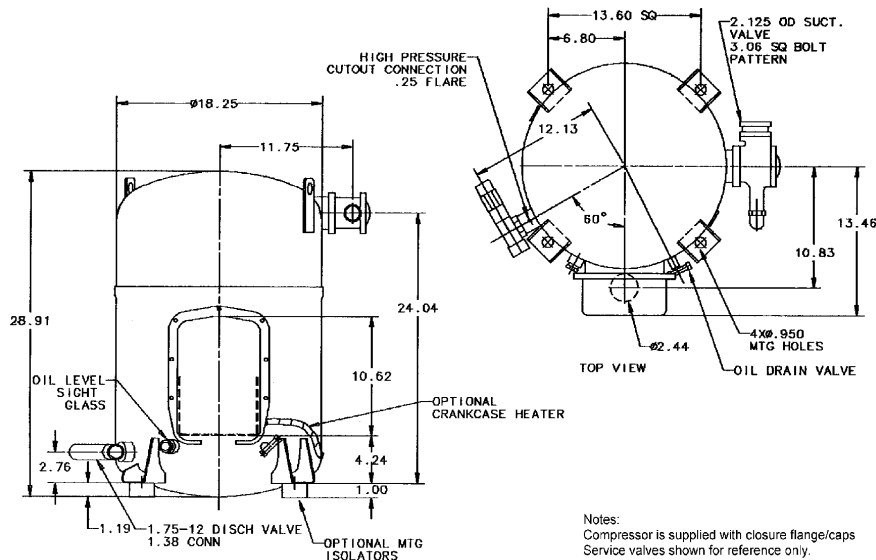
Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	141	114	488
230-60-3	208-254	122	100	424
380-60-3	342-418	74	60	257
460-60-3	416-508	61	50	212
575-60-3	520-635	49	40	170
230-50-3	198-253	101	83	355
346-50-3	311-381	68	56	235
363-50-3	327-399	64	53	225
400-50-3	340-460	58	48	215

± At Minimum Utilization Voltage

* At 10C Sat. Suction, 65.6C Sat. Condensing, 8.3C Superheat, Full Load

** At 4.4C Sat. Suction, 51.7C Sat. Condensing, 8.3C Superheat, Full Load

Figure 50. Model CRHK300 - 30 Ton / R-22 / 60 Hz



Application

Internal Relief Valve Setting 450 PSID
Refrigerant R-22
UL Recognized & CSA Accepted

Rated Performance

	33%	67%	100%
Capacity (BTU/HR))	117,500	232,500	339,500
Power Input (KW)	12.4	21.9	31.1
Current (230) (Amps)	48	68	92
EER (BTU/W-HR)	9.5	10.6	10.9
Evaporator Temp	45	45	45
Condenser Temp	130	130	130
Liquid Temp	115	115	115
Superheat	20	20	20

Physical Data

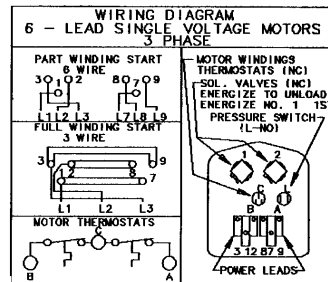
Bore 2.75
Stroke 1.25
No. of Cylinders 6
Speed 1750 RPM

Motor Protection

Type (Pilot Duty) Internal Thermostat
Manufacturer Klaxon
External Overcurrent Protection Required

Crankcase Heater

Insert Type - Accessible Inside Terminal Box
Rating - 150 Watts, 120 Volts



Motor Data Max Load Current (Amp)±

Utilization				
Voltage	Range	Air-Cooled*	Water-Cooled**	LRA
200-60-3	180-220	141	114	488
230-60-3	208-254	122	100	424
380-60-3	342-418	74	60	257
460-60-3	416-508	61	50	212
575-60-3	520-635	49	40	170
230-50-3	198-253	101	83	355
346-50-3	311-381	68	56	235
363-50-3	327-399	64	53	225
400-50-3	340-460	58	48	215

± At Minimum Utilization Voltage

* At 50F Sat. Suction, 150F Sat. Condensing, 15F Superheat, Full Load

** At 40F Sat. Suction, 125F Sat. Condensing, 15F Superheat, Full Load



Nomenclature Carrier 06D

06D X 5 37 6 D A 06 0 0
123 4 5 67 8 9 10 1112 13 14

Digit 1,2,3 — Family

**External Overloads come from failed compressor

Digit 4 — Compressor type

06DA = New Compressor - A/C Duty = No Unloading
06DB = New Compressor - A/C Duty = 1 Step Unloading Electric
06DC = New Compressor - A/C Duty = 2 Step Unloading Electric
06DD = New Compressor - A/C Duty = 1 Step Unloading Pressure
06DE = New Compressor - A/C Duty = 2 Step Unloading Pressure

06DF = New Compressor - A/C Duty = 1 Step Unloading Electric
06DG = New Compressor - A/C Duty = 2 Step Unloading Electric
06DH = New Compressor - A/C Duty = 1 Step Unloading Pressure
06DJ = New Compressor - A/C Duty = 2 Step Unloading Pressure

06DM = Service Replacement Compressor Refrig. Duty Medium Temp./AC

06DR = Service Replacement Compressor Refrig. Duty Low Temp.

06DS = Service Replacement Compressor for New 06DF, G, H and J with Suction cut off unloading

06DX = Service Replacement Compressor for New 06DB, C, D and E with Hot Gas by pass unloading

Digit 5 — Motor Size = no significance

Digit 6, 7 — Displacement in CFM at 1750 RPM

Digit 8 — Compressor I.D. key

0,2,3,4,7,8 = New Compressor

6 = Service Compressor, Remanufactured

9 = Service Compressor, Special

Digit 9 — Suction valve variables

Digit	S.V. Location	Motor End Cover	Angle	Compass
A	Motor End	2 Bolt	30°	
B	Motor End	4 Bolt	30°	
C	Motor End	2 Bolt	90°	
D	Motor End	4 Bolt	90°	
E	Motor End	2 Bolt	150°	
F	Pump End	Plain	270°	
G	Pump End	Plain	225°	

Digit 10 — Electrical variables

A = w/Internal Thermostat & w/External Over Loads*

C = w/Internal Thermostat & w/o External Over Loads

Digit 11, 12 — Electrical

H.E. Models

31 = 575-3-60
32 = 208/230-3-60
34 = 220-3-50
36 = 400/460-3-50/60

STD. Models

01 = 575-3-60
04 = 200-3-60
05 = 230-3-60
06 = 400/460-3-50/60
08 = 220-3-50
12 = 208/230-3-60
13 = 380-3-60
14 = 200-3-60 (PW)
15 = 230-3-60 (PW)
18 = 220-3-50 (PW)

Digit 13 — Suction cut-off unloading designation for 06DM/DM new compressor

0 = All models except as noted

4,6,7 = One unloader DM/DR only

5 = No Oil

Digit 14

0 = No Significance

1 or 9 = Packaging

A = Shipped without oil

Carrier 06D

Compressor Model 06D B 328 6 B A 12 00

Digit 123 4 567 8 9 10 1112 1314

Trane P/N	Carrier Model	Nom HP	Cyl	Percent Unloading	Volt	Service Valve	Shipping Weight
COM06070	06DA8186AA0600	6.7	4	None	460	2 Bolt-30°	225
COM06101	06DA8186AA1200	6.7	4	None	208/230	2 Bolt-30°	225
COM06071	06DX8246AA0600	8.0	6	33%	460	2 Bolt-30°	275
COM06072	06DX8246AA1200	8.0	6	33%	208/230	2 Bolt-30°	275
COM06073	06DX8246BA0600	8.0	6	33%	460	4 Bolt-30°	275
COM06074	06DX8246BA1200	8.0	6	33%	208/230	4 Bolt-30°	275
COM06075	06DX3286BA0600	9.0	6	33%	460	4 Bolt-30°	305
COM06076	06DX3286BA1200	9.0	6	33%	208/230	4 Bolt-30°	305
COM06077	06DX3376BA0600	9.0	6	33%	460	4 Bolt-30°	305
COM06078	06DX3376BA0600	9.0	6	33%	460	4 Bolt-30°	305
COM06079	06DX5376BA1200	12.7	6	33%	208/230	4 Bolt-30°	305
COM06080	06DX5376BA0600	12.7	6	33%	460	4 Bolt-30°	305
COM06102	06DA8186AA0100	6.7	4	None	575	2 Bolt-30°	225
COM06103	06DX8246AA0100	8	6	33%	575	2 Bolt-30°	275
COM06104	06DX8246BA0100	8	6	33%	575	4 Bolt-30°	275
COM06105	06DX3286BA0100	9	6	33%	575	4 Bolt-30°	305
COM06106	06DX3376BA0100	9	6	33%	575	4 Bolt-30°	305
COM06107	06DX5376BA0100	12.7	6	33%	575	4 Bolt-30°	305
COM08866	06DM3136AC3600	5	4	None	460	2 Bolt-30°	200
COM08867	06DM3136AC3200	5	4	None	208-230	2 Bolt-30°	200
COM08868	06DS3286BC3200	9	6	33%	208-230	4 Bolt-30°	280
COM08869	06DS3286BC3600	9	6	33%	460	4 Bolt-30°	280
COM08870	06DM3286DC3600	9	6	None	460	4 Bolt-90°	280
COM08871	06DM5376DC3600	12.7	6	None	460	4 Bolt-90°	300
COM08872	06DS5376DC3600	12.7	6	33%	460	4 Bolt-90°	300
COM08873	06DG5376DC3600	12.7	6	66%	460	4 Bolt-90°	300
COM08874	06DM8246BC3600	8	6	None	460	4 Bolt-30°	280
COM08875	06DS8246BC3600	8	6	33%	460	4 Bolt-30°	280
COM08876	06DS8186AC3600	6.7	4	50%	460	2 Bolt-30°	200
COM08826	06DS5376BC3200	12.7	6	33%	208-230	4 Bolt-30°	305
COM08827	06DS5376BC3600	12.7	6	33%	460	4 Bolt-30°	305

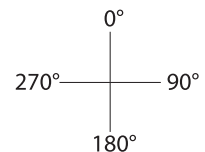
Unloading: 4th Digit

Digit	Type	Method	Steps of Unloading
A	None	N/A	0
B	HGBP	Electric	1
C	HGBP	Electric	2
D	HGBP	Pressure	1
E	HGBP	Pressure	2
F	SCOU	Electric	1
G	SCOU	Electric	2
H	SCOU	Pressure	1
J	SCOU	Pressure	2
M	None	N/A	0
S	SCOU	N/A	1
X	HGBP	N/A	0 or 1

SCOU - Suction Cut-Off Unloading
HGBP - Hot Gas By-Pass Unloading

Digit 9 — Suction valve orientation

Digit	# of Service Valve Bolts	Orientation from Vertical
A	2 Bolt	30°
B	4 Bolt	30°
C	2 Bolt	90°
D	4 Bolt	90° or 180°
E	2 Bolt	150°



Digit 10 —

If the compressor has external overloads, transfer them with the terminal box to the replacement compressor.



Carrier 06D

Digit 11 and 12: Voltage

Digit	Voltage	Start Type	Use
04	200-3-60	XL	12
05	230-3-60	XL	12
06	460-3-60	XL	06
12	208/230-3-60	XL	12
32	208/230-3-60	XL	32
36	460-3-60	XL	36
01.31	575-3-60	XL	01

WARNING

When removing heads from an 06D compressor, loosen all head bolts two turns. Tap on the top of the head with a hammer several times. If necessary use a very thin chisel or gasket scraper and drive between the head and valve plate. NEVER hammer on the side of the head to remove the head and valve plate as it could shear the suction valve dowel pins causing irreparable damage to the compressor. If the valve plate does not come off, remove one of the discharge cages from the valve plate. Then reinstate one of the discharge valve cage bolts, screwing it all the way through the plate. This will lift the plate from the head without any damage. Make sure all old gasket material is removed before reinstallation.

Example Model No.	06D	X	328	0	B	A	1	2	0	0
Digit	123	4	567	8	9	10	11	12	13	14

Customer Model No.06D

Digit 1,2,3 — Family

06D= Requires transfer of terminal box, crankcase heater and proper unloader as described below.
 If Model Number is 6D48, 6D68, 6D73, or 6D75, the following information is required:

1. Voltage Part Winding or Across the Line Start
2. How many unloaders and what type of heads does the compressor have?

If the model number is 6D68, the above information is required in addition to whether the suction valve is mounted with two or four bolts.

Digit 4 — X

Unloading Type

• None

A,M

• Hot Gas By-Pass — HGBP

B,C,D,E,X

• Suction Cut Off — SCOU

F,G,H,J,S

Unloading Method

• Electric

B,C,F,G

• Suction Pressure

D,E,H,J

Unloading Quantity

• One Step

B,D,F,H,X,S

• Two Step (six cylinder only)

C,E,G,J

Note: See following pages to help identify unloaders

Digit 5 — Motor size

Digit 6,7 — Displacement (in CFM at 1750 RPM)

Digit 8 — Remanufactured service compressor

6 =

Digit 9 — Suction service valve orientation

Digit 10 — External overload / internal overloads

A = External Overloads to be transferred with the terminal box

Digit 11, 12 — Voltage-must match

Exceptions: 12 - 208/230/60/3 interchangeable with 04, 05 and 32
 Consult model number nomenclature for other voltages.

Digit 13 — "0" for a/c if 5 or 7, check for availability

0 =

5 = No Oil

7 = 1 Unloader Electric (DR, DM only)

Digit 14 — Service replacement

0 =

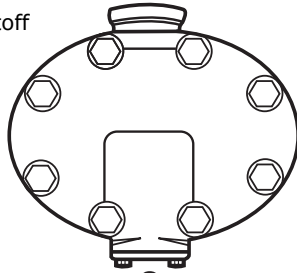
A = Shipped with no oil

Identify compressors that have no I.D. tag

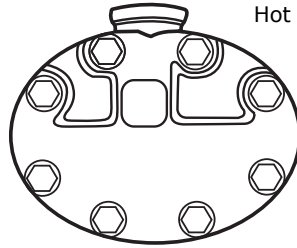
1. Voltage to compressor
2. Is one contactor or two powering compressor?
3. How many heads on compressor?
4. How many unloader valves on heads?
5. Are unloader valves Hot Gas By-Pass or Suction Cut-Off?
6. Suction Cut-Off has unloader valve on the top of head, with an access cap on the bottom of the head.
 Hot Gas By-Pass has unloader valve on the top of the head, with no access plate on the bottom of the head.
7. How many bolts attach suction valve to compressor (two or four)?
8. What is the approximate degree of angle that the suction line is soldered to the suction service valve?
9. Get all information off of unit name tag.
 Manufacturer
 Model #
 Serial #
 Voltage
 Amperage of compressor
 How many compressors in unit?
10. Any available casting numbers on the compressor?

Identifying Unloading Head Types

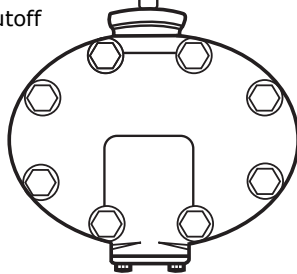
Suction Cutoff



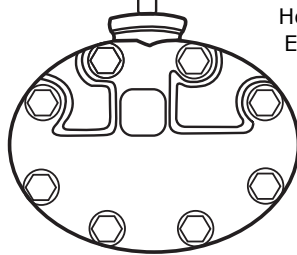
Hot Gas By-Pass



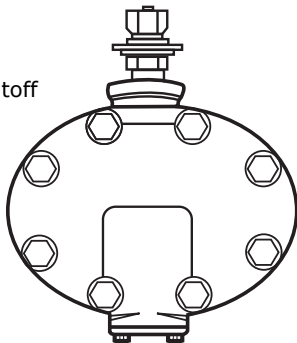
Suction Cutoff
Electric



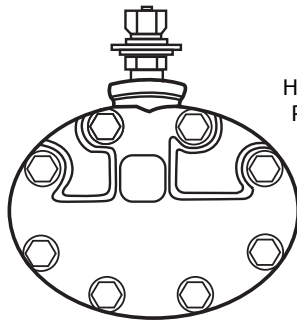
Hot Gas By-Pass
Electric



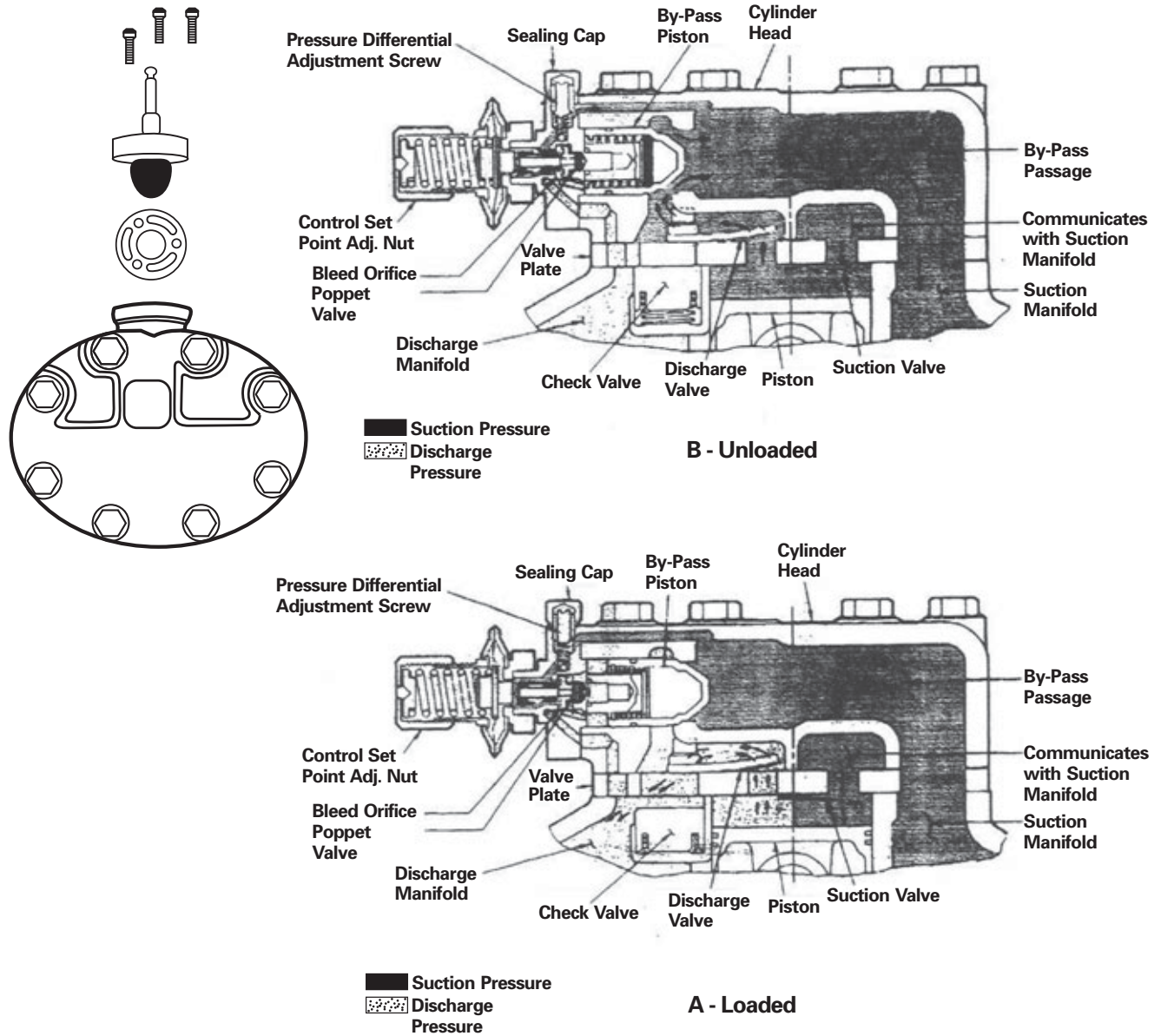
Suction Cutoff
Pressure



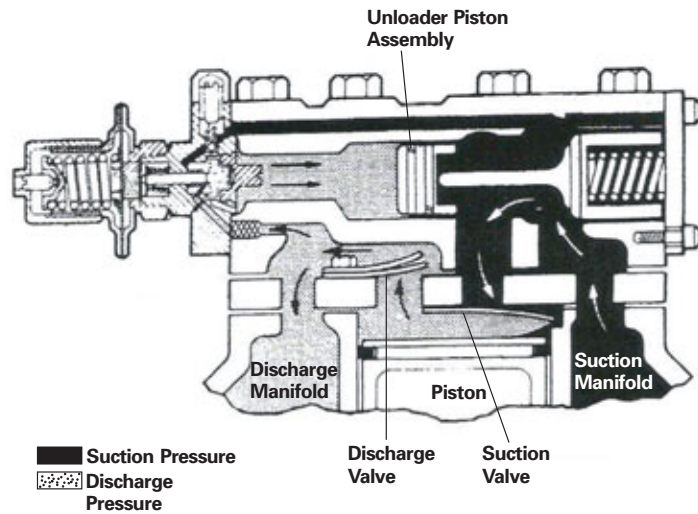
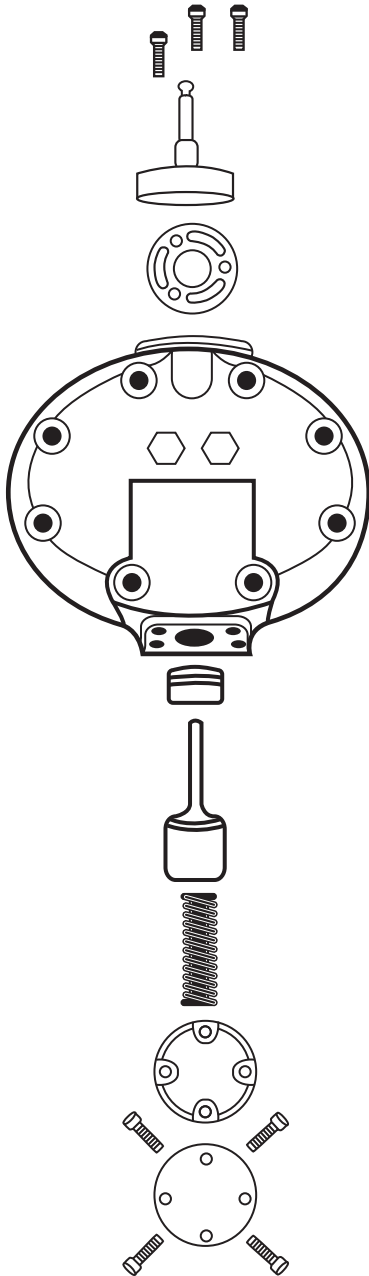
Hot Gas By-Pass
Pressure



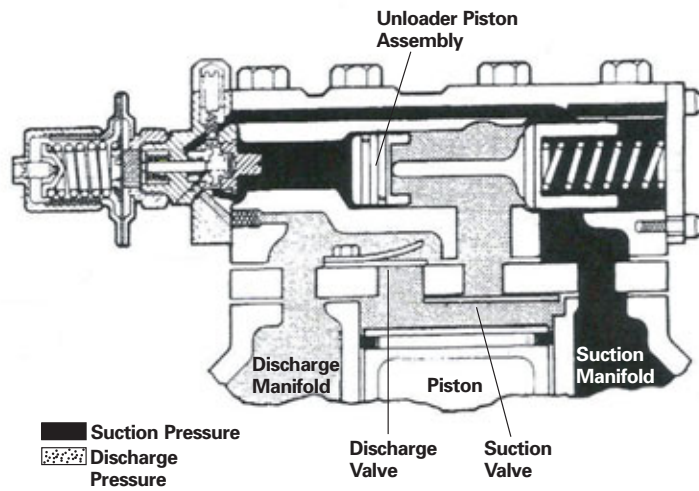
06D/O6E Hot Gas By-Pass Unloading



06D/O6E Suction Cut Off Unloading



Suction Cut-Off Loaded Operation



Suction Cut-Off Unloaded Operation

Carrier 06D, 06E and 5H Accessory Parts

Table 11. Carrier Accessory Parts

City P/N	OEM Ref #	Description
BOX 0584	06DA660078	TERMINAL BOX & LID 06D
BOX 0585	06EA660095	TERMINAL BOX & LID 06E
COL 7098	EF19ZE120	120V COIL
COL 7099	EF19ZE240	240V COIL
GKT 3004	6D40-1053	06D STD HEAD GASKET
GKT 3004-M	05GA502213	06D STD HEAD GASKET, METAL
GKT 3005	6D40-1073	06D V/P, 2" BORE, GASKET
GKT 3005-M	05DA500153	06D V/P, 2" BORE, GASKET, METAL
GKT 3006	6D68-1053	06D TOP HEAD GASKET
GKT 3006-M	05GA502173	06D TOP HEAD GASKET, METAL
GKT 3007	6D75-2672	06D HGBP HEAD GASKET
GKT 3007-M	05GA502183	06D HGBP HEAD GASKET, METAL
GKT 3007-MS	05GA502223	06D SUCTION CUT-OFF HEAD GASKET, METAL
GKT 3008	06EA660049	06E TOP & HGBP HEAD GASKET
GKT 3008-M	06EA503314	06E TOP & HGBP HEAD GASKET, METAL
GKT 3009	06EA504884	06E V/P .075"
GKT 3010	06EA500204	06E STD HEAD GASKET
GKT 3010-M	06EA503304	06E STD HEAD GASKET, METAL
GKT 3011-MS	06EA503334	06E SUCCO HEAD GASKET, METAL
GKT 3012	6G65-1061	06E SUCT SVC GASKET, 175,265
GKT 3013	6D23-1421	06D DIS SVC GASKET, 818, 313
GKT 3014	6D40-1131	06D DIS SVC GASKET, 6 CYL, 06E 4 CYL
GKT 3015	6D68-1131	06E SUCT SVC GASKET, 250, 265
GKT 3016	6D75-2662	06D, 06E U/L VAL GASKET
GKT 3016-M	06EA501253	06D, 06E U/L VAL GASKET, METAL
GKT 3050	6F25-1013	06D, 06E MTR COVER GASKET
HED 0205	6D75-1204-R	06D HGBP U/L HEAD ASSY
HED 0206	06DA504614-R	06D SUCCO U/L HEAD ASSY
HED 0207	06EA500304-R	06E HGBP U/L HEAD ASSY
HED 0208	06EA503524-R	06E SUCCO U/L HEAD ASSY
HED 0209	06EA502084-R	06E REV CENTER HEAD
HTR 2206	HT36FL379-AM	06D, 06E CRANKCASE HEATER 120V
HTR 2207	HT36FL479-AM	06D, 06E CRANKCASE HEATER 240V
HTR 2248	HT36DL480	06D, 06E CRANKCASE HEATER 460V
INS 1975	06EA500672	06E INSULATOR, 3 HOLE - ON COMP, 9 LEAD
KIT 2528	6D43-172-AM	06D GASKET KIT
KIT 2529	06EA660071-AM	06E GASKET KIT
KIT 3064	5H60-502-AM	5H40, 5H46, 5H60, 5H66 GASKET KIT
KIT 3065	5H120-502-AM	5H80, 5H86, 5H120, 5H126
LED 0338	06EA660141-AM	06E 9 LEAD JUMPER KIT, BUSS BARS
MTG D-4	06DA660056	06D 4CYL MTG KIT
MTG D-6	06DA660057	06D 6CYL MTG KIT
MTG E	06EA660089	06E 4 & 6 CYL MTG KIT
PLT 2010	06DA660131-R	06D HGBP V/P ASSY- REMAN
PLT 2011	06EA660105-R	06E HGBP V/P ASSY- REMAN
PLT 2012	06DA660120-R	06D HE V/P ASSY- REMAN



Carrier 06D, 06E and 5H Accessory Parts

Table 11. Carrier Accessory Parts

City P/N	OEM Ref #	Description
PLT 2014	06EA660137- R	06E HE V/P ASSY- REMAN
PMP 0680	6D68-952-AM	06D OIL PUMP ASSY STD, 010, 020
PMP 0681	06EA660001-AM	06E OIL PUMP ASSY STD, 010, 020
PMP 0682	5H40-A372	5H40, 5H46, 5H60, 5H66 OIL PUMP ASSY
PMP 0683	06LA660008	5H86, 5H120, 5H126 OIL PUMP ASSY 1 3/4" DIA
PMP 0684	5H120-A773	5H86, 5H120, 5H126 OIL PUMP ASSY 2 3/16" DIA
SEL 0506	5H40-276-AM	5H40, 5H46, 5H60, 5H66, 5H80, 5H86 C/S SEAL ASSY
SEL 0506A	5H40-276A	POE OIL SEAL ASSY
SEL 0507	5H120-732-AM	5H120, 5H126 C/S SEAL ASSY
SEL 0507A	5H120-732A	POE OIL SEAL ASSY
SVC VLV-61	06DA660061	SVC VLV 2BLT 7/8", 1 5/8" BHC
SVC VLV-64	06DA660064	SVC VLV 2BLT 1 1/8", 1 3/4" BHC
SVC VLV-90	06EA660090	SVC VLV 4BLT 1 5/8", 2 1/2" BHC
SVC VLV-91	06EA660091	SVC VLV 4BLT 2 1/8", 3 1/16" BHC
TER 2001	06DA660134	06D 6 PIN TERMINAL ASSY
TER 2002	06EA660087-R	06E 9 PIN TERMINAL ASSY- REMAN
TER 2003	06EA660125-R	06E 6 PIN TERMINAL ASSY- REMAN
VAL 4280	06EA660100	06D, 06E CAPACITY CONTROL VALVE, PRESSURE
VAL 4281	06EA660135	06D, 06E CAPACITY CONTROL VALVE, ELECTRIC

LEGEND: AM = AFTERMARKET PART, M = METAL GASKET, MS = METAL SUCO GASKET, R = REMANUFACTURED

Nomenclature Carrier 06E

06E X 2 75 3 6 0
123 4 5 67 8 9 10

Digit 1,2,3 — Family

*Standard Center Head - Discharge Flange Faces Oil Pump

**Reversed Center Head - Discharge Flange Faces Motor End

Digit 4 — Compressor type

STD*	REV**	
06EA — 06EF	New Compressor - A/C Duty	No Unloading
06EB — 06EJ	New Compressor - A/C Duty	1 Step Electric
06EC — 06EK	New Compressor - A/C Duty	2 Step Electric
06ED — 06EL	New Compressor - A/C Duty	1 Step Pressure
06EE — 06EN	New Compressor - A/C Duty	2 Step Pressure
06E2 — 06E6	New Compressor - A/C Duty	1 Step Electric
06E3 — 06E7	New Compressor - A/C Duty	2 Step Electric
06E4 — 06E8	New Compressor - A/C Duty	1 Step Pressure
06E5 — 06E9	New Compressor - A/C Duty	2 Step Pressure
06EM	New Compressor - Refrig. Duty Med. Temp	
06ER	New Compressor - Refrig. Duty Low Temp	
06ET	Serv. Replacement A/C Duty Replaces 06E2, 3, 4, 5, 6, 7, 8, and 9	
06EX	Serv. Replacement A/C Duty Replaces 06EA, B, C, D, E, F, J, K, L, and M	
06EY	Serv. Replacement A/C Duty Replaces 06ER	
06EZ	Serv. Replacement A/C Duty Replaces 06EM	

Digit 5 — VARIABLES

0, 1, 2 = Models with Oil

3, 4, 5 = Models without Oil

7 = 1 Unloader Elect. (ER, EM, only)

Digit 6, 7 — Displacement (in CFM at 1750 RPM)

Digit 8 — Electrical variables

Electrical Variables

0 = 208/230-3-60 XL and PW

1 = 575-3-60 XL and PW

3 = 208/230/460-3-60 (208/230 XL or PW, 460 XL Only)

4 = 200-3-60 XL and PW

5 = 230-3-60 XL and PW

6 = 400/460-3-50/60 XL and PW

8 = 230-3-50 XL and PW

9 = 220/380-3-60 XL and PW

Digit 9 — Design variable

New Compressors

0 = OEM Model

1 = Carrier A/C Model (H.E.)

6 = Carrier A/C Model (STD.)

Service Compressors

2 = New Compressors (A/C)

4 = Remanufactured (Low Temp)

6 = Remanufactured (A/C)

7 = Remanufactured (Med. Temp)

Digit — 10

0 = No Significance

1 or 9 = Packaging

A = Shipped without oil



Carrier 06E

Example Model No. 06E X 275 3 6 0
Digit 123 4 567 8 9 10

Customer Model No.06E

Digit 1,2,3 — FAMILY

06E= Requires transfer of terminal box, crankcase heater and proper unloader as described below.

Digit 4 — X

Unloading Type

• None

A = None

F = Reverse Center Head*

• Hot Gas By-Pass - HGBP

B,C,D,E,X

J,K,L,N - Reverse Center Head*

• Suction Cut Off - SCOU

T,2,3,4,5

6,7,8,9 - Reverse Center Head*

*Reverse Center Head **Requires** that the head be transferred to the replacement compressor. Requires head gasket: GKT 3008.

Unloading Method

• Electric

B,C,J,K

2,3,6,7

• Suction Pressure

D,E,L,N

4,5,8,9

Unloading Quantity

• One

B,D,J,L,T,X

2,4,6,8 -

• Two

C,E,K,N (6 Cyl ONLY)

3,5,7,9

Digit 5 — Motor duty - packaging

0,1,2 = Models with Oil

3,4,5 = Models without oil

7 = 1 Unloader Elec. (ER, EM Only)

Digit 6,7 — Displacement

**Digits 5,6, and 7 MUST MATCH

Digit 8 — Voltage

• Digit 3 are nine lead motors suitable for part winding or across the line start on 208 and 230 volts, and across the line only on 460 volt. Interchangeable with "4" 200-60-3 and "5" 230-60-3 and "6" if Across the Line Start application.

• Digit 6 is a six lead motor suitable for across the line or part wind start on 460V can be used to replace a "3" if application is 460 cross-the-line start.

Consult model number nomenclature for other voltages.

Digit 9 — Production design

6 = Remanufactured

Digit 10 — Packaging

0= Standard

1 or 9 = Packaging

A = Shipped without oil

Identify compressors that have no I.D. tag

1. Voltage to compressor
2. How many electrical power terminals on compressor?
3. Is one contactor or two powering compressor?

If two contactors are being used, do all six power leads attach to separate power terminals on compressor?

Are there jumper bars between power terminals?

4. How many heads on compressor?
5. How many unloader valves are on compressor?
6. Are unloader valves Hot Gas By-Pass or Suction Cut-Off?

Suction Cut-Off has unloader valve on the top of head, with an access cap on the bottom of the head.

Hot Gas By-Pass has unloader valve on the top of the head and no access plate on the bottom of the head.

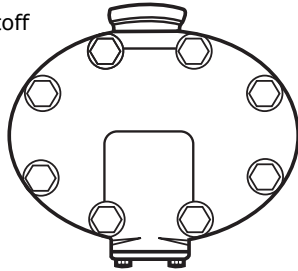
7. If compressor has three heads, the discharge service valve mounts on the top center head. Does the service valve face the oil pump or the motor end?
8. Get all information off of unit name tag.
Manufacturer
Model #
Serial #
Voltage
Amperage of compressor
How many compressors in unit?
9. Any available casting numbers on the compressor?

⚠ WARNING

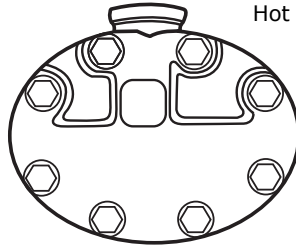
When removing heads from an 06E compressor, loosen all head bolts two turns. Tap on the top of the head with a hammer several times. If necessary use a very thin chisel or gasket scraper and drive between the head and valve plate. NEVER hammer on the side of the head to remove the head and valve plate as it could shear the suction valve dowel pins causing irreparable damage to the compressor. If the valve plate does not come off, remove one of the discharge cages from the valve plate. Then reinstate one of the discharge valve cage bolts, screwing it all the way through the plate. This will lift the plate from the head without any damage. Make sure all old gasket material is removed before reinstallation.

Identifying Unloading Head Types

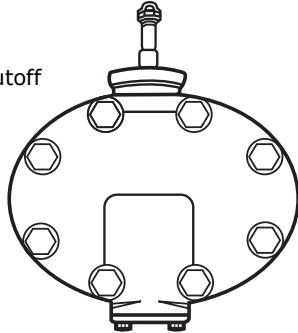
Suction Cutoff



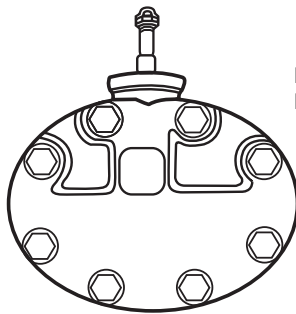
Hot Gas By-Pass



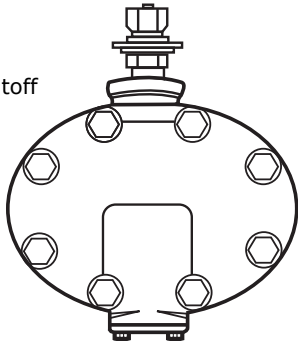
Suction Cutoff
Electric



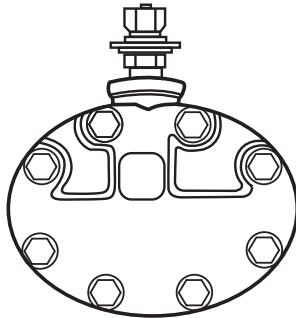
Hot Gas By-Pass
Electric



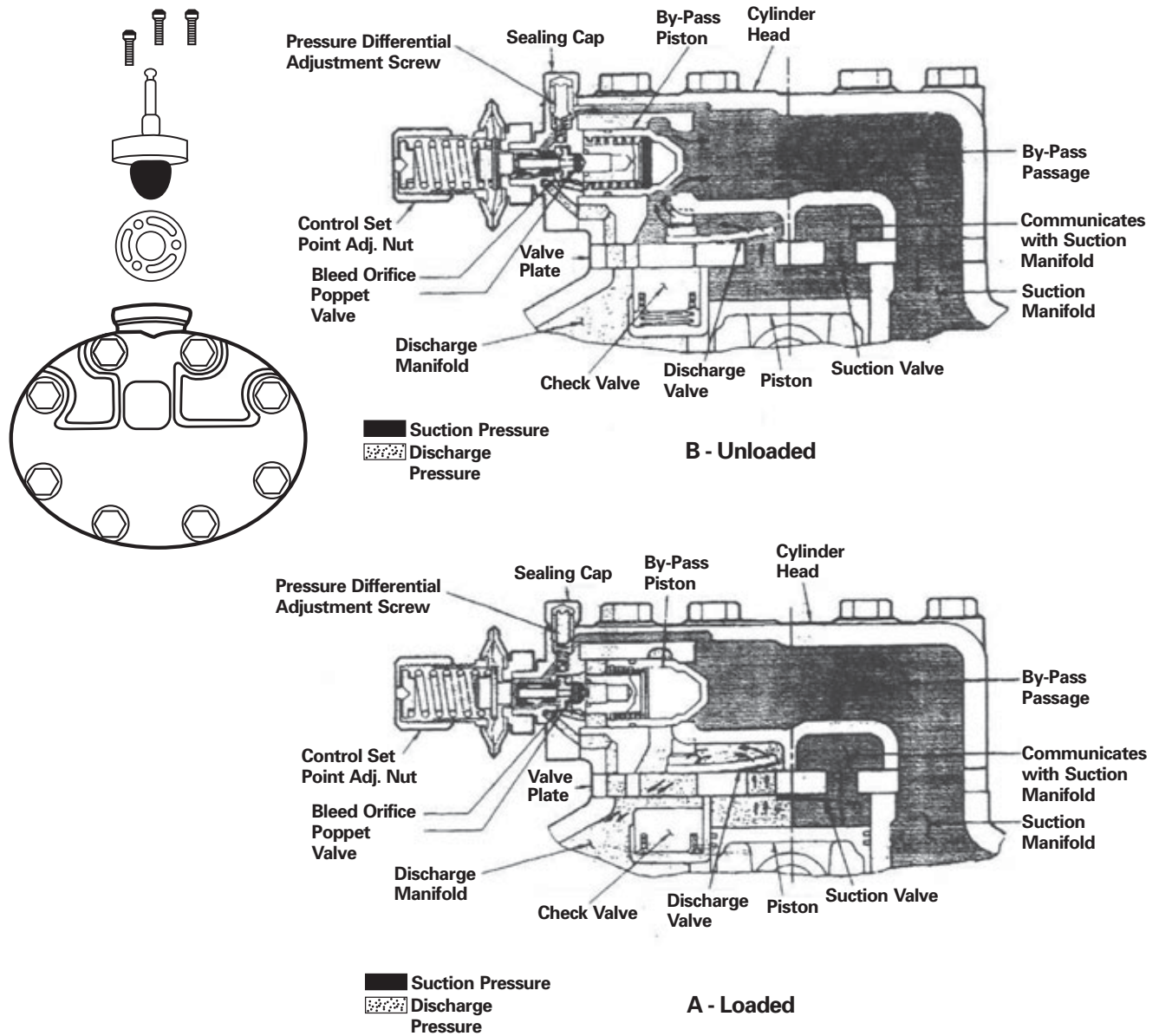
Suction Cutoff
Pressure



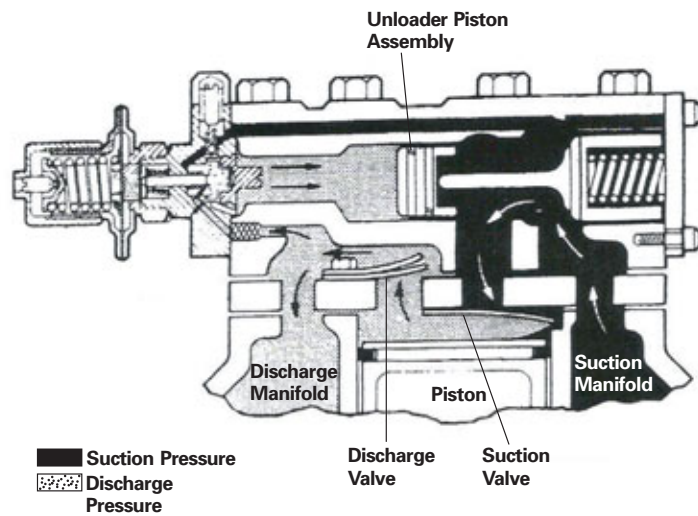
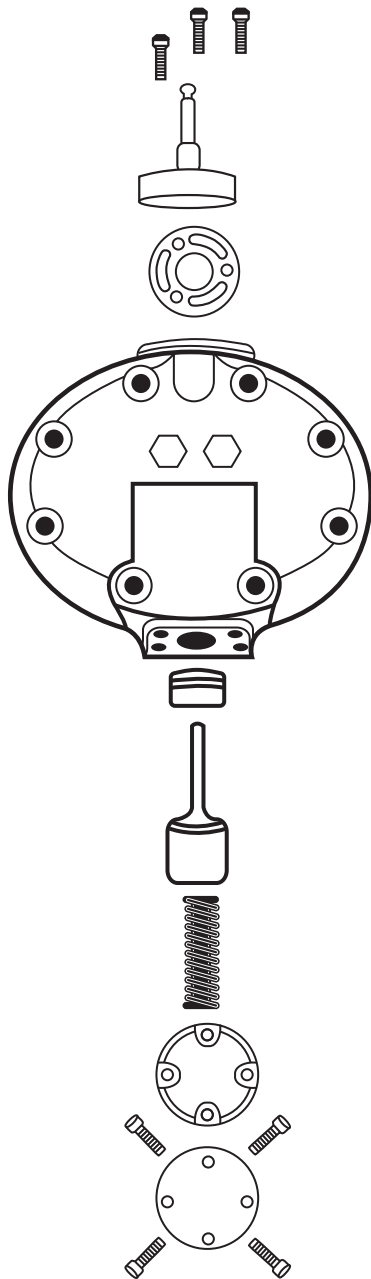
Hot Gas By-Pass
Pressure



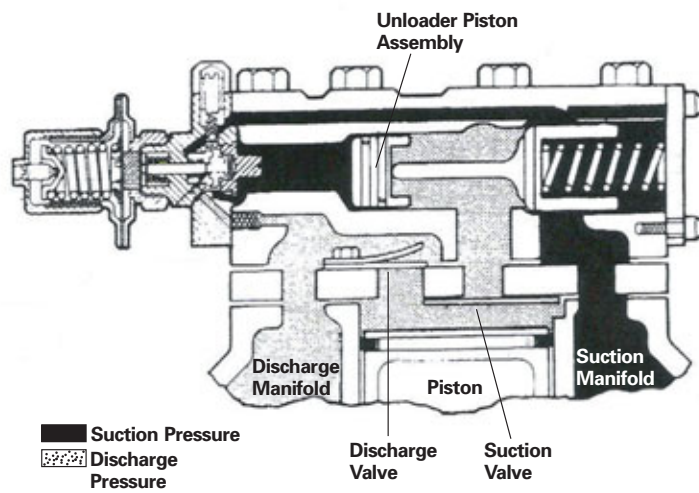
06D/O6E Hot Gas By-Pass Unloading



06D/O6E Suction Cut Off Unloading

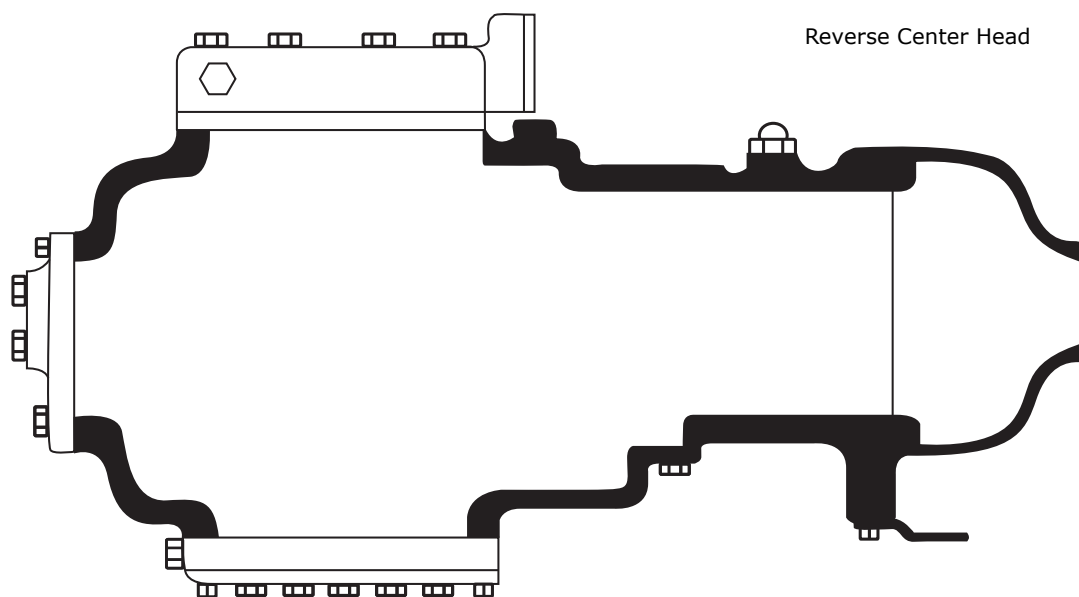
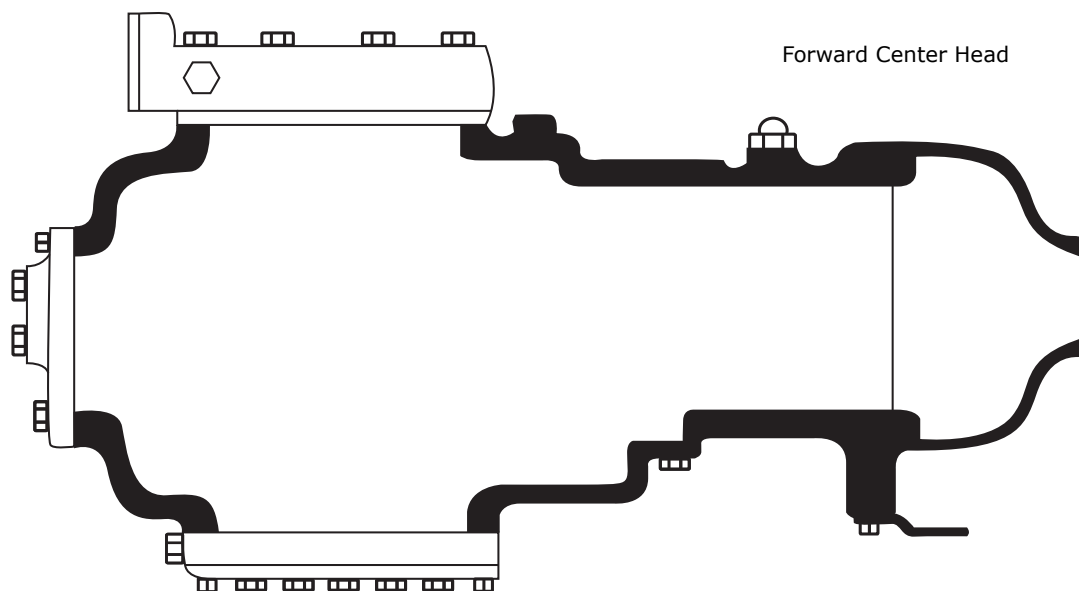


Suction Cut-Off Loaded Operation



Suction Cut-Off Unloaded Operation

06E Six Cylinder



Carrier (Carlyle) 06E

Compressor Model **06E B 275 6 0**

Digit **123 4 567 8 9 10**

Trane P/N	Carrier Model	Nom HP	Cyl	Percent Unloading	Volt	Shipping Weight
COM06081	06EX250360	20	4	50%	208/230/460-3-50/60	400
COM06082	06EX250660	20	4	50%	460-3-60	400
COM06108	06EX250100	20	4	50%	575-3-60	400
COM06083	06EX265360	25	6	33%	208/230/460-3-50/60	450
COM06084	06EX265660	25	6	33%	460-3-60	450
COM06109	06EX265100	25	6	33%	575-3-60	450
COM06085	06EX275360	30	6	33%	208/230/460-3-50/60	500
COM06086	06EX275660	30	6	33%	460-3-60	500
COM06110	06EX275100	30	6	33%	575-3-60	500
COM06087	06EX299360	40	6	33%	208/230/460-3-50/60	550
COM06088	06EX299660	40	6	33%	460-3-60	550
COM06111	06EX299100	40	6	33%	575-3-60	550
COM06143	06ET250360	20	4	50%	208/230/460-3-50/60	400
COM06144	06ET250660	20	4	50%	460-3-60	400
COM06145	06ET265360	25	6	33%	208/230/460-3-50/60	450
COM06146	06ET265660	25	6	33%	460-3-60	450
COM06147	06ET275360	30	6	33%	208/230/460-3-50/60	500
COM06148	06ET275660	30	6	33%	460-3-60	500
COM06149	06ET299360	40	6	33%	208/230/460-3-50/60	550
COM06150	06ET299660	40	6	33%	460-3-60	550
COM08852	06EA250360	20	4	None	208-230/460-3-50/60	450
COM08853	06EF175660	25	6	None	460	470
COM08854	06E6175660	25	6	33%	460	470
COM08855	06E6175360	25	6	33%	208-230/460-3-50/60	470
COM08856	06E6265360	25	6	33%	208-230/460-3-50/60	500
COM08857	06EF275660	30	6	None	460	500
COM08858	06E6275660	30	6	33%	460	500
COM08859	06E6275360	30	6	33%	208-230/460-3-50/60	500
COM08860	06E7275360	30	6	66%	208-230/460-3-50/60	500
COM08861	06E6299660	40	6	33%	460	550
COM08862	06E6299360	40	6	33%	208-230/460-3-50/60	550
COM08863	06E7299360	40	6	66%	208-230/460-3-50/60	550
COM08829	06EF265360	25	6	None	208-230/460-3-50/60	500
COM08830	06EF275360	30	6	None	208-230/460-3-50/60	500

Unloading: 4th Digit

Discharge Position	Type	Method	Steps of Unloading	Digit
A	STD	None	N/A	0
B	STD	HGBP	Electric	1
C	STD	HGBP	Electric	2
D	STD	HGBP	Pressure	1
E	STD	HGBP	Pressure	2
F	Reverse	None	N/A	0
J	Reverse	HGBP	Electric	1
K	Reverse	HGBP	Electric	2
L	Reverse	HGBP	Pressure	1
N	Reverse	HGBP	Pressure	2
X	STD	HGBP	N/A	1
2	STD	SCOU	Electric	1
3	STD	SCOU	Electric	2
4	STD	SCOU	Pressure	1
5	STD	SCOU	Pressure	2
6	Reverse	SCOU	Electric	1
7	Reverse	SCOU	Electric	2
8	Reverse	SCOU	Pressure	1
9	Reverse	SCOU	Pressure	2
T	STD	SCOU	N/A	1

SCOU - Suction Cut-Off Unloading
HGBP - Hot Gas By-Pass

Digit 8: Voltage

Digit	Voltages	Start Type	What to Use
1	575/60/3	XL/PWS	1
3	208/230/460-3-50/60	208/230 PWS/XL	3
		460XL	
4	200-3-60	XL/PWS	3
5	230-3-60	XL/PWS	3
6	460-3-60	XL/PWS	6
0	208/230-3-60	XL/PWS	3



Nomenclature Carrier 5H

Example Model No. 5H 1 2 0

Digit 12 3 4 5

Customer Model No. 5H

Carrier 5H Cross-Reference

Trane P/N	Carrier Model	Max Tons	Cyl	Percent Unloading	Shipping Weight
COM06154	5H40	40	4	100/75/50/25	740
COM06155	5H60	60	6	100/83/66/33	895
COM06156	5H80	80	8	100/87/62/37/25	1215
COM06157	5H120	120	12	100/83/66/50/33	1500

Notes: Compressor ships with unloader spring installed for R-22. A separate R-12 spring ships in the package containing the gaskets with the compressor.

Models 5H46,66,86,126 are long stroke models.
Call 1-800-872-6438 for availability.

*Tonnage Changes with application, freon and operating RPM's.

Accessory Parts

Part	Trane Part Number
Seal 5H40,60,80	CCR-SEL 0506 (Not for use with POE oil)
	CCR-SEL 0506A (Use with POE oil)
Seal 5H120	CCR-SEL 0507 (Not for use with POE oil)
	CCR-SEL 0507A (Use with POE oil)
Oil Pump 5H40,60,80	CCR-PMP 0682
Oil Pump 120	CCR-PMP 0683 (Carrier P/N 06LA6608, 1 3/4" shaft, fits compressors manufactured between 1960 and 1968, S/N 0447119 thru A901765)
Oil Pump 120	CCR-PMP 0684 (Carrier P/N 5H120-A773, 2 3/16" shaft, fits compressors manufactured since 1969, S/N A01765 or later)
Gasket Kit 5H40, 60	CCR-KIT 3064
Gasket Kit 5H80, 120	CCR-KIT 3065

Carrier 06D, 06E and 5H Accessory Parts

Table 12. Carrier Accessory Parts

City P/N	OEM Ref #	Description
CCR-BOX 0584	06DA660078	TERMINAL BOX & LID 06D
CCR-BOX 0585	06EA660095	TERMINAL BOX & LID 06E
CCR-COL 7098	EF19ZE120	120V COIL
CCR-COL 7099	EF19ZE240	240V COIL
CCR-GKT 3004	6D40-1053	06D STD HEAD GASKET
CCR-GKT 3004-M	05GA502213	06D STD HEAD GASKET, METAL
CCR-GKT 3005	6D40-1073	06D V/P, 2" BORE, GASKET
CCR-GKT 3005-M	05DA500153	06D V/P, 2" BORE, GASKET, METAL
CCR-GKT 3006	6D68-1053	06D TOP HEAD GASKET
CCR-GKT 3006-M	05GA502173	06D TOP HEAD GASKET, METAL
CCR-GKT 3007	6D75-2672	06D HGBP HEAD GASKET
CCR-GKT 3007-M	05GA502183	06D HGBP HEAD GASKET, METAL
CCR-GKT 3007-MS	05GA502223	06D SUCTION CUT-OFF HEAD GASKET, METAL
CCR-GKT 3008	06EA660049	06E TOP & HGBP HEAD GASKET
CCR-GKT 3008-M	06EA503314	06E TOP & HGBP HEAD GASKET, METAL
CCR-GKT 3009	06EA504884	06E V/P .075"
CCR-GKT 3010	06EA500204	06E STD HEAD GASKET
CCR-GKT 3010-M	06EA503304	06E STD HEAD GASKET, METAL
CCR-GKT 3011-MS	06EA503334	06E SUCCO HEAD GASKET, METAL
CCR-GKT 3012	6G65-1061	06E SUCT SVC GASKET, 175,265
CCR-GKT 3013	6D23-1421	06D DIS SVC GASKET, 818, 313
CCR-GKT 3014	6D40-1131	06D DIS SVC GASKET, 6 CYL, 06E 4 CYL
CCR-GKT 3015	6D68-1131	06E SUCT SVC GASKET, 250, 265
CCR-GKT 3016	6D75-2662	06D, 06E U/L VAL GASKET
CCR-GKT 3016-M	06EA501253	06D, 06E U/L VAL GASKET, METAL
CCR-GKT 3050	6F25-1013	06D, 06E MTR COVER GASKET
CCR-HED 0205	6D75-1204-R	06D HGBP U/L HEAD ASSY
CCR-HED 0206	06DA504614-R	06D SUCCO U/L HEAD ASSY
CCR-HED 0207	06EA500304-R	06E HGBP U/L HEAD ASSY
CCR-HED 0208	06EA503524-R	06E SUCCO U/L HEAD ASSY
CCR-HED 0209	06EA502084-R	06E REV CENTER HEAD
CCR-HTR 2206	HT36FL379-AM	06D, 06E CRANKCASE HEATER 120V
CCR-HTR 2207	HT36FL479-AM	06D, 06E CRANKCASE HEATER 240V
CCR-HTR 2248	HT36DL480	06D, 06E CRANKCASE HEATER 460V
CCR-INS 1975	06EA500672	06E INSULATOR, 3 HOLE - ON COMP, 9 LEAD
CCR-KIT 2528	6D43-172-AM	06D GASKET KIT
CCR-KIT 2529	06EA660071-AM	06E GASKET KIT
CCR-KIT 3064	5H60-502-AM	5H40, 5H46, 5H60, 5H66 GASKET KIT
CCR-KIT 3065	5H120-502-AM	5H80, 5H86, 5H120, 5H126
CCR-LED 0338	06EA660141-AM	06E 9 LEAD JUMPER KIT, BUSS BARS
CCR-MTG D-4	06DA660056	06D 4CYL MTG KIT
CCR-MTG D-6	06DA660057	06D 6CYL MTG KIT
CCR-MTG E	06EA660089	06E 4 & 6 CYL MTG KIT
CCR-PLT 2010	06DA660131-R	06D HGBP V/P ASSY- REMAN
CCR-PLT 2011	06EA660105-R	06E HGBP V/P ASSY- REMAN
CCR-PLT 2012	06DA660120-R	06D HE V/P ASSY- REMAN



Carrier 06D, 06E and 5H Accessory Parts

Table 12. Carrier Accessory Parts

City P/N	OEM Ref #	Description
CCR-PLT 2014	06EA660137- R	06E HE V/P ASSY- REMAN
CCR-PMP 0680	6D68-952-AM	06D OIL PUMP ASSY STD, 010, 020
CCR-PMP 0681	06EA660001-AM	06E OIL PUMP ASSY STD, 010, 020
CCR-PMP 0682	5H40-A372	5H40, 5H46, 5H60, 5H66, 5H80, 5H86 OIL PUMP ASSY
CCR-PMP 0683	06LA660008	5H86, 5H120, 5H126 OIL PUMP ASSY 1 3/4" DIA
CCR-PMP 0684	5H120-A773	5H86, 5H120, 5H126 OIL PUMP ASSY 2 3/16" DIA
CCR-SEL 0506	5H40-276-AM	5H40, 5H46, 5H60, 5H66, 5H80, 5H86 C/S SEAL ASSY
CCR-SEL 0506A	5H40-276A	SEAL ASSY POE OIL
CCR-SEL 0507	5H120-732-AM	5H120, 5H126 C/S SEAL ASSY
CCR-SEL 0507A	5H120-732A	SEAL ASSY POE OIL
CCR-SVC VLV-61	06DA660061	SVC VLV 2BLT 7/8", 1 5/8" BHC
CCR-SVC VLV-64	06DA660064	SVC VLV 2BLT 1 1/8", 1 3/4" BHC
CCR-SVC VLV-90	06EA660090	SVC VLV 4BLT 1 5/8", 2 1/2" BHC
CCR-SVC VLV-91	06EA660091	SVC VLV 4BLT 2 1/8", 3 1/16" BHC
CCR-TER 2001	06DA660134	06D 6 PIN TERMINAL ASSY
CCR-TER 2002	06EA660087-R	06E 9 PIN TERMINAL ASSY- REMAN
CCR-TER 2003	06EA660125-R	06E 6 PIN TERMINAL ASSY- REMAN
CCR-VAL 4280	06EA660100	06D, 06E CAPACITY CONTROL VALVE, PRESSURE
CCR-VAL 4281	06EA660135	06D, 06E CAPACITY CONTROL VALVE, ELECTRIC

LEGEND: AM = AFTERMARKET, R = REMANUFACTURED

Table 13. Technical Data Carrier Service Valves

COM P/N	OEM MODEL NUMBER	TONS (CAP)	CYL	OIL CHARGE		SERVICE VALVES		
				OZS.	ODF"	SUCTION OEM P/N	ODF"	DISCHARGE OEM P/N
COM06070	06DA8186AA0600	6.7	4	112	1 1/8	06DA660064	7/8	06DA660061
COM06071	06DX8246AA0600	8	6	160	1 1/8	06DA660064	1 1/8	06DA660064
COM06072	06DX8246AA1200	8	6	160	1 1/8	06DA660064	1 1/8	06DA660064
COM06073	06DX8246BA0600	8	6	160	1 1/8	06DA660063	1 1/8	06DA660064
COM06074	06DX8246BA1200	8	6	160	1 1/8	06DA660063	1 1/8	06DA660064
COM06075	06DX3286BA0600	9	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM06076	06DX3286BA1200	9	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM06077	06DX3376BA0600	9	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM06078	06DX3376BA1200	9	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM06079	06DX5376BA1200	12.7	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM06080	06DX5376BA0600	12.7	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM06081	06EX250360	20	4	224	1 5/8	06EA660090	1 1/8	06DA660064
COM06082	06EX250660	20	4	224	1 5/8	06EA660090	1 1/8	06DA660064
COM06083	06EX265360	25	6	304	1 5/8	06EA660090	1 3/8	06DA660065
COM06084	06EX265660	25	6	304	1 5/8	06EA660090	1 3/8	06DA660065
COM06085	06EX275360	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM06086	06EX275660	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM06087	06EX299360	40	6	304	2 1/8	06EA660091	1 5/8	06EA660090
COM06088	06EX299660	40	6	304	2 1/8	06EA660091	1 5/8	06EA660090
COM06101	06DA8186AA1200	6.7	4	112	1 1/8	06DA660064	7/8	06DA660061
COM06102	06DA8186AA0100	6.7	4	112	1 1/8	06DA660064	7/8	06DA660061

Table 13. Technical Data Carrier Service Valves

COM P/N	OEM MODEL NUMBER	TONS (CAP)	CYL	OIL CHARGE		SERVICE VALVES		
				OZS.	ODF"	SUCTION OEM P/N	ODF"	DISCHARGE OEM P/N
COM06103	06DX8246AA0100	8	6	160	1 1/8	06DA660064	1 1/8	06DA660064
COM06104	06DX8246BA0100	8	6	160	1 1/8	06DA660063	1 1/8	06DA660064
COM06105	06DX3286BA0100	9	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM06106	06DX3376BA0100	9	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM06107	06DX5376BA0100	12.7	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM06108	06EX250160	20	4	224	1 5/8	06EA660090	1 1/8	06DA660064
COM06109	06EX265160	25	6	304	1 5/8	06EA660090	1 3/8	06DA660065
COM06110	06EX275160	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM06111	06EX299160	40	6	304	2 1/8	06EA660091	1 5/8	06EA660090
COM06143	06ET250360	20	4	224	1 5/8	06EA660090	1 1/8	06DA660064
COM06144	06ET250660	20	4	224	1 5/8	06EA660090	1 1/8	06DA660064
COM06145	06ET265360	25	6	304	1 5/8	06EA660090	1 3/8	06DA660065
COM06146	06ET265660	25	6	304	1 5/8	06EA660090	1 3/8	06DA660065
COM06147	06ET275360	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM06148	06ET275660	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM06149	06ET299360	40	6	304	2 1/8	06EA660091	1 5/8	06EA660090
COM06150	06ET299660	40	6	304	2 1/8	06EA660091	1 5/8	06EA660090
COM06154	5H40	40	4	288	2 5/8	EM13FA-518	2 1/8	EM13FA-516
COM06155	5H60	60	6	336	3 1/8	EM13FA-520	3 1/8	EM13FA-520
COM06156	5H80	75	8	656	3 1/8	EM13FA-520	3 1/8	EM13FA-520
COM06157	5H120	125	12	976	4 1/8	EM13FA-524	4 1/8	EM13FA-524
COM08826	06DS5376BC3200	12.7	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM08827	06DS5376BC3600	12.7	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM08829	06EF265360	25	6	304	1 5/8	06EA660090	1 3/8	06DA660065
COM08830	06EF275360	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM08852	06EA250360	20	4	224	1 5/8	06EA660090	1 1/8	06DA660064
COM08853	06EF175660	25	6	304	2 1/8	06EA660091	1 1/8	06DA660064
COM08854	06E6175660	25	6	304	2 1/8	06EA660091	1 1/8	06DA660064
COM08855	06E6175360	25	6	304	2 1/8	06EA660091	1 1/8	06DA660064
COM08856	06E6265360	25	6	304	1 5/8	06EA660090	1 3/8	06DA660065
COM08857	06EF275660	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM08858	06E6275660	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM08859	06E6275360	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM08860	06E7275360	30	6	304	2 1/8	06EA660091	1 3/8	06DA660065
COM08861	06E6299660	40	6	304	2 1/8	06EA660091	1 5/8	06EA660090
COM08862	06E6299360	40	6	304	2 1/8	06EA660091	1 5/8	06EA660090
COM08863	06E7299360	40	6	304	2 1/8	06EA660091	1 5/8	06EA660090
COM08866	06DM3136AC3600	5	4	80	1 1/8	06DA660064	5/8	06DA660060
COM08867	06DM3136AC3200	5	4	80	1 1/8	06DA660064	5/8	06DA660060
COM08868	06DS3286BC3200	9	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM08869	06DS3286BC3600	9	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM08870	06DM3286DC3600	9	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM08871	06DM5376DC3600	12.7	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM08872	06DS5376DC3600	12.7	6	160	1 5/8	06EA660090	1 1/8	06DA660064
COM08873	06DG5376DC3600	12.7	6	160	1 5/8	06EA660090	1 1/8	06DA660064



Carrier 06D, 06E and 5H Accessory Parts

Table 13. Technical Data Carrier Service Valves

COM P/N	OEM MODEL NUMBER	TONS (CAP)	CYL	OIL CHARGE		SERVICE VALVES		
				OZS.	ODF"	SUCTION OEM P/N	ODF"	DISCHARGE OEM P/N
COM08874	06DM8246BC3600	8	6	160	1 1/8	06DA660063	1 1/8	06DA660064
COM08875	06DS8246BC3600	8	6	160	1 1/8	06DA660063	1 1/8	06DA660064
COM08876	06DS8186AC3600	6.7	4	112	1 1/8	06DA660064	7/8	06DA660061
OIL CHARGE REFERENCE INFORMATION								
OUNCES TO PINTS X .0625								
OUNCES TO QUARTS X .0312								
OUNCES TO GALLONS X .00781								
PINTS TO OUNCES X 16								
PINTS TO QUARTS X .5								
PINTS TO GALLONS X .125								
QUARTS TO PINTS X 2								
QUARTS TO OUNCES X 32								
QUARTS TO GALLONS X .25								

Copeland Compressor

Model Nomenclature - Original

9R-4R-6R

3D-4D-6D

4 R K 2 250 A T S K
1 2 3 4 567 8 9 10 11

Digit 1 — Family

Digit 2 — Type Compressor

A = Air Cooled
D = Discus Valves
R = Refrigerant Cooled (Flapper Valve)
T = Two Stage
W = Water Cooled

Digit 3 — Unloading

Cyl	Digit	Unloading
3	A, B, F, S	None
3	E, G, H, J, K, P, R, T	Moduload
4	A, B, H, J, L, T	None
4	C, E, K, N, P, R, S	2 Cyl
6	B, G, H, J, L, T	None
6	C, E, K, M, R, W	2 Cyl
6	D, F, N, P, S, Y	4 Cyl
9	A, B, C, J, S	None
9	P, T	1 Cyl

Digit 4 — Variations

Numbers or letters that indicates major changes within a family series (example-short head/tall head)

Digit 5, 6, 7 — Horse Power

100 = 10HP	270 = 27HP
150 = 15HP	300 = 30HP
200 = 20HP	350 = 35HP
220 = 22HP	400 = 40HP
250 = 25HP	

Digit 8 — Oil

A = Alkylbenzene
E = Polyol Ester
L = Less Oil
O = Mineral

Digit 9 - Motor Type

T = 3 Lead Single Voltage
6 Lead Part Winding (575v)
9 Lead Dual Voltage
E = Star-Delta
F = 6 Lead Motors
Part Winding Or Across The Line

Digit 10 — Overloads

A = One External Protector
F = One Internal Protector
H = Internal Thermostats/External Protector
L = Internal Thermostats/3 External Protectors
S = Internal Thermal Protector/Control Module
A = One External Protector
F = One Internal Protector
H = Internal Thermostats/External Protector

Digit 11 — Electrical

C = 208/230-3-60
D = 460-3-60
E = 575-3-60
K = 208/230/460-3-60
N = 230/460-3-60
U = 208-3-60



Copeland Compressor

Model Nomenclature - Interim Disc Type Valve

3D-4D-6D

4 R K 3 A 250 E T S K
1 2 3 4 5 6 7 8 9 10 11 12

Digit 1 — Family

Digit 2 — Type Compressor

D = Discus Valves

Digit 3 — Unloading

Cyl	Digit	Unloading
3	A, B, F, S	None
3	E, G, H, J, K, P, R, T	Moduload
4	A, B, H, J, L, T	None
4	C, E, K, N, P, R, S	2 Cyl
6	B, G, H, J, L, T	None
6	C, E, K, M, R, W	2 Cyl
6	D, F, N, P, S, Y	4 Cyl

Digit 12 — Electrical

C = 208/230-3-60
D = 460-3-60
E = 575-3-60
K = 208/230/460-3-60
N = 230/460-3-60
U = 208-3-60

Digit 4 — Variations

Numbers or letters that indicates major changes within a family series (example-short head/tall head)

Digit 5 — Delta Reed

Digit 6, 7, 8 — Horse Power

050 = 5HP	200 = 20HP
060 = 6HP	220 = 22HP
075 = 7½HP	250 = 25HP
090 = 9HP	270 = 27HP
100 = 10HP	300 = 30HP
120 = 12HP	350 = 35HP
150 = 15HP	400 = 40HP

Digit 9 — Oil

A = Alkylbenzene
E = Polyol Ester
L = Less Oil
O = Mineral

Digit 10 — Motor Type

T = 3 Lead Single Voltage
6 Lead Part Winding (575v)
9 Lead Dual Voltage
E = Star-Delta
F = 6 Lead Motors
Part Winding Or Across The Line

Digit 11 — Overloads

A = One External Protector
F = One Internal Protector
H = Internal Thermostats/External Protector
L = Internal Thermostats/3 External Protectors
S = Internal Thermal Protector/Control Module

Model Nomenclature - Latest Disc Type Valve

3D-4D-6D

3 D S 3 R 17 M E T F C

1 2 3 4 5 67 8 9 10 11 12

Digit 1 — Family

Digit 2 — Type compressor

D = Discus Valves

Digit 3 — Unloading

Cyl	Digit	Unloading
3	A, B, F, S	None
3	E, G, H, J, K, P, R, T	Moduload
4	A, B, H, J, L, T	None
4	C, E, K, N, P, R, S	2 Cyl
6	B, G, H, J, L, T	None
6	C, E, K, M, R, W	2 Cyl
6	D, F, N, P, S, Y	4 Cyl

Digit 12 — Electrical

C = 208/230-3-60
D = 460-3-60
E = 575-3-60
K = 208/230/460-3-60
N = 230/460-3-60
U = 208-3-60

Digit 4 — Variations

Numbers or letters that indicates major changes within a family series (example-short head/tall head)

Digit 5 — Application range

R = High temp, 45/130
S = Medium temp, 20/120
F = Low temp, 25/105

Digit 6, 7 — Nominal capacity

Digit 8 — Capacity

K = X1,000
M = X10,000

Digit 9 — Oil

A = Alkylbenzene
E = Polyol Ester
L = Less Oil
O = Mineral

Digit 10 — Motor type

T = 3 Lead Single Voltage
6 Lead Part Winding (575v)
9 Lead Dual Voltage
E = Star-Delta
F = 6 Lead Motors
Part Winding Or Across The Line

Digit 11 — Overloads

A = One External Protector
F = One Internal Protector
H = Internal Thermostats/External Protector
L = Internal Thermostats/3 External Protectors
S = Internal Thermal Protector/Control Module



Copeland Air Conditioning Compressors

Copeland 4R-4D-6R-6D

Compressor Model 6RA 3000 T S K

Table 14.

Trane P/N	Copeland Model	Nom HP	Percent Unloading	Volt	Shipping Weight
COM06089	4RA*2000TSK	20	None	208/230/460-3-60	398
COM06090	4RE*2000TSK	20	50%	208/230/460-3-60	403
COM06091	4RH*2500TSK	25	None	208/230/460-3-60	410
COM06092	4RK*2500TSK	25	50%	208/230/460-3-60	415
COM06097	4RJ1 3000TSK	30	None	208/230/460-3-60	470
COM06098	4RR1 3000TSK	30	50%	208/230/460-3-60	470
COM06093	6RA*3000TSK	30	None	208/230/460-3-60	475
COM06094	6RE*3000TSK	30	33%	208/230/460-3-60	479
COM06095	6RH*3500TSK	35	None	208/230/460-3-60	485
COM06096	6RK*3500TSK	35	33%	208/230/460-3-60	484
COM06099	6RJ*4000TSN	40	None	230/460-3-60	535
COM06100	6RR*4000TSN	40	33%	230/460-3-60	535
COM06112	4RA3-2000-TSE	20	None	575/60/3	395
COM06113	4RE2-2000-TSE	20	50%	575/60/3	395
COM06114	4RH1-2500-TSE	25	None	575/60/3	415
COM06115	4RK2-2500-TSE	25	50%	575/60/3	415
COM06116	4RJ1-3000-TSE	30	None	575/60/3	470
COM06117	4RR1-3000-TSE	30	50%	575/60/3	470
COM06118	6RA4-3000-TSE	30	None	575/60/3	475
COM06119	6RE2-3000-TSE	30	33%	575/60/3	475
COM06120	6RH1-3500-TSE	35	None	575/60/3	485
COM06121	6RK2-3500-TSE	35	33%	575/60/3	485
COM06122	6RJ1-4000-TSE	40	None	575/60/3	535
COM06123	6RR2-4000-TSE	40	33%	575/60/3	535
COM08491	4DK1-2500-TSK	25	50%	208/230/460-3-60	445
COM08492	4DR1-3000-TSK	30	50%	208/230/460-3-60	450
COM08493	4DR3-3000-TSK	30	50%	208/230/460-3-60	450
COM08494	6DH1-3500-TSK	35	None	208/230/460-3-60	520
COM08495	6DK1-3500-TSK	35	33%	208/230/460-3-60	520
COM08496	6DP1-3500-TSK	35	66%	208/230/460-3-60	520
COM08497	6DP3-3500-TSK	35	66%	208/230/460-3-60	520
COM08498	6DR1-4000-TSN	40	33%	230/460-3-60	570
COM08499	6DS1-4000-TSN	40	66%	230/460-3-60	570
COM08500	6DS3-4000-TSN	40	66%	230/460-3-60	570
COM08501	4DB3-2200-TSK	22	None	208/230/460-3-60	435
COM08502	4DC3-2200-TSK	22	50%	208/230/460-3-60	435
COM08503	4DH1-2500-TSK	25	None	208/230/460-3-60	445
COM08504	4DH3-2500-TSK	25	None	208/230/460-3-60	445
COM08505	4DK3-2500-TSK	25	50%	208/230/460-3-60	445
COM08506	4DJ1-3000-TSK	30	None	208/230/460-3-60	450

Copeland Air Conditioning Compressors

Table 14.

Trane P/N	Copeland Model	Nom HP	Percent Unloading	Volt	Shipping Weight
COM08507	4DJ3-3000-TSK	30	None	208/230/460-3-60	450
COM08508	6DH3-3500-TSK	35	None	208/230/460-3-60	520
COM08509	6DK3-3500-TSK	35	33%	208/230/460-3-60	520
COM08510	6DJ1-4000-TSN	40	None	230/460-3-60	570
COM08511	6DJ3-4000-TSN	40	None	230/460-3-60	570
COM08512	6DR3-4000-TSN	40	33%	230/460-3-60	570
COM08877	3DT3-1500-TFD	15	Variable	460-3-60	425
COM08878	4DK1-2500-FSD	25	50%	460-3-60	450
COM08879	6DW3-3000-TSK	30	33%	208-230/460-3-60	530
COM08880	6DW3-3000-FSD	30	33%	460-3-60	530
COM08881	6DP3-3500-FSD	35	66%	460-3-60	550
COM08882	6RK2-350A-TSK	35	33%	208-230/460-3-60	550
COM08883	6RP2-350A-TSK	35	66%	208-230-460-3-60	550
COM08884	6RS2-400A-TSN	40	66%	230/460-3-60	570
COM08885	6RR2-4000-FSU	40	33%	200-3-60	570
COM08886	6DR3-4000-FSD	40	33%	460-3-60	565
COM08887	6DS3-4000-FSU	40	66%	200-3-60	565
COM08888	6RS2-4000-TSN	40	66%	230/460-3-60	570
COM08889	6DY3-3000-TSK	30	66%	208-230/460-3-60	550
COM08828	6RP2-3500-TSK	35	66%	208-230/460-3-60	535



Copeland Refrigeration Models (Delta Reed)

Table 15.

Trane P/N	Model #	Old Model #	Nom HP	Percent Unloading	Volt	Shipping Weight
COM09795	4DL3F63KETSK	4DL3150ETSK	15	None	208-230/460/3/60	550
COM09796	4DT3F76KETSK	4DT3220ETSK	22	None	208-230/460/3/60	550
COM09797	3DS3F46KETFC	3DS3100ETFC	10	None	208-230/3/60	510
COM09798	3DS3R17METFC	3DS3150ETFC	15	None	208-230/3/60	520
COM09799	3DS3R17METFD	3DS3150ETFD	15	None	460/3/60	520
COM09800	4DK3R22METSK	4DK3250ETSK	25	50%	208-230/460/3/60	550
COM09801	3DB3F33KETFC	3DB3075ETFC	7.5	None	208-230/3/60	500
COM09802	3DS3R17MOTFD	3DS31500TFD	15	None	460/3/60	520
COM09803	3DS3F46KETFD	3DS3100ETFD	10	None	460/3/60	510
COM09804	4DS3F76KETSK	4DS3220ETSK	22	50%	208-230/460/3/60	550
COM09805	4DA3R12METSK	4DA3100ETSK	10	None	208-230/460/3/60	550
COM09806	4DP3F63KETSK	4DP3150ETSK	15	50%	208-230/460/3/60	550
COM09807	3DA3R10METFC	3DA3075ETFC	7.5	None	208-230/3/60	500
COM09808	3DB3R12METFC	3DB3100ETFC	10	None	208-230/3/60	510
COM09809	3DF3F40KETFC	3DF3090ETFC	9	None	208-230/3/60	510
COM09810	3DA3F28KETFC	3DA3060ETFC	6	None	208-230/3/60	500
COM09811	4DE3R18METSK	4DE3200ETSK	20	50%	208-230/460/3/60	550
COM09812	3DB3R12METFD	3DB3100ETFD	10	None	460/3/60	510
COM09813	3DS3R17MOTFC	3DS31500TFC	15	None	208-230/3/60	520
COM09814	3DT3R17MOTFD	3DT31500TFD	15	Moduload	460/3/60	520
COM09815	4DR3R28METSK	4DR3300ETSK	30	50%	208-230/460/3/60	550
COM09816	4DA3F47KETSK	4DA3101ETSK	10	None	208-230/460/3/60	550
COM09817	3DF3R15METFC	3DF3120ETFC	12	None	208-230/3/60	510
COM09818	3DB3F33KETFD	3DB3075ETFD	7.5	None	460/3/60	500
COM09916	6DL3F93KETSK	6DL3270ETSK	27	None	208-230/460/3/60	630
COM09917	6DT3F11METSK	6DT3300ETSK	30	None	208-230/460/3/60	630

Copeland 4R - 4D - 6R - 6D

Example Model No. 6 R H * 3500 T S K

Digit 1 2 3 4 5678 9 10 11

Customer Model No.R

Digit 1 — 4R/6R Family

6 = Transfer Terminal box, crankcase heater and unloader

4 - 4 Cylinder

6 - 6 Cylinder

Digit 2 — Motor cooling

R = A/C applications will be

A = Air

R = Refrigerant

W= Water

D = Discus Valves

Digit 3 — Unloading type

H =All unloading is electric

Digit 4 — Design sequence

* = Only important for replacing internal parts

Digit 5,6,7,8 — Motor horsepower

3500 = Must match

Digit 9 — Motor phase

T = Indicates 3 phase motor

Digit 10 — Internal motor protection

S= Indicates internal motor sensors requires external module

Digit 11 — Motor voltage

K= Service compressors are 9 lead, 208/230/460 motors suitable for part wind or across the line start on

208/230V, and across the line only on 460V

"K" is also suitable for 200/400/50/3

Identify compressors that have no I.D. tag

1. Voltage to compressor
2. How many heads on compressor?
3. Is there a head bolt in the center of the head?
4. Is the thickness of the head approximately 1-3/4" or 3-3/4"?
5. How many electrical terminals on compressor?
6. Is one contactor or two powering terminals?

If two contactors are being used, do all six power leads attach to six separate power terminals on compressor?

Are there jumper bars between power terminals?

7. How many unloader valves are on compressor?
8. What is location of unloaders in reference to electric terminal plate?
9. Get all information off of unit name tag.
Manufacturer
Model #
Serial #
Voltage
Amperage of compressor
How many compressors in unit?
10. Any available casting numbers on the compressor?



Copeland Air Conditioning Accessory Parts

Table 16. Copeland Air Conditioning Accessory Parts

City P/N	OEM Ref #	Description
CCR-BOX 0583	062-0209-00-AM	4/6 TERMINAL BOX
CCR-COV 0583	005-0345-00-AM	4/6 TERMINAL BOX COVER
CCR-ELECT KIT	#5017-AM	4/6 INSULATOR JUMPER KIT
CCR-BOX 0583 A	AM	4/6 TERMINAL BOX ASSY, LESS MODULE
CCR-CNT 1632	998-0524-00-AM	T.I. 31AA1600E-EX DUAL VOLTAGE MODULE, BRKT
CCR-GKT 2989	020-0629-00	4R/6R HEAD GASKET
CCR-GKT 2989-D	020-0600-00	4D/6D HEAD GASKET
CCR-GKT 2990	020-0626-00	4R/6R VALVE PLATE GASKET 2 1/2 BORE
CCR-GKT 2990-D	020-0664-07	4D/6D VALVE PLATE GASKET 2 1/2 BORE
CCR-GKT 2991	020-0627-03	4R/6R VALVE PLATE GASKET 2 11/16 BORE
CCR-GKT 2991-D	020-0664-03	4D/6D VALVE PLATE GASKET 2 11/16 BORE
CCR-GKT 2992	020-0628-01	4R/6R VALVE PLATE GASKET 2 15/16 BORE
CCR-GKT 2992-D	020-0664-05	4D/6D VALVE PLATE GASKET 2 15/16 BORE
CCR-GKT 2993-D	020-0616-00	4D/6D HEAD GASKET - UNLOADING
CCR-GKT 3012	020-0006-47	SUCT VALVE 4R/4D 25, 30 HP, ALL 6R/6D
CCR-GKT 3017	020-0783-00	UNLOADER VALVE 4R/4D AND 6R/6D
CCR-GKT 3017-M		UNLOADER VALVE 4/6 METAL
CCR-GKT 3018	020-0012-09	DISCHARGE VALVE
CCR-GKT 3019	020-0006-46	SUCT VALVE 4R/4D 10, 20 HP
CCR-GKT 3075	020-0755-00	4/6 MOTOR COVER GASKET
CCR-HED 0200	N/A-R	4R/6R U/L HEAD ASSY
CCR-HED 0200-T	998-0119-18-R	4R/6R TALL U/L HEAD ASSY
CCR-HED 0200-D	998-0119-24-R	4D/6D U/L HEAD ASSY
CCR-HED 0200-DT	998-0119-36-R	4D/6D TALL U/L HEAD ASSY
CCR-HTR 2202	518-0002-03-AM	C/C HEATER 120V IMMERSION
CCR-HTR 2203	518-0002-02-AM	C/C HEATER 240V IMMERSION
CCR-HTR 2204	998-0518-00-AM	C/C HEATER 120V (DEEP SUMP) INSERTION
CCR-HTR 2205	998-0518-01-AM	C/C HEATER 240V (DEEP SUMP) INSERTION
CCR-HTR 2212	918-0028-00	120V INSERTION, USES WELL
CCR-HTR 2213	918-0028-01	240V INSERTION, USES WELL
CCR-HTR WELL	030-0186-00	HTR WELL
CCR-KIT 2527	N/A-AM	4R/6R GASKET KIT
CCR-KIT 2526	N/A-AM	4D/6D GASKET KIT
CCR-MTG 42025	527-0037-00	MTG KIT 4CYL 20-25 HP
CCR-MTG 46030	527-0042-00	MTG KIT 4CYL 30 HP, 6CYL 30 HP
CCR-MTG 60035	527-0057-00	MTG KIT 6CYL 35 HP
CCR-MTG 60040	527-0080-00	MTG KIT 6CYL 40 HP
CCR-PLT 2018	998-0661-52-R	4R/6R V/P ASSY 2 1/2 DIA
CCR-PLT 2019	998-0661-51-R	4R/6R V/P ASSY 2 11/16 DIA
CCR-PLT 2020	998-0661-60-R	4R/6R V/P ASSY 2 15/16 DIA
CCR-PLT 2021	998-1661-27	4D/6D V/P ASSY STANDARD
CCR-PLT 2022	998-1661-28	4D/6D V/P ASSY UNLOADER
CCR-PMP 0649	998-0008-33-AM	OIL PUMP SENTRONIC APPLICATION
CCR-SGT GLS	998-0002-02	SIGHT GLASS
CCR-SGT GLS RG	020-0003-03	SIGHT GLASS O-RING #125
CCR-SVC VLV-07	998-0510-07	SVC VLV 4 BLT 1 5/8", 2 1/2" BHC

Copeland Air Conditioning Accessory Parts

Table 16. Copeland Air Conditioning Accessory Parts

City P/N	OEM Ref #	Description
CCR-SVC VLV-09	998-0510-09	SVC VLV 2 BLT 1 1/8", 2 3/4" BHC
CCR-SVC VLV-11	998-0510-11	SVC VLV 2 BLT 1 3/8", 2 3/4" BHC
CCR-SVC VLV-20	998-0510-20	SVC VLV 4 BLT 2 1/8", 3 1/16" BHC
CCR-SVC VLV-46	998-0510-46	SVC VLV 2 BLT 1 3/8", 2 3/4" BHC, ROTOLOCK
CCR-TER 2004	521-0142-00-R	9 LEAD TERMINAL ASSEMBLY
CCR-VAL 4287	998-0212-02	UNLOADER VALVE WITH COIL 120V
CCR-VAL 4288	998-0212-03	UNLOADER VALVE WITH COIL 240V

LEGEND: AM = AFTERMARKET, R = REMANUFACTURED

Table 17. Technical Data Copeland Service Valves

COM P/N	OEM MODEL NUMBER	TONS (CAP)	CYL	OIL CHARGE OZS.	SERVICE VALVES			
					SUCT	OEM P/N	DISCH	OEM P/N
COM06089	4RA3-2000-TSK	20	4	135	1 5/8 SWT	998-0510-07	1 1/8 SWT	998-0510-09
COM06090	4RE2-2000-TSK	20	4	135	1 5/8 SWT	998-0510-07	1 1/8 SWT	998-0510-09
COM06091	4RH1-2500-TSK	25	4	135	2 1/8 SWT	998-0510-20	1 1/8 SWT	998-0510-09
COM06092	4RK2-2500-TSK	25	4	135	2 1/8 SWT	998-0510-20	1 1/8 SWT	998-0510-09
COM06093	6RA4-3000-TSK	30	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06094	6RE2-3000-TSK	30	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06095	6RH1-3500-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06096	6RK2-3500-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06097	4RJ1-3000-TSK	30	4	245	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM06098	4RR1-3000-TSK	30	4	245	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM06099	6RJ1-4000-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06100	6RR2-4000-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06112	4RA3-2000-TSE	20	4	135	1 5/8 SWT	998-0510-07	1 1/8 SWT	998-0510-09
COM06113	4RE2-2000-TSE	20	4	135	1 5/8 SWT	998-0510-07	1 1/8 SWT	998-0510-09
COM06114	4RH1-2500-TSE	25	4	135	2 1/8 SWT	998-0510-20	1 1/8 SWT	998-0510-09
COM06115	4RK2-2500-TSE	25	4	135	2 1/8 SWT	998-0510-20	1 1/8 SWT	998-0510-09
COM06116	4RJ1-3000-TSE	30	4	245	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM06117	4RR1-3000-TSE	30	4	245	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM06118	6RA4-3000-TSE	30	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06119	6RE2-3000-TSE	30	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06120	6RH1-3500-TSE	35	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06121	6RK2-3500-TSE	35	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06122	6RJ1-4000-TSE	40	6	255	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM06123	6RR2-4000-TSE	40	6	255	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM08491	4DK1-2500-TSK	25	4	135	1 5/8 SWT	998-0510-07	1 1/8 SWT	998-0510-09
COM08492	4DR1-3000-TSK	30	4	245	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM08493	4DR3-3000-TSK	30	4	245	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM08494	6DH1-3500-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08495	6DK1-3500-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08496	6DP1-3500-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08497	6DP3-3500-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08498	6DR1-4000-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08499	6DS1-4000-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08500	6DS3-4000-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*



Copeland Air Conditioning Accessory Parts

Table 17. Technical Data Copeland Service Valves

COM P/N	OEM MODEL NUMBER	TONS (CAP)	CYL	OIL CHARGE		SERVICE VALVES		
				OZS.	SUCT	OEM P/N	DISCH	OEM P/N
COM08501	4DB3-2200-TSK	22	4	135	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM08502	4DC3-2200-TSK	22	4	135	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM08503	4DH1-2500-TSK	25	4	135	1 5/8 SWT	998-0510-07	1 1/8 SWT	998-0510-09
COM08504	4DH3-2500-TSK	25	4	135	1 5/8 SWT	998-0510-07	1 3/8 SWT	998-0510-11
COM08505	4DK3-2500-TSK	25	4	135	1 5/8 SWT	998-0510-07	1 3/8 SWT	998-0510-11
COM08506	4DJ1-3000-TSK	30	4	245	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM08507	4DJ3-3000-TSK	30	4	245	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-11
COM08508	6DH3-3500-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08509	6DK3-3500-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08510	6DJ1-4000-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08511	6DJ3-4000-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08512	6DR3-4000-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08828	6RP2-3500-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46*
COM08877	3DT3-1500-TFD	15	3	125	1 5/8 SWT	998-0510-07	1 1/8 SWT	998-0510-02
COM08878	4DK1-2500-FSD	25	4	135	1 5/8 SWT	998-0510-07	1 18 SWT	998-0510-09
COM08879	6DW3-3000-TSK	30	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46
COM08880	6DW3-3000-FSD	30	6	140	2 1/8 SWT	998-5510-20	1 3/8 SWT	998-0510-46
COM08881	6DP3-3500-FSD	35	6	140	2 1/8 SWT	998-5510-20	1 5/8 SWT	998-0510-46*
COM08882	6RK2-350A-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08883	6RP2-350A-TSK	35	6	140	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08884	6RS2-400A-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08885	6RR2-4000-FSU	40	6	255	2 1/8 SWT	998-5510-20	1 5/8 SWT	998-0510-46*
COM08886	6DR3-4000-FSD	40	6	255	2 1/8 SWT	998-5510-20	1 5/8 SWT	998-0510-46*
COM08887	6DS3-4000-FSU	40	6	255	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08888	6RS2-4000-TSN	40	6	255	2 1/8 SWT	998-0510-20	1 5/8 SWT	998-0510-46*
COM08889	6DY3-3000-TSK	30	6	140	2 1/8 SWT	998-0510-20	1 3/8 SWT	998-0510-46

Note: * = REQUIRES ROTOLOCK ADAPTER

OIL CHARGE REFERENCE INFORMATION

OUNCES TO PINTS X .0625

OUNCES TO QUARTS X .0312

OUNCES TO GALLONS X .00781

PINTS TO OUNCES X 16

PINTS TO QUARTS X .5

PINTS TO GALLONS X .125

QUARTS TO PINTS X 2

QUARTS TO OUNCES X 32

QUARTS TO GALLONS X .25

"J" Compressors

Recent changes in the model numbering system for York compressors are presented here. There are presently (1996) two (2) lines of reciprocating compressors being manufactured by York, the "J" (large H.P.) (from 60 through 160 horsepower), and the "Z" compressor which is in the 35-65 H.P. range, then there are different strokes to these machines as well, thus it is imperative that all of the data be recorded accurately, so to follow the sequence.

Digit 1 — A letter that indicates the compressor series

Digit 2 — A letter that indicates single (S) or compound (C) machine

Digit 3 — A numeral indicating the number of active cylinders (4-6-8)

Digit 4 — A numeral which indicates the stroke (as follows) on a 468cyl machine

3= 3.2"3.0"3.1"

4= 3.8"3.6"3.7"

Digit 5 — A letter indicating the style (E or F)

Digit 6 — A letter which indicates the motor size as follows

M 60 H.P.
P 80 H.P.
Q 90 H.P.
S 115 H.P.
T 135 H.P.
V 160 H.P.
N 70 H.P.

Digit 7 — Numerals which indicate voltage (sometimes will indicate more than 1)

17 200-3-60
28 230-3-60
40 380-3-60
43 440-3-50
46 460-3-60
50 380/415/3-50
58 575-3-60
59 190-3-50
63 220-3-50
64 346-3-50
70 500-3-50

Digit 8 — A letter which indicates the motor vendor

L Leroy Somer
S A.O. Smith

Thus a sample compressor model number might be JS64E-P46S which would translate to a Model "J" compressor single stage, six cylinder long stroke series "E" with a 80 H.P. motor installed which will operate on 460-3-60 volts and was made by A.O. Smith.

Moving on now to the model "Z" compressor, much is the same as with the "J", and here again it is imperative that all of the data be recorded, for here we have a machine again that may have a different motor, or displacement, so all of the information please.

"Z" Compressor

Digit 1 — A letter that indicates the series of compressor

Digit 2 — A numeral that will indicate the number of active cylinders

Digit 3 — A letter that will indicate the displacement as follows

H (4cyl, 2.7" bore X 2.4" Stroke)
J (4cyl, 2.9" bore X 2.4" Stroke)
K(4cyl, 2.7" bore X 3.0" Stroke)
M(4cyl, 2.9" bore X 3.0" Stroke)
N(6cyl, 2.7" bore X 2.4" Stroke)
R(6cyl, 2.9" bore X 2.4" Stroke)
S(6cyl, 2.7" bore X 3.0" Stroke)
W (6cyl, 2.9" bore X 3.0" Stroke)
AE(6cyl, 3.1" bore X 3.0" Stroke)

Digit 4 — A numeral indicating how many steps of unloading (0-1-2)

Digit 5 — A letter that will indicate which style compressor (A or B right now)

Digit 6 — A numeral indicating what size motor is installed as follows

B. 35 H.P.
C. 45 H.P.
D. 55 H.P.
E. 65 H.P.

Digit 7 — A letter to indicate the voltage code of the machine as follows

17 200-3-60
28 230-3-60
40 380-3-60
43 440-3-50
46 460-3-60
50 380/415-3-50
58 575-3-60
59 190-3-50
63 220-3-50
64 346-3-50
70 500-3-50

Digit 8 — Tells which vendor made the motor

L Leroy Somers
S A.O. Smith



Copeland Air Conditioning Accessory Parts

York

	<u>JS**E</u>	<u>JS**F</u>
Box	364-47342	364-47606
Cover	064-48993	064-47459
Module (240 V)	N/A	025-28722

JK*M

Box used with 200v motor M,N,P,Q,S	364-48175-000
Cover	064-47459-000
Module 115/230	025-32838-000
Box used with 460v motor M, N, P, Q, S, T, V and high eff. motor M, N, P, Q,S,T, V	364-48175-000
Cover	064-47459-000
Module 115/230	364-48175-000
Box used with 200v high eff motor M,N,P,Q,S	364-48704-000
Cover	064-47459-000
Module 115/230	364-48175-000

JG

Box	664-48175-000
Cover	064-47459-000
Module 240 V	025-32539-000

P

Box and cover same as J, K, & M	
Module 115/230	025-35149-000

Technical Data

Section	Section Page Number	Subject Page
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Compressor Unloading

Models A, B, E and F

Unloading

The Model A, B, E and F compressor families use internal hydraulic unloaders. They may be internally activated in response to suction pressure changes or externally from the control system. The unloaders are activated to load. The sequence is shown in the following tables and figures.

Model E Open and Hermetic

Cylinder Number Loading Sequence				
Loading Sequence	4 Cyl	5 Cyl	6 Cyl	8 Cyl
Unloaded	2	3, 4	3, 4	1, 2, 7
1st Stage	2, 1	3, 4, 5	3, 4, 5	1, 2, 7, 8
2nd Stage	2, 1, 3	3, 4, 5, 6	3, 4, 5, 6	1, 2, 7, 8, 5, 6
3rd Stage	ALL	ALL	ALL	ALL

Model E Open and Hermetic

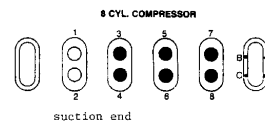
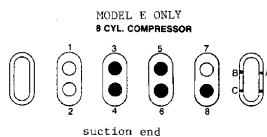
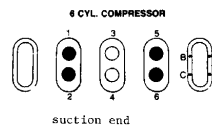
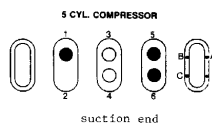
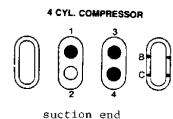
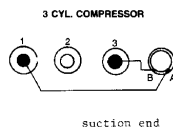
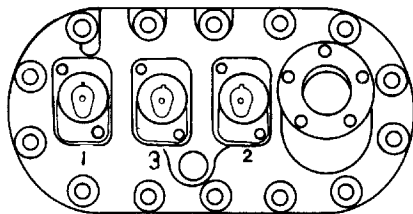
Cylinder Number Loading Sequence					
Loading Sequence	3 Cyl	4 Cyl	5 Cyl	6 Cyl	8 Cyl
Unloaded	2	2	3, 4	3, 4	1, 2
1st Stage	2, 1	2, 1	3, 4, 5	3, 4, 5	1, 2, 5, 6
2nd Stage	2, 1, 3	2, 1, 3	3, 4, 5, 6	3, 4, 5, 6	1, 2, 5, 6, 7, 8
3rd Stage	NA	ALL	ALL	ALL	ALL

Model A and B Open

Cylinder Number Loading Sequence			
Loading Sequence	4 Cyl	6 Cyl	8 Cyl
Unloaded	2	3, 4	1, 2
1st Stage	2, 1	3, 4, 5	1, 2, 5, 6
2nd Stage	2, 1, 3	3, 4, 5, 6	1, 2, 5, 6, 7, 8
3rd Stage	ALL	ALL	ALL

Note: Cylinder numbers are cast into the housing on most compressors. The following diagram shows the location of cylinders.

Power is applied on electric unloaders to load the cylinders.



Models E and F

Model E and F Unloading Types

There are three types of unloading available on the Model E and Model F, open and semihermetic compressors.

1. Suction unloading,
2. Electric unloading,
3. Electric unloading with remote mounted unloaders.

The compressor unloading sequence and the corresponding cylinders which are unloaded are shown in Figure 50.

Suction Unloading (See Figure 51)

The suction unloading option utilizes an internally mounted control device which provides automatic capacity control and permits the compressor to start unloaded. Loading and unloading of the compressor is actuated by variations in the suction pressure, but the unloader mechanism operates hydraulically from the pressure developed by the lubrication system oil pump. The capacity control device will operate over a 9 to 10 psi range with three capacity modulation steps. The setting at which the unloading starts can be adjusted, but the differential between steps cannot be adjusted.

To adjust the suction pressure actuated unloader, remove the hexagon head cover and gasket shown in Figure 51. Turn the adjusting screw shown in Figure 52. Turning the adjustment screw clockwise will raise the setting at which unloading will start. If the suction pressure is being held constant by the system, turning the adjustment screw clockwise will cause the compressor to unload. The loading or unloading of the compressor can be detected audibly or by measuring a change in amperage.

Electric Unloading (See Figures 53 and 54)

The electric unloading solenoid valves, either handhole mounted or remote mounted solenoid valves, are actuated by an electrical signal to the unloader solenoid valve. The solenoid operates the valve to supply lubrication system oil pressure to the hydraulic unloader mechanisms to load or unload the compressor.

The electric unloaders are intended to be used with systems which use a temperature control device to electrically load and unload the compressor.

Compressor Unloading

Figure 50. Model E and F Compressor Capacity Control Sequence and Cylinder Loading and Unloading

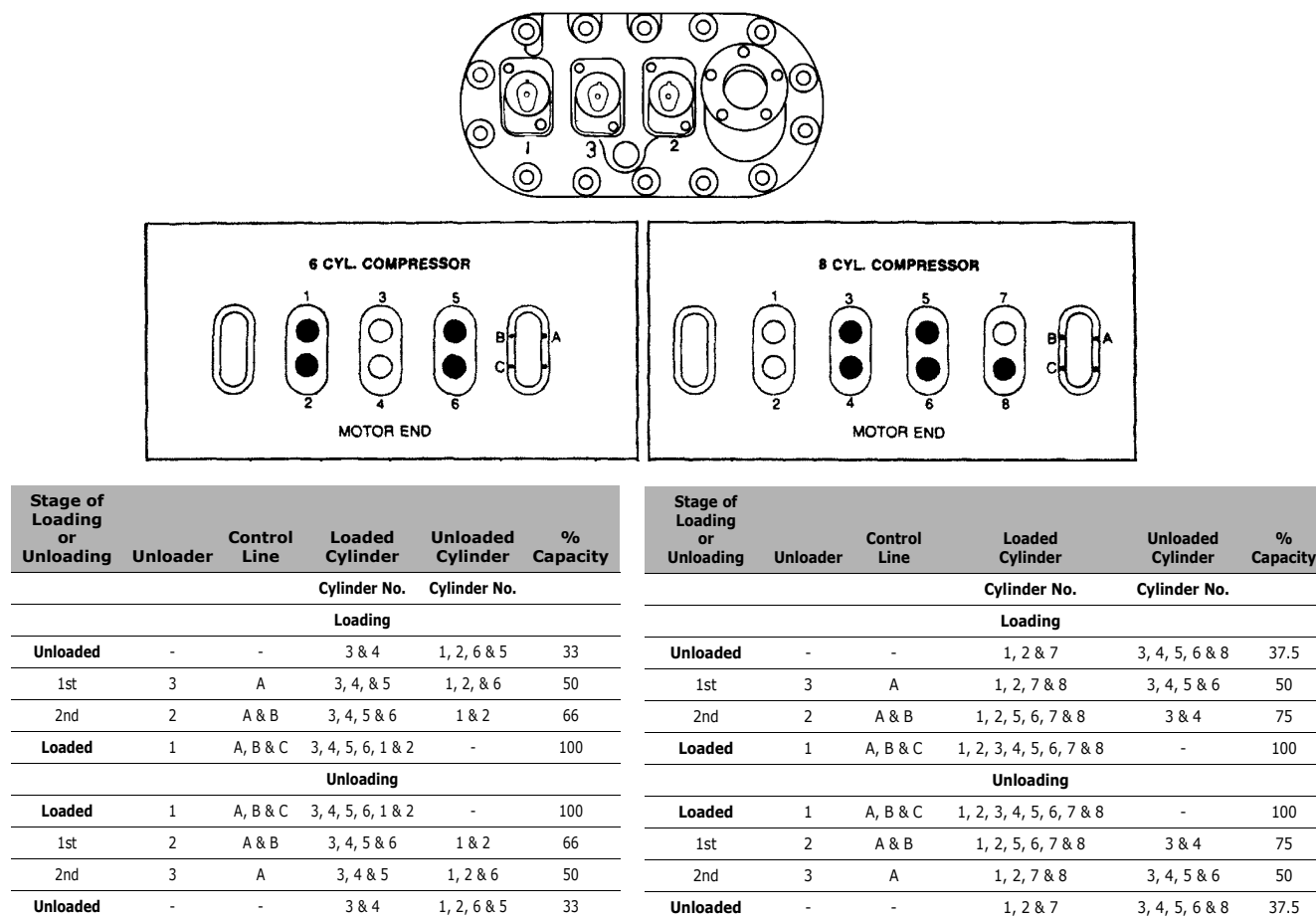
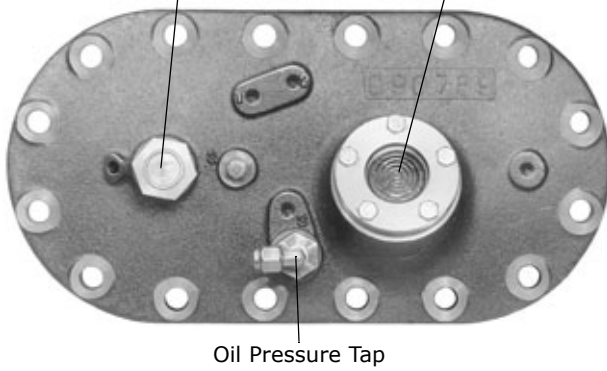
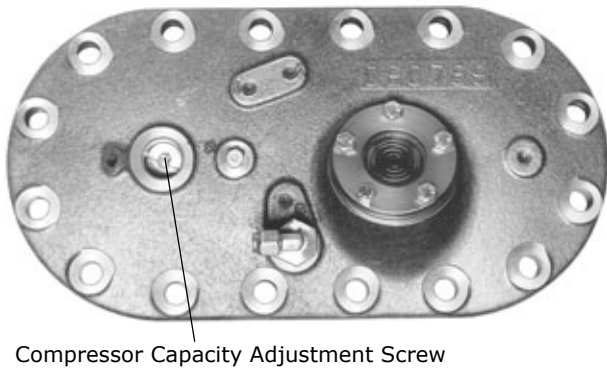
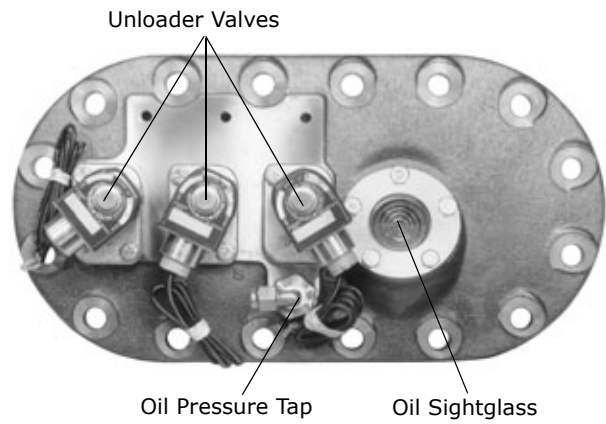
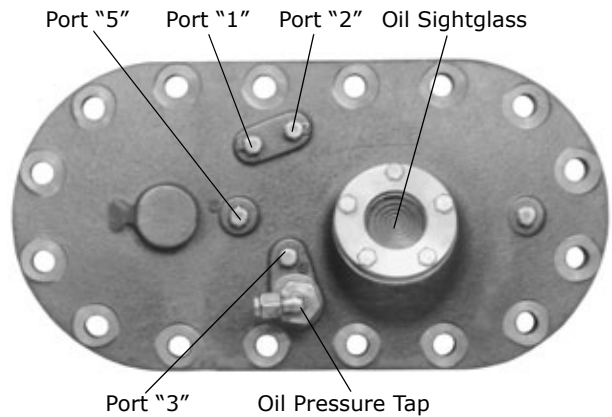


Figure 51. Suction Unloading Handhole Cover

Suction Pressure Unloading
Adjustment Under This Nut

Oil Sightglass


Figure 52. Suction Unloading Handhole Cover

Figure 53. Electric Handhole Mounted Unloading

Figure 54. Electric Unloading with Remote Mounted Solenoid


Model M and R

Model M and R Compressor Unloading

The Model M and R compressor families use cylinder head unloaders activated by an electrical signal from the control system. The unloader solenoid valves are energized to unload the cylinders.

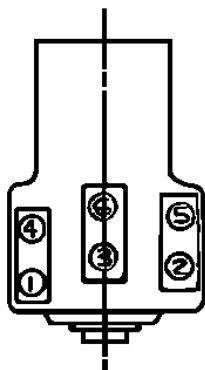
Two-Step Unloading. These compressors have two unloader heads. Only one head is active, Cylinders 1 and 3.

Number of Cylinders	% Loaded	Cylinders Loaded
3	100	1, 2, 4 (Cyl 3 is blank)
	66	2, 4
4	100	1, 2, 3, 4
	50	2, 4
6	100	1, 2, 3, 4, 5, 6
	66	1, 2, 3, 4, 5

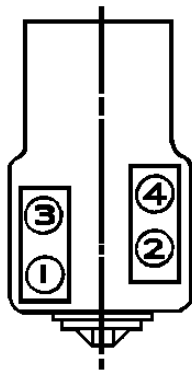
Three-Step Unloading. These compressors have two unloader heads.

Number of Cylinders	% Loaded	Cylinders Loaded
3	100	1, 2, 4 (Cyl 3 is blank)
	66	2, 4
	33	2
4	100	1, 2, 3, 4
	50	2, 4
	25	2
6	100	1, 2, 3, 4, 5, 6
	66	1, 2, 4, 5
	33	2, 5

Cylinder position for these compressor families is shown below.



Schematic View of Cylinders



Schematic View of Cylinder:
(Cylinder No. 3 is Removed
the 3-Cylinder Compressors)

Model M and R Unloading Types

The Model M and R compressors utilize electric solenoid actuated unloading. Energizing the unloader solenoid valve unloads the compressor.

Figure 55 shows the cylinder head in both the loaded and unloaded position.

The Model M and R compressors utilize discharge gas pressure to unload the compressor. The following is a description of how the unloading system operates.

Unloading

When the unloader solenoid valve is energized, high pressure gas from Chamber "C" flows through passage "D" and, with the solenoid valve open, into passage "E". Equal force is not applied to both the unloader piston and the unloader valve seal. The pressure on the larger area of the unloader piston forces the loader valve open. High pressure from Chamber "C" is dumped into the suction side of the compressor through Chamber "B". Pressure in Chamber "C" drops to a point slightly above that of suction Chamber "B". The check valve closes, preventing other cylinders from unloading since Chamber "A" is common to all cylinders. The discharge gas from cylinders entering Chamber "C" will not be compressed as long as the solenoid valve remains open and gas is dumped back into the suction side of the compressor.

Loading

When the unloader solenoid valve is de-energized the discharge gas from the cylinders enters Chamber "C" as a pressured gas. High pressure gas in Chamber "C" holds the unloader valve closed preventing compressed gas from flowing into the suction side of the compressor which is represented by Chamber "B". As the gas pressure in Chamber "C" reaches the discharge pressure the check valve opens and compressed gas enters discharge Chamber "A" and flows out to the common discharge line.

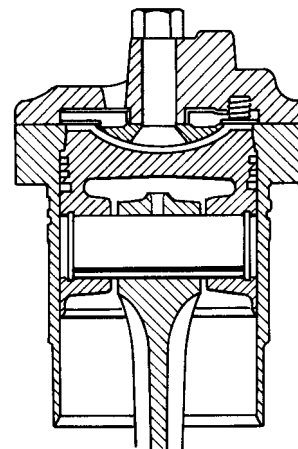
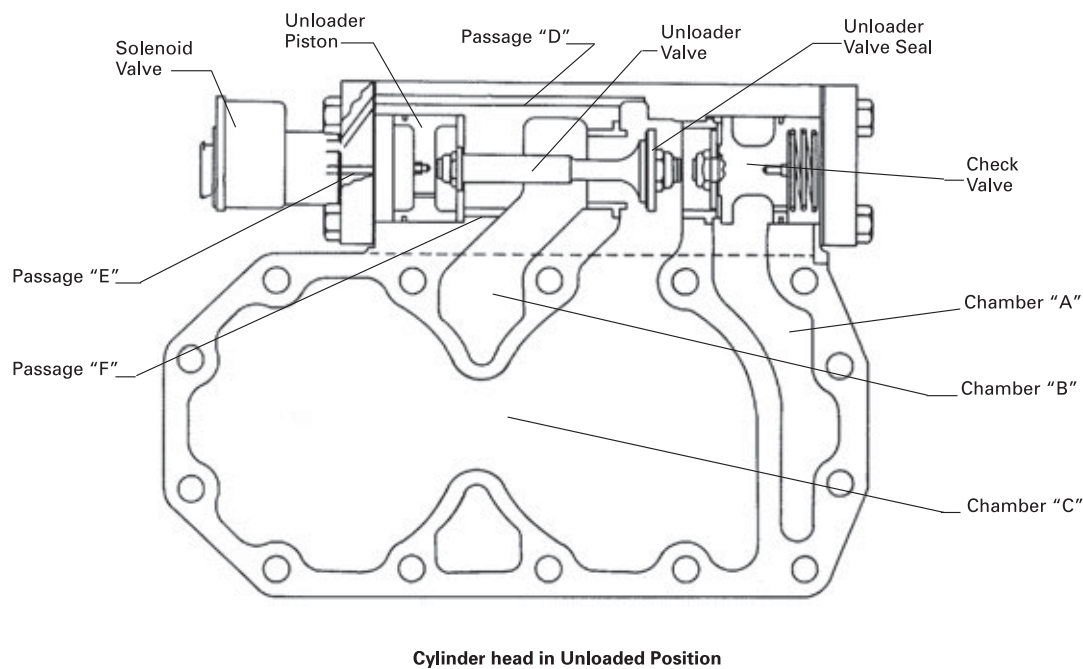
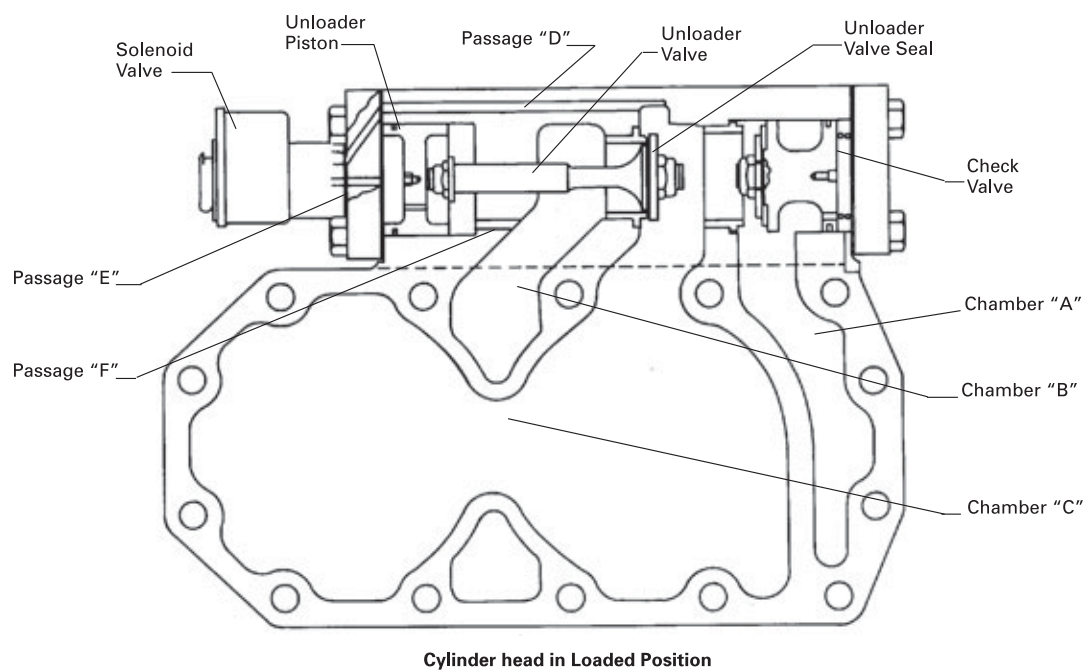


Figure 55. Capacity Control Operation




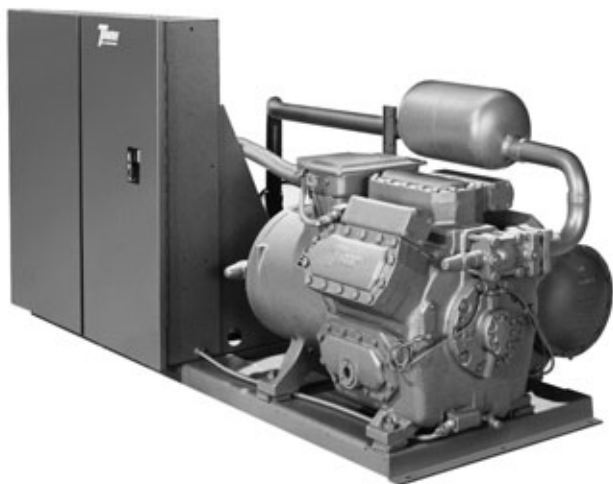
Compressor Service Bulletin Listing

Table 17.

Subject	Service Bulletin Number
Model "M" Compressor: 9-Lead Hermetic Motor Phaseout	HCOT-SB-1A
Model "M" Compressor: Cylinder Head Identification and Unloading Sequence	HCOT-SB-2
Model "M" Compressor: Motor Stator Pin Design Change	HCOT-SB-3A
Approved Oils and Oil Changes for Reciprocating Compressors	HCOT-SB-4F
Model "E" and "F" Compressor: Hermetic Motor Ordering Information	HCOT-SB-7A
Hermetic Model "M" and "R" Compressor: Robertshaw MC-20 Motor Protector Terminal Size Change	HCOT-SB-8
Model "M" and "R" Compressor Oil Pump	HCOT-SB-11A
Overload Relay (Furnas) Settings for Reciprocating Compressors	HCOT-SB-14
Reciprocating Compressor Oil Line kit Ordering Information	HCOT-SB-16
Model "E" Compressor Suction Valve Plate and Spring	HCOT-SB-17A
Model "F" Compressor Discharge Valve Cage Assembly Design Change	HCOT-SB-19A
Operation and Troubleshooting: Robertshaw MP13, MP23 and MC20 Solid-State Motor Protectors	HCOT-SB-20A
Model "M" and "R" Compressor: Robertshaw Motor Winding Sensor Ordering Information	HCOT-SB-21
Reciprocating Compressor: Service Valve Parts Identification and Repair	HCOT-SB-22D
Reciprocating Compressor: Klixon Motor Winding Sensor Ordering Information	HCOT-SB-23
Model "R" Compressor: Main Bearing Replacement Procedure	HCOT-SB-24B
Robertshaw Motor Protector Relay Design Change	HCOT-SB-25
Model "M" Compressor: Unloader Valve Rattle	HCOT-SB-26
Model "R" Compressor: Check Valve Assembly	HCOT-SB-27
Model "E" Open and Hermetic Compressor: Lubrication Design Change	HCOT-SB-28A
Unloader Solenoid Mounting Arrangement For Model "M" and "R" Compressors	HCOT-SB-29A
Robertshaw MC-20 Motor Protector: Nuisance Lockout if Reset Relay Circuit	HCOT-SB-30
Robertshaw Motor Protector Model MP23: Nuisance Lockouts	HCOT-SB-31
Model "E" and "F" hermetic Compressor: Motor Thermostat Wiring	HCOT-SB-32
Model "R" Thrust Bearing Replacement	HCOT-SB-35
Fusite Terminal Safety Hazard	HCOT-SB-37
Reciprocating Compressor Gasket Material	HCOT-SB-38
Diagnosis of Model "E" and "F" Compressor Low Oil Pressure and Oil Loss	HCOT-SB-39A
Replacement Compressors for Trane Model "J" Compressors in Mid-Range Units, Computer Room Units and Air-Cooled Cold Generators	HCOT-SB-40
Replacement Compressors For Mid-Range Equipment	HCOT-SB-41A
Compressor Changeout Procedure	HCOT-SB-42
Replacement Model "A" or "B" Open Compressors with Model "E" or "F" Open Compressors	HCOT-SB-43
Reciprocating Hermetic and Open Compressors: Oil Line Replacement	HCOT-SB-44A
System Cleanup After Hermetic Motor Burnout: Suction Line Filter Method	HCOT-SB-45
Model "F" Compressor: Rotor Bolt Torque Change	HCOT-SB-46
8-Cylinder Model "E" Open and hermetic Compressors: Minimum Unloading Change	HCOT-SB-47
Hermetic Compressor Motors: Packaging For Shipment	HCOT-SB-48
Reciprocating Compressors: All Models: Operating Oil Level	HCOT-SB-49
Model "M" Compressor: 5 to 6 Cylinder Conversion	HCOT-SB-50
Model "F" Compressor: Stator Bolt Breakage	HCOT-SB-51
Model "M" Valve Plate	HCOT-SB-52
Model "A" Compressor: Bolt Torque Changes	HCOT-SB-53
Model "E" Open and Hermetic Compressors: Oil Pressure Sensing Modification and Kit	HCOT-SB-56
Model "K" Compressor Removal Kit	HCOT-SB-58A
Trane ServiceFirst Remanufactured Hermetic Compressors with Undersized Crankshafts and Bearings	HCOT-SB-59A
Model "K" Compressor Oil Overcharge	HCOT-SB-60
Reciprocating Compressor Identification: Model, Design Sequences and Serial Numbers	HCOT-SB-61
Model "K" Compressor Redesign: High Pressure Control Port Location	HCOT-SB-62
Model "E" and "F" Compressor Connecting Rod Redesign	HCOT-SB-63
Model "H" Compressor Crankcase Heater Change	HCOT-SB-64
Model "K" Compressors: Loss of Charge Protection	HCOT-SB-67
Hermetic Reciprocating Compressors: Motor Insulation Resistance Testing	HCOT-SB-68
Model "K" Replacement Compressors: Pressure Control Replacement	HCOT-SB-69
Model "E" Open Compressor Parts Interchangability	HCOT-SB-70A
Model "E" Open Compressor Terminal Board Retaining Ring Cap Screw Replacement	HCOT-SB-71A

Table 17.

Model "E" Open Compressor Terminal Plate Retaining Ring and Cap Screw Changes	HCOM-SB-72A
Model "E" Open Compressor Crankcase Heater (Trane Part No.: HTR00211)	HCOM-SB-73
Standardization of Model "H" Service Compressors	HCOM-SB-74
Model "K" Compressor Pre-Start Isolator Sleeve Removal	HCOM-SB-75
Model "E" Reciprocating Compressor Discharge Valve-Seat Failure	HCOM-SB-76
Model "E" Oil Pressure	HCOM-SB-81
Model "E" Open Compressor: John Crane Seal Change	OCOM-SB-1
Flexible Couplings for Model "A, B, E and F" Open Reciprocating Compressors	OCOM-SB-6E
Model "A" and "B" Compressors: Suction Discharge Valves	OCOM-SB-7





Recommended Oils and Oil Charges For Reciprocating Compressors

Note: Information Obtained From: HCOM-SB-4F

Introduction

This information specifies the appropriate oil charges and recommended oils to be used in all Trane reciprocating compressors.

Note that any oil charges indicated in this bulletin are for the compressor only and do not take into account any system requirements.

Discussion

Reciprocating compressors do not require oil changes unless there is evidence of oil breakdown (resulting from motor burnout), operation at excessive temperatures, or mechanical failure.

Note: *If a motor burnout occurs in a hermetic compressor, be sure to perform the special cleanup procedures described in the current edition of Trane Service Bulletin: HCOM-SB-45.*

Tables 18 and 19 indicate the recommended oils and oil charges for the various compressors contained in this book; the specific compressor models covered by each table are listed below.

- A. For compressor Models "A", "B", "E", "F", "M" and "R", use Table 18
- B. For compressor Model "K", use Table 19.

Requirements used to recommend the specific oils listed in Tables 18 and 19 are itemized in Tables 20 and 21.

Any negative effects resulting from the use of refrigeration oils other than those listed here are the responsibility of the owner.

The Trane Company does not recommend the use of commercially available oil additives which are advertised to increase oil lubricity and/or improve heat transfer efficiency when added to the system. The possible effects that such oil additives may have on oil breakdown, acid formation and their long-term impact on elastomers and motor insulation materials has not been substantiated by laboratory tests or field-usage history. Normal product design life and efficiency can be assured only by using Trane-recommended products and by following all recommended maintenance procedures. Liability for any detrimental effects that the use of non-approved products may have on equipment performance or longevity must be assumed by the equipment owner, equipment servicer, or the oil additive manufacturer.

Recommended Oils and Oil Charges For Reciprocating Compressors

Table 18. Recommended Oil Types and Charges for Model A, B, E, F, M, and R Compressors

Reciprocating Compressor			Recommended Oil	
Model	Type	No. Of Cylinders	Oil Charge	Oil Code
A	Open	4	27.0 Pints	Code 1 (Oil-15)
		6 and 8	28.0 Pints	Code 1 (Oil-15)
B	Open	4	15.0 Pints	Code 1 (Oil-15)
		6	17.0 Pints	Code 1 (Oil-15)
		8	17.5 Pints	Code 1 (Oil-15)
	Hermetic	3	12.0 Pints	Code 1 (Oil-15)
E	Open	4	29.0 Pints	Code 1 (Oil-15)
		5 and 6	31.0 Pints	Code 1 (Oil-15)
		8	33.0 Pints	Code 1 (Oil-15)
	Hermetic	4	32.0 Pints	Code 1 (Oil-15)
		5 and 6	34.0 Pints	Code 1 (Oil-15)
		8	36.0 Pints	Code 1 (Oil-15)
F	Open	3	13.5 Pints	Code 1 (Oil-15)
		4	18.0 Pints	Code 1 (Oil-15)
		5 and 6	19.0 Pints	Code 1 (Oil-15)
		8	20.5 Pints	Code 1 (Oil-15)
	Hermetic	3	13.5 Pints	Code 1 (Oil-15)
		4	18.0 Pints	Code 1 (Oil-15)
		5 and 6	19.0 Pints	Code 1 (Oil-15)
		8	20.5 Pints	Code 1 (Oil-15)
M	Hermetic	3 and 4	11.0 Pints	Code 2 (Oil-43)
		5 and 6	13.0 Pints	Code 2 (Oil-43)
R	Hermetic	4	20.0 Pints	Code 2 (Oil-43)
		6	27.0 Pints	Code 2 (Oil-43)



Recommended Oils and Oil Charges For Reciprocating Compressors

Table 19. Recommended Oil Types and Charges for Model K Compressors

Compressor		Recommended Oil	
Model	Capacity	Oil Charge	Oil Code
K	20, 25 and 30 Tons	21.0 Pints	Code 2(Oil-43)

Table 20. Code 1 Oil Requirement

Approved Oil	Characteristics	Specifications
Trane Oil-15	Viscosity:	
	 at 100 F	F290 to 332 SSU
	 at 210 F	47 to 53 SSU
	Pour Point	-25 F or Below
	Floc Point	-40 F or Below
	Moisture Content	30 PPM
	Aniline Point	190 to 220 F
	Neutralization	0.04 mg Maximum KOH Per Gram

Table 21. Code 2 Oil Requirements

Approved Oil	Characteristics	Specifications
Trane Oil-43	Viscosity:	
	 at 100 F	150 to 160 SSU
	 at 210 F	40 to 42 SSU
	Pour Point	-45 F or Below
	Floc Point	-40 F or Below
	Moisture Content	30 PPM Maximum
	Aniline Point	170 to 185 F
	API Gravity	23 to 27
	Maximum Operating Temperature in Refrigerant:	
	 Continuous	200 F
	 Intermittent	300 F



Compressor Evacuation and Dehydration

For the refrigeration system to work properly, it must be free of air and moisture. The process by which air and moisture are removed is known as evacuation and dehydration. Moisture and air are harmful to the system because they increase the condensing temperature, cause oil breakdown and the formation of acids. Acids are corrosive to the components in the refrigeration system, including the piping, refrigerant specialties and the compressor mechanical and electrical components. The elevated temperatures can lead to copper plating, which can cause mechanical failure of the compressor.

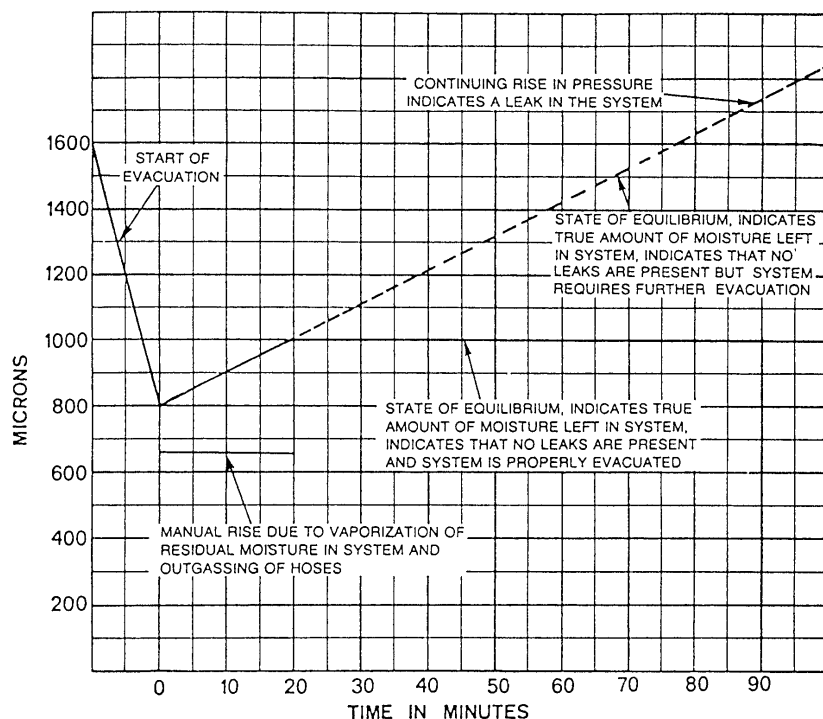
The recommended method for evacuation and dehydration is to evacuate the system from both the high and low sides to 800 microns or less. To establish that the unit is leak-free and moisture-free, a standing vacuum test is recommended. The maximum allowable rise over a 15

minute period is 200 microns. If the rise exceeds this, either there is still moisture in the system or a leak is present in the system.

⚠ WARNING

Never Use Oxygen Or Acetylene In Place Of Refrigerant And Dry Nitrogen For Leak Testing. A Violent Explosion May Result Causing Personal Injury Or Death.

Always Use A Pressure Regulator When Using Nitrogen To Pressure Test. Failure To Do So Will Result In Extremely High Pressure Which Could Exceed The Burst Pressure Of The Compressor Or Other System Components And Result In Personal Injury Or Death.



System Cleanliness

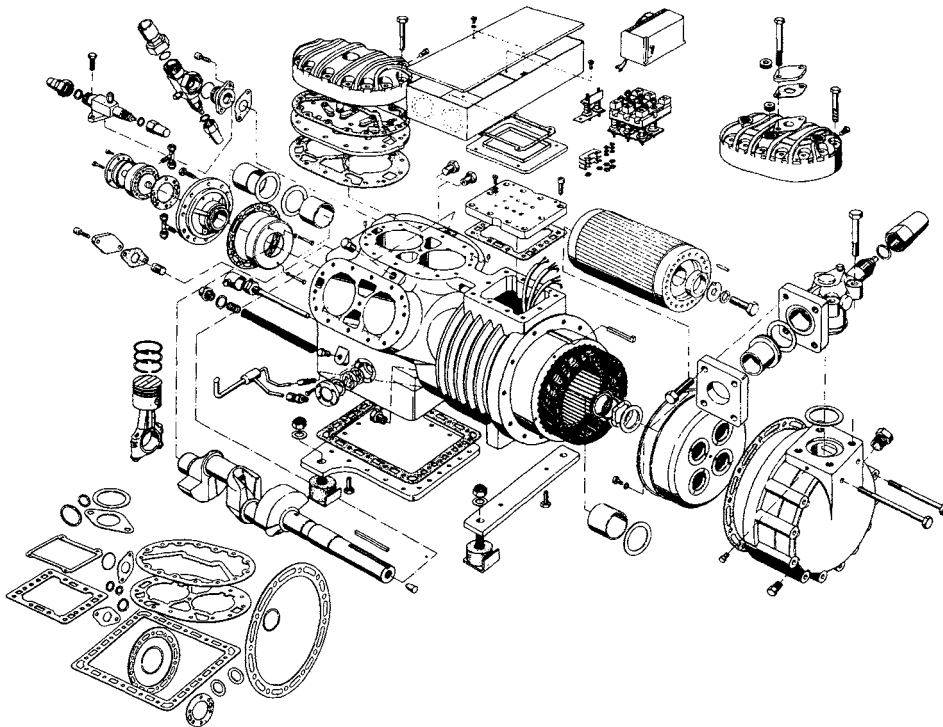
System cleanliness is one of the most important factors that affect system and compressor reliability. System contamination can cause both mechanical and electrical failures. There are several sources of system contamination. Some of these are:

1. Copper Oxides from system refrigerant piping brazing.
2. Refrigerant piping chips and burrs and brazing flux.
3. Processing residue and metal chips from evaporators and condensers.

4. Metal chips and wire brush strands from processing of other system components.
5. Contamination in refrigeration tubing which is left uncapped during assembly.
6. Moisture and air.

In addition, field erected systems are subject to all the dirt and system contamination of the typical jobsite.

It is recommended that a suction line filter be installed in the system to prevent contaminants from entering the compressor.



Undersized Crankshafts and Bearings

Note: Information Obtained from HCOM-SB-59A

Introduction

The purpose of this Service Bulletin is to provide component parts identification and ordering information for the undersized parts used in some Trane remanufactured, Models E, F, M and R compressors.

Discussion

Undersized connecting rods and main bearings may be used in remanufactured hermetic compressors of all design sequences. All of these parts are undersized to .020" from standard and must be used in conjunction with an undersized crankshaft that includes main and rod journals that are undersized to .020" from standard.

Trane remanufactured compressors built with undersized crankshafts and bearings are identified by an indicator in the new model number, or by an indicator in the old serial number (prior to 1993).

Parts Ordering Information

The mnemonic part numbers for undersized components used on Trane Remanufactured compressors are shown in Table 22.

When ordering an undersized crankshaft, the compressor model number is required. A standard-sized crankshaft may only be ordered if the standard bearings and rods are also ordered for the compressor.

Table 22. Part Numbers for Undersized Compressor Components (Hermetic Only)

Description Component of Compressor	Trane Part No.	Quantity Required						
		3 Cyl	4 Cyl	5 Cyl	6 Cyl	8 Cyl		
Model F								
Main Bearing	BRG00501	1						
Main Bearing	BRG00500	2	3	3	3	3		
Connecting Rod	ROD00260	3	4	5	6	8		
Model E								
Main Bearing	BRG00502		3	3	3	3		
Connecting Rod	ROD00261		4	5	6	8		
Description of Compressor Component	Trane Part No.	Quantity Required						
		15 Ton	20 Ton	25 Ton	30 Ton	40 Ton	50 Ton	60 Ton
Model M								
Main Bearing	BRG00537	3	3	3	3			
Connecting Rod	ROD00314	3	4	6	6			
Connecting Rod	ROD00315					1		
Model R						2	3	3
Main Bearing	BRG00537					4		6
Main Bearing	BRG00538						6	
Connecting Rod	ROD00316							
Connecting Rod	ROD00317							



Flexible Couplings For Model A, B, E and F Open Reciprocating Compressors

Note: Information Obtained From: OCOM-SB-6E

Introduction

This service bulletin provides a listing of flexible coupling assemblies for use with Model A, B, E and F open reciprocating compressors. Replacement disc pack assemblies for the couplings are also listed along with information for field-boring couplings that have solid motor flanges.

Discussion

All flexible couplings have the compressor flange bored to fit Trane compressors. Table 23 lists couplings stocked with motor flanges bored to fit most standard frame motors. Table 24 lists additional couplings stocked by Trane or direct shipped, but with a "blank" or solid motor flange. Couplings with a pilot bore are no longer available. Motor flanges on the latter couplings are to be bored to fit by the customer. Refer to Table 23 and Figures 56 and 57 for flange machining and keyway information.

Note: The Trane Company will not bore the motor flange.

The following information is required to select a replacement flexible coupling:

1. Compressor shaft size:

Note: Model A and E compressors have a 2.00" diameter shaft.
Model B and F compressors have a 1-1/2" diameter shaft.

2. Motor shaft size and horsepower.
3. Vendor's flexible coupling part number, if available.

Notes for Tables 23 and 24

1. Couplings not stocked by Trane are to be ordered on a "DS" type of order.
2. Replacement couplings are furnished with disc packs. When replacing disc packs on existing couplings, two are required.
3. Replacement couplings and disc pack assemblies are furnished with stainless steel or "tomaloy" discs, depending on availability.
4. Component parts of couplings, other than disc pack assemblies, are not stocked by Trane.
5. Trane mnemonic part numbers for the compressor crankshaft screws and washers needed to install the couplings are as follows:
 - a. Screws (A, B, E and F Compressors) = SCR00007
 - b. Washers (A & E Compressors) = WAS00007
(B & F Compressors) = WAS00006
6. CPL00001, CPL00038 and CPL00154 were originally Thomas Coupling Part No.: 62MT-B, with a 6-hole bolt pattern. The current coupling (Thomas Part No.: 163DBZ-B) has a 8-hole pattern. Replacement disc pack assemblies for the 162MT-B style couplings are RNG00920.
7. CPL00002, CPL00003, CPL00039 and CPL00151 were originally Thomas Coupling Part No.: 200MT-B, with a 6-hole bolt pattern. The current coupling (Thomas Part No.: 201DBZ-B) has a 8-hole pattern. Replacement disc pack assemblies for the 200MT-B style couplings are RNG00111.

Flexible Couplings For Model A, B, E and F Open Reciprocating Compressors

Table 23. Flexible Couplings with Finished Motor Bores

Coupling Part No. (Trane Mnemonic)	Coupling HP Rating		Thomas Coupling No.	Compressor End Bore	Motor End Bore	Replacement Disc Pack Assemblies (Trane Mnemonic)
	1450 RPM	1750 RPM				
CPL00001	15	15	163DBZ-B *	1.485"	1.625"	RNG00110
CPL00002	30	30	201DBZ-B **	1.500"	1.875"	RNG00113
CPL00003	30	30	201DBZ-B **	2.000"	1.875"	RNG00113
CPL00004	60	75	226DBZ-B	2.000"	2.125"	RNG00112
CPL00038	15	15	163DBZ-B *	1.485"	1.375"	RNG00110
CPL00039	30	30	201DBZ-B **	1.500"	1.625"	RNG00113
CPL00050	40	40	201DBZ-B	2.000"	2.125"	RNG00113
CPL00051	40	40	201DBZ-B	2.000"	1.875"	RNG00113
CPL00052	125	150	262AMR	2.000"	2.125"	RNG00518
CPL00053	40	40	201DBZ-B	1.500"	2.125"	RNG00113
CPL00058	40	40	201DBZ-B	1.500"	1.875"	RNG00113
CPL00156	60	75	226DBZ-B	2.000"	1.875"	RNG00112

Table 24. Flexible Couplings with Solid Motor Bores

Coupling Part No. (Trane Mnemonic)	Coupling HP Rating		Thomas Coupling No.	Compressor End Bore	Motor End Bore	Replacement Disc Pack Assemblies (Trane Mnemonic)
	1450 RPM	1750 RPM				
CPL00145 +	40	40	201DBZ-B	2.000"	2.125"	RNG00113
CPL00151	30	30	201DBZ-B *	1.500"	2.000"	RNG00113
CPL00152	60	75	226DBZ-B	2.000"	2.250"	RNG00112
CPL00153 +	40	40	201DBZ-B	1.500"	2.125"	RNG00113
CPL00154 +	15	15	163DBZ-B **	1.485"	1.625"	RNG00110
CPL00155	100	120	263DBZ-B	2.000"	2.625"	RNG00519

**Coupling was part number 162MT-B; see note 6

*Coupling was part number 200MT-B; see note 7

+No longer stocked, see note 1

Coupling Bore Instructions

A coupling is a rotating member used to connect two shafts. It is important that proper centering of the hub bores be maintained to help minimize unbalance in the coupling. The recommended procedure and set up readings at indicator locations are given for each size of coupling as listed. All finished bores are to have a surface finish of 125 RMS or better.

DBZ-B coupling hubs are bored using set up procedures as shown in Figure 56. Figure 56 shows the proper method for checking that the hub is square in the chuck of the lathe. Once the hub is square it can properly be bored.

Be certain that when setting up the dial indicator for indicating the flange face surface (B) that it is placed as far out on the back face diameter as possible to get the best overall indication of total indicated runout (TIR). Dial indicator run-out on bored surfaces (flange O.D. and flange face) should be within the tolerances provided in Table 25.

Flexible Couplings For Model A, B, E and F Open Reciprocating Compressors

Table 25. DBZ-B Coupling Hub Runout Readings

Coupling Size	Flange O.D. (Note 1)	Flange Back Face (Note 2)
163	.0010 TIR (3)	.0015 TIR
201, 226, 263	.0015 TIR	.0020 TIR

Note:

1. Refer to dial indicator "A" in Figure 56
2. Refer to dial indicator "B" in Figure 56
3. TIR = Total Indicator Readings in inches

Figure 56. Proper Set-up Procedure for Boring DBZ Hub

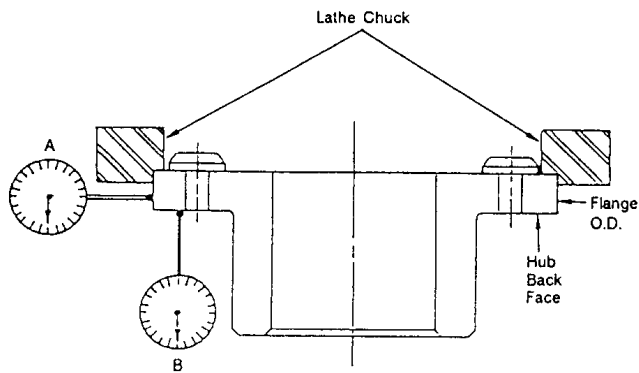
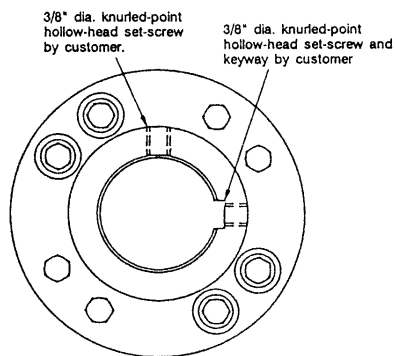


Figure 57. Typical Keyway and Set-Screw



Model E, F, M, R and K Motor Winding Sensors

The Trane Models E, F and K compressors utilize two (2) thermostat type, bimetallic switches imbedded in the windings to sense temperature. When checking these sensors, they will be either continuous or open. When the compressor is cool they should be closed. Use a standard ohmmeter to check.

Current flow through these devices must not exceed 5 amps. The part number for the Model E, F and K winding sensor is SEN00014.

Model M and R compressors use three thermistors imbedded in the windings to sense motor winding temperature. The resistance of the thermistors increases as the motor temperature increases.

When checking the resistance use an ohmmeter with **no more** than 3 volt batteries.

The part number for the Model M and R winding sensor is SEN00011.

The following information provides application and trouble shooting data and can also be found in service bulletin: HCOM-SB-32.

Note: Information Obtained From: HCOM-SB-32

Subject

Model "E" and "F" Hermetic Compressor, Motor Thermostat Wiring.

Introduction

The purpose of this bulletin is to outline proper procedures for field wiring of the motor thermostat for Model E and F hermetic compressors. The compressors have been manufactured with a 3-lead motor thermostat (MT) since January 1963.

Discussion

The motor thermostat consists of two bimetallic thermosensitive switches. These two switches are wired in series so that either can interrupt the circuit. These switches are normally closed and open on a temperature rise. They are factory set and cannot be field adjusted.

Installation - New Compressors

The two control circuit leads from the control panel are to be connected to spade connectors below the compressor terminal block and designated as "A" and "B" on the attached sketches. In this way, both switches are in series with the control circuit. The spade connector designated "C" on the switch is common to both switches.

If the motor terminal circuit should malfunction for any reason, check continuity between "A" and "C" and "B" and "C". Connect the leads from the control panel to the set of points which show continuity. In this way one of the thermostat switches will be operable and will protect the motor from overheating.

Installation - Replacement Motors

If it becomes necessary to make terminal connections inside a new compressor (motor change) the common lead should be connected to the spade connector designated "C". The common lead is a different color than the other two leads.

The other two leads can be connected interchangeably at points "A" and "B".

If a motor is replaced in an older compressor, there will be only two spade connectors on the terminal board. Insulate the common lead to prevent shorting the control circuit. Connect the other two leads to the spade connectors.

Figure 58. Model "E" Compressor

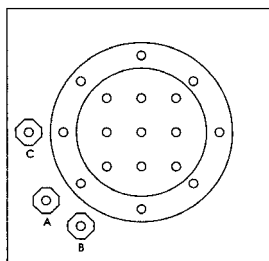


Figure 59. Model "F" Compressor (with 12.375" Motor)

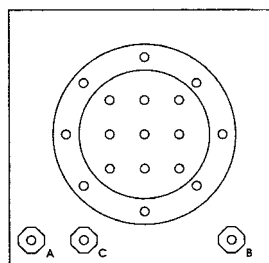
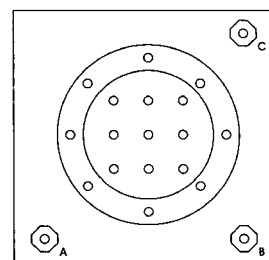
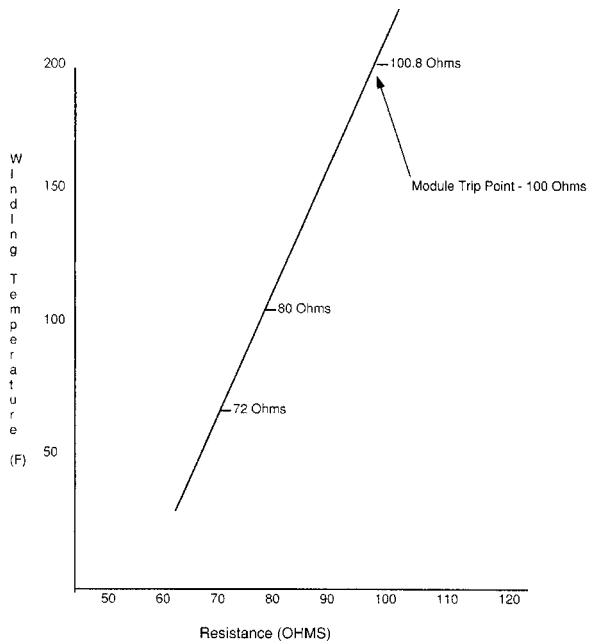


Figure 60. Model "F" Compressor (with 8.77" Motor)



Model E, F, M, R and K Motor Winding Sensors

Figure 61. Approximate Resistance Values of Winding Sensors Versus Temperature



Testing Procedure

Remove leads from sensor terminals at the compressor. Using an ohmmeter with no more than three volt batteries, check resistance of the common terminal to each of the three other terminals. The readings should agree with the temperature resistance curve and be equal within ± 2 ohms.

Motor Winding Sensors for Model "M" and "R" Reciprocating Compressors

The sensor is part number SEN00011. This sensor is used on Model "M" and "R" reciprocating compressor motors regardless of size, electrical characteristics, or motor vendor.

Electrical Characteristics

Description

The following charts show the electrical characteristics, utilization range, amp draw and locked rotor amps for Trane compressors. The amp draw data was derived at operating conditions that duplicate the normal maximum full load conditions for the compressor. However, the

application of the compressor in Trane equipment will determine the actual full load amp draw of the compressor and that data will be displayed on the **unit** nameplate. The data displayed on the unit nameplate will **always** take precedence over the data in these charts.

Table 26. Model E - Electrical Characteristics (Small Diameter Motor)

75 Ton

Electrical Characteristics	L.R.A. Full Wind	Utilization Range	Overload - Must Hold		Full Load	
			W/C	A/C	W/C	A/C
230-60-3	1054	207-253	227	277	182	222
400-50-3/460-60-3	524	342-456/414-506	112/112	135/140	90/90	108/112
575-60-3	426	517-633	91	110	73	88
380-60-3	631	342-418	142	171	114	137
363-50-3	577	327-399	123	148	98	118
220-50-3	953	198-242	208	246	166	197
200-60-3	1141	180-220	262	320	210	256
346-50-3	605	311-381	129	155	103	124

100 Ton

Electrical Characteristics	L.R.A. Full Wind	Utilization Range	Overload - Must Hold		Full Load	
			W/C	A/C	W/C	A/C
230-60-3	1390	207-253	305	374	244	299
400-50-3/460-60-3	695	342-456/414-506	142/152	180/185	114/118	144/148
575-60-3	556	517-633	122	148	94	118
380-60-3	841	342-418	176	223	141	178
363-50-3	759	327-399	157	199	126	159
220-50-3	1253	198-242	265	331	212	265
200-60-3	1600	180-220	352	430	282	344
346-50-3	796	311-381	165	208	132	166

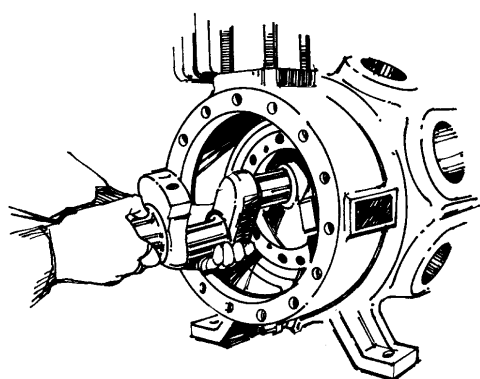
Electrical Characteristics

Table 27. Model E - Electrical Data (Large Diameter Motor)

Nominal HP	Electrical Characteristics	Utilization Range	AMP Draw*		L.R.A.
			Air Cooled	Water Cooled	
30	200-60-3	180-220	129	-	495
	200-60-3«	187-220	-	-	-
	230-60-3«	207-256	-	-	-
	460-60-3	414-506	48	44	228
	575-60-3	517-633	41	36	168
40	200-60-3	180-220		178	645
	200-60-3«	187-220	144	126	533
	230-60-3«	207-256	130	114	614
	460-60-3	414-506	65	57	307
	575-60-3	517-633	55	48	226
50	200-60-3	180-220	187	161	790
	200-60-3«	187-220	171	147	652
	230-60-3«	207-253	155	133	750
	460-60-3	414-506	78	67	375
	575-60-3	517-633	65	56	274
60	200-60-3	180-220	231	207	955
	200-60-3«	187-220	211	188	791
	230-60-3«	207-253	191	170	910
	460-60-3	414-506	96	85	455
	575-60-3	517-633	80	72	333
75	200-60-3	180-220	290	246	1160
	200-60-3«	187-220	264	224	956
	230-60-3«	207-253	248	202	1100
	460-60-3	414-506	124	101	550
	575-60-3	517-633	101	86	400
100	200-60-3	180-220	378	324	1660
	200-60-3«	187-220	342	294	1320
	230-60-3«	207-253	310	266	1520
	460-60-3	414-506	155	133	760
	575-60-3	517-633	131	113	555

«= 9 Lead Dual Voltage

* = Approximate - May vary slightly by application



Electrical Characteristics

Table 28. Model F - Electrical Data (Small Diameter Motor)

Nominal HP	Electrical Characteristics	Utilization Range	AMP Draw*		L.R.A.
			Air Cooled	Water Cooled	
10	200/60/3	180-220	-	-	240
	200/60/3«	187-230	36	32	136
	230/60/3«	207-253	32.5	29	157
	460/60/3	414-506	16.5	14.5	79
	575/60/3	517-633	13.8	12.3	57
15	200/60/3	180-220	-	-	-
	200/60/3«	187-230	-	-	-
	230/60/3«	207-253	50.5	-	-
	460/60/3	414-506	25.3	22.5	-
	575/60/3	517-633	21.4	19.2	-
20	200/60/3	180-220	-	-	-
	200/60/3«	187-230	-	-	256
	230/60/3«	207-253	-	-	295
	460/60/3	414-506	-	-	148
	575/60/3	517-633	-	-	108
25	200/60/3	180-220	-	-	-
	200/60/3«	187-230	-	-	256
	230/60/3«	207-253	-	-	295
	460/60/3	414-506	-	-	148
	575/60/3	517-633	-	-	108
30	200/60/3	180-220	-	-	-
	200/60/3«	187-230	-	96	285
	230/60/3«	207-253	-	-	328
	460/60/3	414-506	-	-	164
	575/60/3	517-633	-	-	121
40	200/60/3	180-220	178	-	645
	200/60/3«	187-230	144	126	533
	230/60/3«	207-253	130	114	614
	460/60/3	414-506	65	57	307
	575/60/3	517-633	55	48	226

« = 9 Lead Dual Voltage

* = Approximate - May vary slightly by application



Electrical Characteristics

Table 29. Model F - Electrical Data (Large Diameter Motor)

Nominal HP	Electrical Characteristics	Utilization Range	AMP Draw*		L.R.A.
			Air Cooled	Water Cooled	
12.5	200/60/3«	187-230	-	-	-
	230/60/3«	207-253	47	42	200
	460/60/3	414-506	23.5	21	100
	575/60/3	517-633	-	-	-
15	200/60/3«	187-230	-	-	-
	230/60/3«	207-253	56	50	220
	460/60/3	414-506	28	25	110
	575/60/3	517-633	21.4	19.2	84
20	200/60/3«	187-230	-	-	-
	230/60/3«	207-253	72	64	290
	460/60/3	414-506	36	32	145
	575/60/3	517-633	27	24	111
25	200/60/3«	187-230	-	-	-
	230/60/3«	207-253	88	80	365
	460/60/3	414-506	44	40	182
	575/60/3	517-633	34	31	140
30	200/60/3«	187-230	-	-	-
	230/60/3«	207-253	106	96	435
	460/60/3	414-506	53	48	218
	575/60/3	517-633	41	36	168
40	200/60/3«	187-230	-	-	-
	230/60/3«	207-253	140	126	580
	460/60/3	414-506	70	63	290
	575/60/3	517-633	54	48	222

« = 9 Lead Dual Voltage

* = Approximate - May vary slightly by application

Table 30. Model M Electrical Data

Nominal HP	Electrical Characteristics	Utilization Range	AMP Draw*		L.R.A.
			Air Cooled	Water Cooled	
15	200/60/3	180-220	95	78	310
	230/60/3	207-253	83	68	270
	460/60/3	414-506	42	34	135
	575/60/3	517-633	33	27	108
16	200/60/3	180-220	106	86	350
	230/60/3	207-253	92	75	305
	460/60/3	414-506	46	38	153
	575/60/3	517-633	37	30	125
20	200/60/3	180-220	120	98	396
	230/60/3	207-253	104	85	345
	460/60/3	414-506	52	43	173
	575/60/3	517-633	42	34	138
25	200/60/3	180-220	158	129	483
	230/60/3	207-253	137	112	420
	460/60/3	414-506	69	56	210
	575/60/3	517-633	55	45	168
30	200/60/3	180-220	179	147	551
	230/60/3	207-253	156	128	480
	460/60/3	414-506	78	64	240
	575/60/3	517-633	62	50	192

* = Approximate - May vary slightly by application

Electrical Characteristics

Table 31. Model R Electrical Data

Nominal HP	Electrical Characteristics	Utilization Range	AMP Draw*		L.R.A.
			Air Cooled	Water Cooled	
40	200-60-3	180-220	230	187	729
	230-60-3	208-254	195	170	631
	460-60-3	416-508	100	85	315
	575-60-3	520-635	80	68	245
50	200-60-3	180-220	258	234	910
	200-60-3	208-254	226	212	792
	460-60-3	416-508	113	106	396
	575-60-3	520-635	90	85	315
60	200-60-3	180-220	316	280	990
	200-60-3	208-254	275	252	860
	460-60-3	416-508	138	126	430
	575-60-3	520-635	110	101	346

* = Approximate - May vary slightly by application

Table 32. Model K Electrical Data

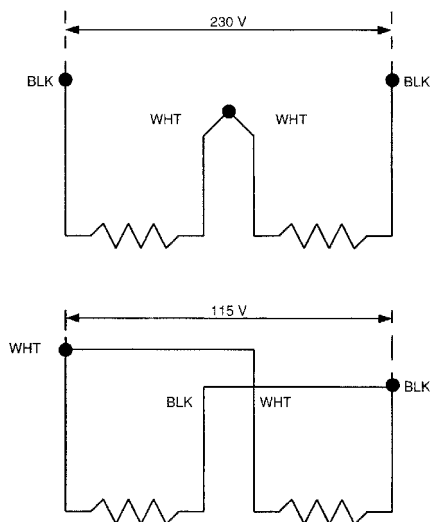
Nominal HP	Electrical Characteristics	Utilization Range	AMP Draw*		L.R.A.
			Air Cooled	Water Cooled	
20	200-60-3	180-220	96	80	394
	230-60-3	208-254	83	70	343
	460-60-3	416-508	42	35	172
	575-60-3	520-635	33	28	138
25	200-60-3	180-220	115	96	426
	200-60-3	208-254	100	83	370
	460-60-3	416-508	50	42	185
	575-60-3	520-635	40	33	148
30	200-60-3	180-220	141	114	488
	200-60-3	208-254	122	100	424
	460-60-3	416-508	61	50	212
	575-60-3	520-635	49	40	170



Compressor Crankcase Heaters

Compressor Model	Heater Number	Voltage	Watts
A	HTR00212	USE HTR01566	-
	HTR01566	110/220	140
B	HTR00210	110/230	75
E	HTR01566	110/220	140
F	HTR00006	USE HTR00210	-
	HTR00210	110/230	75
K	HTR01103	120	75
M	HTR00201	120	75
	HTR00202	240	75
R	HTR00244	120	100
	HTR01566	120	140

Figure 62. Dual Voltage Crankcase Wiring



⚠ WARNING

Disconnect electrical power supply to prevent injury or death due to electrical shock.

⚠ CAUTION

Unless otherwise specified, use only copper conductors to prevent equipment damage.

Compressor Mounting Assemblies

Table 33. E Compressor Mounting Assemblies

4, 5 and 6 Cylinder Description	Part No.	Qty
Mounting Assembly, Complete	MNT00219	1
Consists of:		
Isolator-Pads	PAD00051	8
Isolator-Spacers	SPC00046	4
Spacer-Angles	SPC00083	4
Screws	SCR00111	4
Nuts	NUT00347	4

8 Cylinder Description	Part No.	Qty
Mounting Assembly, Complete	MNT00266	1
Consists of:		
Isolator-Pads	PAD00059	8
Isolator-Spacers	SPC00069	4
Spacer-Angles	SPC00083	4
Screws	SCR00111	4
Nuts	NUT00347	4

Table 34. F Compressor Mounting Assemblies

3, 4, 5 and 6 Cylinder Description	Part No.	Qty
Mounting Assembly, Complete	MNT00653	1
Consists of:		
Isolator-Pads	PAD00049	8
Isolator-Spacers	SPC00044	4
Spacer-Angles	SPC00083	4
Screws	SCR00013	4
Nuts	NUT00570	4

8 Cylinder Description	Part No.	Qty
Mounting Assembly, Complete	MNT00654	1
Consists of:		
Isolator-Pads	PAD00050	8
Isolator-Spacers	SPC00045	4
Spacer-Angles	SPC00083	4
Screws	SCR00013	4
Nuts	NUT00570	4

Table 35. R Compressor Mounting Assemblies (R-I-S Only No Spring)

4 Cylinder Description	Part No.	Qty
Mounting Assembly, Complete	MNT00218	1
Consists of:		
Isolator-Pads	PAD00068	8
Isolator-Spacers	SPC00125	4
Spacer-Angles	SPC00083	4
Screws	SCR00134	4

5 and 6 Cylinder Description	Part No.	Qty
Mounting Assembly, Complete	MNT00217	1
Consists of:		
Isolator-Pads	PAD00067	8
Isolator-Spacers	SPC00126	4
Spacer-Angles	SPC00083	4
Screws	SCR00134	4

Table 36. K Compressor Mounting Assemblies

Description	Part No.	Qty
Mounting Assembly, Complete	MNT00382	4*

*4 Req. Per Compressor



Compressor Mounting Assemblies

Table 37. M Compressor Mounting Assemblies (Spring Only No R-I-S)

10, 15, 20 Ton - Old Style (Fits Under The Base)		
Description	Part No.	Qty
Mounting Assembly, Complete	MNT00652	1
Consists of:		
Screws	SCR00067	2
Lockwashers	WAS00019	8
Spring	MNT00193	4
Channel-Spacers	CNL00210	2
Angle-Spacers	ANG00505	2
Screws	SCR00173	6
Plugs	PLU00446	4

10, 15, 20 Ton - New Style (Fits Under The Comp. Feet)		
Description	Part No.	Qty
Mounting Assembly, Complete	MNT00166	1
Consists of:		
Screws	SCR00067	2
Lockwashers	WAS00019	8
Springs	MNT00193	4
Screws	SCR00173	6
Plugs	PLU00446	4

25, 30 Ton - Old Style (Fits Under The Base)		
Description	Part No.	Qty
Mounting Assembly, Complete	MNT00655	1
Consists of:		
Screws	SCR00067	2
Lockwashers	WAS00019	8
Springs	MNT00194	4
Channel-Spacers	CNL00210	2
Angle-Spacers	ANG00505	2
Screws	SCR00173	6
Plugs	PLU00446	4

25, 30 Ton - New Style (Fits Under The Comp. Feet)		
Description	Part No.	Qty
Mounting Assembly, Complete	MNT00169	1
Consists of:		
Screws	SCR00067	2
Lockwashers	WAS00019	8
Springs	MNT00194	4
Screws	SCR00173	6
Plugs	PLU00446	4



Discharge Mufflers

Discharge mufflers are available as an option to reduce noise and pulsation in the discharge line of the compressor. The 8" muffler with

2-1/8" connections is recommended for the "E" 50 and 60 and the 10" muffler with the 2-5/8" connections is recommended for the "E" 75 and 1C compressors.

horizontally. To prevent the muffler from becoming an oil trap when the muffler is mounted horizontally, the muffler must be mounted with the large part of the shell above the pipe connection.

The muffler is an all-steel ASME-approved welded design with steel pipe connections.

Muffler Installation

The muffler has an arrow indicating the proper direction of flow. The mufflers may be mounted either vertically or

Table 38. Replacement Discharge Mufflers

If the line size is known, use to select the correct Replacement Muffler. If the line size is unknown, see Table 30 and select by the Compressor Model Number.

Connection Size	Diameter (Inches)	Length (Inches)	Mnemonic Number
1-1/8	4	12-1/8	MFL00027
1-3/8	5	12-15/16	MFL00028
1-5/8	6	11-3/16	MFL00029
2-1/8	8	15-3/8	MFL00030
2-5/8	10	15-3/8	MFL00031

Table 39. Replacement Discharge Mufflers

If the line size is unknown, use the Compressor Model Number to select the replacement Discharge Muffler. If the line size is known, see Table 29 and select the correct service replacement.

Compressor Tonnage	Connection Size	Diameter (Inches)	Length (Inches)	Mnemonic Number
10 Ton M	1-1/8	4	12-1/8	MFL00027
13 Ton M	1-1/8	4	12-1/8	MFL00027
15 Ton M	1-1/8	4	12-1/8	MFL00027
17 Ton M	1-3/8	5	12-15/16	MFL00028
19 Ton M	1-3/8	5	12-15/16	MFL00028
20 Ton M	1-1/8	4	12-1/8	MFL00027
25 Ton M	1-3/8	5	12-15/16	MFL00028
30 Ton M	1-3/8	5	12-15/16	MFL00028
26 Ton R	1-5/8	6	11-3/16	MFL00029
32 Ton R	1-5/8	6	11-3/16	MFL00029
38 Ton R	2-1/8	8	15-3/8	MFL00030
40 Ton R	1-5/8	6	11-3/16	MFL00029
50 Ton R	1-5/8	6	11-3/16	MFL00029
60 Ton R	2-1/8	8	15-3/8	MFL00030
48 Ton E	2-1/8	8	15-3/8	MFL00030
75 Ton E	2-1/8	8	15-3/8	MFL00030
62 Ton E	2-5/8	10	15-3/8	MFL00031
100 Ton E	2-5/8	10	15-3/8	MFL00031
10 Ton F	1-1/8	4	12-1/8	MFL00027
15 Ton F	1-1/8	4	12-1/8	MFL00027
20 Ton F	1-1/8	4	12-1/8	MFL00027
25 Ton F	1-3/8	5	12-15/16	MFL00028
30 Ton F	1-3/8	5	12-15/16	MFL00028
40 Ton F	1-3/8	5	12-15/16	MFL00028

Service Valves

Valve Part Number	Where Used Compressor Model	O.D.F. Nominal	Compressor Connect Nominal	Figure
VAL00008	B, F, K, M, R	1-5/8	2-3/4 OD	2
VAL00009	A, B, E, F, K, M, R	2-1/8	3-7/32 OD	2
VAL00035	A, B, E, F, R	2-5/8	3-7/32 OD	2
VAL00036	-	VAL00009	-	-
VAL00037	-	VAL00008	-	-
VAL00042	A, E	4-1/8	5-1/8 OD	2
VAL00043	A, E, R	3-1/8	4-5/32 OD	2
VAL00059	-	VAL04230	-	-
VAL00076	-	VAL04163	-	-
VAL00095	-	VAL04230	-	-
VAL00975	M	1-1/4	1-1/8 OD	1
VAL04163	F, M	1-3/8	2.00 OD	1
VAL04230	F	1-1/8	2.00 OD	1

Figure 63.

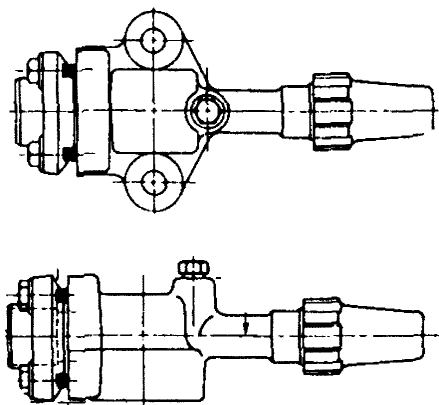
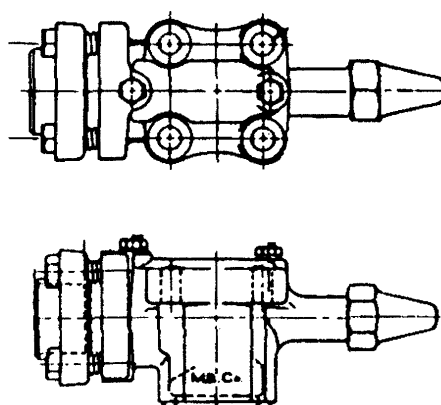


Figure 64.



Rotolock To Sweat (ODF) Valves

Part Number	ODF Number	Rotolock Size	
VAL01957	1-1/4	1-3/4 - 12	Model K Discharge Valve
VAL01958	1-3/8	1-3/4 - 12	Model K Discharge Valve

Note: Replacement of individual valve components and the replacement procedures are detailed in service bulletin HCOM-SB-22D.

Miscellaneous

Compressor Changeout Considerations

Compressor changeout involves replacing other components besides the compressor. The information provided below is in two sections: electrical failure and mechanical failure.

Electrical Failure

When an electrical failure occurs, often the refrigerant system is contaminated. The service technician must consider what is needed to clean up the contamination and what other electrical components may require replacement. To perform a changeout, the following components are **required**:

1. Suction filter with acid removal cores
2. Liquid line filter drier with acid removal cores³
3. Suction filter
4. Liquid line drier cores — standard capacity
5. Acid test kits to test the oil for acidity⁶
6. Manufacturer's approved oil
7. Motor electrical terminals and wiring, if damaged due to the electrical failure.

Trane service bulletin HCOM-SB-45B gives guidelines for selecting the proper suction and liquid line driers. Trane service bulletin HCOM-SB-4F specifies the appropriate oil charges and approved oils for Trane compressors. Both of these service bulletins are available from your Trane Parts Center.

After the system has been cleaned up, the suction filter shell should be removed. If left on the suction filter, the shell could trap oil, increase pressure drop and reduce system capacity. An alternative to removing the suction filter shell is to replace the acid removal cores with a suction filter.

Liquid line cores also should be changed to the standard capacity moisture removal cores.

Parts that are **highly recommended** for replacement after an electrical failure are:

1. Compressor motor contactor(s)
2. Compressor motor overcurrent protection device
3. Motor protection modules
4. Part winding start timer

These components must be functional to assure proper operation and reliability of the compressor and protection of the motor. These components may have been damaged by the electrical failure or caused it to occur.

For those situations where over- and under-voltage and single-phasing conditions are either suspected or known to exist, it would be **prudent to consider** adding a device

that would protect the compressor motor against these conditions.

Mechanical Failure

The components that are required for a mechanical compressor changeout are:

1. Liquid line filter drier cores — standard capacity
2. Manufacturer's approved oil
3. Acid test kits

A highly recommended component to replace is the oil pressure switch.

Other parts **for consideration** include:

1. Vibration isolator pads (replace if compressed or oil-soaked)
2. Service valves — if they do not seal tightly
3. High pressure switch
4. Low pressure switch
5. Compressor motor contactor(s)
6. Compressor motor overcurrent protection device
7. Motor protection modules
8. Part winding start timer
9. Suction filter with moisture cores (if multiple repeat failures have occurred)

Items 3 through 8 play a critical role in the electrical operation and protection of the compressor and must be functional to assure proper operation and reliability. It is not necessary to replace these items if they are functional and in good operating condition.

To assure proper compressor replacement and repair, the service technician must perform a complete checkout of the entire unit and system. The unit and system checkout may reveal the cause of the failure and require the replacement or repair of other components.



Cross Reference

Reciprocating Compressors - Carrier/Trane Cross Reference

Model Number	COM Number	Nom Tons	Shipping Weight
06DA818*AA0600	COM06070	6.5	225
06DA818*AA1200	COM06101	6.5	225
06DA8186AA0100	COM06102	6.5	225
06DG5376DC3600	COM08873	12.7	305
06DM3136AC3200	COM08867	5	200
06DM3136AC3600	COM08866	5	200
06DM3286DC3600	COM08870	9	305
06DM5376DC3600	COM08871	12.7	305
06DM8246BC3600	COM08874	8	275
06DS328613C3600	COM08869	9	305
06DS3286BC3200	COM08868	9	305
06DS5376BC3200	COM08826	12.7	305
06DS5376BC3600	COM08827	12.7	305
06DS5376DC3600	COM08872	12.7	305
06DS8186AC3600	COM08876	6.5	225
06DS8246BC3600	COM08875	8	275
06DX328*BA0600	COM06075	9	305
06DX328*BA1200	COM06076	9	305
06DX3286BA0100	COM06105	9	305
06DX337*BA0600	COM06077	9	305
06DX337*BA1200	COM06078	9	305
06DX3376BA0100	COM06106	9	305
06DX537*BA0600	COM06080	12.7	305
06DX537*BA1200	COM06079	12.7	305
06DX5376BA0100	COM06107	12.7	305
06DX824*AA0600	COM06071	8	275
06DX824*AA1200	COM06072	8	275
06DX824*BA0600	COM06073	8	275
06DX824*BA1200	COM06074	8	275
06DX8246AA0100	COM06103	8	275
06DX8246BA0100	COM06104	8	275
06E6175360	COM08855	25	470
06E6175660	COM08854	25	470
06E6265360	COM08856	25	450
06E6275360	COM08859	30	500
06E6275660	COM08858	30	500
06E6299360	COM08862	40	550
06E6299660	COM08861	40	550
06E7275360	COM08860	30	500
06E7299360	COM08863	40	550
06EA250360	COM08852	20	400
06EF175660	COM08853	25	470
06EF265360	COM08829	25	450
06EF275360	COM08830	30	500
06EF275660	COM08857	30	500
06ET2503*0	COM06143	20	400

Reciprocating Compressors - Carrier/Trane Cross Reference

Model Number	COM Number	Nom Tons	Shipping Weight
06ET2506*0	COM06144	20	400
06ET2653*0	COM06145	25	450
06ET2656*0	COM06146	25	450
06ET2753*0	COM06147	30	500
06ET2756*0	COM06148	30	500
06ET2993*0	COM06149	40	550
06ET2996*0	COM06150	40	550
06EX250160	COM06108	20	400
06EX250360	COM06081	20	400
06EX2506*0	COM06082	20	400
06EX265160	COM06109	25	450
06EX265360	COM06083	25	450
06EX2656*0	COM06084	25	450
06EX275160	COM06110	30	500
06EX275360	COM06085	30	500
06EX2756*0	COM06086	30	500
06EX299160	COM06111	40	550
06EX299360	COM06087	40	550
06EX2996*0	COM06088	40	550
5H120	COM06157	120	1500
5H40	COM06154	40	740
5H60	COM06155	60	895
5H80	COM06156	80	1215

Reciprocating Compressors - Copeland/Trane Cross Reference

Model Number	COM Number	Nom Tons	Shipping Weight
3DT3-1500-TFD	COM08877	15	425
4DB3-2200-TSK	COM08501	22	435
4DC3-2200-TSK	COM08502	22	435
4DH1-2500-TSK	COM08503	25	445
4DH3-2500-TSK	COM08504	25	445
4DJ1-3000-TSK	COM08506	30	450
4DJ3-3000-TSK	COM08507	30	450
4DK1-2500-FSD	COM08878	25	445
4DK1-2500-TSK	COM08491	25	445
4DK3-2500-TSK	COM08505	25	445
4DR1-3000-TSK	COM08492	30	450
4DR3-3000-TSK	COM08493	30	450
4RA*2000-TSK	COM06089	20	398
4RA3-2000-TSE	COM06112	20	395
4RE*2000-TSK	COM06090	20	403
4RE2-2000-TSE	COM06113	20	395
4RH*2500-TSK	COM06091	25	410
4RH1-2500-TSE	COM06114	25	415
4RJ*3000-TSK	COM06097	30	470
4RJ1-3000-TSE	COM06116	30	470
4RK*2500-TSK	COM06092	25	415



Cross Reference

Reciprocating Compressors - Copeland/Trane Cross Reference

Model Number	COM Number	Nom Tons	Shipping Weight
4RK2-2500-TSE	COM06115	25	415
4RR*3000-TSK	COM06098	30	470
4RR1-3000-TSE	COM06117	30	470

Reciprocating Compressors - Copeland/Trane Cross Reference

Model Number	COM Number	Nom Tons	Shipping Weight
6DH1-3500-TSK	COM08494	35	520
6DH3-3500-TSK	COM08508	35	520
6DJ1-4000-TSN	COM08510	40	570
6DJ3-4000-TSN	COM08511	40	570
6DK1-3500-TSK	COM08495	35	520
6DK3-3500-TSK	COM08509	35	520
6DP1-3500-TSK	COM08496	35	520
6DP3-3500-FSD	COM08881	35	520
6DP3-3500-TSK	COM08497	35	520
6DR1-4000-TSN	COM08498	40	570
6DR3-4000-FSD	COM08886	40	570
6DR3-4000-TSN	COM08512	40	570
6DS1-4000-TSN	COM08499	40	570
6DS3-4000-FSN	COM08887	40	570
6DS3-4000-TSN	COM08500	40	570
6DW3-3000-FSD	COM08880	30	530
6DW3-3000-TSK	COM08879	30	530
6DY3-3000-TSK	COM08889	30	550
6RA*3000-TSK	COM06093	30	475
6RA4-3000-TSE	COM06118	30	475
6RE*3000-TSK	COM06094	30	480
6RE2-3000-TSE	COM06119	30	475
6RH*3500-TSK	COM06095	35	485
6RH1-3500-TSE	COM06120	35	485
6RJ*4000-TSN	COM06099	40	535
6RJ1-4000-TSE	COM06122	40	535
6RK*3500-TSK	COM06096	35	485
6RK2-3500-TSE	COM06121	35	485
6RK2-350A-TSK	COM08882	35	520
6RP2-3500-TSK	COM08828	35	485
6RP2-350A-TSK	COM08883	35	484
6RR*4000-TSN	COM06100	40	535
6RR2-4000-FSN	COM08885	40	570
6RR2-4000-TSE	COM06123	40	535
6RS2-4000-TSN	COM08888	40	570
6RS2-400A-TSN	COM08884	40	570

Copeland Refrigeration Models (DELTA REED) - Copeland/Trane Cross Reference

Current Model Number	Old Model Number	COM Number
4DL3F63KETSK	4DL3150ETSK	COM09795
4DT3F76KETSK	4DT3220ETSK	COM09796
3DS3F46KETFC	3DS3100ETFC	COM09797
3DS3R17METFC	3DS3150ETFC	COM09798
3DS3R17METFD	3DS3150ETFD	COM09799
4DK3R22METSK	4DK3250ETSK	COM09800
3DB3F33KETFC	3DB3075ETFC	COM09801
3DS3R17MOTFD	3DS31500TFD	COM09802
3DS3F46KETFD	3DS3100ETFD	COM09803
4DS3F76KETSK	4DS3220ETSK	COM09804
4DA3R12METSK	4DA3100ETSK	COM09805
4DP3F63KETSK	4DP3150ETSK	COM09806
3DA3R10METFC	3DA3075ETFC	COM09807
3DB3R12METFC	3DB3100ETFC	COM09808
3DF3F40KETFC	3DF3090ETFC	COM09809
3DA3F28KETFC	3DA3060ETFC	COM09810
4DE3R18METSK	4DE3200ETSK	COM09811
3DB3R12METFD	3DB3100ETFD	COM09812
3DS3R17MOTFC	3DS31500TFC	COM09813
3DT3R17MOTFD	3DT31500TFD	COM09814
4DR3R28METSK	4DR3300ETSK	COM09815
4DA3F47KETSK	4DA3101ETSK	COM09816
3DF3R15METFC	3DF3120ETFC	COM09817
3DB3F33KETFD	3DB3075ETFD	COM09818
6DL3F93KETSK	6DL3270ETSK	COM09916
6DT3F11METSK	6DT3 300ETSK	COM09917



Questions To Ask

Questions to ask after the quotation

Remember your customer will probably need some other items to finish the job!

Find out what they are:

1. Does he need compressor accessories such as unloader valves, crankcase heaters, and control modules?

Items like crankcase heaters and control modules are important to compressor reliability.

2. Does he need filter dryers (minimum of liquid line dryers, suction line dryers if a motor burn has occurred), oil test kits, offer oil analysis from Charlotte?

Motor burns and improper cleanup are reasons for repeat compressor failures.

3. Does the customer need a new contactor, or contactors?

Many compressor failures are caused by contactor failures.

4. Does the customer need pressure switches, high low, oil pressure?

Defective safety controls can lead to compressor failures.

5. Does the customer need extra oil to help cleanup the system?

Remember a replacement compressor is a terrible thing to waste!

You can help prevent compressor failures and make money also!



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