

MIL-STD-279B

25 January 1965

SUPERSEDING

MIL-STD-279A

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MILITARY STANDARD

COMPRESSORS, RECIPROCATING, POWER-DRIVEN, OPEN-TYPE, FOR USE WITH REFRIGERANT-12



FSC 4130

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25 January 1965

DEPARTMENT OF DEFENSE
WASHINGTON, D.C.

**COMPRESSORS, RECIPROCATING, POWER-DRIVEN,
OPEN-TYPE, FOR USE WITH REFRIGERANT-12**

25 JANUARY 1965

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1. This standard has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, and the Air Force. Effective 25 January 1965.

2. Recommended corrections, additions, or deletions should be addressed to U.S. Army Natick Laboratories, Natick, Mass.

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1. SCOPE

1.1 SCOPE. This standard covers capacities, input horsepower limitations, and physical characteristics of Military standard open-type compressors.

1.1.1 Application. The open-type compressors covered by this standard are for use in combination with other standard refrigera-

tion components in refrigeration and air-conditioning systems employing refrigerant 12.

1.2 CLASSIFICATION. The compressors covered by this standard are classified in two types (type I and II) according to capacities (see fig. 1 and 2).

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2. REFERENCED DOCUMENTS

2.1 GOVERNMENTAL. The issues of the following documents in effect on the date of invitation for bids or request for proposal form a part of this standard to the extent specified herein.

SPECIFICATION

MILITARY

MIL-C-14370 — Compressors, Recipro-

cating, Power-Driven, Open-Type For Use With Refrigerant 12.

PUBLICATION

NATIONAL BUREAU OF STANDARDS

Handbook H28 — Screw-Thread Standards For Federal Services.

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3. DEFINITIONS

(Not applicable) (The following definitions are not applicable to this specification.)

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4. GENERAL REQUIREMENTS

4.1 PROCUREMENT SPECIFICATION. sors covered by this standard is MIL-C-
The procurement specification for compres- 14370.

59-12

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5. DETAIL REQUIREMENTS

5.1 REFRIGERANT. Compressors shall be for use with refrigerant 12, dichloro-difluoromethane (CCl_2F_2).

5.2 CAPACITIES. Compressors shall meet the minimum requirements of capacity groups A, B, C, and D as indicated on figures 1 and 2, under the conditions specified when driven by a prime mover having a nominal speed of 1,750 rpm, using B section belts, and the pitch diameters of the driving pulleys are as follows:

Pitch diameter (inches)	Type compressor	Capacity group
5.6	I	A
7.4	I	B
5.6	II	C
7.4	II	D

Capacities shall be met at rotative speeds not exceeding 80 percent of the maximum speed recommended by the compressor manufacturer.

5.3 POWER REQUIREMENTS. Power input to compressors shall not exceed the maximums indicated on figures 3 and 4 under the conditions indicated thereon and when operated at the speeds specified in 5.2.

5.4 PHYSICAL CHARACTERISTICS. Mounting dimensions, flywheel details, maximum overall dimensions, and maximum weights of compressors are shown on figure 5. Flange location dimensions for mounting

suction and discharge service valves are shown on figure 6.

5.5 STUDS AND CAP SCREWS. Studs and cap screws used in assembly of compressors shall be in the inch system limited to sizes, threads, and length increments shown on figure 7, and shall conform to requirements of Handbook H28 — Screw-Tread Standards for Federal Services.

5.6 CRANKSHAFT, SHAFT SEAL, AND SEAL HOUSING. Shaft seals shall be self-aligning to provide positive sealing. Shaft seal, seal housing, and seal-end of crankshaft are shown on figure 8.

Notice of availability. Copies of specifications, standards, drawings and publications required by suppliers in connection with specific procurement functions should be obtained from the procurement agency or as directed by the contracting officer.

Copies of this standard for military use may be obtained as indicated in the foreword to, or the general provisions of, the Index of Military Specifications and Standards.

The title and identifying symbol should be stipulated when requesting copies of military standards.

Custodians:

Army—GL
Navy—YD
Air Force—82

Preparing activity:

Army—GL
Project No. 4130-0066

Review activities:

Army—MD, MO
Navy—MC, SA, YD
Air Force—82

User activities:

Army—SM
Navy—CG, SH

Note. Review and User information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current Federal Supply Classification Listing Of DOD Documents.

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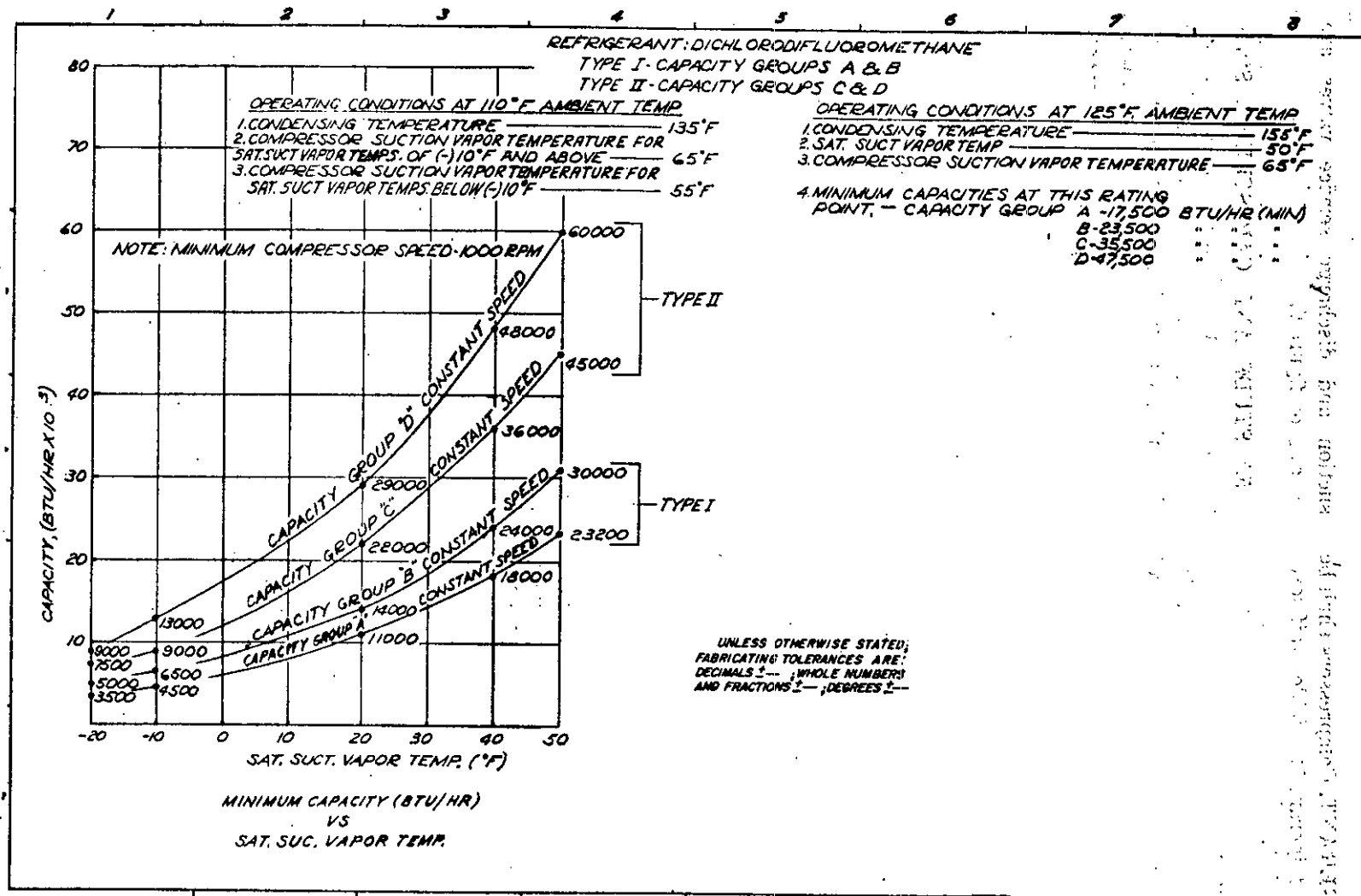


FIGURE 1. Compressor, reciprocating power-driven, open type, for use with refrigerant 12, compressor capacities at 135°F. and 155°F. condensing temperature (normal air-cooled condenser operation).

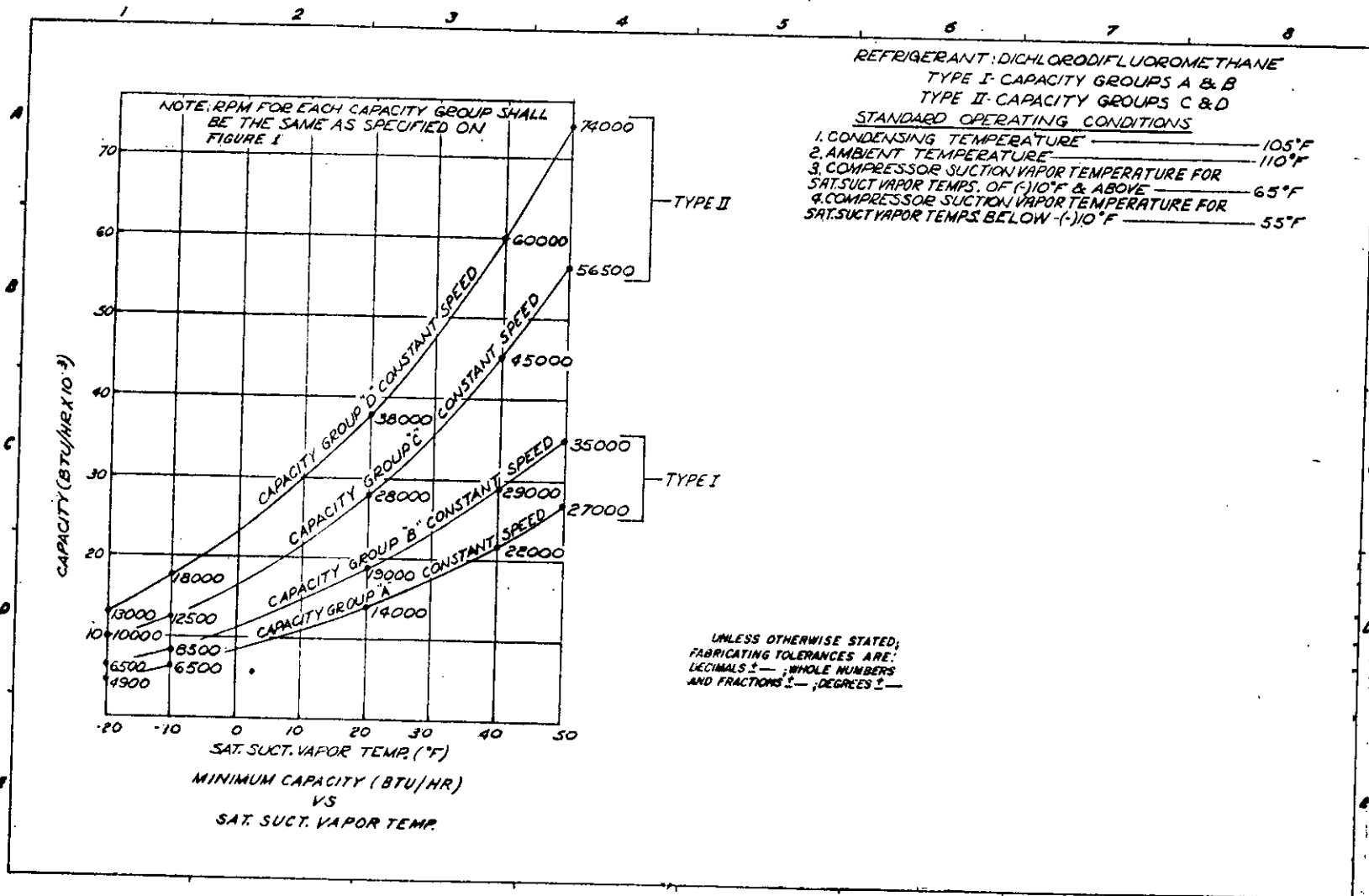


FIGURE 2. Compressor, reciprocating power-driven, open type, for use with refrigerant 12, compressor capacities at 105°F. condensing temperature (normal water-cooled condenser operation).

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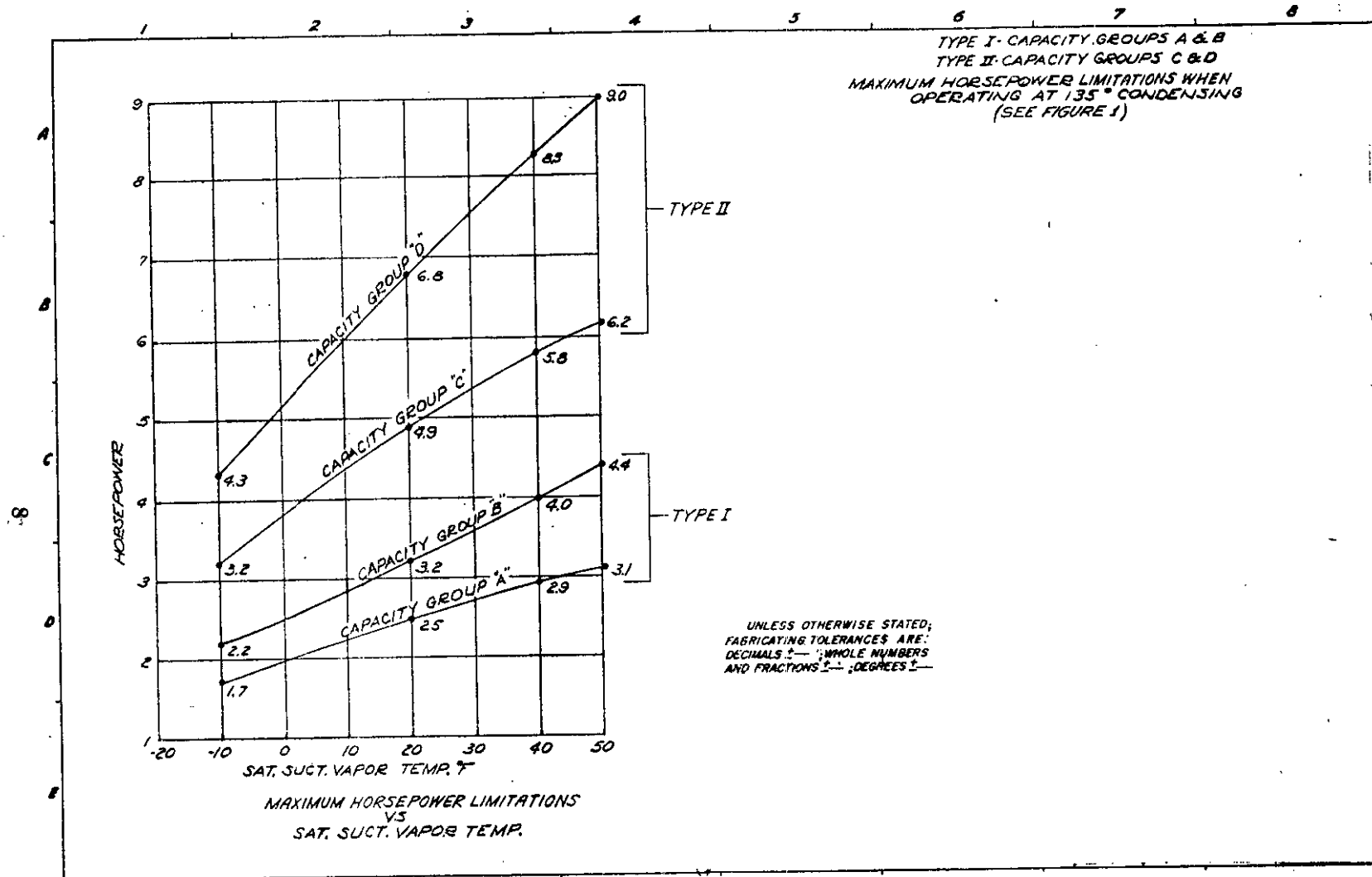


FIGURE 3. Compressor, reciprocating power-driven, open type, for use with refrigerant 12, maximum hp limitations at 135°F. condensing temperature (normal air-cooled condenser operation).

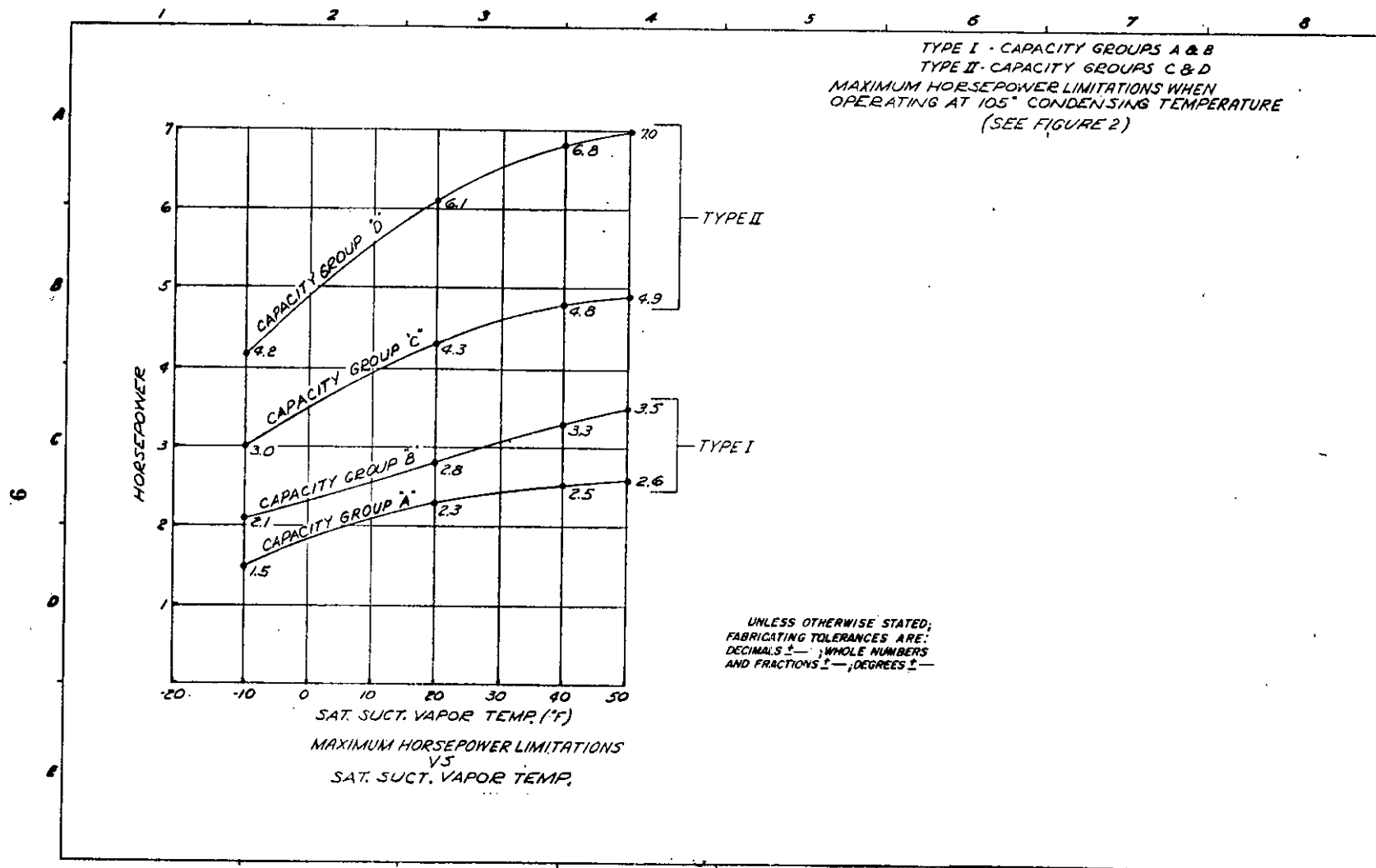


FIGURE 4. Compressor, reciprocating power-driven, open type, for use with refrigerant 12, maximum hp limitation at 105°F. condensing temperature (normal water-cooled condenser operation).

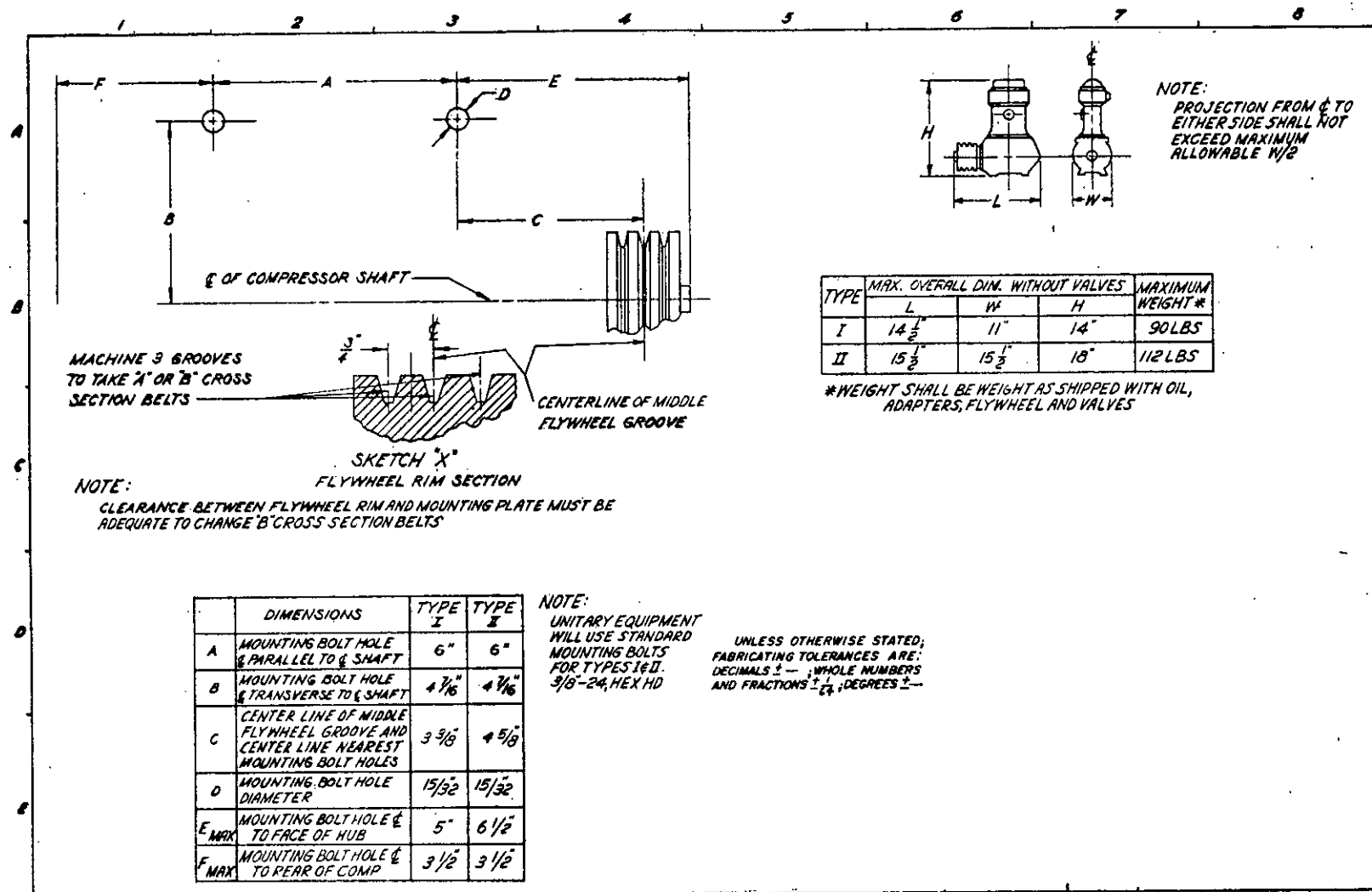


FIGURE 5. Compressor, reciprocating power-driven, open type, for use with refrigerant 12, compressor mounting bolt layout, flywheel details, overall dimensions and weight.

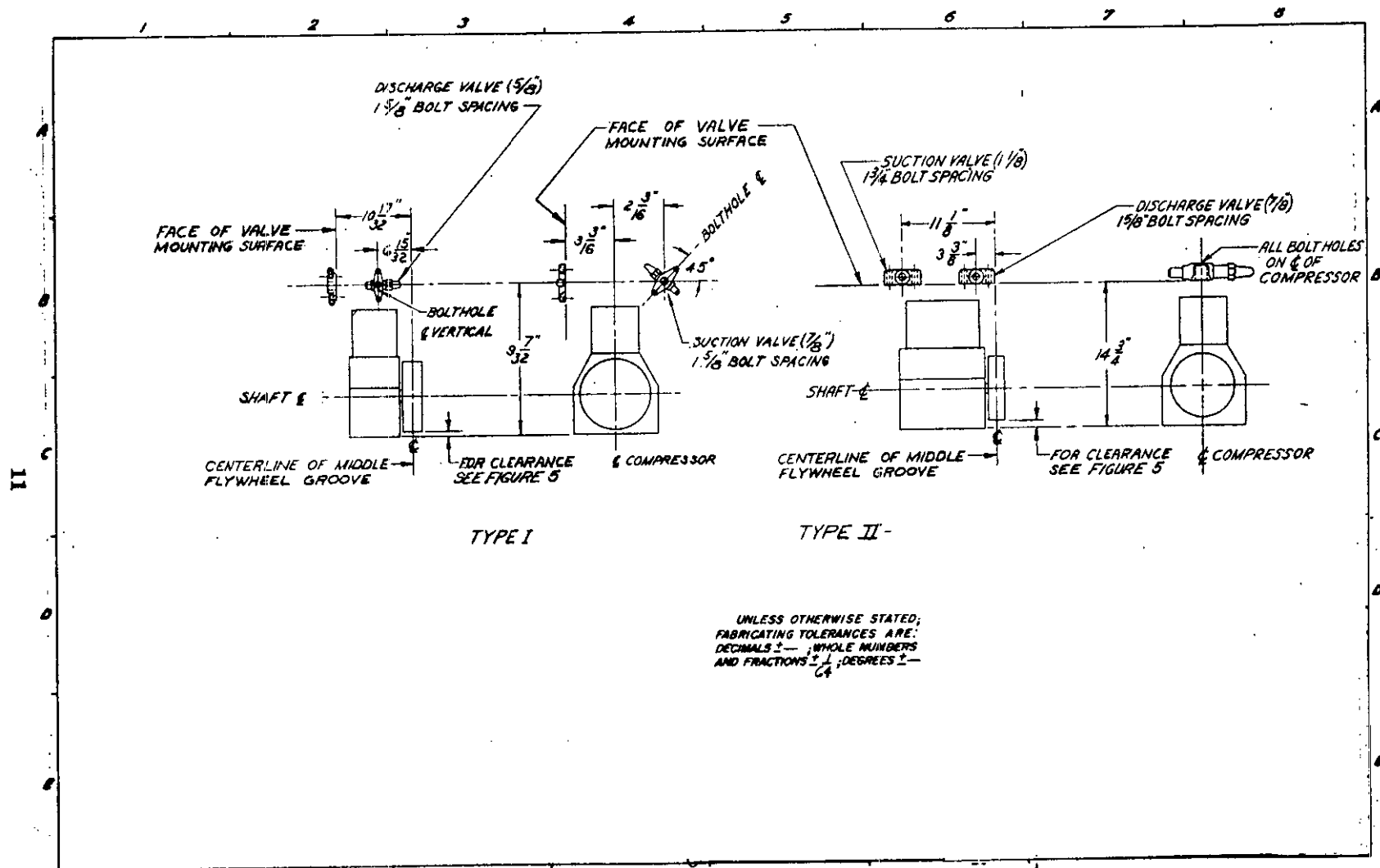


FIGURE 6. Compressor, reciprocating power-driven, open type, for use with refrigerant 12, suction and discharge service valves flange locations.

TYPE	DIAMETER	THREADS/INCH	LENGTH-INCREMENT
HEX HEAD CAP SCREWS	5/16"	18	1/8"
	3/8"	16	1/8"
	1/4"	28	1/8"
SOCKET- CAP SCREWS (ALLEN HEAD)	5/16"	18	1/8"
	3/8"	16	1/8"
	"10	32	1/8"
STUDS	5/16"	18-TAP 24-NUT	1/2"
	3/8"	16-TAP 24-NUT	1/2"

UNLESS OTHERWISE STATED;
FABRICATING TOLERANCES ARE:
DECIMALS ± —; WHOLE NUMBERS
AND FRACTIONS ± —; DEGREES ± —

FIGURE 7. Compressor, reciprocating power-driven, open type, for use with refrigerant
12, stud and cap screw dimensions.

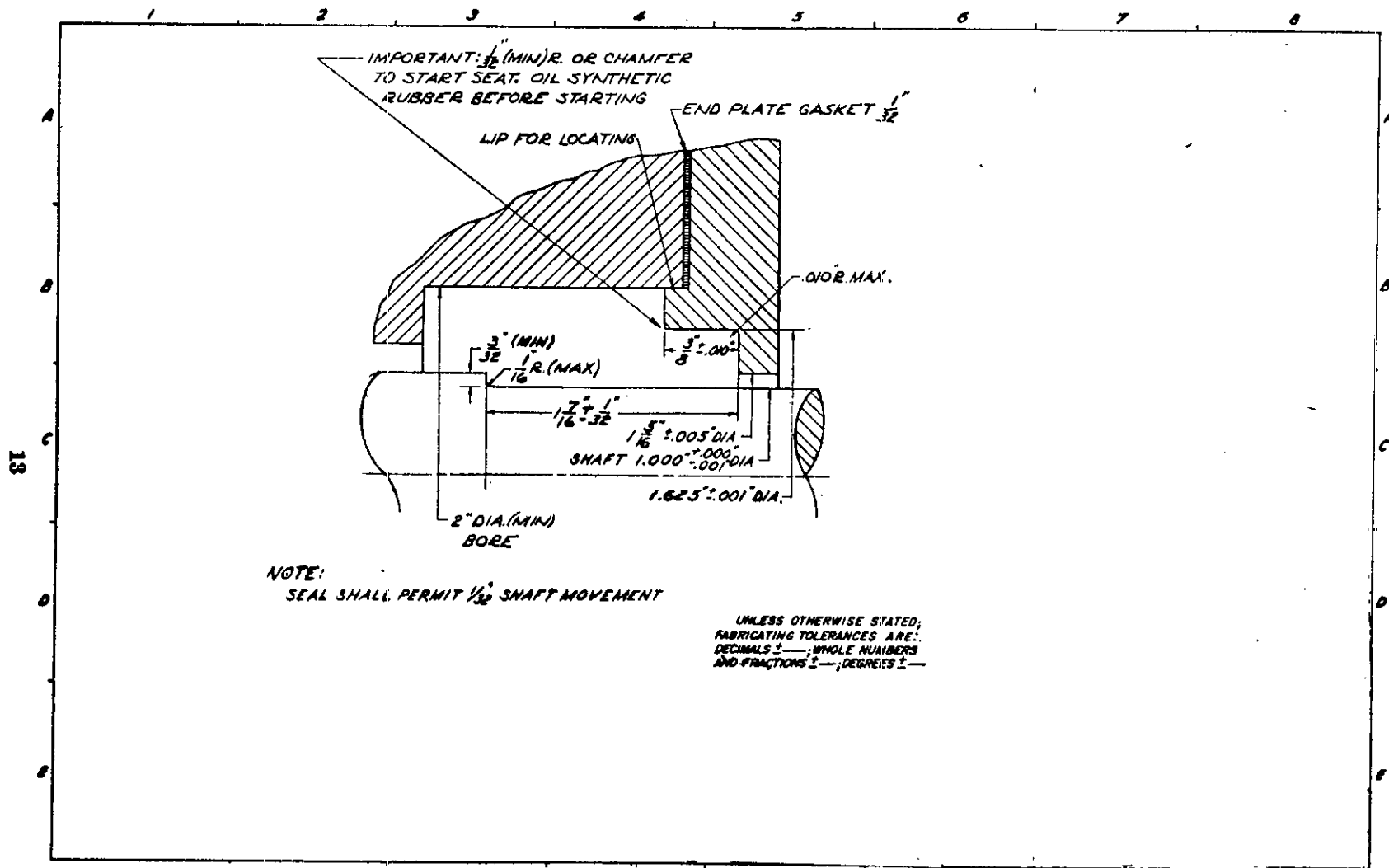


FIGURE 8. Compressor, reciprocating power-driven, open type, for use with refrigerant 12, shaft seal housing.