Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

Dimension Sheet
3540

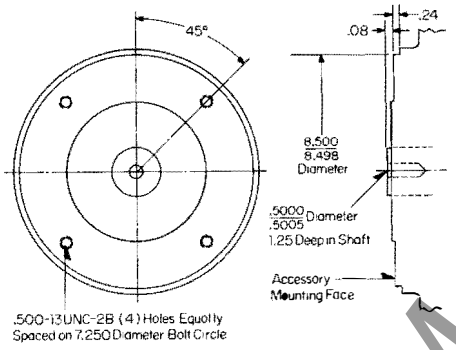
Page 131

April, 1977
New Information
Mailed to: E, D, C/1747/DS

Drip-proof Guarded
Frame Series 210A-500AT
Tachometer Mounting Parts

Dc Motors Life-Line S

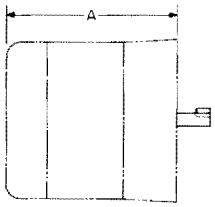
Common Bracket Flange for All Tachometers (Frames 210A to 500AT)



Reproduced From Drawing 6739A21

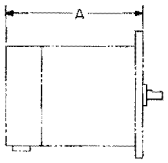
Tachometer

Tachometer	A
BC42	8.3
BC46	10.5
BC66	11.5
AEI	10.2



BC42-46-66 and AEI

Tachometer	A
PY59EY	5.1
SPY59JY1 and JY2	6.6

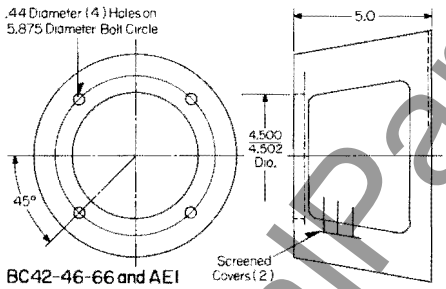


PY

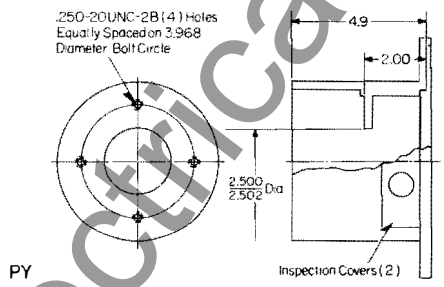
Sigmotion

Servo-Tek

Tachometer Adapter



BC42-46-66 and AEI



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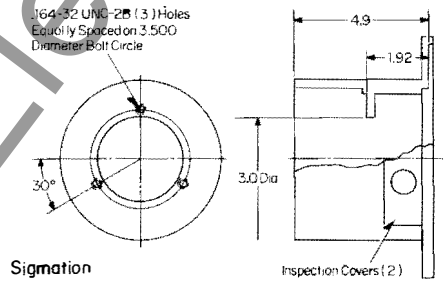

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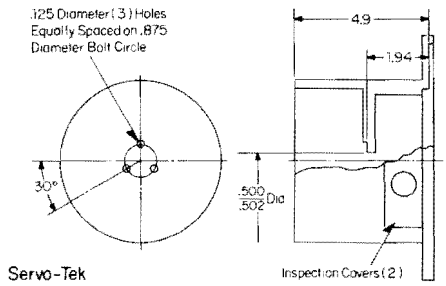
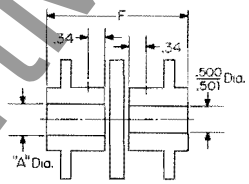
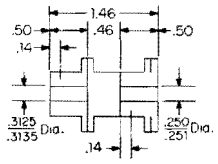


Servo-Tek

Coupling



Tachometer	A	F	Keyway Wide	Keyway Deep
BC42-46 AEI	.625/.626	2.56	.188	.109
BC66	.750/.751	2.62	.188	.109



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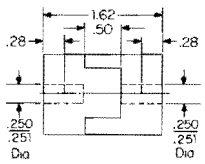

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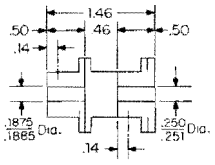
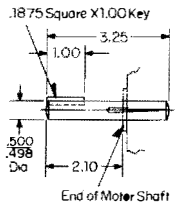
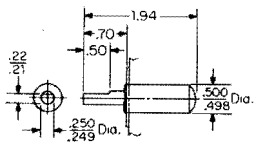


Servo-Tek

Accessory Shaft Extension



BC42-46-66 and AEI



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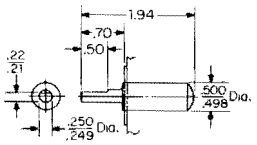

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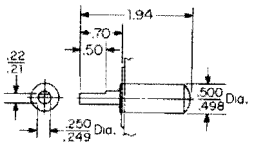

Servo-Tek

Printed in USA

Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

April, 1977
New Information
Mailed to: E, D, C/1747/DS

Drip-proof Guarded
Frame Series 580A-680A
Tachometer Mounting Parts

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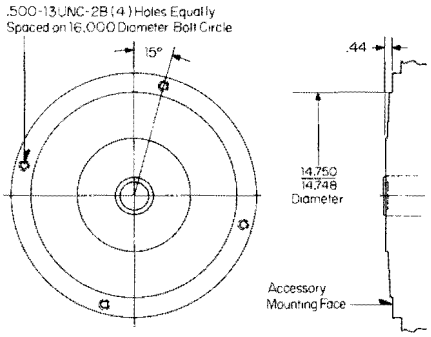
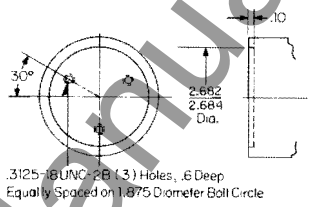
Page 133

Dc Motors Life-Line S

Common Bracket Flange for All Tachometers (Frames 580A to 680A)



Shaft Machining for All Tachometers



Reproduced From Drawing 6739A22

Tachometer

Tachometer	A
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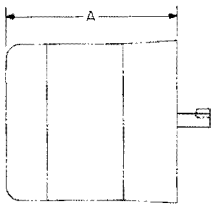
BC46	10.5
BC66	11.5
AEI	10.2



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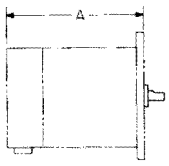
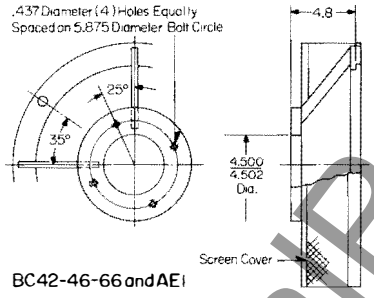


PY

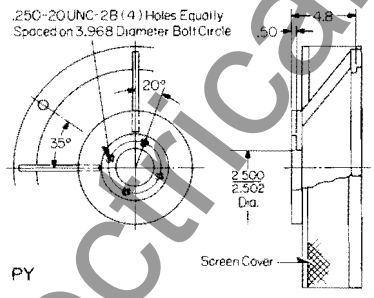
Sigmation

Servo-Tek

Tachometer Adapter



BC42-46-66 and AEI



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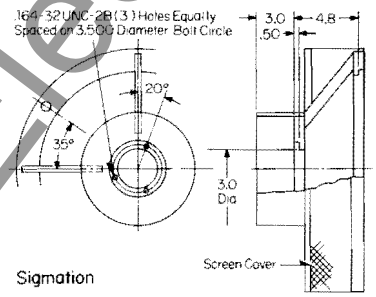

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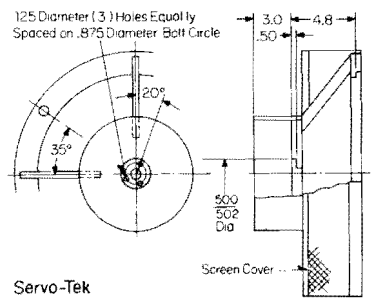
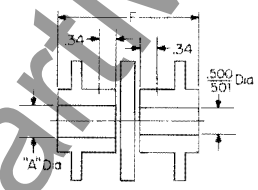


Servo-Tek

Coupling



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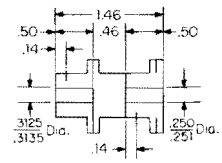

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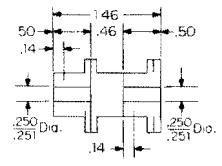

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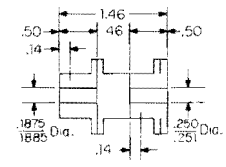
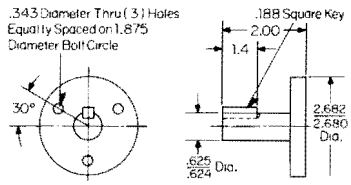
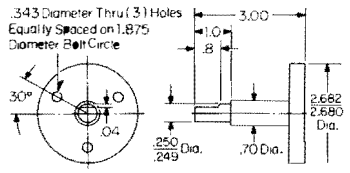


Servo-Tek

Accessory Shaft Extension



BC42-46-66 and AEI



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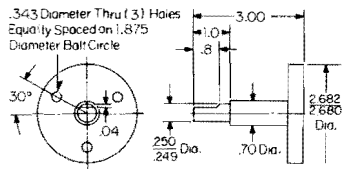

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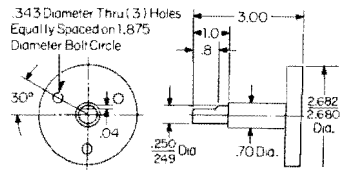


Servo-Tek

Printed in USA

Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

Westinghouse Electric Corporation
Distribution Equipment Division
St. Louis, Missouri 16143

April 14, 1977
New Information
Mailed to: E,D,C/1927, 1928
1966, 2335, 2522/PL, DB

Hospital Isolation
Systems

Effective immediately, Section 31-300 of the General Catalog covering Hospital Isolation Systems is cancelled and should be removed from your catalog and files. This product is no longer available.

Publications which are being cancelled are as follows:

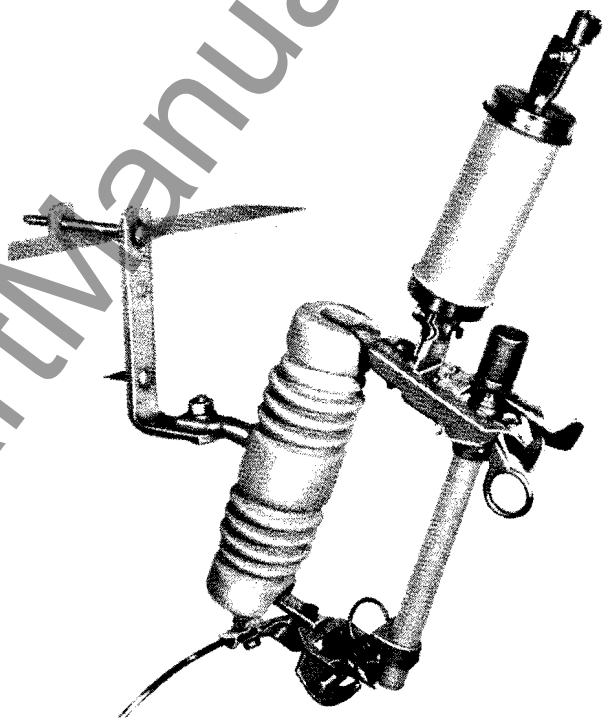
Index tab 31-300
Selling Policy 31-300, pages 1-4, dated December 6, 1976
Contractor Discount Schedule 31-303, pages 1-2, dated December 6, 1976
Distributor Discount Schedule 31-308, pages 1-2, dated December 6, 1976
Descriptive Bulletin 31-300 D WE A dated January, 1974
Price List 31-320 P WE A, pages 1-6, dated September 15, 1975

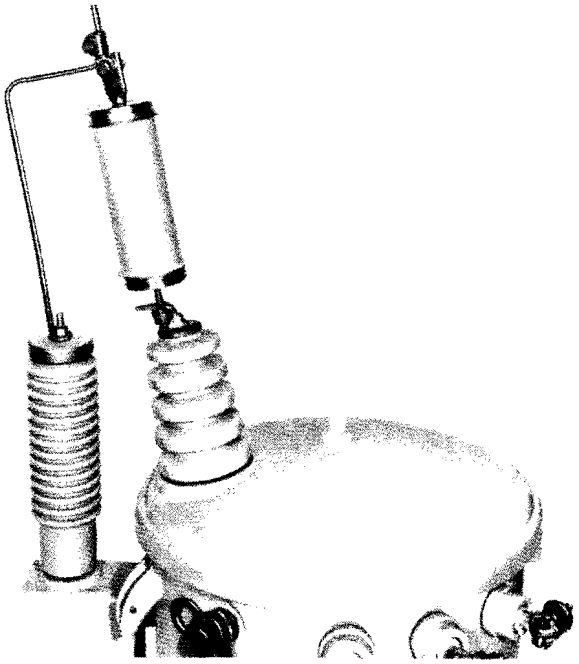
Printed in U. S. A.

Westinghouse Electric Corporation
Switchgear Division
East Pittsburgh, PA 15112

April, 1977
New Information
E, D, C/1971/DB

Type CLTX Power Fuses





Introduction

Increasing load densities and other factors have dictated that the Electric Utility use higher distribution voltages, larger MVA capacity substation transformers, larger conductors for feeders and shorter feeders, all resulting in significantly higher available fault currents throughout the distribution system. These higher fault currents can exceed the interrupting rating of various equipments including fuse cutouts, transformer weak link fuses, and liquid fuses. Furthermore, the maximum power and energy which can be transferred into an arc in a faulted transformer, capacitor, or other types of distribution equipment increases as available fault current increases. Thus higher available fault currents raise the probability of disruptive failure in this type of equipment. To reduce the probability of disruptive failure, it is necessary to reduce the amount of power and energy which can be transferred into the faulted equipment. Since expulsion fuses such as transformer weak links, cutouts, and liquid fuses are essentially zero current clearing devices, they allow at least the first loop of the available fault current to flow unattenuated. Consequently, they cannot reduce the power and sub-cycle energy which can be transferred into faulted equipment, and they can not prevent sub-cycle disruptive failures due to high available fault currents.

The Westinghouse CLTX is an outdoor, partial range, current limiting fuse designed to protect new or existing installations of overhead distribution transformers or capacitor banks from excessively high fault currents by limiting the peak let-thru current and energy (I^2t)

The CLTX, when applied correctly, can significantly reduce the energy (I^2t) available to distribution equipment subjected to high magnitude faults to minimize disruptive transformer and capacitor tank failures, prevent line lockout due to external bushing flashover and improve series coordination of system protective devices.

The CLTX fuse is designed as a back-up type fuse to be used in series with new or existing distribution fuses (distribution fuse cutouts, internal weak link fuses, liquid fuse, or Westinghouse Power fuse type DBS) when applied to protect overhead conventional distribution transformers, CSP transformers, capacitor banks or line sectionalizing.

The economic advantage of using the CLTX as a back-up fuse in series with an expulsion or weak link type fuse is that the majority of faults are of the low magnitude or incipient-type transformer faults, where normally only the low cost expulsion or weak link will melt and clear the fault. Where higher magnitude fault currents are imposed on the system, which can cause a disruptive failure (catastrophic damage), the CLTX fuse will operate to limit the amount of let-thru energy to the protected distribution equipment to low levels.

Benefits

The CLTX fuse offers a unique advantage in its ability to limit the let-thru current/energy within tolerable limits when operating above its threshold current value, and in addition, it operates in a silent nonventing mode. Retrofitting the CLTX fuse to existing installations or installing it on new applications greatly increases the ability of the Electric Utility system to handle high fault current especially on older systems where increased loads are occuring. Using the CLTX energy limiting fuse on a distribution system will provide the user with the following benefits.

1. Better protection for OH Distribution transformers subjected to high internal fault currents by minimizing disruptive tank failures.
2. Less severe damage to distribution equipment on bushing flashover.
3. Closer coordination between expulsion type fuse ratings for improved circuit sectionalizing and performance.
4. Does not necessitate changing fusing practices based upon present usage, loading or coordination requirements.
5. Visual indication of fuse operation when used with standard distribution type cutouts or Westinghouse power fuses type DBS, RDB.
6. Significant reduction in transient recovery voltage limitations associated with expulsion fuses.
7. Improved high current interruption performance without sacrificing superior low current clearing capabilities of standard expulsion type fuse links.
8. Significant reduction in the expulsion of gas and the noise generated by a normal fuse cutout operation.
9. Extended life of cutout holder by reducing let-thru energy.
10. Prevention of line lock-out in bushing flashover.
11. Reduction of replacement cost compared to a general purpose current limiting fuse to achieve the same degree of protection.
12. Retrofittable to existing installations because the CLTX back-up type fuse is generally smaller in size than a general purpose type current limiting fuse.

Operation and Coordination

The CLTX is a back-up type, current limiting fuse with the ability to limit and clear fault currents up to 50 KA RMS. The CLTX must be used in series with an expulsion or liquid type fuse to provide full range protection in the area of low current faults and overloads.

The series expulsion type link or submersible weak link type fuse must be coordinated with the CLTX fuse so that the expulsion fuse will always melt whether the series combination is subject to a low or high current fault. This type of coordination insures that the cutout will always drop open to provide a positive visual indication that a fuse operation has occurred and in addition, provide additional open gap voltage insulation.

The CLTX can be used in series with any type of expulsion or liquid fuse providing proper coordination is observed. At 0.01 seconds on the time-current characteristic curve the minimum melting current of the CLTX fuse should be at least 20% greater than the minimum melting current of the series expulsion fuse link. See Figure 1 for typical coordination curve and Table 1 for the proper coordination between fuse links and the CLTX. Failure to observe this guideline will possibly allow miscoordination to occur which could defeat the purpose of using the CLTX fuse. If miscoordinated, the following could occur:

1. The CLTX could melt and clear before the link melted, thus losing the dropout indication of the cutout.

2. The CLTX could melt on low currents which it is not designed to interrupt.

Normal withstand energy of the transformer must be greater than the let-thru of the back-up CL fuse. The true transformer withstand value is measured in KW. seconds and the commonly accepted value of the measurement of let-thru energy of a current limiting fuse is I^2t or ampere squared seconds. Utilizing a large back-up fuse to reduce stocks or confusion may produce let-thru energies of sufficient magnitude to seriously damage smaller transformer KVA sizes.

Utilizing this type of coordination provides for the low current clearing efficiency of the expulsion link and turns the high fault current clearing duties over to the energy limiting capabilities of the CLTX. This minimizes the replacement costs to the user because the CLTX fuse generally will not respond to transformer secondary faults. Reduced replacement costs are substantiated by the fact that over the years, it has been reported that 70 to 80% of the transformer fuse interruptions have been created by low current fault conditions generated by either an overload condition, external secondary line fault or an internal secondary fault.

Although the CLTX can be used to protect equipment from fault currents as high as 50,000 amperes RMS symmetrical, it is necessary in all applications that the series distribution fuses be capable of interrupting all fault currents up to the level listed in Table 1. For coordination with conventional distribution transformers (not self-protected) and capacitor banks, the utilities normal fusing practice can be followed but in no case should the "T" or "K" link rating of the series expulsion fuse be larger than the corresponding CLTX rating.

For coordination with Westinghouse self-protected distribution transformers (CSP-CP), the transformer KVA rating should not exceed the maximum rating indicated in Table 2. To protect other manufacturers self-protected transformers, the minimum melting time current characteristic curve of the internal submersible link must be coordinated with the CLTX fuse as previously described to determine the maximum transformer KVA rating that can be protected.

Generally, most back-up type current limiting fuses will not clear currents that melt the element in .02 seconds or longer. This reduces the window of coordination to a minimum and enhances the chances of miscoordination which can defeat the purpose of minimizing the probability of catastrophic failures. Miscoordination that causes the cur-

TABLE 1. CLTX-Performance and Coordination Data

Technical Data and Ratings									Maximum Ampere Rating of Required Series Distribution Fuse										Dimensional Data & Style Reference			
		Maximum System KV							Cutout Expulsion Links		Power Fuse Type DBS		CSP Submersible Weak Link③									
KV Class	CLTX Fuse Rating	Three Phase ①	Phase to Phase ②	Phase to Neutral	I.C. Rms. Amps Sym. KA	Peak Arc Voltage KV ⑦	Let Thru Energy KA^2 Sec.	Approx. .01 Sec. Melt Amps	Nema K	Nema T	K Speed	E Speed	Link	RTE 351-2 Link 355-7 Link OS ④	RTE 351-2 Link 355-7 Link FS ⑤	124090-92 Kearney Dual Element	GE 9F54	Min. Rms. Asym. Amp. I.C. of Series Connected Expulsion Link⑥	Weight in Lbs.	Leakage Distance Inches	Style Number
15	15	14.4	14.4	8.3	50	26	13	800	15	10	15	10	7A	C5	C7	15	A7-B7 C7-H7	700	3.5	5.18	151D930G03
15	25	14.4	14.4	8.3	50	26	50	1600	25	15	25	20	8	C8	C10	30	A9-B9 C9-H9	1200	4.0	8.54	151D930G07
15	40	14.4	14.4	8.3	50	26	120	2800	40	25	40	30	9	C10	C16	35	A11-B11 C11-H11	2100	4.5	8.54	151D930G04
25	15	27	27	15.5	50	49	13	800	15	10	15	10	7A	C5	C7	15	A7-B7 C7-H7	700	4.5	8.54	151D930G02
25	25	27	27	15.5	50	49	50	1600	25	15	25	20	8	C8	C10	30	A9-B9 C9-H9	1200	5.5	13.18	151D930G08
25	40	27	27	15.5	50	49	120	2800	40	25	40	30	9	C10	C16	35	A11-B11 C11-H11	2100	6.0	13.18	151D930G05
35	15	40	40	23	50	75	13	800	15	10	15	10	7A	C5	C8	15	A7-B7 C7-H7	700	6.0	13.18	151D930G06

① CLTX can be used with bank connected, single phase, conventional or CSP type transformers if primary windings are wye connected, or conventional or CSP integrally connected in a Delta or wye configuration. Single phase CSP type transformers with primary windings connected in Delta configuration must use phase-to phase voltage rated CLTX fuses.

② CLTX fuses must be connected in each phase.

③ See Table 2 for Westinghouse type CSP transformer KVA ratings. Consult transformer manufacturer for correct weak link TCC and rating before using CLTX fuse.

④ Overload sensing weak link.

⑤ Fault sensing weak link.

● Minimum RMS asymmetrical ampere interrupting current of series connected expulsion link.

⑦ Maximum peak arc voltages. In actual practice generated arc voltages are normally well below these limits.

rent limiting fuse to melt on low currents that take longer than .02 seconds will cause most back-up type current limiting fuses to fail during its clearing operation. The Westinghouse back-up type CLTX fuse is designed to melt and clear all currents that will melt the element in 0.1 seconds or less which considerably increases its coordination capabilities and enhances the CLTX total clearing performance when subjected to low currents.

When the series combination of the CLTX and fuse link operates it is an indication that one of five failure situations has occurred.

1. Primary or secondary fault internal to the transformer.
2. Secondary fault external to the transformer.
3. Primary bushing flashover.
4. Overloaded transformer.
5. Lighting stroke (if arresters on load side of CLTX)

Generally, both the CLTX fuse and expulsion fuse will melt when subjected to a primary fault internal to the transformer or a bushing flashover. For secondary faults, internal or external, and overloads which are most frequent, the expulsion fuse link will melt and clear relieving the CLTX from this duty.

For utilities that require the lineman to refuse and close the cutout to determine if the conventional distribution transformer is in operable condition, it is recommended that one of the following two procedural checks be followed.

1. Replace the back-up current limiting fuse with a new CLTX. If the replacement method is utilized then the replaced CLTX can be checked for continuity and returned to stock or used elsewhere at a later time.
2. Remove the CLTX from service and check for continuity. If the fuse is not open, it can be restored to service.

When the CLTX is used to protect a CSP type transformer the hot lead must be disconnected to remove the CLTX and perform the continuity check. If the CLTX does not have continuity, then the transformer has experienced an internal fault and must be replaced. In all cases, the internal link would have melted making it necessary to replace the CSP transformer. Merely closing the secondary breaker should easily establish whether the transformer should be replaced. An attempt to re-energize the distribution transformer after the CLTX fuse has operated is not recommended, never by-pass the CLTX fuse to test the transformer.

Voltage Rating

CLTX is available in 8.3, 15.5 and 23 KV maximum voltage designs. It can be applied to single-phase transformers, three phase banks of single phase transformers, three phase transformers and three phase delta, grounded wye or ungrounded wye connected capacitor banks. The CLTX is designed and rated for single as well as three phase application. The voltage class used with single phase transformers connected phase-to-ground are also applicable to three phase combinations connected in a grounded wye configuration utilizing either conventional or self-protected, single phase transformers or integrally connected, three phase type. When single phase self-protected transformers are banked with the primary windings connected in delta, it is recommended that a phase-to-phase voltage rated CLTX be used. A phase-to-ground voltage rated CLTX fuse can be used with three phase, integrally connected, self-protected transformers. Where single phase transformers are connected phase-to-phase a CLTX fuse must be connected in each phase and can be phase-to-ground voltage rated.

As previously stated, the CLTX is a back-up fuse designed to be used in conjunction with a low fault current protective device. This low fault current protective device, normally a protective link is used to withstand recovery voltage after the link and CLTX has operated. In the event that the low current protective device should fail to operate or is refused, the CLTX is able to withstand a recovery voltage equal to its maximum design voltage for a minimum of several days due to the exclusive weather seal system.

When applying the CLTX to either the source or load side of the distribution fuse, normal system clearances must be maintained between phases and between energized parts and ground.

Table 2. Maximum Westinghouse Self-Protected Transformer ① Rating Selection Chart ④

Maximum KV Rating	Transformer Rating, KV			CLTX ⑤ Rating	Max. Transf. Rating, KVA ④		
	Single-Phase		Three-Phase ③		Single-Phase		Three-Phase ⑤
	Phase-Neutral	Phase-Phase ②			Phase-Neutral	Phase-Phase	
8.3 (15 KV Class)	6.9	12	12	15K/10T 25K/15T 40K/25T	50 75 100	100 100⑤ 100⑥	75 112½ 150
	7.2		12.47	15K/10T 25K/15T 40K/25T	50 75 100	100 100⑥ 100⑥	75 112½ 150
	7.62	13.2	13.2	15K/10T 25K/15T 40K/25T	50 75 100	100 100⑤ 100⑥	75 112½ 150
	7.96	13.8	13.8	15K/10T 25K/15T 40K/25T	50 75 100	100 100⑥ 100⑥	75 112½ 150
	8.32	14.4	14.4	15K/10T 25K/15T 40K/25T	50 75 100	100 100⑥ 100⑥	75 112½ 150
15.5 (25 KV Class)	12		20.8	15K/10T 25K/15T 40K/25T	100 100⑥ 100⑥		⑥
	13.2	22.9	22.9	15K/10T 25K/15T 40K/25T	100 100⑥ 100⑥		
	13.8	23.9	23.9	15K/10T 25K/15T 40K/25T	100 100⑥ 100⑥		
	14.4	24.9	24.9	15K/10T 25K/15T 40K/25T	100 100⑥ 100⑥		
	15		26	15K/10T 25K/15T 40K/25T	100 100⑥ 100⑥		
23 (35 KV Class)	19.92		34.5	15K/10T	100⑥		

① Transformer having an internal fuse and secondary breaker either with or without surge arresters.

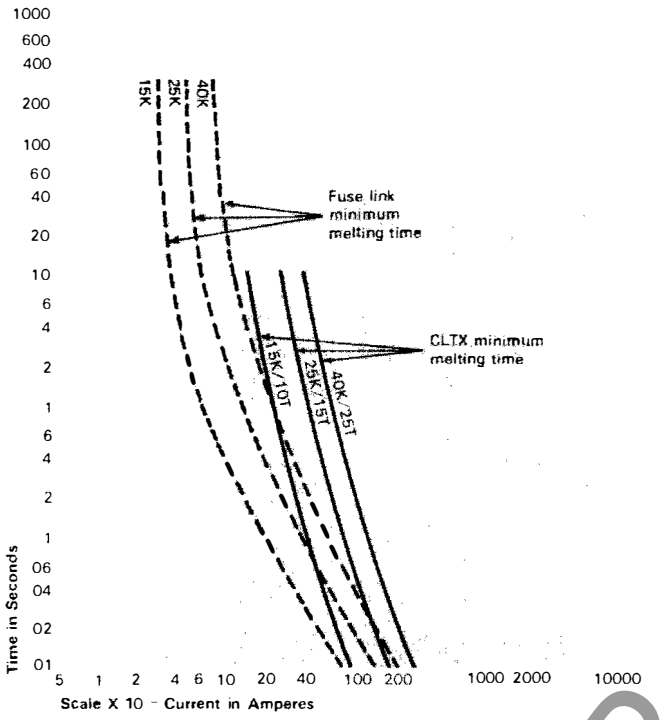
② When single phase transformers are connected phase-to-phase, a CLTX must be used in each phase. Single phase CSP transformers connected in Delta configurations must use phase-to-phase voltage rated CLTX fuses.

③ Applies to integrally connected three phase transformers only.

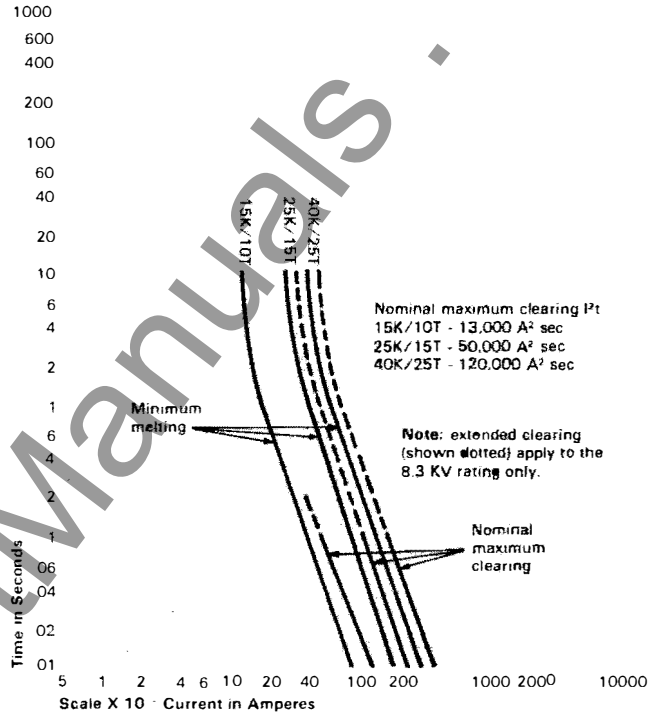
④ Ratings based on use of Westinghouse #7A or smaller weak link for 15K/10T CLTX #8 or smaller for 25K/15T CLTX and #9 or smaller weak link for 40K/25T CLTX, in self-protected transformer.

⑤ The surge arrester, if any, should be connected to the source side of CLTX.

⑥ Maximum KVA rating limited by secondary breaker and/or internal link rating availability.



Minimum Melting Time-Current Characteristic Curves for CLTX Fuses Rated 8.3/15.5 KV., 15K/10T, 25K/15T and 40K/25T; 23 KV. 15K/10T with Corresponding Maximum K Rated Expulsion Link.



Minimum Melting and Total Clearing Time-Current Characteristic Curves for CLTX Fuses Rated 8.3/15.5 KV., 15K/10T, 25K/15T and 40K/25T; 23 KV. 15K/10T

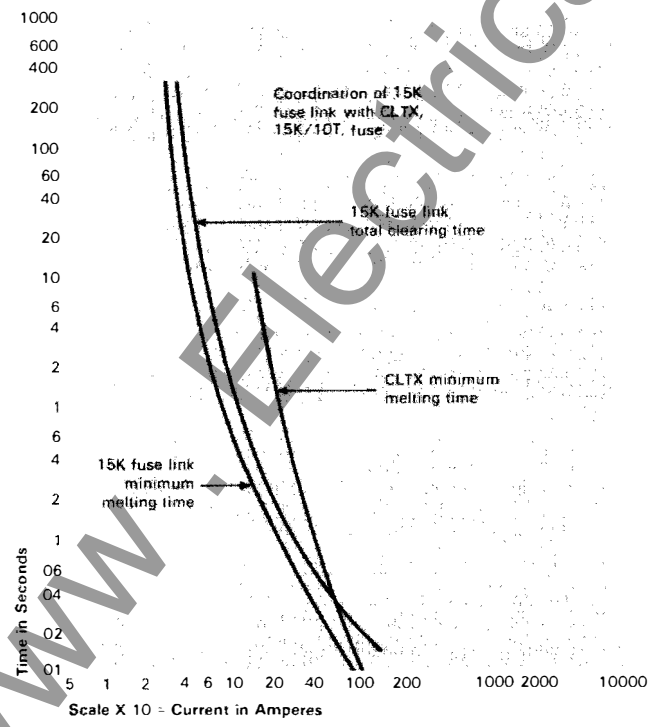
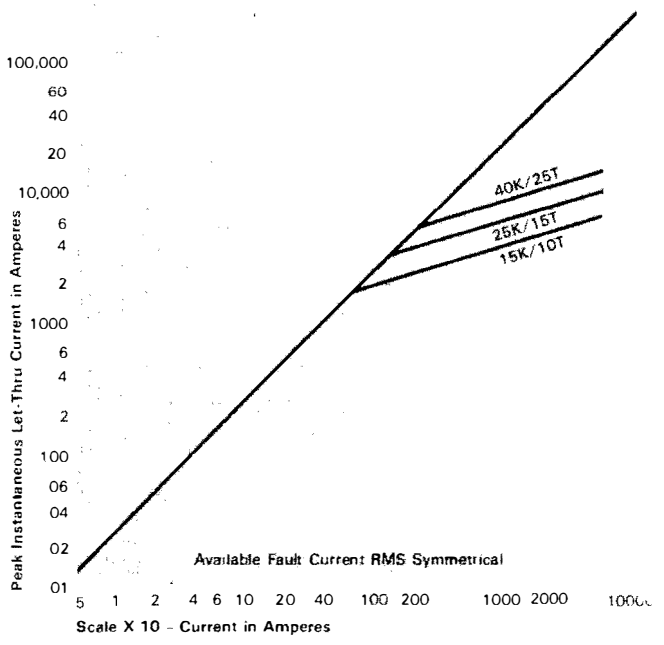
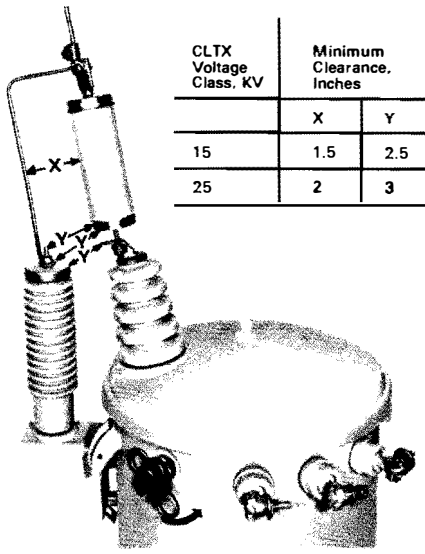


Figure 1 Example of Recommendation Coordination Between CLTX and Series Expulsion Link.



Let-Thru Current Characteristic Curves for CLTX Fuses Rated 8.3/15.5 KV., 15K/10T, 25K/15T and 40K/25T, 23 KV 15K/10T

Peak Arc Voltage and Arrester Coordination



CLTX Voltage Class, KV	Minimum Clearance, Inches	
	X	Y
15	1.5	2.5
25	2	3

Figure 2. CLTX mounted on self-protected overhead distribution transformer

The peak arc voltage that is generated by the current limiting fuse during a high current interruption forces the current to zero before the first natural current zero occurs. This generated peak arc voltage may create some concern when applying a current limiting fuse in conjunction with surge arresters. Since the CLTX fuse utilizes a punched ribbon element, the peak arc voltage generated by each fuse size is dependent on the system voltage on which the fuse is applied. As a rule of thumb, the maximum peak voltage will not exceed 3 times the applied system RMS voltage plus 1000 volts. The CLTX is designed to comply with ANSI. Standard C37.40 thru 48 which limits the peak arc voltage to 26, 49 and 75 KV for fuse maximum applied voltage ratings of 8.3, 15.5 and 23 KV, respectively. When properly applied, the CLTX fuse will not sparkover surge arresters. If the arrester is located on the load side of the CLTX, the lightning impulse strike may or may not melt the fuse depending on the arrester performance and the energy of the stroke. Therefore, it is recommended practice to locate the arrester on the line or source side of the CLTX fuse.

When using the CLTX to protect a self-protected overhead distribution transformer with a tank mounted surge arrester, Figure 2 indicates the clearances necessary to reconnect the surge arrester to the source side of the CLTX.

Installation and Mounting

The CLTX fuse can be mounted in several different ways:

1. Conventional transformer with fused cutout. The usual method of mounting is to attach the CLTX to either the source side or the load side of the distribution fuse. The fuse can be attached to the cutout source side (break jaw end) in a vertical upright position as illustrated in Figure 3. Where overhead clearance is at a premium, the CLTX can be mounted in a horizontal position extending from either side of the distribution fuse mounting providing the connector will accommodate the CLTX fuse and the connector is keyed to prevent fuse rotation.

When attaching the CLTX to the load end of the distribution fuse mounting, the CLTX can be mounted in an offset straight down to the rear or horizontally, extending to either side of the mounting. Again, the connector must be keyed to prevent rotation of the fuse. See Figure 4. When the CLTX is mounted at the load end of a distribution fuse, the connecting conductor to the transformer and the CLTX fuse must be routed clear of the exhaust path of the distribution fuse cutout. In addition, the exhaust path and byproducts of interruption must not be directed over the CLTX fuse.

2. When protecting self-protected distribution transformers (CSP), the CLTX can be connected directly to the high voltage bushing terminal connector per Figure 2.

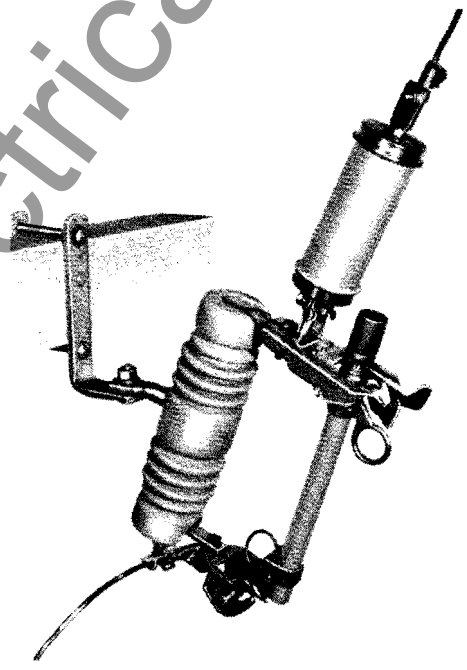


Figure 3. CLTX vertically mounted on source side of cutout

3. The CLTX can also be suspended from the high voltage lead by connecting a short cable lead to the stud using a companion-type splicing sleeve or suitable parallel groove clamp. The opposite end of the short conductor can then be connected to the hot line clamp which in turn is connected to a bail clamp attached to the main line. The spade end of the fuse is then connected to the cutout or transformer bushing by the drop line conductor.

4. When mounting the CLTX to a double vented cutout, there is no need to replace the expendable cap when using the 15K rating CLTX fuse. For larger sizes, the expendable cap must be replaced with a solid cap when the CLTX is mounted on the source side of the double vented cutout. This will prevent flashover of the CLTX by eliminating the venting of conductive gas from the top of the cutout. When modifying the cutout to a single from a double vented device, the cutout must still be capable of interrupting all faults up through the current values listed in Table 1.

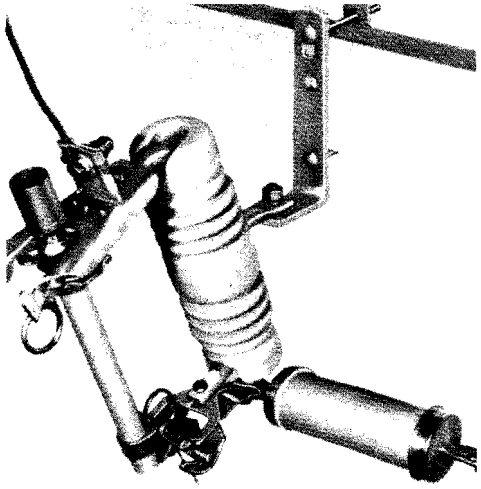


Figure 4. CLTX mounted on load side of cutout

Mechanical Strength

The following average values have been tested on the CLTX fuse:

1. Torque: 250 inch-pounds
2. Tensile: 2600 pounds
3. Cantilever: 175 inch-pounds

Weatherseal System

A breakthrough in outdoor coating technology has made possible a new line of Westinghouse outdoor fuses which can remain electrically stressed after operation. This significant advance in protective coatings for fuses was made possible by a unique Westinghouse patented epoxy resin system. Extensive outdoor and accelerated life testing has proven the superiority of this protective system for fuses.

Pioneer work in the use of epoxy resin systems as outdoor electrical insulation was started in Europe over 20 years ago. Shortly afterwards U.S. electrical manufacturers and the military started studies on outdoor exposure of epoxy resin systems. The general attitude was a conservative approach with much testing and evaluation of various formulations. Westinghouse R&D was an early pioneer in evaluating and testing epoxy compositions simultaneously outdoors and under high voltage stress. Eight outdoor test stations were established throughout the country to obtain a variety of climatic and contamination conditions. With the advent of the cycloaliphatic epoxies weathering characteristics of epoxy resin systems improved markedly. The compositions made from this epoxy resin have been the basis of the outdoor coatings for fuses. With these compositions it became possible to design a weather resistant fuse which would, with a very high degree of realibility, resist the effects of outdoor weathering.

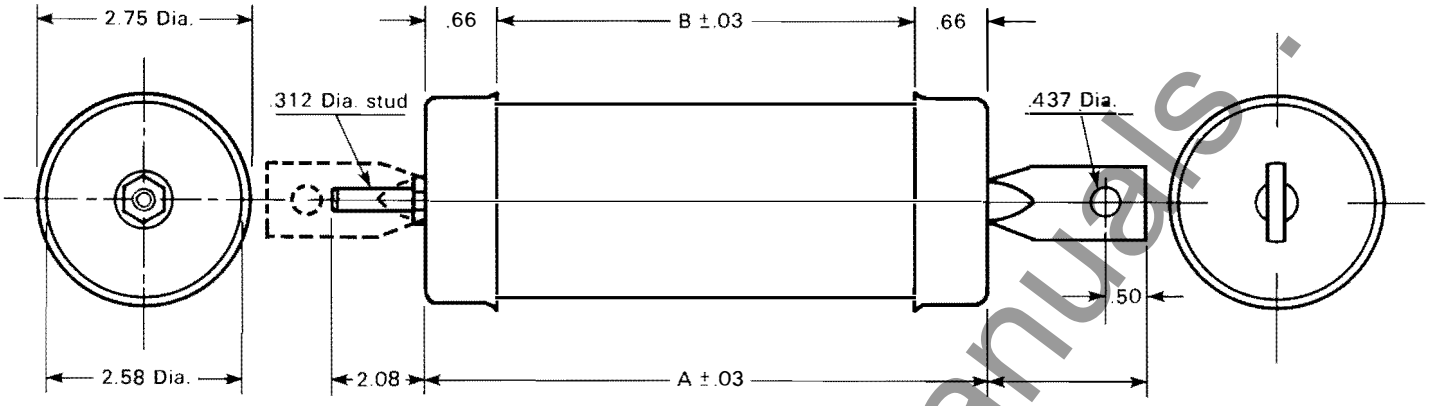
The following tests have been performed to verify the reliability of the coating.

1. Cycloaliphatic epoxy resin compositions are still in good condition after 10 years in the outdoor test rack with continuous voltage stress applied.

2. Simulated outdoor weathering has been conducted on this coating in the Weatherometer per ASTM D1499. The Weatherometer not only exposes the sample to intense UV radiation but periodically applies a water spray. After exposure equivalent to five years the fuse coating showed no significant signs of degradation. Coatings made from this same epoxy resin system show only a ten percent loss in thickness after a weatherometer exposure equivalent to ten years.

3. A salt-fog chamber, which affords a convenient way of comparing materials and is an accelerated outdoor life test, was used in our evaluation. The test indicated a probable life **under voltage stres**s of more than 12 years.

These tests along with many others made during the development program indicate the fuse coating has a long outdoor life under high voltage stresses. Under normal conditions the fuse is unstressed and an even longer life is predicted.



Specification Data – Dimensions, Weights and Terminal Connectors

Dimensions In Inches

Maximum KV Rating	Maximum NEMA Expulsion Link Rating	Westinghouse Style Number	Ramad Number ①	Approx. Weight in Lbs.	Dimensions A	B
Fuse – Spade to Stud Type						
8.3 (15KV Class)	15K/10T	151D930G03	48524	8.5	6.50	5.18
	25K/15T	151D930G07	57725	4.0	9.86	8.54
	40K/25T	151D930G04	48419	4.5	9.86	8.54
15.5 (25KV Class)	15K/10T	151D930G02	48523	4.5	9.86	8.54
	25K/15T	151D930G08	70448	5.25	14.5	13.18
	40K/25T	151D930G05	48420	6.0	14.5	13.18
23 (35KV Class)	15K/10T	151D930G06	48421	6.0	14.5	13.18
Fuse – Spade to Spade Type						
8.3 (15KV Class)	15K/10T	6911D50G03	57705	3.5	6.50	5.18
	25K/15T	6911D50G07	57721	4.0	9.86	8.54
	40K/25T	6911D50G04	57714	4.5	9.86	8.54
15.5 (25KV Class)	15K/10T	6911D50G02	57704	4.5	9.86	8.54
	25K/15T	6911D50G08	57724	5 25	14.5	13.18
	40K/25T	6911D50G05	57719	6.0	14.5	13.18
23 (35KV Class)	15K/10T	6911D50G06	57720	6.0	14.5	13.18

Cable Connectors

Type	Style Number	Cable Size	Ramad ②
Parallel Groove Clamp Tin Plated Aluminum	507B242H02	#8 thru 2/0	57679
Single Eye-Bolt Bronze Unplated	665A500G04	#8 thru 2/0	48275

① Order CLTX from W-16 warehouse
② Order connectors from W-89 warehouse

Terminal Connections

The standard terminal is a 5/16 inch diameter copper-bronze stud terminal at one end and a spade type terminal at opposite end. Spade type terminals are suitable for 3/8 inch single bolt type connectors. All terminations are tin plated to accept aluminum connectors. Cable connectors are available as indicated.

Printed in U.S.A.

Westinghouse Electric Corporation
Switchgear Division
East Pittsburgh, PA 15112

Westinghouse Electric
Corporation
Small Power Transformer
Division
South Boston, Va. 24592

Supplement to
Price List 47-250

April 11, 1977
Mailed to: E,D,C/2091/PL

For Underground Power
Distribution 3 Phase,
Liquid Immersed 1500
Thru 5000 Kva

Plazapad Transformers

The following price correction should be made to Price List 47-250, dated March 1, 1977:

Refer to Page 4, Rule 22, "Fused Disconnect Switches".

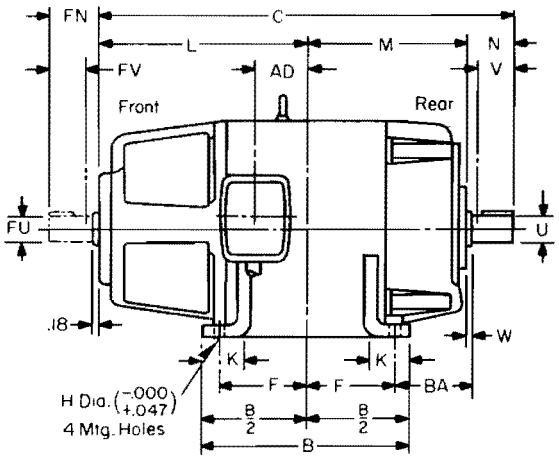
The correct prices for "Heavy Duty, Type SM-4S, 200E max" are:

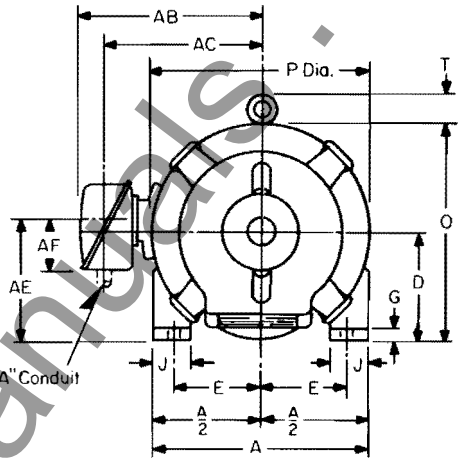
95 kV BIL	$2450
125 kV BIL	$2750

Westinghouse

Dc Motors, Generators, Exciters
Drip-proof, TENV

Life-Line H, Type SK-H
Frames 187A-408A





Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	End View										Conduit Box										
											Standard ③				Oversize				Steel Mill		
	A	D①	E	G	J	O	P	T②	W	AE	AA	AB	AC	AF	AA	AB	AC	AF	AA	AB	AF
187A	8.75	4.50	3.75	.62	1.75	8.9	8.8	1.9	.18	4.50	.50-.76	7.32	6.06	2.38	1-1.25-1.5	8.48	6.44	3.00	Undrilled	8.94	3.12
216A to 218A	10.25	5.25	4.25	.62	1.75	10.4	10.3	1.9	.00	5.25	.50-.76	8.08	6.82	2.38	1-1.25-1.5	9.22	7.28	3.00	Undrilled	9.68	3.12
256A	12.25	6.25	5.00	.62	2.50	12.4	12.3	2.6	.00	8.32	1-1.25-1.5	10.72	8.68	3.00	1.5-2-2.5-3	12.82	9.82	5.38	Undrilled	13.68	7.00
284A to 286A	13.88	7.00	5.50	.68	2.50	13.9	13.8	2.6	.18	9.12	1-1.25-1.5	11.72	9.68	3.00	1.5-2-2.5-3	13.82	10.82	5.38	Undrilled	14.68	7.00
324A to 326A	15.75	8.00	6.25	.75	2.75	15.9	15.8	3.6	.12	10.50	1.5-2-2.5-3	14.52	11.52	5.38	Undrilled	15.38	.....	7.00	Undrilled	15.38	7.00
365A to 366A	17.75	9.00	7.00	.94	3.00	17.9	17.8	3.6	.25	11.50	1.5-2-2.5-3	15.82	12.82	5.38	Undrilled	16.68	.....	7.00	Undrilled	16.68	7.00
404A to 408A	19.75	10.00	8.00	.94	3.75	19.9	19.8	4.3	.18	12.76	1.5-2-2.5-3	16.52	13.52	5.38	Undrilled	17.38	.....	7.00	Undrilled	17.38	7.00

Frame No.④	Side View									Rear Shaft				Front Shaft⑦				Approx. Wt. Lbs.
	B	BA	C	F	H	K	L	M	AD	U⑤	Key Size	N	V⑥	FU	Key Size	FN	FV⑥	
187A	9.50	2.75	18.56	4.00	.40	1.9	9.56	6.56	2.8	.875	.187 sq. x 1.38	2.44	2.00	.750	.187 sq. x 1.38	2.44	2.00	110
216A	9.50	3.50	20.88	4.00	.40	1.9	10.38	7.50	3.3	1.125	.250 sq. x 2.00	3.00	2.75	.875	.187 sq. x 1.38	2.44	2.00	160
218A	11.50	3.50	22.88	5.00	.40	1.9	11.38	8.50	4.3	1.125	.250 sq. x 2.00	3.00	2.75	.875	.187 sq. x 1.38	2.44	2.00	205
256A	12.00	4.25	25.25	5.00	.54	2.1	12.25	9.25	4.1	1.375	.312 sq. x 2.75	3.75	3.50	1.125	.250 sq. x 1.75	2.94	2.68	260
256AS	12.00	4.25	24.44	5.00	.54	2.1	12.25	9.25	4.1	1.125	.250 sq. x 1.75	2.94	2.50	1.125	.250 sq. x 1.75	2.94	2.68	260
284A	12.00	4.75	27.62	4.75	.54	2.5	13.25	9.31	3.6	1.625	.375 sq. x 3.75	5.06	4.62	1.375	.312 sq. x 1.75	2.94	2.50	325
284AS	12.00	4.75	25.50	4.75	.54	2.5	13.25	9.31	3.6	1.375	.312 sq. x 1.75	2.94	2.62	1.375	.312 sq. x 1.75	2.94	2.50	325
286A	13.50	4.75	29.12	5.50	.54	2.5	14.00	10.06	4.3	1.625	.375 sq. x 3.75	5.06	4.62	1.375	.312 sq. x 1.75	2.94	2.50	365
286AS	13.50	4.75	27.00	5.50	.54	2.5	14.00	10.06	4.3	1.375	.312 sq. x 1.75	2.94	2.62	1.375	.312 sq. x 1.75	2.94	2.50	365
324A	13.75	5.25	31.12	5.25	.66	2.9	15.00	10.38	4.0	1.875	.500 sq. x 4.25	5.75	5.38	1.625	.375 sq. x 1.88	3.44	3.00	520
324AS	13.75	5.25	28.75	5.25	.66	2.9	15.00	10.38	4.0	1.625	.375 sq. x 1.88	3.38	3.00	1.625	.375 sq. x 1.88	3.44	3.00	520
326A	14.75	5.25	32.62	6.00	.66	2.9	15.75	11.12	4.8	1.875	.500 sq. x 4.25	5.75	5.38	1.625	.375 sq. x 1.88	3.44	3.00	565
326AS	14.75	5.25	30.25	6.00	.66	2.9	15.75	11.12	4.8	1.625	.375 sq. x 1.88	3.38	3.00	1.625	.375 sq. x 1.88	3.44	3.00	565
365A	15.00	5.88	34.25	6.12	.82	3.0	15.88	11.75	3.4	2.125	.500 sq. x 5.00	6.62	6.12	1.875	.500 sq. x 2.00	3.94	3.50	700
365AS	15.00	5.88	31.62	6.12	.82	3.0	15.88	11.75	3.4	1.875	.500 sq. x 2.00	4.00	3.50	1.875	.500 sq. x 2.00	3.94	3.50	700
366A	16.75	5.88	36.00	7.00	.82	3.0	16.75	12.62	4.3	2.125	.500 sq. x 5.00	6.62	6.12	1.875	.500 sq. x 2.00	3.94	3.50	790
366AS	16.75	5.88	33.38	7.00	.82	3.0	16.75	12.62	4.3	1.875	.500 sq. x 2.00	4.00	3.50	1.875	.500 sq. x 2.00	3.94	3.50	790
404A	15.25	6.62	37.38	6.12	.94	3.0	17.50	12.56	3.9	2.375	.625 sq. x 5.50	7.32	6.88	2.125	.500 sq. x 2.75	4.44	4.00	925
404AS	15.25	6.62	34.50	6.12	.94	3.0	17.50	12.56	3.9	2.125	.500 sq. x 2.75	4.44	4.00	2.125	.500 sq. x 2.75	4.44	4.00	925
405A	16.75	6.62	38.88	6.88	.94	3.0	18.25	13.31	4.7	2.375	.625 sq. x 5.50	7.32	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1015
405AS	16.75	6.62	36.00	6.88	.94	3.0	18.25	13.31	4.7	2.125	.500 sq. x 2.75	4.44	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1015
406A	19.00	6.62	41.12	8.00	.94	3.0	19.38	14.44	5.81	2.375	.625 sq. x 5.50	7.32	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1250
406AS	19.00	6.62	38.26	8.00	.94	3.0	19.38	14.44	5.81	2.125	.500 sq. x 2.75	4.44	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1250
408A	23.00	6.62	45.62	10.00	.94	3.0	21.87	16.44	8.32	2.375	.625 sq. x 5.50	7.32	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1600
408AS	23.00	6.62	42.75	10.00	.94	3.0	21.87	16.44	8.32	2.125	.500 sq. x 2.75	4.44	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1600

① "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.

② Eye bolt removable.

③ Conduit boxes are pressed steel type with knockouts for conduit sizes as shown.

④ "AS" indicates standard short shaft for direct connection (coupled service).

⑤ Manufacturers allowance +.0000, −.0005 for shafts 1.5 diameter and smaller; +.000, −.001 for shafts larger than 1.5 diameter.

⑥ "V" and "FV" are minimum straight portion of shaft.

⑦ Front shaft extension is supplied only when specified on order.

Notes: 1. Dimensions also apply to drip-proof protected and splash-proof motors.

2. Drip-proof enclosure is maintained in wall or ceiling mounted motors, with shaft horizontal, by rotating brackets. If shaft is not horizontal, special covers should be specified if drip-proof enclosure must be maintained.

3. Conduit box can be mounted on opposite side of frame when specified on order. Conduit box may be rotated for top, front or rear conduit entrance.

Reproduced from Drawings 2725-D-01, sub 5; 185-C-710, sub 1; 678-B-784, sub 2; and 678-B-785, sub 3.

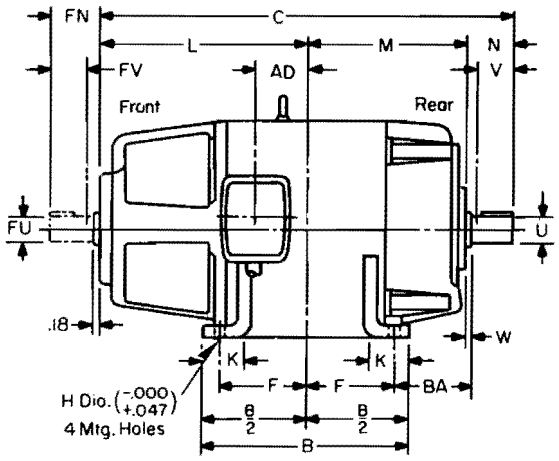
Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

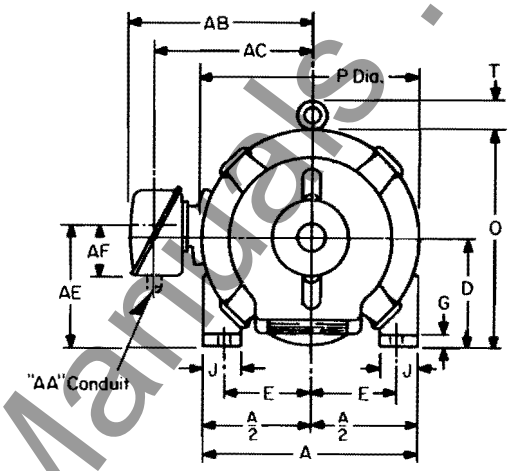
August, 1971
Supersedes DS 3540, pages 1 and 2, dated July, 1968
E. D. C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters
Drip-proof, TENV

Life-Line H, Type SK-H
Frames 444A-507A





Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	End View										Conduit Box											
											Standard③				Oversize				Steel Mill			
	A	D①	E	G	J	O	P	T②	W	AE	AA	AB	AC	AF	AA	AB	AC	AF	AA	AB	AC	AF
444A to 448A	21.75	11.00	9.00	1.06	4.00	21.9	21.8	4.0	.18	14.00	1.5-2-2.5-3	17.58	14.58	5.38	Undrilled	18.44	....	7.00	Undrilled	18.44		7.00
504A to 507A	24.62	12.50	10.00	1.18	4.50	24.8	24.6	4.0	.18	15.50	Undrilled	20.00	.....	7.00	Undrilled	23.50	....	10.12	Undrilled	23.50		10.12

Frame No.④	Side View									Rear Shaft				Front Shaft⑦				Approx. Wt. Lbs.
	B	BA	C	F	H	K	L	M	AD	U⑤	Key Size	N	V⑥	FU	Key Size	FN	FV⑥	
444A	17.00	7.50	40.68	7.25	1.06	3.3	18.06	14.56	4.2	2.625	.625 sq. x 6.50	8.06	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1325
444AS	17.00	7.50	37.56	7.25	1.06	3.3	18.06	14.56	4.2	2.375	.625 sq. x 3.25	4.94	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1325
445A	19.00	7.50	42.68	8.25	1.06	3.3	19.06	15.56	5.2	2.625	.625 sq. x 6.50	8.06	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1470
445AS	19.00	7.50	39.56	8.25	1.06	3.3	19.06	15.56	5.2	2.375	.625 sq. x 3.25	4.94	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1470
447A	22.50	7.50	46.20	10.00	1.06	3.3	20.82	17.32	6.9	2.625	.625 sq. x 6.50	8.06	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1610
447AS	22.50	7.50	43.08	10.00	1.06	3.3	20.82	17.32	6.9	2.375	.625 sq. x 3.25	4.94	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1610
448A	24.50	7.50	48.20	11.00	1.06	3.3	21.82	18.32	7.9	2.625	.625 sq. x 6.50	8.06	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1780
448AS	24.50	7.50	45.08	11.00	1.06	3.3	21.82	18.32	7.9	2.375	.625 sq. x 3.25	4.94	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1780
504A	18.75	8.50	45.44	8.00	1.18	3.5	20.31	16.31	5.3	2.875	.750 sq. x 7.25	8.82	8.38	2.625	.625 sq. x 3.75	5.44	5.00	1940
504AS	18.75	8.50	42.06	8.00	1.18	3.5	20.31	16.31	5.3	2.625	.625 sq. x 3.75	5.44	5.00	2.625	.625 sq. x 3.75	5.44	5.00	1940
505A	20.75	8.50	47.44	9.00	1.18	3.5	21.31	17.31	6.3	2.875	.750 sq. x 7.25	8.82	8.38	2.625	.625 sq. x 3.75	5.44	5.00	2125
505AS	20.75	8.50	44.06	9.00	1.18	3.5	21.31	17.31	6.3	2.625	.625 sq. x 3.75	5.44	5.00	2.625	.625 sq. x 3.75	5.44	5.00	2125
507A	24.75	8.50	51.44	11.00	1.18	3.5	23.31	19.31	8.3	2.875	.750 sq. x 7.25	8.82	8.38	2.625	.625 sq. x 3.75	5.44	5.00	2500
507AS	24.75	8.50	48.06	11.00	1.18	3.5	23.31	19.31	8.3	2.625	.625 sq. x 3.75	5.44	5.00	2.625	.625 sq. x 3.75	5.44	5.00	2500

① "D" dimension will not be exceeded. For exact shaft height shown liners up to .03 may be required.

② Eye bolt removable.

③ Conduit boxes are pressed steel type with knockouts for conduit sizes as shown. Box on 500 frame series is furnished with removable bottom plate to be drilled by customer as required.

④ "AS" indicates standard short shaft for direct connection (coupled service).

⑤ Manufacturers allowance +.0000, −.0005 for shafts 1.5 diameter and smaller; +.000, −.001 for shafts larger than 1.5 diameter.

⑥ "V" and "FV" are minimum straight portion of shaft.

⑦ Front shaft extension is supplied only when specified on order.

Notes: 1. Dimensions also apply to drip-proof protected and splash-proof motors.

2. Drip-proof enclosure is maintained in wall or ceiling mounted motors, with shaft horizontal, by rotating brackets. If shaft is not horizontal, special covers should be specified if drip-proof enclosure must be maintained.

3. Conduit box can be mounted on opposite side of frame when specified on order. Conduit box may be rotated for top, front or rear conduit entrance.

Reproduced from Drawings 2725-D-01, sub 2; 185-C-710, sub 1; 678-B-784, sub 2; 678-B-785, sub 3; and 5449-D-99, sub 2.

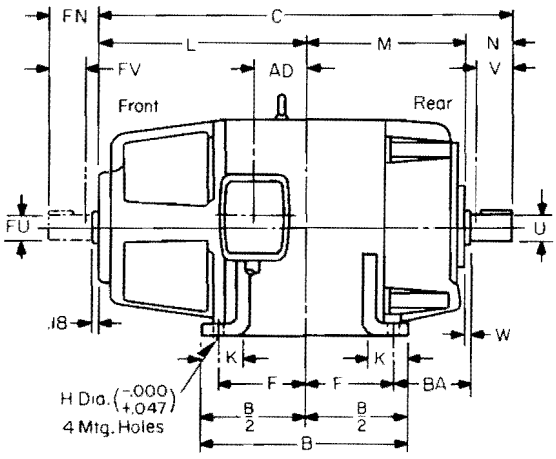
Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

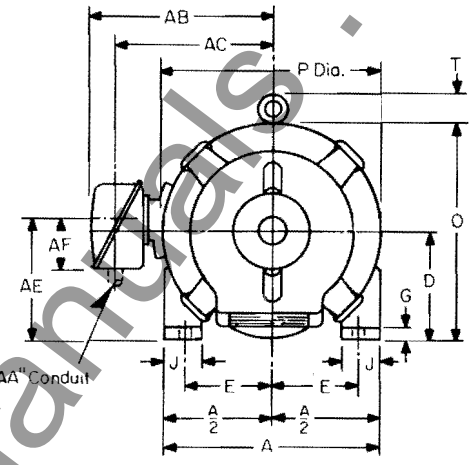
January, 1972
Supersedes DS 3540, page 3 dated
July, 1968
E. D. C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters
Drip-proof, TENV

Life-Line H, Type SK-H
Frames 284A-405A, Series J-K-N





Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series J-K-N	End View										Conduit Box											
											Standard③				Oversize				Steel Mill			
	A	D①	E	G	J	O	P	T②	W	AE	AA		AB	AC	AF	AA	AB	AC	AF	AA	AB	AF
284A to 286A	13.88	7.00	5.50	.68	2.50	13.9	13.8	2.6	.18	9.12	1-1.25-1.5		11.72	9.68	3.00	1.5-2-2.5-3	13.82	10.82	5.38	Undrilled	14.68	7.00
324A to 326A	15.75	8.00	6.25	.75	2.75	15.9	15.8	3.6	.12	10.50	1.5-2-2.5-3		14.52	11.52	5.38	Undrilled	15.38	.....	7.00	Undrilled	15.38	7.00
365A to 366A	17.75	9.00	7.00	.94	3.00	17.9	17.8	3.6	.25	11.50	1.5-2-2.5-3		15.82	12.82	5.38	Undrilled	16.68	.....	7.00	Undrilled	16.68	7.00
404A to 405A	19.75	10.00	8.00	.94	3.75	19.9	19.8	4.3	.18	12.76	1.5-2-2.5-3		16.52	13.52	5.38	Undrilled	17.38	.....	7.00	Undrilled	17.38	7.00

Frame No.④	Side View									Rear Shaft				Front Shaft⑦				Approx. Wt. Lbs.
	B	BA	C	F	H	K	L	M	AD	U⑤	Key Size	N	V⑥	FU	Key Size	FN	FV⑥	
J284AS	12.00	4.75	27.00	4.75	.54	2.88	14.75	9.32	5.06	1.375	.312 sq. x 1.75	2.94	2.62	....	.....	...	...	350
K365A	15.00	5.88	35.94	6.12	.81	3.00	17.56	11.75	5.12	2.125	.500 sq. x 5.00	6.62	6.12	1.875	.500 sq. x 2.00	3.94	3.50	740
K365AS	15.00	5.88	33.31	6.12	.81	3.00	17.56	11.75	5.12	1.875	.500 sq. x 2.00	4.00	3.50	1.875	.500 sq. x 2.00	3.94	3.50	740
J366A	16.75	5.88	37.50	7.00	.81	3.00	18.25	12.62	5.81	2.125	.500 sq. x 5.00	6.62	6.12	1.875	.500 sq. x 2.00	3.94	3.50	820
J366AS	16.75	5.88	34.88	7.00	.81	3.00	18.25	12.62	5.81	1.875	.500 sq. x 2.00	4.00	3.50	1.875	.500 sq. x 2.00	3.94	3.50	820
J404A	15.25	6.62	38.88	6.12	.94	3.00	19.00	12.56	5.44	2.375	.625 sq. x 5.50	7.31	6.88	2.125	.500 sq. x 2.75	4.44	4.00	970
J404AS	15.25	6.62	36.00	6.12	.94	3.00	19.00	12.56	5.44	2.125	.500 sq. x 2.75	4.44	4.00	2.125	.500 sq. x 2.75	4.44	4.00	970
J405A	16.75	6.62	40.38	6.88	.94	3.00	19.76	13.31	5.44	2.375	.625 sq. x 5.50	7.31	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1120
J405AS	16.75	6.62	37.50	6.88	.94	3.00	19.76	13.31	5.44	2.125	.500 sq. x 2.75	4.44	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1120
K405A	16.75	6.62	40.62	6.88	.94	3.00	20.00	13.31	6.44	2.375	.625 sq. x 5.50	7.31	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1130
K405AS	16.75	6.62	37.75	6.88	.94	3.00	20.00	13.31	6.44	2.125	.500 sq. x 2.75	4.44	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1130
N405A	16.75	6.62	42.38	6.88	.94	3.00	21.75	13.31	8.31	2.375	.625 sq. x 5.50	7.31	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1230
N405AS	16.75	6.62	39.50	6.88	.94	3.00	21.75	13.31	8.31	2.125	.500 sq. x 2.75	4.44	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1230

① "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.

② Eye bolt removable.

③ Conduit boxes are pressed steel type with knockouts for conduit sizes as shown.

④ "AS" indicates standard short shaft for direct connection (coupled service).

⑤ Manufacturers allowance +.0000, −.0005 for shafts 1.5 diameter and smaller; +.000, −.001 for shafts larger than 1.5 diameter.

⑥ "V" and "FV" are minimum straight portion of shaft.

⑦ Front shaft extension is supplied only when specified on order.

Notes: 1. Dimensions also apply to drip-proof protected and splash-proof motors.

2. Drip-proof enclosure is maintained in wall or ceiling mounted motors, with shaft horizontal, by rotating brackets. If shaft is not horizontal, special covers should be specified if drip-proof enclosure must be maintained.

3. Conduit box can be mounted on opposite side of frame when specified on order. Conduit box may be rotated for top, front or rear conduit entrance.

Reproduced from Drawings 2725-D-31, sub 3; 678-B-784, sub 2; and 678-B-785, sub 3.

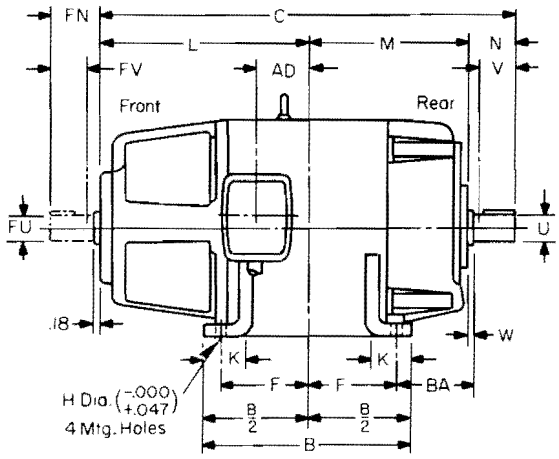
Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

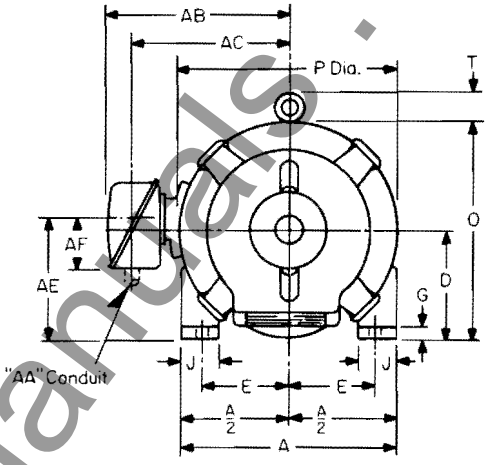
August, 1968
New Information
E, D, C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters
Drip-proof, TENV

Life-Line H, Type SK-H
Frames 444A-507A, Series K-N





Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series K-N	End View										Conduit Box										
											Standard③				Oversize				Steel Mill		
	A	D①	E	G	J	O	P	T②	W	AE	AA	AB	AC	AF	AA	AB	AC	AF	AA	AB	AF
444A to 445A	21.75	11.00	9.00	1.06	4.00	21.9	21.8	4.0	.18	14.00	1.5-2-2.5-3	17.58	14.58	5.38	Undrilled	18.44	....	7.00	Undrilled	18.44	7.00
504A to 507A	24.62	12.50	10.00	1.18	4.50	24.8	24.6	4.0	.18	15.50	Undrilled	20.00	.....	7.00	Undrilled	23.50	....	10.12	Undrilled	23.50	10.12

Frame No.④	Side View									Rear Shaft				Front Shaft⑦				Approx. Wt. Lbs.
	B	BA	C	F	H	K	L	M	AD	U⑤	Key Size	N	V⑥	FU	Key Size	FN	FV⑥	
K444A	17.00	7.50	42.44	7.25	1.06	3.25	19.81	14.56	5.94	2.625	.625 sq. x 6.50	8.06	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1390
K444AS	17.00	7.50	39.31	7.25	1.06	3.25	19.81	14.56	5.94	2.375	.625 sq. x 3.25	4.94	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1390
K445A	19.00	7.50	44.44	8.25	1.06	3.25	20.81	15.56	6.94	2.625	.625 sq. x 6.50	8.06	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1540
K445AS	19.00	7.50	41.31	8.25	1.06	3.25	20.81	15.56	6.94	2.375	.625 sq. x 3.25	4.94	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1540
N445A	19.00	7.50	46.18	8.25	1.06	3.25	22.56	15.56	8.68	2.625	.625 sq. x 6.50	8.06	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1610
N445AS	19.00	7.50	43.06	8.25	1.06	3.25	22.56	15.56	8.68	2.375	.625 sq. x 3.25	4.94	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1610
K504A	18.75	8.50	47.12	8.00	1.18	3.50	22.00	16.31	6.94	2.875	.750 sq. x 7.25	8.81	8.38	2.625	.625 sq. x 3.75	5.44	5.00	2040
K504AS	18.75	8.50	43.75	8.00	1.18	3.50	22.00	16.31	6.94	2.625	.625 sq. x 3.75	5.44	5.00	2.625	.625 sq. x 3.75	5.44	5.00	2040
N504A	18.75	8.50	48.81	8.00	1.18	3.50	23.63	16.31	8.62	2.875	.750 sq. x 7.25	8.81	8.38	2.625	.625 sq. x 3.75	5.44	5.00	2140
N504AS	18.75	8.50	45.44	8.00	1.18	3.50	23.63	16.31	8.62	2.625	.625 sq. x 3.75	5.44	5.00	2.625	.625 sq. x 3.75	5.44	5.00	2140
K505A	20.75	8.50	49.12	9.00	1.18	3.50	23.00	17.31	7.94	2.875	.750 sq. x 7.25	8.81	8.38	2.625	.625 sq. x 3.75	5.44	5.00	2275
K505AS	20.75	8.50	45.75	9.00	1.18	3.50	23.00	17.31	7.94	2.625	.625 sq. x 3.75	5.44	5.00	2.625	.625 sq. x 3.75	5.44	5.00	2275
N505A	20.75	8.50	50.81	9.00	1.18	3.50	24.68	17.31	9.62	2.875	.750 sq. x 7.25	8.81	8.38	2.625	.625 sq. x 3.75	5.44	5.00	2425
N505AS	20.75	8.50	47.44	9.00	1.18	3.50	24.68	17.31	9.62	2.625	.625 sq. x 3.75	5.44	5.00	2.625	.625 sq. x 3.75	5.44	5.00	2425
K507A	24.75	8.50	52.81	11.00	1.18	3.50	24.68	19.31	9.62	2.875	.750 sq. x 7.25	8.81	8.38	2.625	.625 sq. x 3.75	5.44	5.00	2690
K507AS	24.75	8.50	49.44	11.00	1.18	3.50	24.68	19.31	9.62	2.625	.625 sq. x 3.75	5.44	5.00	2.625	.625 sq. x 3.75	5.44	5.00	2690
N507A	24.75	8.50	54.81	11.00	1.18	3.50	26.68	19.31	11.62	2.875	.750 sq. x 7.25	8.81	8.50	2.625	.625 sq. x 3.75	5.44	5.00	....
N507AS	24.75	8.50	51.44	11.00	1.18	3.50	26.68	19.31	11.62	2.625	.625 sq. x 3.75	5.44	5.12	2.625	.625 sq. x 3.75	5.44	5.00	....

① "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.

② Eye bolt removable.

③ Conduit boxes are pressed steel type with knockouts for conduit sizes as shown. Box on 500 frame series is furnished with removable bottom plate to be drilled by customer as required.

④ "AS" indicates standard short shaft for direct connection (coupled service).

⑤ Manufacturers allowance +.0000, −.0005 for shafts 1.5 diameter and smaller; +.000, −.001 for shafts larger than 1.5 diameter.

⑥ "V" and "FV" are minimum straight portion of shaft.

⑦ Front shaft extension is supplied only when specified on order.

Notes: 1. Dimensions also apply to drip-proof protected and splash-proof motors.

2. Drip-proof enclosure is maintained in wall or ceiling mounted motors, with shaft horizontal, by rotating brackets. If shaft is not horizontal, special covers should be specified if drip-proof enclosure must be maintained.

3. Conduit box can be mounted on opposite side of frame when specified on order. Conduit box may be rotated for top, front or rear conduit entrance.

Reproduced from Drawings 2725-D-31, sub 3; 678-B-784, sub 2; and 678-B-785, sub 3.

Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

August, 1968
New Information
E, D, C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters Drip-proof, TENV

Life-Line H, Type SK-H
Frames 584A to R587A

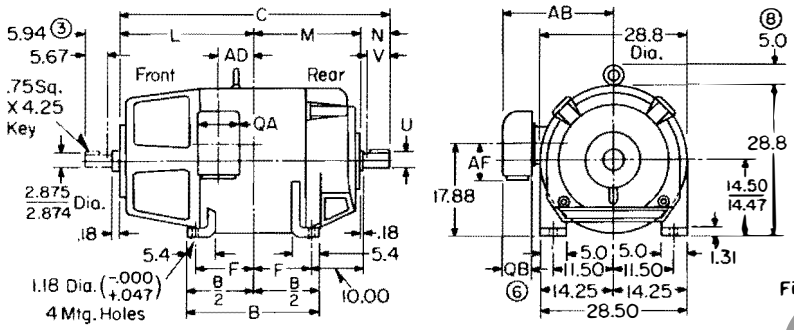


Figure 1 Machine with Conduit Box

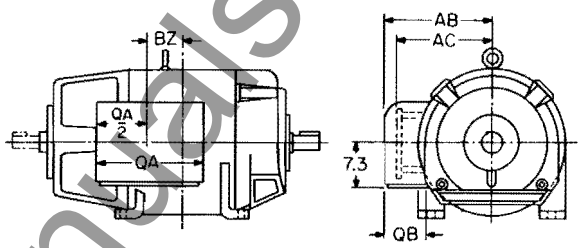


Figure 2 With Terminal Board, all Other Dimensions Same as Figure 1

Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Conduit Box Without Terminal Board⑥								Conduit Box With Terminal Board⑦											
Standard				Oversize and/or Steel Mill				Small				Medium				Large			
AB	AF	QA	QB	AB	AF	QA	QB	AB	AC	QA	QB	AB	AC	QA	QB	AB	AC	QA	QB
25.32	10.12	10.26	10.12	25.32	10.12	15.50	10.12	26.6	17.1	14.3	10.5	26.6	17.1	18.3	10.5	26.6	17.1	22.3	10.5

Frame No.①②	B	C	F	L	M	AD	BZ	Rear Shaft U④	Key Size	N	V⑤	N-W	Approx. Wt. Lbs.
584A	21.00	52.56	9.00	23.81	18.81	4.81	6.06	3.250	.750 sq. x 8.25	9.94	9.50	9.75	2750
584AS	21.00	48.56	9.00	23.81	18.81	4.81	6.06	2.875	.750 sq. x 4.25	5.94	5.50	5.75	2750
K584A	21.00	54.31	9.00	25.56	18.81	6.56	7.81	3.250	.750 sq. x 8.25	9.94	9.50	9.75	2800
K584AS	21.00	50.31	9.00	25.56	18.81	6.56	7.81	2.875	.750 sq. x 4.25	5.94	5.50	5.75	2800
N584A	21.00	56.18	9.00	27.44	18.81	6.56	9.68	3.250	.750 sq. x 8.25	9.94	9.50	9.75	2850
N584AS	21.00	52.18	9.00	27.44	18.81	6.56	9.68	2.875	.750 sq. x 4.25	5.94	5.50	5.75	2850
R584A	21.00	58.06	9.00	29.31	18.81	6.56	9.68	3.250	.750 sq. x 8.25	9.94	9.50	9.75	2900
R584AS	21.00	54.06	9.00	29.31	18.81	6.56	9.68	2.875	.750 sq. x 4.25	5.94	5.50	5.75	2900
585A	23.00	54.56	10.00	24.81	19.81	5.81	7.06	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3090
585AS	23.00	50.56	10.00	24.81	19.81	5.81	7.06	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3090
K585A	23.00	56.31	10.00	26.56	19.81	7.56	8.81	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3140
K585AS	23.00	52.31	10.00	26.56	19.81	7.56	8.81	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3140
N585A	23.00	58.18	10.00	28.44	19.81	7.56	10.68	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3190
N585AS	23.00	54.18	10.00	28.44	19.81	7.56	10.68	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3190
R585A	23.00	60.06	10.00	30.31	19.81	7.56	10.68	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3240
R585AS	23.00	56.06	10.00	30.31	19.81	7.56	10.68	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3240
586A	25.00	57.31	11.00	26.56	20.81	7.56	8.81	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3430
586AS	25.00	53.31	11.00	26.56	20.81	7.56	8.81	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3430
K586A	25.00	59.06	11.00	28.31	20.81	9.31	10.56	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3480
K586AS	25.00	55.06	11.00	28.31	20.81	9.31	10.56	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3480
N586A	25.00	60.94	11.00	30.18	20.81	9.31	12.44	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3530
N586AS	25.00	56.94	11.00	30.18	20.81	9.31	12.44	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3530
R586A	25.00	62.81	11.00	32.06	20.81	9.31	12.44	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3580
R586AS	25.00	58.81	11.00	32.06	20.81	9.31	12.44	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3580
587A	28.00	60.31	12.50	28.06	22.31	9.06	10.31	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3890
587AS	28.00	56.31	12.50	28.06	22.31	9.06	10.31	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3890
K587A	28.00	62.06	12.50	29.81	22.31	10.81	12.06	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3940
K587AS	28.00	58.06	12.50	29.81	22.31	10.81	12.06	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3940
N587A	28.00	63.94	12.50	31.68	22.31	10.81	13.94	3.250	.750 sq. x 8.25	9.94	9.50	9.75	3990
N587AS	28.00	59.94	12.50	31.68	22.31	10.81	13.94	2.875	.750 sq. x 4.25	5.94	5.50	5.75	3990
R587A	28.00	65.81	12.50	33.56	22.31	10.81	13.94	3.250	.750 sq. x 8.25	9.94	9.50	9.75	4040
R587AS	28.00	61.81	12.50	33.56	22.31	10.81	13.94	2.875	.750 sq. x 4.25	5.94	5.50	5.75	4040

① "AS" indicates standard short shaft for direct connection (coupled service). Coupled service is considered standard unless otherwise specified.

② "K", "N" and "R" indicate motor with standard mounting dimensions but increased "C", "L" and "AD" dimensions.

③ Front shaft extension is supplied only when specified.

④ Manufacturers allowance +.000, −.001.

⑤ "V" dimension is straight portion of shaft.

⑥ Conduit box is furnished with removable bottom plate to be drilled by customer as required.

⑦ Terminal board as shown is standard and not rotatable. Box size will be determined by Westinghouse depending on type of winding and current capacity.

⑧ Eye bolt is removable.

Notes: 1. Dimensions also apply to drip-proof protected and splash-proof motors.

2. Drip-proof enclosure is maintained in wall or ceiling mounted motors, with shaft horizontal, by rotating brackets. If shaft is not horizontal, special covers should be specified if drip-proof enclosure must be maintained.

3. Unless otherwise specified, conduit box is mounted as shown. Conduit box can be mounted on opposite side of frame when specified on order. Conduit box may be rotated in steps of 90°.

Reproduced from Drawing 2725-D-03, sub 1; 678-B-784, sub 2; and 678-B-785, sub 3.

Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

July, 1968
Supersedes DS 3540, pages 17 and 18, dated August, 1965.
E, D, C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters
Drip-proof, TENV

Life-Line H, Type SK-H
Frames 684A-687A

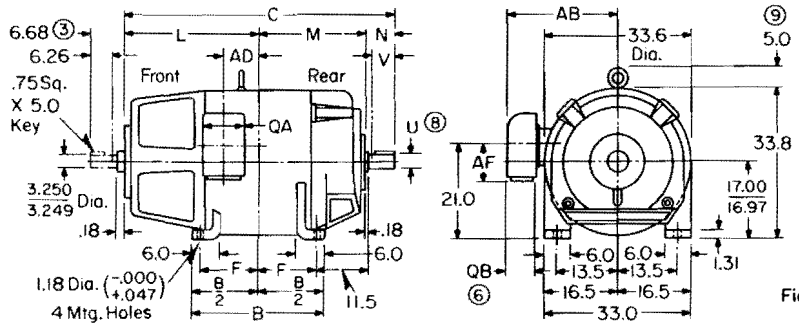


Figure 1 Machine with Conduit Box

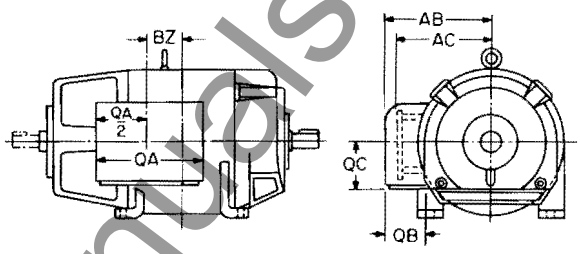


Figure 2 With Terminal Board, all Other Dimensions Same as Figure 1

Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Conduit Box Without Terminal Board⑥								Conduit Box With Terminal Board⑦											
Standard				Oversize and/or Steel Mill				Small				Medium				Large			
AB	AF	QA	QB	AB	AF	QA	QB	AB	AC	QA	QB	AB	AC	QA	QB	AB	AC	QA	QB
27.88	10.12	10.26	10.12	27.88	10.12	15.50	10.12	29.0	19.5	14.3	10.5	29.0	19.5	18.3	10.5	29.0	19.5	22.3	10.5

Frame No. ①②	B	C	F	L	M	AD	BZ	Rear Shaft U④⑧	Key Size	N	V⑤	N-W	Approx. Wt. Lbs.
684A	26.25	63.25	11.00	29.88	22.31	8.00	9.25	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	4750
684AS	26.25	58.88	11.00	29.88	22.31	8.00	9.25	3.250	.75 sq. x 5.00	6.68	6.25	6.50	4750
K684A	26.25	65.12	11.00	31.75	22.31	8.00	11.12	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	4825
K684AS	26.25	60.75	11.00	31.75	22.31	8.00	11.12	3.250	.75 sq. x 5.00	6.68	6.25	6.50	4825
R684A	26.25	67.00	11.00	33.62	22.31	8.00	11.12	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	4900
N684AS	26.25	62.62	11.00	33.62	22.31	8.00	11.12	3.250	.75 sq. x 5.00	6.68	6.25	6.50	4900
R684A	26.25	68.88	11.00	35.50	22.31	8.00	11.12	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	4975
N684AS	26.25	64.50	11.00	35.50	22.31	8.00	11.12	3.250	.75 sq. x 5.00	6.68	6.25	6.50	4975
685A	29.25	66.75	12.50	31.88	23.81	10.00	11.25	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	5400
685AS	29.25	62.38	12.50	31.88	23.81	10.00	11.25	3.250	.75 sq. x 5.00	6.68	6.25	6.50	5400
K685A	29.25	68.62	12.50	33.75	23.81	10.00	13.12	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	5475
K685AS	29.25	64.25	12.50	33.75	23.81	10.00	13.12	3.250	.75 sq. x 5.00	6.68	6.25	6.50	5475
N685A	29.25	70.50	12.50	35.62	23.81	10.00	13.12	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	5550
N685AS	29.25	66.12	12.50	35.62	23.81	10.00	13.12	3.250	.75 sq. x 5.00	6.68	6.25	6.50	5550
R685A	29.25	72.38	12.50	37.50	23.81	10.00	13.12	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	5625
R685AS	29.25	68.00	12.50	37.50	23.81	10.00	13.12	3.250	.75 sq. x 5.00	6.68	6.25	6.50	5625
686A	32.25	69.75	14.00	33.38	25.31	11.50	12.75	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	6150
686AS	32.25	65.38	14.00	33.38	25.31	11.50	12.75	3.250	.75 sq. x 5.00	6.68	6.25	6.50	6150
K686A	32.25	71.62	14.00	35.25	25.31	11.50	14.62	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	6225
K686AS	32.25	67.25	14.00	35.25	25.31	11.50	14.62	3.250	.75 sq. x 5.00	6.68	6.25	6.50	6225
N686A	32.25	73.50	14.00	37.12	25.31	11.50	14.62	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	6300
N686AS	32.25	69.12	14.00	37.12	25.31	11.50	14.62	3.250	.75 sq. x 5.00	6.68	6.25	6.50	6300
R686A	32.25	75.38	14.00	39.00	25.31	11.50	14.62	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	6375
R686AS	32.25	71.00	14.00	39.00	25.31	11.50	14.62	3.250	.75 sq. x 5.00	6.68	6.25	6.50	6375
687A	36.25	73.25	16.00	34.88	27.32	13.00	14.26	4.500	1.00 sq. x 9.75	11.06	10.62	10.88	6800
687AS	36.25	68.88	16.00	34.88	27.32	13.00	14.26	3.250	.75 sq. x 5.00	6.68	6.25	6.50	6800

① "AS" indicates standard short shaft for direct connection (coupled service). Coupled service is considered standard unless otherwise specified.

② "K", "N" and "R" indicate motor with standard mounting dimensions but increased "C", "L" and "AD" dimensions.

③ Front shaft extension supplied only when specified.

④ Manufacturers allowance +.000, −.001.

⑤ "V" dimension is straight portion of shaft.

⑥ Conduit Box is furnished with removable bottom plate to be drilled by customer as required.

⑦ Terminal board as shown is standard and not rotatable. Box size will be determined by Westinghouse depending on type of winding and current capacity.

⑧ 4.5 "U" diameter for belted service is larger than NEMA standard.

⑨ Eye bolt is removable.

Notes: 1. Dimensions also apply to drip-proof protected and splash-proof motors.

2. Drip-proof enclosure is maintained on wall or ceiling mounted motors, with shaft horizontal, by rotating brackets. If shaft is not horizontal, special covers should be specified if drip-proof enclosure must be maintained.

3. Unless otherwise specified, conduit box is mounted as shown. Conduit Box can be mounted on opposite side of frame when specified on order. Conduit box may be rotated in steps of 90°.

Reproduced from Drawing 2725-D-04, sub 2; 841-D-233, sub 6; 678-B-784, sub 2; and 678-B-785, sub 3.

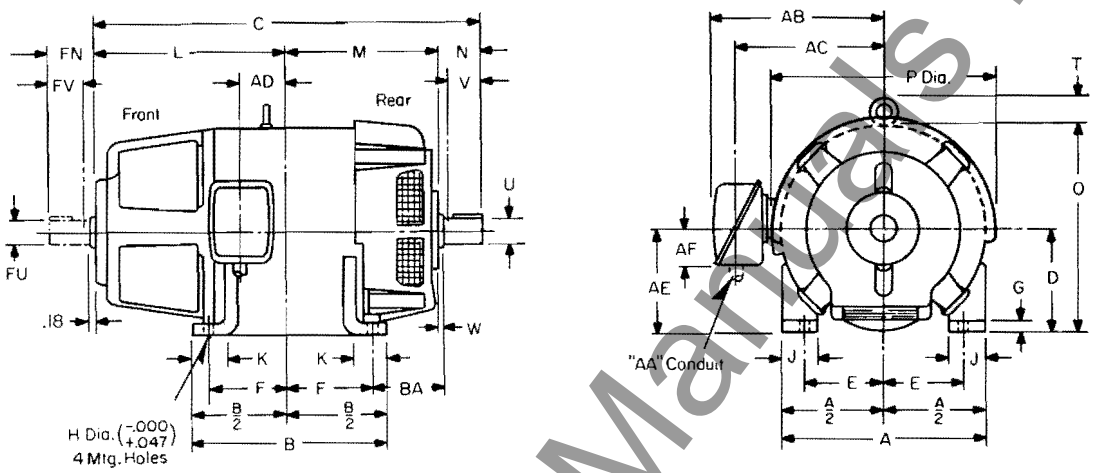
Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

July, 1968
Supersedes DS 3540, pages 19 and 20, dated August, 1965.
E, D, C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters Totally Enclosed Fan Cooled

Life-Line H, Type SK-H
Frames 256A-448A



Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	End View										Conduit Box								Steel Mill		
											Standard③				Oversize						
	A	D①	E	G	J	O	P	T②	W	AE	AA	AB	AC	AF	AA	AB	AC	AF	AA	AB	AF
256A	12.25	6.25	5.00	.62	2.50	13.18	13.9	1.8	.03	8.32	1-1.25-1.5	10.72	8.68	3.00	1.5-2-2.5-3	12.82	9.82	5.38	Undrilled	13.68	7.00
284A to 286A	13.88	7.00	5.50	.68	2.50	14.88	15.8	1.7	.03	9.12	1-1.25-1.5	11.72	9.68	3.00	1.5-2-2.5-3	13.82	10.82	5.38	Undrilled	14.68	7.00
324A to 326A	15.75	8.00	6.25	.75	2.75	16.94	17.9	2.6	.03	10.50	1.5-2-2.5-3	14.52	11.52	5.38	Undrilled	15.38	.....	7.00	Undrilled	15.38	7.00
365A to 366A	17.75	9.00	7.00	.94	3.00	19.00	20.0	2.5	.03	11.50	1.5-2-2.5-3	15.82	12.82	5.38	Undrilled	16.68	.....	7.00	Undrilled	16.68	7.00
404A to 405A	19.75	10.00	8.00	.94	3.75	21.32	22.6	2.7	.03	12.76	1.5-2-2.5-3	16.52	13.52	5.38	Undrilled	17.38	.....	7.00	Undrilled	17.38	7.00
444A to 448A	21.75	11.00	9.00	1.06	4.00	23.25	24.5	2.9	.03	14.00	1.5-2-2.5-3	17.58	14.58	5.38	Undrilled	18.44	.....	7.00	Undrilled	18.44	7.00

Frame No.④⑤	Side View									Rear Shaft				Front Shaft⑧				Approx. Wt. Lbs.
	B	BA	C	F	H	K	L	M	AD	U⑥	Key Size	N	V⑦	FU⑥	Key Size	FN	FV⑦	
256A	12.00	4.25	25.25	5.00	.54	2.06	12.25	9.22	4.12	1.375	.312 sq. x 2.75	3.78	3.68	1.125	.250 sq. x 1.75	2.94	2.68	310
256AS	12.00	4.25	24.25	5.00	.54	2.06	12.25	9.22	4.12	1.125	.250 sq. x 1.75	2.78	2.50	1.125	.250 sq. x 1.75	2.94	2.68	260
284A	12.00	4.75	27.62	4.75	.54	2.50	13.25	9.46	3.56	1.625	.375 sq. x 3.75	4.90	4.62	1.375	.312 sq. x 1.75	2.94	2.50	385
284AS	12.00	4.75	25.50	4.75	.54	2.50	13.25	9.46	3.56	1.375	.312 sq. x 1.75	2.78	2.62	1.375	.312 sq. x 1.75	2.94	2.50	325
286A	13.50	4.75	29.12	5.50	.54	2.50	14.00	10.22	4.32	1.625	.375 sq. x 3.75	4.90	4.62	1.375	.312 sq. x 1.75	2.94	2.50	425
286AS	13.50	4.75	27.00	5.50	.54	2.50	14.00	10.22	4.32	1.375	.312 sq. x 1.75	2.78	2.62	1.375	.312 sq. x 1.75	2.94	2.50	365
324A	13.75	5.25	31.12	5.25	.66	2.88	15.00	10.46	4.00	1.875	.500 sq. x 4.25	5.66	5.38	1.625	.375 sq. x 1.88	3.44	3.00	590
324AS	13.75	5.25	28.75	5.25	.66	2.88	15.00	10.46	4.00	1.625	.375 sq. x 1.88	3.28	3.00	1.625	.375 sq. x 1.88	3.44	3.00	590
326A	14.75	5.25	32.62	6.00	.66	2.88	15.75	11.22	4.75	1.875	.500 sq. x 4.25	5.66	5.38	1.625	.375 sq. x 1.88	3.44	3.00	635
326AS	14.75	5.25	30.25	6.00	.66	2.88	15.75	11.22	4.75	1.625	.375 sq. x 1.88	3.28	3.00	1.625	.375 sq. x 1.88	3.44	3.00	635
365A	15.00	5.88	34.25	6.12	.82	3.00	15.88	11.96	3.44	2.125	.500 sq. x 5.00	6.40	6.12	1.875	.500 sq. x 2.00	3.94	3.50	780
365AS	15.00	5.88	31.62	6.12	.82	3.00	15.88	11.96	3.44	1.875	.500 sq. x 2.00	3.78	3.50	1.875	.500 sq. x 2.00	3.94	3.50	780
366A	16.75	5.88	36.00	7.00	.82	3.00	16.75	12.84	4.32	2.125	.500 sq. x 5.00	6.40	6.12	1.875	.500 sq. x 2.00	3.94	3.50	870
366AS	16.75	5.88	33.38	7.00	.82	3.00	16.75	12.84	4.32	1.875	.500 sq. x 2.00	3.78	3.50	1.875	.500 sq. x 2.00	3.94	3.50	870
404A	15.25	6.62	37.38	6.12	.94	3.00	17.50	12.72	3.94	2.375	.625 sq. x 5.50	7.16	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1015
404AS	15.25	6.62	34.50	6.12	.94	3.00	17.50	12.72	3.94	2.125	.500 sq. x 2.75	4.28	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1015
405A	16.75	6.62	38.88	6.88	.94	3.00	18.25	13.46	4.68	2.375	.625 sq. x 5.50	7.16	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1105
405AS	16.75	6.62	36.00	6.88	.94	3.00	18.25	13.46	4.68	2.125	.500 sq. x 2.75	4.28	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1105
444A	17.00	7.50	40.68	7.25	1.06	3.25	18.06	14.72	4.18	2.625	.625 sq. x 6.50	7.90	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1425
444AS	17.00	7.50	37.56	7.25	1.06	3.25	18.06	14.72	4.18	2.375	.625 sq. x 3.25	4.78	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1425
445A	19.00	7.50	42.68	8.25	1.06	3.25	19.06	15.72	5.18	2.625	.625 sq. x 6.50	7.90	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1575
445AS	19.00	7.50	39.56	8.25	1.06	3.25	19.06	15.72	5.18	2.375	.625 sq. x 3.25	4.78	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1575
K445A	19.00	7.50	44.44	8.25	1.06	3.25	20.81	15.72	6.94	2.625	.625 sq. x 6.50	7.90	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1610
K445AS	19.00	7.50	41.31	8.25	1.06	3.25	20.81	15.72	6.94	2.375	.625 sq. x 3.25	4.78	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1610
448A	24.50	7.50	48.18	11.00	1.06	3.25	21.81	18.46	7.94	2.625	.625 sq. x 6.50	7.90	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1700
448AS	24.50	7.50	45.06	11.00	1.06	3.25	21.81	18.46	7.94	2.375	.625 sq. x 3.25	4.78	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1700

① "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.
② Eye bolt is removable.
③ Conduit boxes are pressed steel type with knockouts for conduit sizes as shown. Conduit box can be mounted on opposite side of frame when specified on order. Conduit box may be rotated for top, front or rear conduit entrance.
④ "AS" indicates standard short shaft for direct connection (coupled service).
⑤ "K" indicates motor with standard mounting dimensions but increased "C" and "L" dimensions.
⑥ Manufacturers allowance +.0000, −.0005 for shafts 1.5 diameter and smaller; +.000, −.001 for shafts larger than 1.5 diameter.
⑦ "V" and "FV" dimensions are straight portion of shaft.
⑧ Front shaft extension is supplied only when specified.

Reproduced from Drawings 2725-D-02, sub 3; 430-C-901, sub 4; 678-B-784, sub 2; and 678-B-785, sub 3.

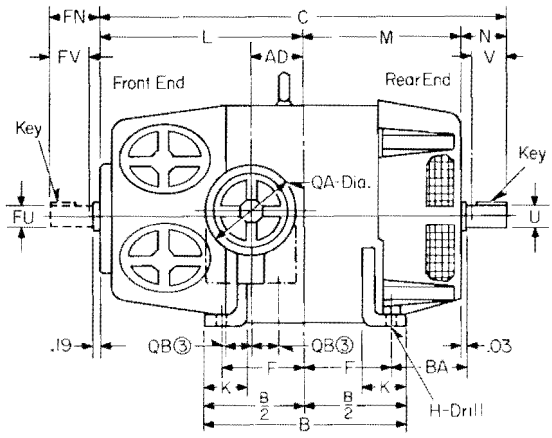
Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

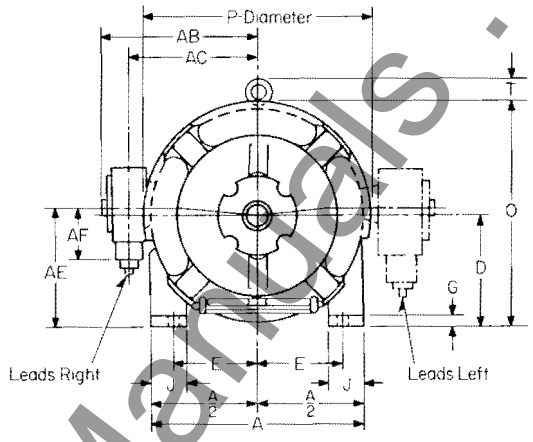
July, 1968
Supersedes DS 3540, pages 9 and 10, dated October, 1960.
E, D, C/1747/DS

Westinghouse

Dc Motors
TEFC, Explosion Proof
Bureau of Mines

Life-Line H, Type SK-H
1 to 100 Hp
Frames 256A-448A





Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	End View							
	A	D①	E	G	J	O	P	T②
256A	12.25	6.25	5.00	.62	2.50	13.19	13.88	1.81
284A to 286A	13.88	7.00	5.50	.69	2.50	14.88	15.75	1.69
324A to 326A	15.75	8.00	6.25	.75	2.75	16.94	17.88	2.56
365A to 366A	17.25	9.00	7.00	.94	3.00	19.00	20.00	2.50
404A to 405A	19.75	10.00	8.00	.94	3.75	21.31	22.62	2.69
444A to 448A	21.75	11.00	9.00	1.06	4.00	23.25	24.50	2.88

Note:
Unless otherwise specified optimum size conduit box for rating is mounted as shown. Conduit box can be rotated for top, front or rear conduit entrance and can be supplied on opposite side of frame.

Frame Series	Conduit Box																	
	Small						Medium						Large					
	Max. Hose Diameter③	AB	AC	AE	AF	QA	Max. Hose Diameter③	AB	AC	AE	AF	QA	Max. Hose Diameter③	AB	AC	AE	AF	QA
256A	.....	.....	.....	.....	.....	.....	1.00 I.D.	9.38	7.56	8.31	4.00	5.38	1.50 I.D.	10.12	7.81	8.31	4.81	7.00
284A to 286A	.....	.....	.....	.....	.....	.....	1.00 I.D.	10.19	8.38	9.12	4.00	5.28	1.50 I.D.	10.94	8.62	9.12	4.81	7.00
324A to 326A	1.00 I.D.	11.19	9.38	10.50	4.00	5.38	1.50 I.D.	11.94	9.62	10.50	4.81	7.00	2.00 I.D.	12.62	9.88	10.50	5.69	8.00
365A to 366A	1.00 I.D.	12.12	10.31	11.62	4.00	5.38	1.50 I.D.	12.88	10.56	11.62	4.81	7.00	2.00 I.D.	13.56	10.81	11.62	5.69	8.00
404A to 405A	1.00 I.D.	13.25	11.44	12.88	4.00	5.38	1.50 I.D.	14.00	11.69	12.88	4.81	7.00	2.00 I.D.	14.75	12.00	12.88	5.69	8.00
444A to 448A	1.00 I.D.	14.25	12.44	13.75	4.00	5.38	1.50 I.D.	15.00	12.69	13.75	4.81	7.00	2.00 I.D.	15.75	13.00	13.75	5.69	8.00

Frame No.④	Side View									Rear Shaft				Front Shaft⑦				Approx. Wt. Lbs.
	B	BA	C	F	H	K	L	M	AD	U⑤	Key Size	N	V⑥	FU⑤	Key Size	FN	FV⑥	
256A	12.00	4.25	26.28	5.00	.53	2.44	13.28	9.22	3.38	1.375	.312 sq. x 2.75	3.78	3.69	1.125	.250 sq. x 1.75	2.94	2.69	325
284A	12.00	4.75	28.94	4.75	.53	2.88	14.56	9.47	3.06	1.625	.375 sq. x 3.75	4.91	4.62	1.375	.312 sq. x 1.75	2.94	2.50	425
286A	13.50	4.75	30.44	5.50	.53	2.88	15.31	10.22	3.81	1.625	.375 sq. x 3.75	4.91	4.62	1.375	.312 sq. x 1.75	2.94	2.50	550
324A	13.75	5.25	32.47	5.25	.66	....	16.34	10.47	2.88	1.875	.500 sq. x 4.25	5.66	5.38	1.625	.375 sq. x 1.88	3.44	3.00	640
324AS	13.75	5.25	30.09	5.25	.66	....	16.34	10.47	2.88	1.625	.375 sq. x 1.88	3.28	3.00	1.625	.375 sq. x 1.88	3.44	3.00	640
326A	14.75	5.25	33.97	6.00	.66	....	17.09	11.22	3.62	1.875	.500 sq. x 4.25	5.66	5.38	1.625	.375 sq. x 1.88	3.44	3.00	720
326AS	14.75	5.25	31.59	6.00	.66	....	17.09	11.22	3.62	1.625	.375 sq. x 1.88	3.28	3.00	1.625	.375 sq. x 1.88	3.44	3.00	720
365A	15.00	5.88	35.25	6.12	.81	3.75	16.88	11.97	3.31	2.125	.500 sq. x 5.00	6.41	6.12	1.875	.500 sq. x 2.00	3.94	3.50	835
365AS	15.00	5.88	32.62	6.12	.81	3.75	16.88	11.97	3.31	1.875	.500 sq. x 2.00	3.78	3.50	1.875	.500 sq. x 2.00	3.94	3.50	835
366A	16.75	5.88	37.00	7.00	.81	3.75	17.75	12.84	4.19	2.125	.500 sq. x 5.00	6.41	6.12	1.875	.500 sq. x 2.00	3.94	3.50	955
366AS	16.75	5.88	34.38	7.00	.81	3.75	17.75	12.84	4.19	1.875	.500 sq. x 2.00	3.78	3.50	1.875	.500 sq. x 2.00	3.94	3.50	955
404A	15.25	6.62	38.31	6.12	.94	3.00	18.44	12.72	3.81	2.375	.625 sq. x 5.50	7.16	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1175
404AS	15.25	6.62	35.44	6.12	.94	3.00	18.44	12.72	3.81	2.125	.500 sq. x 2.75	4.28	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1175
405A	16.75	6.62	39.81	6.88	.94	3.00	19.19	13.47	4.56	2.375	.625 sq. x 5.50	7.16	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1225
405AS	16.75	6.62	36.94	6.88	.94	3.00	19.19	13.47	4.56	2.125	.500 sq. x 2.75	4.28	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1225
444A	17.00	7.50	41.69	7.25	1.06	4.00	19.06	14.72	4.06	2.625	.625 sq. x 6.50	7.91	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1570
444AS	17.00	7.50	38.56	7.25	1.06	4.00	19.06	14.72	4.06	2.375	.625 sq. x 3.25	4.78	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1570
445A	19.00	7.50	43.69	8.25	1.06	4.00	20.06	15.72	5.06	2.625	.625 sq. x 6.50	7.91	7.62	2.375	.625 sq. x 3.25	4.94	4.50	1770
445AS	19.00	7.50	40.56	8.25	1.06	4.00	20.06	15.72	5.06	2.375	.625 sq. x 3.25	4.78	4.50	2.375	.625 sq. x 3.25	4.94	4.50	1770
448A	24.50	7.50	54.12	11.00	1.06	4.00	22.81	18.47	5.06	2.625	.625 sq. x 6.50	7.91	7.62	2.375	.625 sq. x 6.50	4.94	4.50	2200
448AS	24.50	7.50	51.00	11.00	1.06	4.00	22.81	18.47	5.06	2.375	.625 sq. x 3.25	4.78	4.50	2.375	.625 sq. x 3.25	4.94	4.50	2200

① "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.

② Eyebolt is welded in place to meet explosion-proof requirement. Eye to be cut off at weld if not desired.

③ QB=

	1" I.D.	1.5" I.D.	2" I.D.
Single gland	0	0	0
Double gland	1.56	2	2.5

④ "AS" indicates standard short shaft for direct connection. (Coupled service).

⑤ Manufacturers allowance +.0000, −.0005 for shafts 1.5 diameter and smaller; +.000, −.001 for shafts larger than 1.5 diameter.

⑥ "V" and "FV" dimensions are straight portion of shaft.

⑦ Front shaft extension is supplied only when specified.

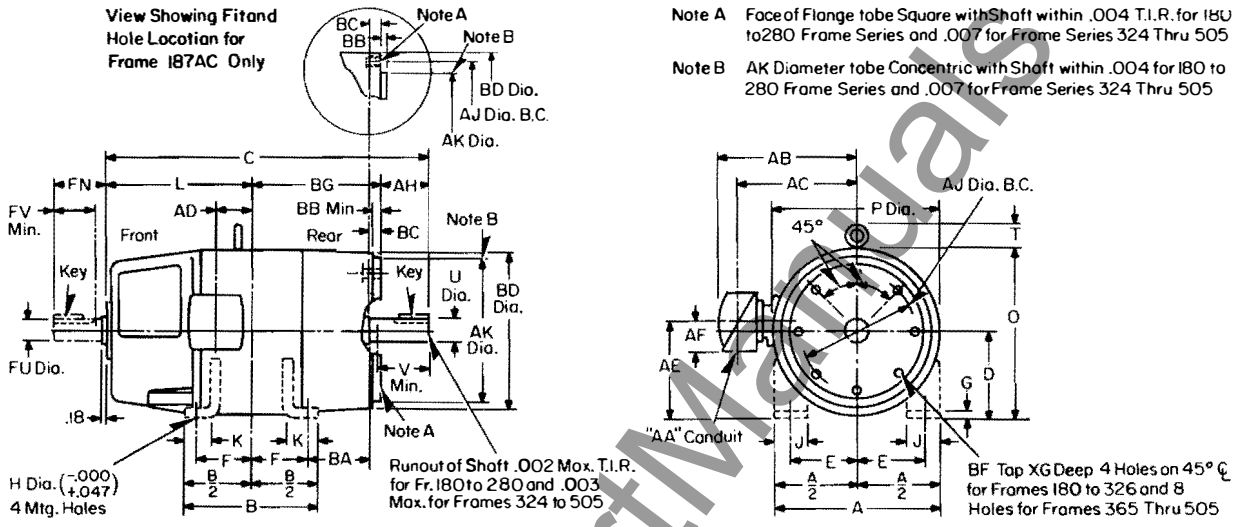
Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

January, 1972
New Information
E, D, C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters
Drip-proof, TENV
NEMA Type C Flange

Life-Line H, Type SK-H
Frames 187AC-366AC



Note A Face of Flange to be Square with Shaft within .004 T.I.R. for 180 to 280 Frame Series and .007 for Frame Series 324 Thru 505

Note B AK Diameter to be Concentric with Shaft within .004 for 180 to 280 Frame Series and .007 for Frame Series 324 Thru 505

Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	End View													BF Holes		
	A	D①	E	G	J	O	P	T②	AJ	AK●	AE	BB	BC	BD	XG	Tap Size	No. Holes
187AC	8.75	4.50	3.75	.62	1.75	8.9	8.8	1.9	5.88	4.50	4.50	.12	.12	6.5	.82	.375-10	4
216AC-218AC	10.25	5.25	4.25	.62	1.75	10.4	10.3	1.9	7.25	8.50	5.25	.28	.25	9.0	.88	.500-13	4
256AC	12.25	6.25	5.00	.62	2.50	12.4	12.3	2.6	7.25	8.50	8.32	.28	.25	9.1	.75	.500-13	4
284AC-286AC	13.88	7.00	5.50	.68	2.50	13.9	13.8	2.6	9.00	10.50	9.12	.28	.25	10.7	.75	.500-13	4
324AC-326AC	15.75	8.00	6.25	.75	2.75	15.9	15.8	3.6	11.00	12.50	10.50	.28	.25	12.9	1.00	.625-11	4
365AC-366AC	17.75	9.00	7.00	.94	3.00	17.9	17.8	3.6	11.00	12.50	11.50	.28	.25	13.0	1.00	.625-11	8

Conduit Box

Frame Series	Standard④				Oversize				Steel Mill		
	AA	AB	AC	AF	AA	AB	AC	AF	AA	AB	AF
187AC	.50-.76	7.32	6.06	2.38	1-1.25-1.5	8.48	6.44	3.00	Undrilled	8.94	3.12
216AC-218AC	.50-.76	8.08	6.82	2.38	1-1.25-1.5	9.22	7.28	3.00	Undrilled	9.68	3.12
256AC	1-1.25-1.5	10.72	8.68	3.00	1.5-2-2.5-3	12.82	9.82	5.38	Undrilled	13.68	7.00
284AC-286AC	1-1.25-1.5	11.72	9.68	3.00	1.5-2-2.5-3	13.82	10.82	5.38	Undrilled	14.68	7.00
324AC-326AC	1.5-2-2.5-3	14.52	11.52	5.38	Undrilled	15.38	.....	7.00	Undrilled	15.38	7.00
365AC-366AC	1.5-2-2.5-3	15.82	12.82	5.38	Undrilled	16.68	.....	7.00	Undrilled	16.68	7.00

Frame No.	Side View									Rear Shaft			Front Shaft⑦				Approx. Wt. Lbs.
	B	BA	C	F	H	K	L	BG	AD	U⑤	Key Size	AH	V⑥	FU⑤	Key Size	FN	FV⑥	
187AC	9.50	2.75	18.48	4.00	.40	1.88	9.56	6.88	2.75	.875	.187 sq. x 1.38	2.12	2.12	.750	.187 sq. x 1.38	2.44	2.00	110
216AC	9.50	3.50	20.88	4.00	.40	1.88	10.38	7.75	3.31	1.125	.250 sq. x 2.00	2.75	2.81	.875	.187 sq. x 1.38	2.44	2.00	160
218AC	11.50	3.50	22.88	5.00	.40	1.88	11.38	8.75	4.31	1.125	.250 sq. x 2.00	2.75	2.81	.875	.187 sq. x 1.38	2.44	2.00	205
256AC	12.00	4.25	25.25	5.00	.54	2.06	12.25	9.50	4.12	1.375	.312 sq. x 2.75	3.50	3.62	1.125	.250 sq. x 1.75	2.94	2.69	260
284AC	12.00	4.75	27.62	4.75	.54	2.50	13.25	9.75	3.56	1.625	.375 sq. x 3.75	4.62	4.75	1.375	.312 sq. x 1.75	2.94	2.69	325
286AC	13.50	4.75	29.12	5.50	.54	2.50	14.00	10.50	4.31	1.625	.375 sq. x 3.75	4.62	4.75	1.375	.312 sq. x 1.75	2.94	2.50	365
324AC	13.75	5.25	31.12	5.25	.66	2.88	15.00	10.75	4.00	1.875	.500 sq. x 4.25	5.38	5.50	1.625	.375 sq. x 1.88	3.44	3.00	520
324ASC	13.75	5.25	28.75	5.25	.66	2.88	15.00	10.75	4.00	1.625	.375 sq. x 1.88	3.00	3.12	1.625	.375 sq. x 1.88	3.44	3.00	520
326AC	14.75	5.25	32.62	6.00	.66	2.88	15.75	11.50	4.75	1.875	.500 sq. x 4.25	5.38	5.50	1.625	.375 sq. x 1.88	3.44	3.00	565
326ASC	14.75	5.25	30.25	6.00	.66	2.88	15.75	11.50	4.75	1.625	.375 sq. x 1.88	3.00	3.12	1.625	.375 sq. x 1.88	3.44	3.00	565
365AC	15.00	5.88	34.25	6.12	.82	3.00	15.88	12.25	3.44	2.125	.500 sq. x 5.00	6.12	6.25	1.875	.500 sq. x 2.00	3.94	3.50	700
365ASC	15.00	5.88	31.62	6.12	.82	3.00	15.88	12.25	3.44	1.875	.500 sq. x 2.00	3.50	3.62	1.875	.500 sq. x 2.00	3.94	3.50	700
366AC	16.75	5.88	36.00	7.00	.82	3.00	16.75	13.12	4.31	2.125	.500 sq. x 5.00	6.12	6.25	1.875	.500 sq. x 2.00	3.94	3.50	790
366ASC	16.75	5.88	33.38	7.00	.82	3.00	16.75	13.12	4.31	1.875	.500 sq. x 2.00	3.50	3.62	1.875	.500 sq. x 2.00	3.94	3.50	790

① "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.
② Eye bolt is removable.
③ "AK" dimensions tolerance +.000, −.003 for frame series 187AC thru 286AC; +.000, −.005 for frame series 324AC thru 366AC.
④ Conduit boxes are pressed steel type with knock-outs for conduit sizes as shown. Conduit box can be mounted on opposite side of frame when specified on order. Conduit box may be rotated for top, front or rear conduit entrance.
⑤ Manufacturers allowance +.0000, −.0005 for shafts 1.5 diameter and smaller; +.000, −.001 for shafts larger than 1.5 diameter.
⑥ "V" and "FV" dimensions are straight portion of shaft.
⑦ Front shaft extension is supplied only when specified.

Note: Dimensions also apply to drip-proof protected and splash-proof motors. Drip-proof enclosure is maintained in wall or ceiling mounted motors, with shaft horizontal, by rotating brackets. If shaft is not horizontal, special covers should be specified if drip-proof enclosure must be maintained.

Reproduced from Drawings 568-D-757, sub 18; 678-B-784, sub 2; and 678-B-785, sub 3.

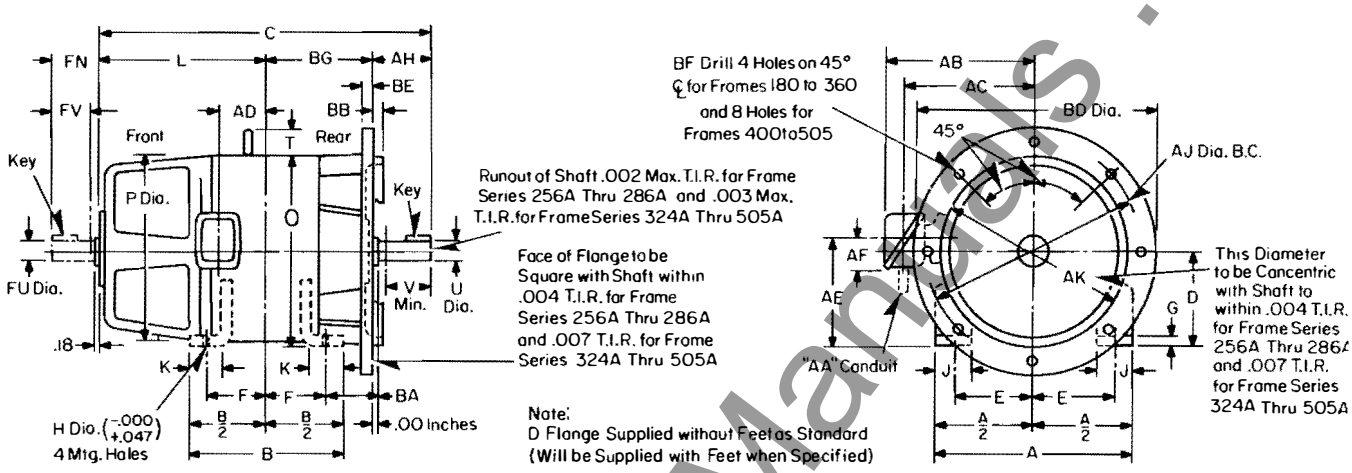
Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

July, 1968
New Information
E, D, C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters
Drip-proof, TENV
NEMA Type D Flange

Life-Line H, Type SK-H
Frames 404AD-505AD



Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	End View														BF Drill	
	A	D①	E	G	J	O	P	T②	AJ	AK③	AE	BB	BD	BE	Hole Size	No. Holes
404AD-405AD	19.75	10.00	8.00	.94	3.75	19.9	19.8	4.2	20.0	18.0	12.76	.25	22.0	1.062	.812	8
444AD-445AD	21.75	11.00	9.00	1.06	4.00	21.9	21.8	4.0	20.0	18.0	14.00	.25	22.0	.938	.812	8
504AD-505AD	24.62	12.50	10.00	1.19	4.50	24.8	24.6	4.0	22.0	18.0	15.50	.18	24.0	1.000	.812	8

Conduit Box

Frame Series	Standard④				Oversize				Steel Mill		
	AA	AB	AC	AF	AA	AB	AC	AF	AA	AB	AF
404AD-405AD	1.5-2-2.5-3	16.52	13.52	5.38	Undrilled	17.38	....	7.00	Undrilled	17.38	7.00
444AD-445AD	1.5-2-2.5-3	17.58	14.58	5.38	Undrilled	18.44	....	7.00	Undrilled	18.44	7.00
504AD-505AD	Undrilled	20.00	....	7.00	Undrilled	23.50	....	10.12	Undrilled	23.50	10.12

Frame No.	Side View								Rear Shaft				Front Shaft⑦				Approx. Wt. Lbs.
	B	BA	C	F	H	K	L	BG	AD	U⑤	Key Size	AH	V⑥	FU⑤	Key Size	FN	FV⑥	
404AD	15.25	6.62	37.38	6.12	.94	3.00	17.50	12.75	3.94	2.375	.625 sq. x 5.50	7.12	6.88	2.125	.500 sq. x 2.75	4.44	4.00	925
404ASD	15.25	6.62	34.50	6.12	.94	3.00	17.50	12.75	3.94	2.125	.500 sq. x 2.75	4.25	4.00	2.125	.500 sq. x 2.75	4.44	4.00	925
405AD	16.75	6.62	38.88	6.88	.94	3.00	18.25	13.50	4.68	2.375	.625 sq. x 5.50	7.12	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1015
405ASD	16.75	6.62	36.00	6.88	.94	3.00	18.25	13.50	4.68	2.125	.500 sq. x 2.75	4.25	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1015
J404AD	16.75	6.62	38.88	6.88	.94	3.00	18.25	13.50	4.68	2.375	.625 sq. x 5.50	7.12	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1015
J404ASD	16.75	6.62	36.00	6.88	.94	3.00	18.25	13.50	4.68	2.125	.500 sq. x 2.75	4.25	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1015
J405AD	18.25	6.62	40.38	7.62	.94	3.00	19.00	14.25	5.44	2.375	.625 sq. x 5.50	7.12	6.88	2.125	.500 sq. x 2.75	4.44	4.00	1105
J405ASD	18.25	6.62	37.50	7.62	.94	3.00	19.00	14.25	5.44	2.125	.500 sq. x 2.75	4.25	4.00	2.125	.500 sq. x 2.75	4.44	4.00	1105
444AD	17.00	7.50	40.68	7.25	1.06	3.25	18.06	14.75	4.18	2.625	.625 sq. x 6.50	7.88	7.62	.....	.....	....	....	1325
444ASD	17.00	7.50	37.56	7.25	1.06	3.25	18.06	14.75	4.18	2.375	.625 sq. x 3.25	4.75	4.50	.....	.....	....	....	1325
445AD	19.00	7.50	42.68	8.25	1.06	3.25	19.06	15.75	5.18	2.625	.625 sq. x 6.50	7.88	7.62	.....	.....	....	....	1470
445ASD	19.00	7.50	39.56	8.25	1.06	3.25	19.06	15.75	5.18	2.375	.625 sq. x 3.25	4.75	4.50	.....	.....	....	....	1470
504AD	18.75	8.50	45.44	8.00	1.18	3.50	20.32	16.50	5.25	2.875	.750 sq. x 7.25	8.62	8.38	.....	.....	....	....	1940
504ASD	18.75	8.50	42.06	8.00	1.18	3.50	20.32	16.50	5.25	2.625	.625 sq. x 3.75	5.25	5.00	.....	.....	....	....	1940
505AD	20.75	8.50	47.44	9.00	1.18	3.50	21.32	17.50	6.25	2.875	.750 sq. x 7.25	8.62	8.38	.....	.....	....	....	2125
505ASD	20.75	8.50	44.06	9.00	1.18	3.50	21.32	17.50	6.25	2.625	.625 sq. x 3.75	5.25	5.00	.....	.....	....	....	2125

① "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.
② Eye bolt is removable.
③ "AK" dimensions tolerance +.000, −.005 for frame series 404AD thru 505AD.
④ Conduit boxes are pressed steel type with knock-outs for conduit sizes as shown. Box on 500 frame series is furnished with removable bottom plate to be drilled by customer as required. Conduit box can be mounted on opposite side of frame when specified on order. Conduit box may be rotated for top, front or rear conduit entrance.
⑤ Manufacturers allowance +.000, −.001 for shafts larger than 1.5 diameter.
⑥ "V" and "FV" dimensions are straight portion of shaft.
⑦ Front shaft extension is supplied only when specified.

Note: Dimensions also apply to drip-proof protected and splash-proof motors. Drip-proof enclosure is maintained in wall or ceiling mounted motors, with shaft horizontal, by rotating brackets. If shaft is not horizontal, special covers should be specified if drip-proof enclosure must be maintained.

Reproduced from Drawings 568-D-700, sub 16; 678-B-784, sub 2; and 678-B-785, sub 3.

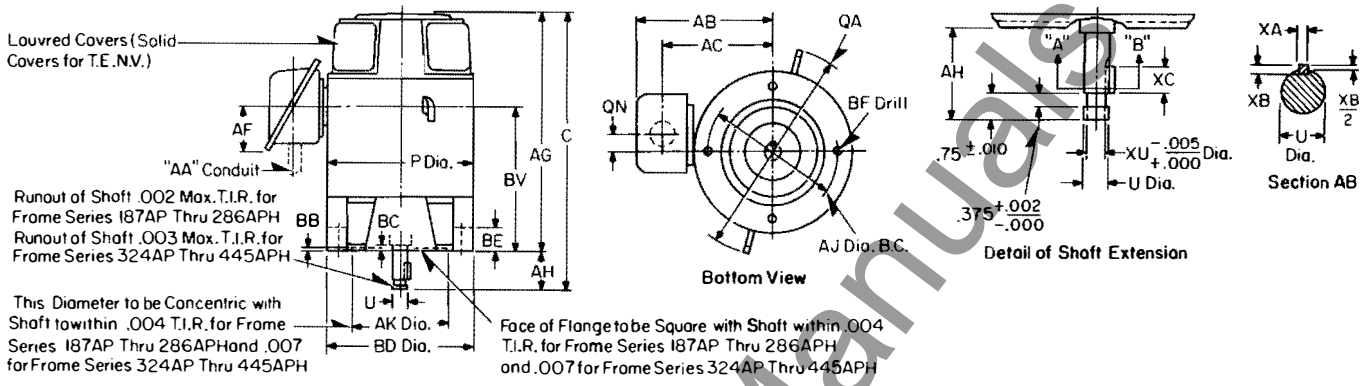
Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

July, 1968
New Information
E, D, C/1747/DS

Westinghouse

Dc Motors, Generators Exciters, Drip-proof, TENV Vertical NEMA P Flange Ring Groove Shaft Extension

Life-Line H, Type SK-H
Frames 187AP-405AP



Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	Bottom View				Conduit Box								Steel Mill		
	QA	QN	BF Holes		Standard①				Oversize						
			Size	Number	AA	AB	AC	AF	AA	AB	AC	AF	AA	AB	AF
187AP	11.50	0	.4375	4	.50-.76	7.32	6.06	2.38	1-1.25-1.5	8.48	6.44	3.00	Undrilled	8.94	3.12
216AP to 218AP	13.00	0	.4375	4	.50-.76	8.08	6.82	2.38	1-1.25-1.5	9.22	7.28	3.00	Undrilled	9.68	3.12
256AP	15.00	2.06	.4375	4	1-1.25-1.5	10.72	8.68	3.00	1.5-2-2.5-3	12.82	9.82	5.38	Undrilled	13.68	7.00
284AP to 286AP	16.62	2.12	.4375	4	1-1.25-1.5	11.72	9.68	3.00	1.5-2-2.5-3	13.82	10.82	5.38	Undrilled	14.68	7.00
284APH to 286APH	16.62	2.12	.6875	4	1-1.25-1.5	11.72	9.68	3.00	1.5-2-2.5-3	13.82	10.82	5.38	Undrilled	14.68	7.00
324AP to 326AP	18.50	2.50	.6875	4	1.5-2-2.5-3	14.52	11.52	5.38	Undrilled	15.38	.....	7.00	Undrilled	15.38	7.00
365AP to 366AP	21.76	2.50	.6875	4	1.5-2-2.5-3	15.82	12.82	5.38	Undrilled	16.68	.....	7.00	Undrilled	16.68	7.00
404AP to J405AP	23.76	2.75	.6875	4	1.5-2-2.5-3	16.52	13.52	5.38	Undrilled	17.38	.....	7.00	Undrilled	17.38	7.00

Frame Number	Side View										Rear Shaft					Approx. Net Wt., Pounds
	C	P	AJ	AG	AK②	BB	BC	BD	BE	BV	AH	U③	XA	XB	XC	XU	
187AP	18.69	8.76	9.125	16.44	8.25	.22	0	10.00	.56	9.62	2.25	.875	.187	.187	.62	.687	110
216AP	21.00	10.26	9.125	18.25	8.25	.22	0	10.00	.56	11.18	2.75	1.125	.250	.250	1.00	.937	160
218AP	23.00	10.26	9.125	20.25	8.25	.22	0	10.00	.56	13.18	2.75	1.125	.250	.250	1.00	.937	205
256AP	24.37	12.26	9.125	21.62	8.25	.22	0	10.00	.62	13.50	2.75	1.125	.250	.250	1.00	.937	260
284AP	27.44	13.88	9.125	22.94	8.25	.22	0	10.94	.68	13.24	4.50	1.625	.375	.375	2.62	1.250	325
284APH	27.44	13.88	14.75	22.94	13.50	.24	0	16.50	.68	13.24	4.50	1.625	.375	.375	2.62	1.250	325
286AP	28.94	13.88	9.125	24.44	8.25	.22	0	10.94	.68	14.74	4.50	1.625	.375	.375	2.62	1.250	365
286APH	28.94	13.88	14.75	24.44	13.50	.24	0	16.50	.68	14.74	4.50	1.625	.375	.375	2.62	1.250	365
324AP	30.12	15.76	14.75	25.62	13.50	.28	0	16.26	.74	14.62	4.50	1.625	.375	.375	2.62	1.250	520
326AP	31.62	15.76	14.75	27.12	13.50	.28	0	16.26	.74	16.12	4.50	1.625	.375	.375	2.62	1.250	565
365AP	32.38	17.76	14.75	27.88	13.50	.28	0	16.26	.74	15.44	4.50	1.625	.375	.375	2.62	1.250	700
366AP	34.12	17.76	14.75	29.62	13.50	.28	0	16.26	.74	17.18	4.50	1.625	.375	.375	2.62	1.250	790
404AP	34.68	19.76	14.75	30.18	13.50	.28	0	16.38	.74	16.62	4.50	2.125	.500	.500	2.62	1.750	925
J404AP	36.18	19.76	14.75	31.68	13.50	.28	0	16.38	.74	18.12	4.50	2.125	.500	.500	2.62	1.750	1015
405AP	36.18	19.76	14.75	31.68	13.50	.28	0	16.38	.74	18.12	4.50	2.125	.500	.500	2.62	1.750	1015
J405AP	37.68	19.76	14.75	33.18	13.50	.28	0	16.38	.74	19.62	4.50	2.125	.500	.500	2.62	1.750	1105

① Conduit boxes are pressed steel type with knockouts for conduit sizes as shown.
② AK dimension tolerance +.003, −.000 for frames 187AP through 286APH; +.005, −.000 for frames 324AP through 445APH.
③ Manufacturer's allowance +.0000, −.0005 for shafts 1.500 diameter and smaller; +.000, −.001 for shafts larger than 1.500 diameter.
Notes: 1. Dimensions also apply to drip-proof protected and splash-proof motors.
2. Conduit box may be rotated in steps of 90°.

Reproduced from Drawing 2728-D-23, Sub 1.

Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

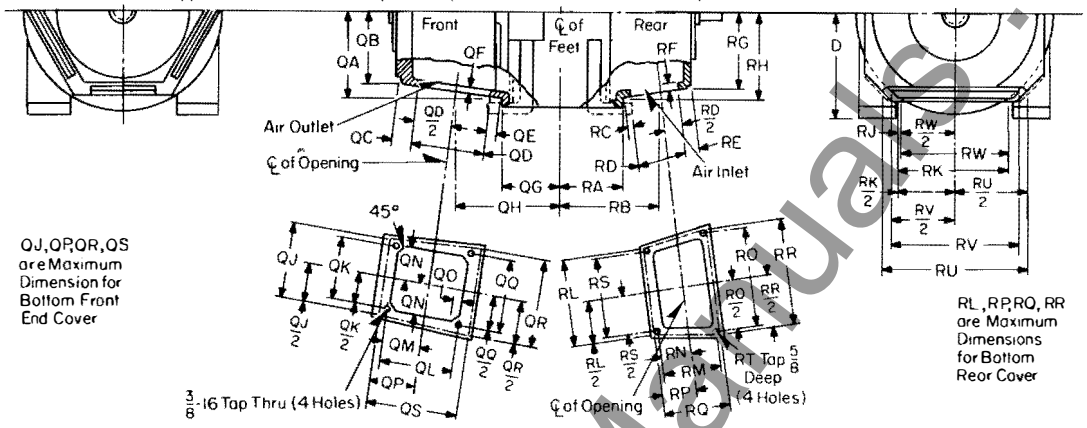
July, 1968
New Information
E, D, C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters
Ventilation Opening Location Details

Life-Line H, Type SK-H
Frames 584A-R686A

Note: Motors are Supplied without Rear Blower, Diffusor, and Airshield Unless otherwise Specified



Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame No. ①	QA	QB	QC	QD	QE	QF	QG	QH	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	RA	RB	RC
584A-AS	11.38	9.69	.75	12.00	1.00	.50	8.94	15.94	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	10.88	15.00	.62
K584A-AS	11.38	9.69	.75	12.00	1.00	.50	10.69	17.69	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	10.88	15.00	.62
N584A-AS	11.38	9.69	.75	12.00	1.00	.50	12.56	19.56	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	10.88	15.00	.62
R584A-AS	11.38	9.69	.75	12.00	1.00	.50	14.44	21.44	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	10.88	15.00	.62
585A-AS	11.38	9.69	.75	12.00	1.00	.50	9.94	16.94	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	11.88	15.88	.62
K585A-AS	11.38	9.69	.75	12.00	1.00	.50	11.69	18.69	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	11.88	15.88	.62
N585A-AS	11.38	9.69	.75	12.00	1.00	.50	13.56	20.56	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	11.88	15.88	.62
R585A-AS	11.38	9.69	.75	12.00	1.00	.50	15.44	22.44	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	11.88	15.88	.62
586A-AS	11.38	9.69	.75	12.00	1.00	.50	11.69	18.69	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	12.88	17.00	.62
K586A-AS	11.38	9.69	.75	12.00	1.00	.50	13.44	20.44	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	12.88	17.00	.62
N586A-AS	11.38	9.69	.75	12.00	1.00	.50	15.31	22.31	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	12.88	17.00	.62
R586A-AS	11.38	9.69	.75	12.00	1.00	.50	17.19	24.19	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	12.88	17.00	.62
587A-AS	11.38	9.69	.75	12.00	1.00	.50	13.19	20.19	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	14.38	18.50	.62
K587A-AS	11.38	9.69	.75	12.00	1.00	.50	14.94	21.94	12.75	11.75	11.38	5.69	6.00	1.00	6.56	12.75	14.12	13.12	14.38	18.50	.62
684A-AS	13.19	11.19	.81	14.50	1.00	.56	12.12	20.31	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	13.81	18.44	1.44
K684A-AS	13.19	11.19	.81	14.50	1.00	.56	14.00	22.19	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	13.81	18.44	1.44
N684A-AS	13.19	11.19	.81	14.50	1.00	.56	15.88	24.06	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	13.81	18.44	1.44
R684A-AS	13.19	11.19	.81	14.50	1.00	.56	17.75	25.94	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	13.81	18.44	1.44
685A-AS	13.19	11.19	.81	14.50	1.00	.56	14.12	22.31	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	15.31	19.94	1.44
N685A-AS	13.19	11.19	.81	14.50	1.00	.56	17.88	26.06	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	15.31	19.94	1.44
686A-AS	13.19	11.19	.81	14.50	1.00	.56	15.62	23.81	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	16.81	21.44	1.44
K686A-AS	13.19	11.19	.81	14.50	1.00	.56	17.50	25.69	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	16.81	21.44	1.44
N686A-AS	13.19	11.19	.81	14.50	1.00	.56	19.38	27.56	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	16.81	21.44	1.44
R686A-AS	13.19	11.19	.81	14.50	1.00	.56	24.25	29.44	15.38	14.50	14.50	7.25	7.25	1.00	7.88	14.50	16.25	15.88	16.81	21.44	1.44

Frame No. ①	RD	RE	RF	RG	RH	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	D
584A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
K584A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
N584A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
R584A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
585A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
K585A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
N585A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
R585A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
586A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
K586A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
N586A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
R586A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
587A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
K587A-AS	7.00	.62	.50	10.50	13.38	.47	17.12	16.94	7.00	3.50	19.38	4.06	8.12	20.88	16.00	.375-16	21.25	19.38	16.38	14.50
684A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00
K684A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00
N684A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00
R684A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00
685A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00
N685A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00
686A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00
K686A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00
N686A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00
R686A-AS	6.88	.62	.50	12.38	15.12	.44	20.00	20.00	6.81	3.38	22.62	3.94	8.25	24.00	19.38	.375-16	24.25	21.12	19.38	17.00

① For frame 687, refer to Westinghouse.

Note: Motors are supplied without rear blower, diffuser and airshield unless otherwise specified.

Reproduced from Drawing 822-D-627, sub 13.

Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

July, 1968
New Information
E, D, C/1747/DS

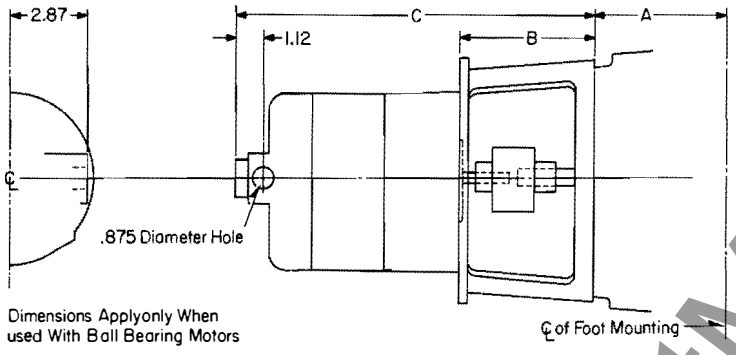
Westinghouse

Dc Motors, Generators, Exciters
Drip-proof, TENV, TEFC
Motor Mounted Tachometers

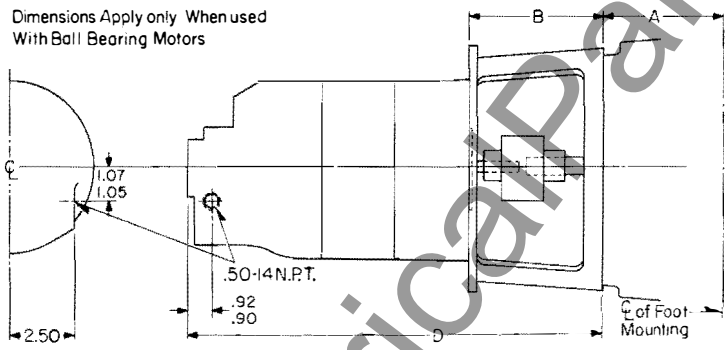
Life-Line H, Type SK-H
Frames 180A-840A

Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Type BC42 Tachometer, Flange Mounted



Type BC46 Tachometer, Flange Mounted



Type BC42 and Type BC46 Tachometers, Flange Mounted

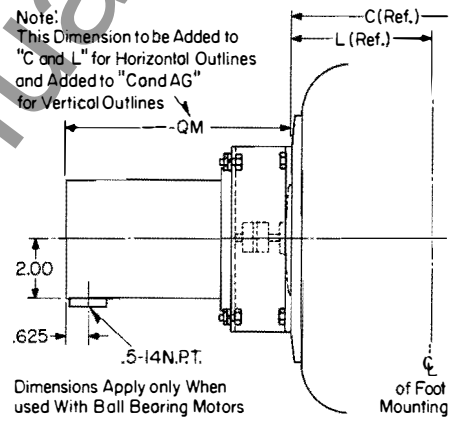
Frame Series	A	B	C (BC42)	D (BC46)
180A-440A	①L−.32	5.00	13.25	15.44
500	①L−.24	5.00	13.25	15.44
580-680	①L−.44	5.12	13.38	15.56
840	①L−.18	5.00	13.25	15.44
B580	①L+.06	5.12	13.38	15.56
B680	①L−.44	5.12	13.38	15.56

① "L" dimension is from center line of mounting feet to front end of bracket on standard outline.
Reproduced from Drawing 186-C-680, sub 4.

Note: Other tachometers available through Westinghouse, both foot and flange mounted are shown below.

Foot Mounted Tachometer	Westinghouse Outline Drawing	Flange Mounted Tachometer	Westinghouse Outline Drawing
BC-42, BC-46	185-C-109	BC-66	185-C-661
BC-66	185-C-122		
A80	185-C-557		
Artron T670	861-C-555		
Weston 750	861-C-970		

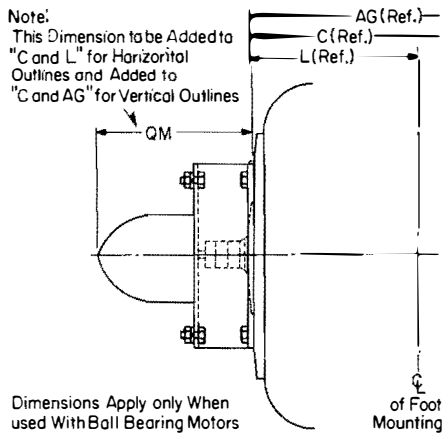
Type PY and 5PY Tachometer Flange Mounted



Frame Series	QM	Type of Tach
180A-210A	8.5	PY59EY
250A-580A	8.9	PY59EY
680A-840A	8.9	PY59EY
180A-210A	9.9	5PY59JY1 or 5PY59JY2
260A-580A	10.3	5PY59JY1 or 5PY59JY2
680A-840A	10.3	5PY59JY1 or 5PY59JY2

Reproduced from Drawing 642-B-448, sub 4.

Reliance Tachometer Flange Mounted



Frame Series	QM
187A-210A	5.3
250A-280A	4.9
320A-500A	5.1
580A	4.9
680A-840A	6.4

Reproduced from Drawing 642-B-447, sub 3.

Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

February, 1970
Supersedes DS-3540 page 43,
dated July, 1968

Westinghouse

Dc Motors, Generators, Exciters
Sheet Steel Conduit Boxes

Life-Line H, Type SK-H
All Enclosures
Frame Series 187-840

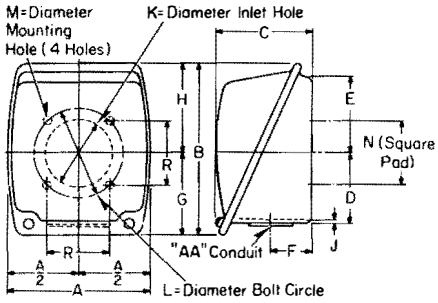


Fig. 1 Pressed Steel

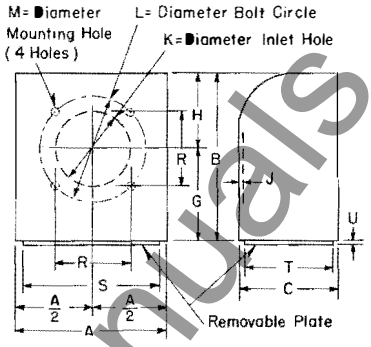


Fig. 2 Fabricated Steel

Conduit Box Identification, Dc Motors

Frame Series	Conduit Boxes for DP, NV and FC Enclosures		
	Standard	Oversize	Steel Mill and Oversize S.M.
187-210	41A1740G06 (Fig. 1)	46A1914G01 (Fig. 1)①	426C404G01 (Fig. 2)①
256-280	46A1914G01 (Fig. 1)	554D694G02 (Fig. 1)	426C405G01 (Fig. 2)
320-440	554D694G02 (Fig. 1)	426C405G01 (Fig. 2)	426C405G01 (Fig. 2)
500	426C405G01 (Fig. 2)	421C918G04 (Fig. 2)	421C918G04 (Fig. 2)
580-840	421C918G04 (Fig. 2)	637C807G01 (Fig. 2)	637C807G01 (Fig. 2)

① Special adapter must accompany this box when used on this frame size.

Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Pressed Steel, Figure 1

Conduit Box Identity	Approx. Internal Volume	Conduit AA Hole	Conduit AA Knockouts	A	B	C	D	E	F	G	H	J	K	L	M	Q	R	Weight Lbs.
41A1740G06	50 cu. in.	.5	.76	4.88	5.50	2.76	2.38	2.38	1.50	2.62	2.88	.06	2.0	2.5	.281	.06	..	1.25
46A1914G01	105 cu. in.	1.0	1.25-1.50	6.06	6.56	3.66	3.00	2.76	1.62	3.26	3.32	.06	3.0	...	.406	.00	3	1.35
554D694G02	320 cu. in.	1.5	2-2.5-3	8.18	9.62	5.76	5.38	2.88	2.76	5.76	3.76	.06	②	...	.406	.00	3	7.50

Fabricated Steel, Figure 2

Conduit Box Identity	Approx. Internal Volume	Conduit AA Hole Size③	Max. Conduit Grp.	Max. Conduit Size	A	B	C	G	H	J	K	M	R	S	T	U	Weight Lbs.
426C404G01	145 cu. in.	Blank	G09	1.5	6.26	6.76	4.12	3.00	3.62	.12	3.26	.40	3	6.00	4.00	.12	6
426C405G01	615 cu. in.	Blank	G09	4	10.00	9.88	6.62	6.88	3.00	.12	②	.44	3	10.00	6.50	.12	17
421C918G04	1300 cu. in.	Blank	G13	6	10.00	13.12	10.12	10.00	3.12	.12	②	.44	3	10.00	10.00	.12	25
637C807G01	1860 cu. in.	Blank	G06	6	15.24	13.12	10.12	10.00	3.12	.12	②	.44	3	15.24	10.00	.12	36

② Opening is cloverleaf shape. See drawing for dimensions. Has minimum opening of 3 inch diameter.

③ Supplied as standard.

Reproduced from Drawing 2728-D-60, sub 3.

Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

July, 1968
New Information
E, D, C/1747/DS

Westinghouse

Dc Motors, Generators, Exciters
Cast Iron Conduit Boxes

Life-Line H, Type SK-H
All Enclosures
Frame Series 187-840

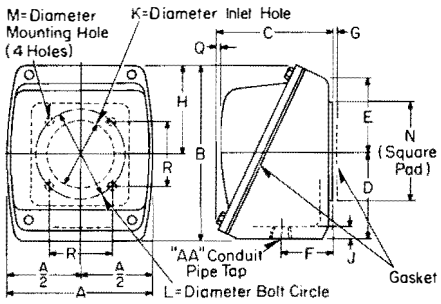


Fig. 3 Cast Iron

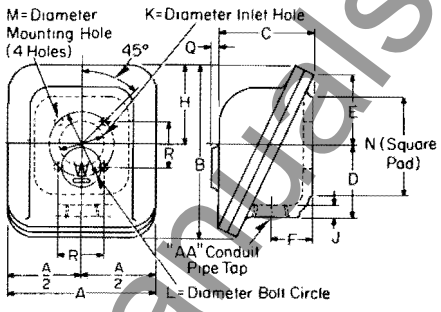


Fig. 4 Cast Iron Explosion Proof

Conduit Box Identification, Dc Motors

Frame Series	Drip-proof NV and FC①	Explosion Resistant⑤	Marine and Water Proof①②
187-210	41A1730G01 (Fig. 3)	1B8044G03 (Fig. 4)	41A1730G04 (Fig. 3)
256-280	46A1916G02 (Fig. 3)	55B4955 (Fig. 4) (S#1651306)	46A1916G05 (Fig. 3)
320-360	554D671G05 (Fig. 3)	69D427 (Fig. 4) (S#1032584)	554D671G01 (Fig. 3)
400-440	554D671G05 (Fig. 3)	55B841 (Fig. 4) (S#1032486)	554D671G01 (Fig. 3)
500	567D979G01 (Fig. 3)	.....	567D979G01 (Fig. 3)
580-840	554D672G01 (Fig. 3)	.....	554D672G01 (Fig. 3)

① If oversize cast iron box is requested, use next size larger box.
② Conduit boxes on these enclosures will normally be supplied blank.
⑤ Underwriters – no label.

Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Cast Iron, Figure 3

Conduit Box Identity	Approx. Internal Volume	Conduit AA Pipe Tap Size③	Max. Pipe Tap Grp.	Max. Pipe Tap Size	Blank Box Identity	A	B	C	D	E	F	G	H	J	K	L	M	N	Q	R	Weight Lbs.
41A1730G01	45 cu. in.	.75	G03	1.25	G04	4.76	5.62	3.18	2.88	2.50	1.50	.06	2.76	.38	1.88	2.50	.281	3.88	.12	..	4
46A1916G02	95 cu. in.	1.25	G04	2	G05	5.88	6.76	3.94	3.38	3.06	1.62	.12	3.38	.38	3.00	...	.406	5.00	.06	3	5.5
554D671G05	380 cu. in.	3.00	G05	3	G01	7.76	10.26	7.32	6.62	2.76	3.50	.06	3.62	.44	3.00	...	.406	5.00	.00	3	22
567D979G01	675 cu. in.	Blank	G02	4	G01	10.00	13.62	7.76	8.50	4.50	3.50	.06	5.12	.62	④	...	.406	5.00	.00	3	41
554D672G01	1300 cu. in.	Blank	G07	6	G01	11.50	13.62	11.25	9.38	3.00	5.38	.06	4.25	.62	4.00	...	.406	5.00	.00	3	57

Cast Iron Explosion Proof, Figure 4

Conduit Box Identity	Approx. Internal Volume	Conduit AA Pipe Tap Size③	Max. Pipe Tap Grp.	Max. Pipe Tap Size	Blank Box Identity	A	B	C	D	E	F	H	J	K	L	M	N	Q	R	Weight Lbs.
1B8044G03	40 cu. in.	.75	G05	1.5	G06	5.38	6.12	3.90	2.68	2.38	1.62	2.88	.50	1.88	2.50	.281	4.12	.04	..	11.5
55B4955 (S#1651306)	95 cu. in.	1.25	G02	2	G04	7.26	7.88	4.50	3.62	3.18	2.00	3.56	.50	3.12	...	.406	5.26	.12	2	17
69D427 (S#1032584)	128 cu. in.	2	S# 1032584	2	G01	8.00	8.62	4.82	4.00	3.56	1.94	3.94	.50	2.26	4.00	.312	...	.12	3	15.25
55B841 (S#1032586)	400 cu. in.	3	S# 1032587	3.5	S# 1621537	11.00	12.26	8.00	7.00	4.12	3.50	4.82	1.38	3.00	...	.406	6.26	.06	3	77

③ Supplied as standard.
④ Opening is cloverleaf shape. See drawing for dimensions. Has minimum opening of 3 inch diameter.

Reproduced from Drawing 2728-D-60, sub 3.

Westinghouse Electric Corporation
Large Ac and Dc Motor Division, Buffalo, N. Y. 14240
Printed in USA

July, 1968
New Information
E, D, C/1747/DS

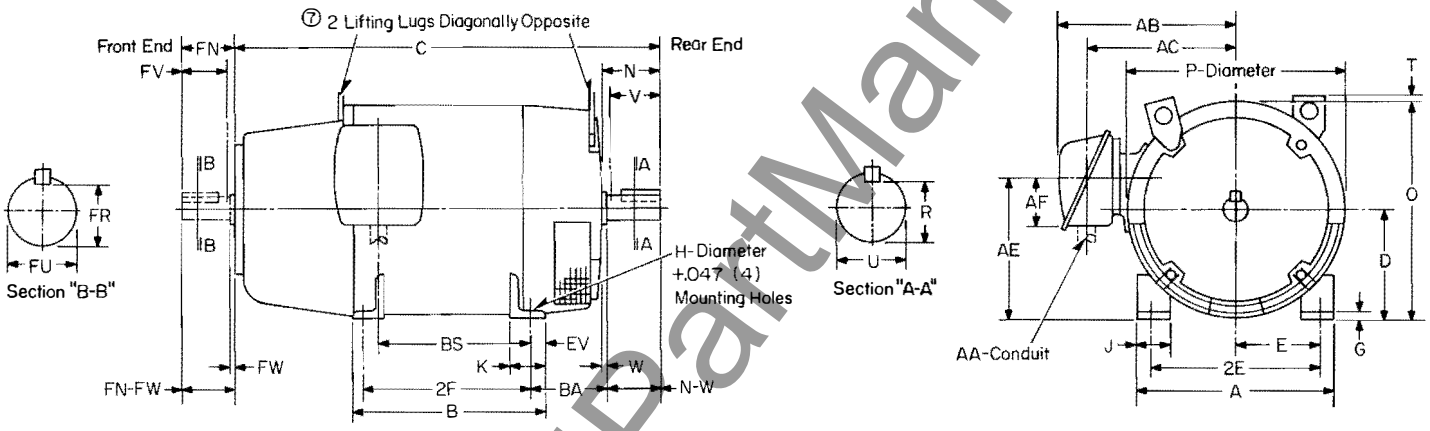
Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

November, 1975
New Information
Mailed to: E, D, C/1747/DS

Drip-proof Guarded⑧
Frames 283 AT-367AT

Dc Motors
Life-Line S

Drip-proof Guarded®, Life-Line S



Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	A	D②	E	G	H	J	K	O	P	T⑦	W	BA	EV	FW	Conduit Box③ AA	AB	AC	AE	AF
283AT to 286AT	12.6	7.00	5.50	.3	.537	2.0	2.0	14.0	14.0	.5	.16	4.76	0.7	.16	1-1.25-1.5	11.7	9.7	9.1	3.0
324AT to 327AT	14.4	8.00	6.25	.4	.656	2.4	2.5	15.9	15.8	.3	.12	5.26	1.0	.16	1.5-2-2.5-3	14.5	11.5	10.5	5.4
364AT to 367AT	16.0	9.00	7.00	.5	.812	3.0	3.0	17.9	17.8	.0	.18	5.88	1.3	.18	1.5-2-2.5-3	15.8	12.8	11.5	5.4

Frame No.	B	C	2F	BS	Rear Shaft R⑥	Rear Shaft U①	Rear Shaft Key Size	Front Shaft④ N	Front Shaft④ V⑤	Front Shaft④ N-W	Front Shaft④ FR⑥	Front Shaft④ FU①	Front Shaft④ Key Size	Front Shaft④ FN	Front Shaft④ FV⑤	Front Shaft④ FN-FW	Approx. Wt. Lbs.
283AT	9.4	25.5	8.00	7.44	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	1.416	1.625	.375 sq. x 2.38	3.40	3.00	3.24	375
284AT	10.9	27.0	9.50	8.94	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	1.416	1.625	.375 sq. x 2.38	3.40	3.00	3.24	420
286AT	12.4	28.5	11.00	10.44	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	1.416	1.625	.375 sq. x 2.38	3.40	3.00	3.24	470
324AT	12.5	30.4	10.50	10.18	1.845	2.125	.500 sq. x 3.00	4.36	4.00	4.24	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	630
326AT	14.0	31.9	12.00	11.68	1.845	2.125	.500 sq. x 3.00	4.36	4.00	4.24	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	700
327AT	16.0	33.9	14.00	13.68	1.845	2.125	.500 sq. x 3.00	4.36	4.00	4.24	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	800
364AT	13.8	32.7	11.24	9.90	2.021	2.375	.625 sq. x 3.50	4.94	4.50	4.76	1.845	2.125	.500 sq. x 3.00	4.42	4.00	4.24	820
366AT	16.6	35.4	14.00	12.66	2.021	2.375	.625 sq. x 3.50	4.94	4.50	4.76	1.845	2.125	.500 sq. x 3.00	4.42	4.00	4.24	970
367AT	18.6	37.4	16.00	14.66	2.021	2.375	.625 sq. x 3.50	4.94	4.50	4.76	1.845	2.125	.500 sq. x 3.00	4.42	4.00	4.24	1080

① Manufacturers allowance + .0000, − .0005 for shafts 1.5 diameter and smaller; +.000, −.001 for shafts larger than 1.5 diameter.
② "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.
③ Conduit boxes are pressed steel type with knock-outs for conduit sizes as shown.
④ Front shaft extension is supplied only when specified on order.
⑤ "V" and "FV" represent usable portion of shaft.
⑥ Manufacturers allowance +.000, −.015.
⑦ Use spreaders when lifting.
⑧ Force ventilated motors will have same mounting dimensions except when blower is mounted. It will be mounted on front (commutator) end.

Reproduced from Drawing 8250-D-15, sub 4.

Notes:
1. Conduit box can be mounted on opposite side of frame, and/or rotated in steps of 90° when specified on order.
2. Drip-proof guarded enclosure is maintained in wall or ceiling mounted machines with shaft horizontal, by rearranging covers. If shaft is not horizontal, special covers should be specified if drip-proof guarded enclosure must be maintained.

Printed in U.S.A.

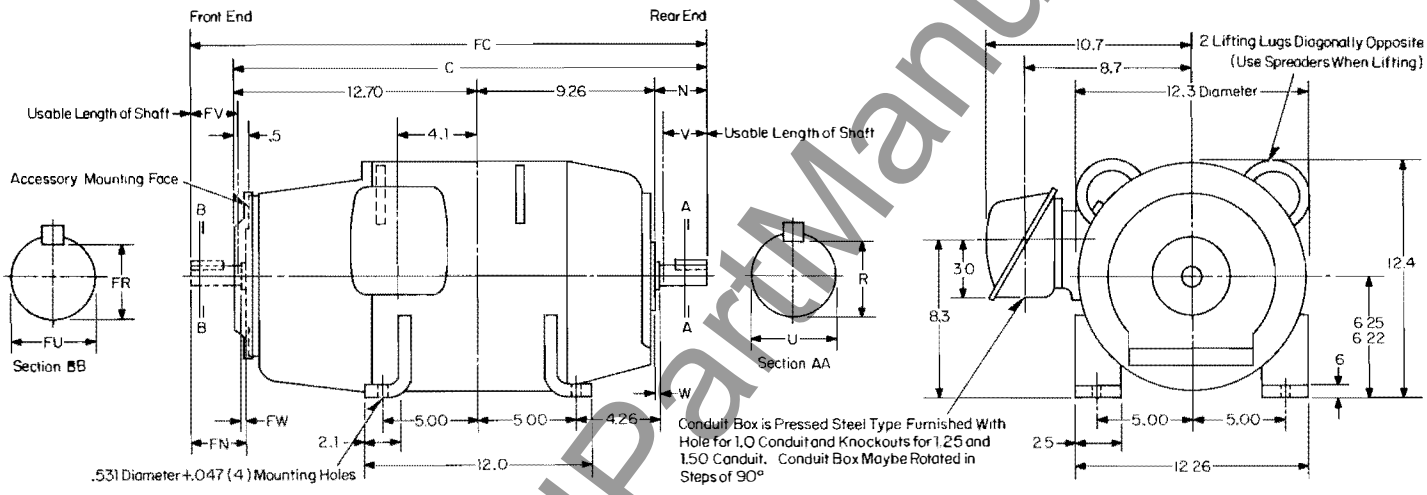
Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

August, 1976
New Information
Mailed to: E, D, C/1747/DS

Drip-proof Guarded
Frame 256A

Dc Motors
Life-Line S

Drip-proof Guarded, Life-Line S



Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame No.	C	FC	Rear Shaft						Front Shaft③						Approx. Wt. Lbs.
			R②	U①	Key Size	N	V	W	FR②	FU①	Key Size	FN	FV	FW	
256A	25.70	28.18	1.201	1.3750	.3125 sq. x 2.75	3.74	3.50	0	.986	1.1250	.250 sq. x 1.75	2.94	2.68	.18	260
256AS	24.70	27.18	.986	1.1250	.250 sq. x 1.75	2.74	2.50	0	.986	1.1250	.250 sq. x 1.75	2.94	2.68	.18	260

① Manufacturers allowance +.000, −.0005.
② Manufacturers allowance +.000, −.015.
③ Front shaft extension is supplied only when specified on order.

Reproduced from Drawing 2229-C-75, sub 4.

Notes:
1. Motors with single shaft extension have the front (commutator end) bracket and shaft prepared to accept accessories.
2. Drip-proof guarded enclosure is maintained in wall or ceiling mounted machines with shaft horizontal, by rearranging covers. If shaft is not horizontal, special covers should be specified if drip-proof guarded enclosures must be maintained.

Printed in U.S.A.

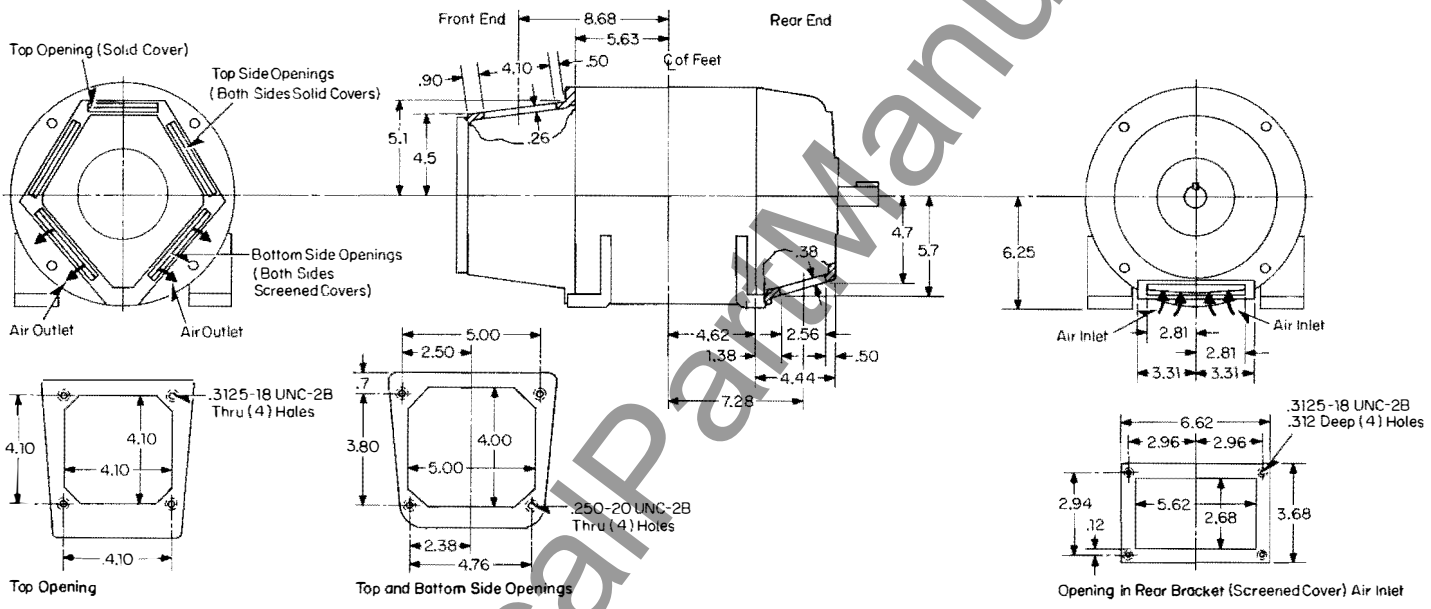
Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

September, 1976
New Information
Mailed to: E, D, D/1747/DS

Drip-proof Guarded
Frame 256A
Ventilation Opening Details

Dc Motors
Life-Line S

Drip-proof Guarded, Life-Line S, Ventilation Opening Details



Reproduced from Drawing 2231-C-18, sub 2.

Notes:
1. Front bracket need not be rotated, as it is only necessary to shift location of solid covers.
2. Front bracket can not be rotated in steps of 90° unless it is either redrilled or reconnected for rocker rings.
3. Rear bracket may be rotated in steps of 90°.

Printed in U.S.A.

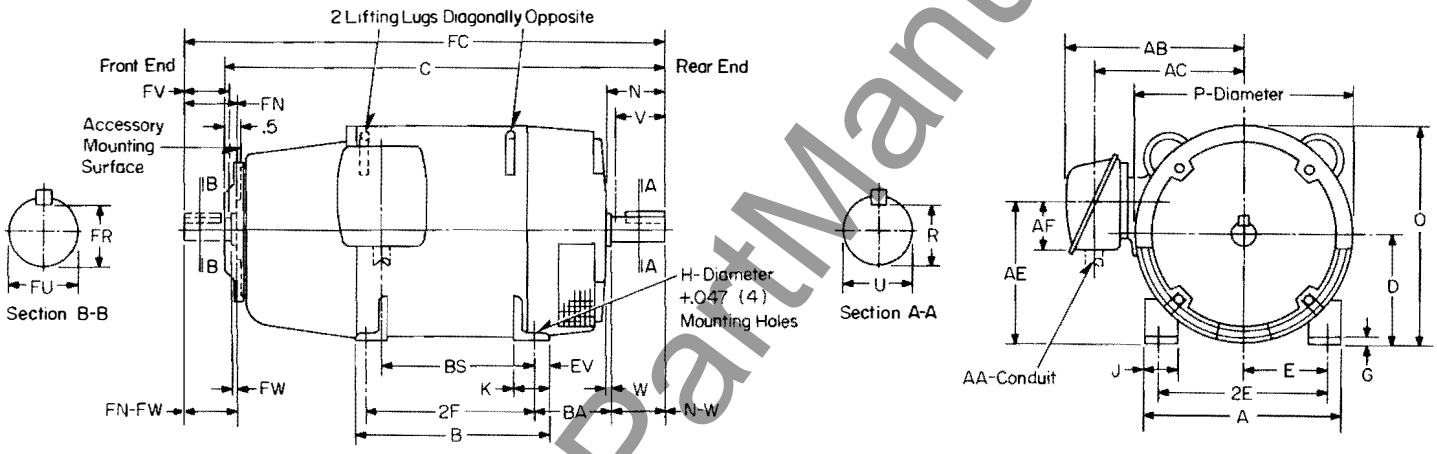
Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

November, 1976
Supersedes 3540 F WE A
Dimension Sheet
pages 113 and 114 dated August, 1976
Mailed to: E, D, C/1747/DS

Drip-proof Guarded
Frames 283 AT-367AT

Dc Motors Life-Line S

Drip-proof Guarded⑦, Life-Line S



Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	A	D②	E	G	H	J	K	O	P	W	BA	EV	FW	Conduit Box③ AA	AB	AC	AE	AF
283AT to 286AT	12.6	7.00	5.50	.4	.537	2.0	2.0	14.0	14.0	.16	4.76	0.7	.16	1-1.25-1.5	11.7	9.7	9.1	3.0
324AT to 327AT	14.4	8.00	6.25	.4	.656	2.4	2.5	15.9	15.8	.12	5.26	1.0	.16	1.5-2-2.5-3	14.5	11.5	10.5	5.4
364AT to 367AT	16.0	9.00	7.00	.5	.812	3.0	3.0	17.9	17.8	.18	5.88	1.3	.20	1.5-2-2.5-3	15.8	12.8	11.5	5.4

Frame No.	B	C	FC	2F	BS	Rear Shaft R⑥	Rear Shaft U①	Rear Shaft Key Size	N	V⑤	N-W	Front Shaft④ FR⑥	Front Shaft④ FU①	Front Shaft④ Key Size	FN	FV⑤	FN-FW	Approx. Wt. Lbs.
283AT	9.4	25.94	28.86	8.00	7.44	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	1.416	1.625	.375 sq. x 2.38	3.40	3.00	3.24	375
284AT	10.9	27.44	30.36	9.50	8.94	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	1.416	1.625	.375 sq. x 2.38	3.40	3.00	3.24	420
286AT	12.4	28.94	31.86	11.00	10.44	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	1.416	1.625	.375 sq. x 2.38	3.40	3.00	3.24	470
324AT	12.5	30.84	34.28	10.50	10.18	1.845	2.125	.500 sq. x 3.00	4.36	4.00	4.24	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	630
326AT	14.0	32.34	35.78	12.00	11.68	1.845	2.125	.500 sq. x 3.00	4.36	4.00	4.24	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	700
327AT	16.0	34.34	37.78	14.00	13.68	1.845	2.125	.500 sq. x 3.00	4.36	4.00	4.24	1.591	1.875	.500 sq. x 2.50	3.90	3.50	3.74	800
364AT	13.8	33.16	37.12	11.24	9.90	2.021	2.375	.625 sq. x 3.50	4.94	4.50	4.76	1.845	2.125	.500 sq. x 3.00	4.42	4.00	4.24	820
366AT	16.6	35.92	39.88	14.00	12.66	2.021	2.375	.625 sq. x 3.50	4.94	4.50	4.76	1.845	2.125	.500 sq. x 3.00	4.42	4.00	4.24	970
367AT	18.6	37.92	41.88	16.00	14.66	2.021	2.375	.625 sq. x 3.50	4.94	4.50	4.76	1.845	2.125	.500 sq. x 3.00	4.42	4.00	4.24	1080

① Manufacturers allowance + .0000, − .0005 for shafts 1.5 diameter and smaller; +.000, −.001 for shafts larger than 1.5 diameter.
② "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.
③ Conduit boxes are pressed steel type with knock-outs for conduit sizes as shown.
④ Front shaft extension is supplied only when specified on order. When front shaft extension is ordered, the cover over the accessory mounting surface is not supplied.
⑤ "V" and "FV" represent usable portion of shaft.
⑥ Manufacturers allowance +.000, −.015.
⑦ Force ventilated motors will have same mounting dimensions except when blower is mounted. It will be mounted on front (commutator) end.

Reproduced from Drawing 8250-D-15, sub 7.

Notes:
1. Conduit box can be mounted on opposite side of frame, and/or rotated in steps of 90° when specified on order.
2. Drip-proof guarded enclosure is maintained in wall or ceiling mounted machines with shaft horizontal, by rearranging covers. If shaft is not horizontal, special covers should be specified if drip-proof guarded enclosure must be maintained.
3. Motors with single shaft extension have the front (commutator end) bracket and shaft prepared to accept accessories.

Printed in U.S.A.

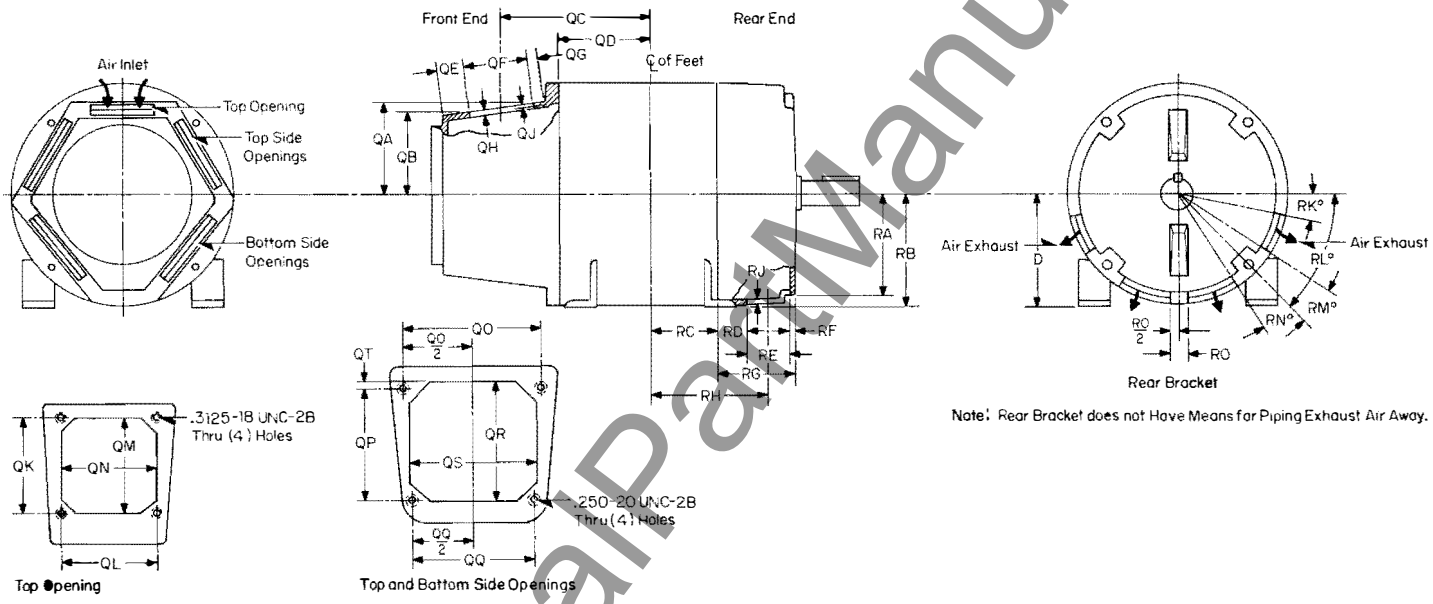
Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

September, 1976
New Information
Mailed to: E, D, C/1747/DS

Drip-proof Guarded
Frame 283AT-367AT
Ventilation Opening Details

Dc Motors
Life-Line S

Drip-proof Guarded, Life-Line S, Ventilation Opening Details



Note: Rear Bracket does not Have Means for Piping Exhaust Air Away.

Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame No.	D②	RA	RB	RC	RD	RE	RF	RG	RH	RJ	RK°	RL°	RM°	RN°	RO
283AT	7.00	6.25	6.86	3.46	1.88	2.82	.24	4.94	6.75	.24	12°	45°	12°	12°	.88
284AT	7.00	6.25	6.86	4.22	1.88	2.82	.24	4.94	7.51	.24	12°	45°	12°	12°	.88
286AT	7.00	6.25	6.86	4.96	1.88	2.82	.24	4.94	8.25	.24	12°	45°	12°	12°	88
324AT	8.00	7.06	7.83	5.38	2.12	3.08	.30	5.50	9.04	.36	12°	45°	12°	12°	1.00
326AT	8.00	7.06	7.83	6.12	2.12	3.08	.30	5.50	9.78	.36	12°	45°	12°	12°	1.00
327AT	8.00	7.06	7.83	7.12	2.12	3.08	.30	5.50	10.78	.36	12°	45°	12°	12°	1.00
364AT	9.00	8.00	8.76	3.92	2.50	3.02	.36	5.88	7.93	.35	12°	45°	12°	12°	1.00
366AT	9.00	8.00	8.76	5.30	2.50	3.02	.36	5.88	9.31	.35	12°	45°	12°	12°	1.00
367AT	9.00	8.00	8.76	6.30	2.50	3.02	.36	5.88	10.31	.35	12°	45°	12°	12°	1.00

Frame No.	QA	QB	QC	QD	QE	QF	QG	QH	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT
283AT	5.8	4.9	8.53	5.04	1.70	4.10	.6	.32	.26	4.10	4.10	4.10	4.10	5.88	4.76	5.12	5.00	5.52	.12
284AT	5.8	4.9	9.27	5.78	1.70	4.10	.6	.32	.26	4.10	4.10	4.10	4.10	5.88	4.76	5.12	5.00	5.52	.12
286AT	5.8	4.9	10.03	6.54	1.70	4.10	.6	.32	.26	4.10	4.10	4.10	4.10	5.88	4.76	5.12	5.00	5.52	.12
324AT	6.6	5.7	10.40	6.52	1.84	5.00	.6	.32	.26	5.00	5.00	5.00	5.00	6.76	5.68	6.12	5.76	6.24	.06
326AT	6.6	5.7	11.16	7.28	1.84	5.00	.6	.32	.26	5.00	5.00	5.00	5.00	6.76	5.68	6.12	5.76	6.24	.06
327AT	6.6	5.7	12.16	8.28	1.84	5.00	.6	.32	.26	5.00	5.00	5.00	5.00	6.76	5.68	6.12	5.76	6.24	.06
364AT	7.4	6.4	11.62	7.46	2.70	5.00	.8	.38	.26	5.00	5.00	5.00	5.00	7.88	6.38	6.76	7.00	6.76	.06
366AT	7.4	6.4	13.00	8.84	2.70	5.00	.8	.38	.26	5.00	5.00	5.00	5.00	7.88	6.38	6.76	7.00	6.76	.06
367AT	7.4	6.4	14.00	9.84	2.70	5.00	.8	.38	.26	5.00	5.00	5.00	5.00	7.88	6.38	6.76	7.00	6.76	.06

② "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.

Reproduced from Drawing 8974-D-43, sub. 2.

Notes:
1. Front bracket top opening is best for air inlet because it does not prevent access to brushes.
2. Front bracket may be rotated in steps of 180° but neutral may have to be reset.
3. Front bracket can not be rotated in steps of 90° unless it is either redrilled or reconnected for rocker rings.

Printed in U.S.A.

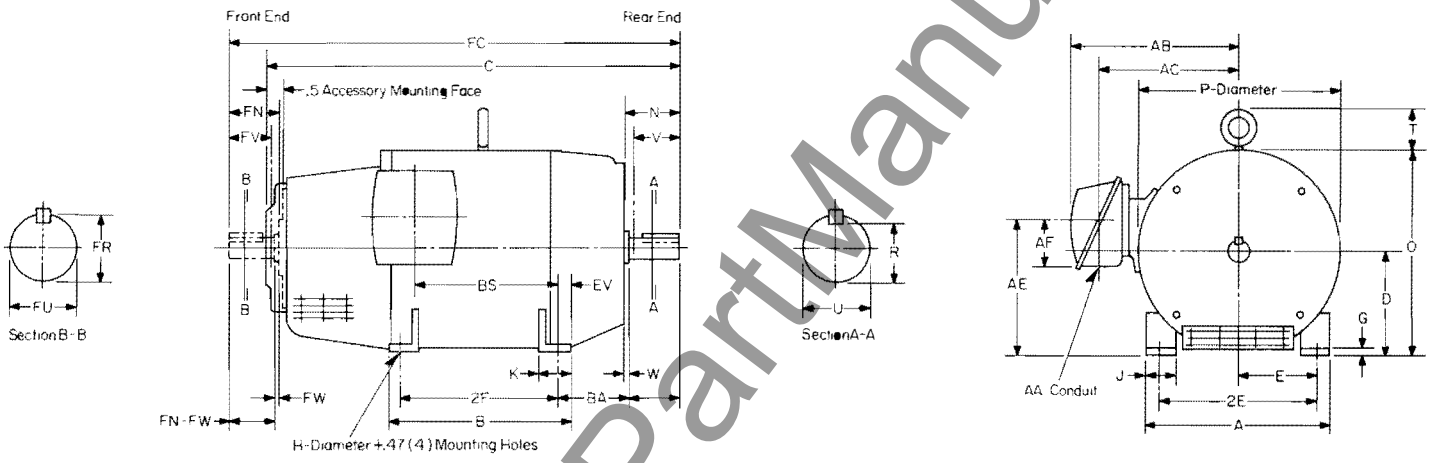
Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

November, 1976
Supersedes 3540 F WE A
Dimension Sheet
pages 123 and 124 dated August, 1976
Mailed to: E, D, C/1747/DS

Drip-proof Guarded
Frames 406AT-508AT

Dc Motors
Life-Line S

Drip-proof Guarded, Life-Line S



Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame Series	A	D②	E	G	H	J	K	O	P	T	W	BA	EV	FW	Conduit Box③ AA	AB	AC	AE	AF
400AT	19.8	10.00	8.00	.9	.94	3.8	3.0	19.9	19.8	4.3	.18	6.62	1.5	.18	1.5-2-2.5-3	16.6	13.6	12.8	5.4
440AT	21.8	11.00	9.00	1.1	1.06	4.0	3.3	21.9	21.8	4.0	.18	7.50	1.3	.18	1.5-2-2.5-3	17.6	14.6	14.0	5.4
500AT	24.6	12.50	10.00	1.2	1.18	4.5	3.5	24.8	24.6	4.0	.18	8.50	1.3	.18	Undrilled	20.0	....	15.5	7.0

Frame No.	B	C	FC	2F	BS	Rear Shaft R⑥	Rear Shaft U①	Rear Shaft Key Size	Front Shaft④ N	Front Shaft V⑤	Front Shaft N-W	Front Shaft FR⑥	Front Shaft FU①	Front Shaft Key Size	FN	FV⑤	FN-FW	Approx. Wt. Lbs.
406AT	19.0	39.70	44.20	16.00	13.8	2.275	2.625	.625 sq. x 4.00	5.44	5.00	5.26	2.021	2.375	.625 sq. x 3.50	4.94	4.50	4.76	1250
408AT	23.0	44.20	48.70	20.00	18.4	2.275	2.625	.625 sq. x 4.00	5.44	5.00	5.26	2.021	2.375	.625 sq. x 3.50	4.94	4.50	4.76	1600
447AT	22.5	44.50	49.50	20.00	16.9	2.450	2.875	.750 sq. x 4.50	5.94	5.50	5.76	2.275	2.625	.625 sq. x 4.00	5.44	5.00	5.26	1610
448AT	24.5	46.50	51.50	22.00	18.9	2.450	2.875	.750 sq. x 4.50	5.94	5.50	5.76	2.275	2.625	.625 sq. x 4.00	5.44	5.00	5.26	1780
506AT	22.8	47.74	53.24	20.00	17.3	2.831	3.250	.750 sq. x 5.25	6.68	6.38	6.50	2.450	2.875	.750 sq. x 4.75	5.94	5.50	5.76	2150
507AT	24.8	49.74	55.24	22.00	19.3	2.831	3.250	.750 sq. x 5.25	6.68	6.38	6.50	2.450	2.875	.750 sq. x 4.75	5.94	5.50	5.76	2500
508AT	27.8	52.74	58.24	25.00	22.3	2.831	3.250	.750 sq. x 5.25	6.68	6.38	6.50	2.450	2.875	.750 sq. x 4.75	5.94	5.50	5.76	3000

① Manufacturers allowance +.000, −.001.
② "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.
③ Conduit boxes are pressed steel type with knock-outs for conduit sizes as shown.
④ Front shaft extension is supplied only when specified on order. When front shaft extension is ordered, the cover over the accessory mounting surface is not supplied.
⑤ "V" and "FV" represent usable portion of shaft.
⑥ Manufacturers allowance +.000, −.015.
⑦ Force ventilated motors will have same mounting dimensions except when blower is mounted. It will be mounted on front (commutator) end.

Reproduced from Drawing 8973-D-60, sub 3.

Notes:
1. Conduit box can be mounted on opposite side of frame, and/or rotated in steps of 90° when specified on order.
2. Drip-proof guarded enclosure is maintained in wall or ceiling mounted machines with shaft horizontal, by rearranging covers. If shaft is not horizontal, special covers should be specified if drip-proof guarded enclosure must be maintained.
3. Motors with single shaft extension have the front (commutator end) bracket and shaft prepared to accept accessories.

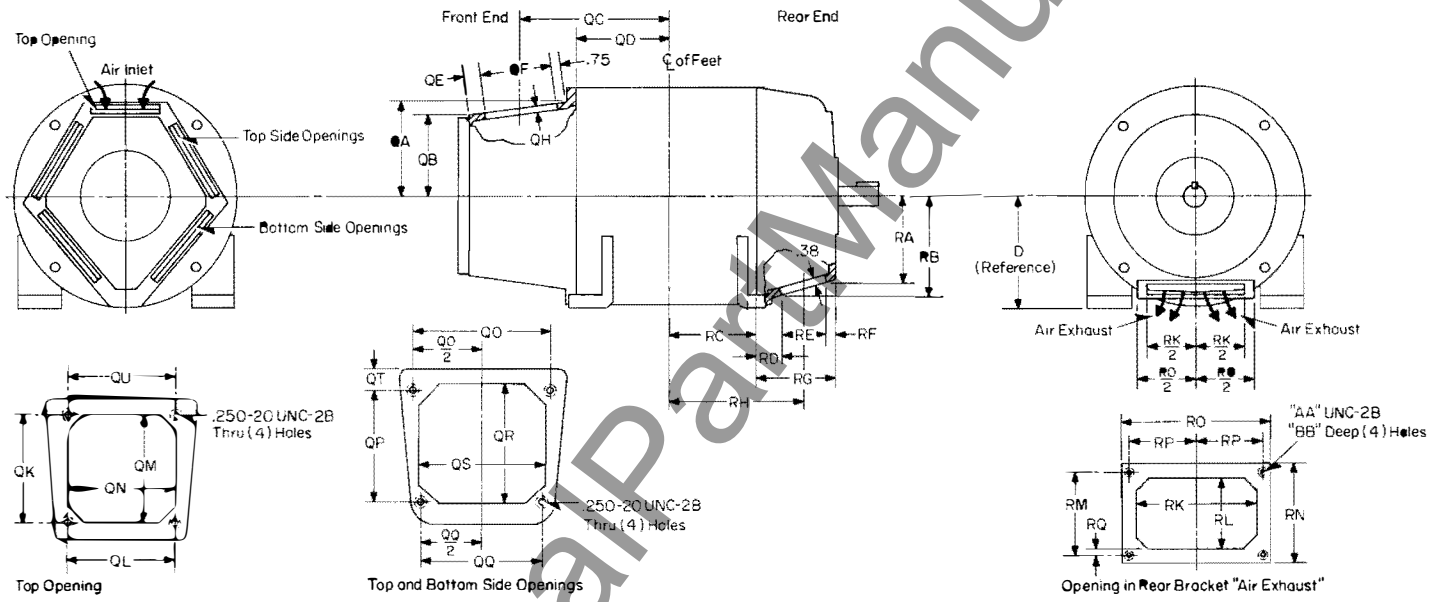
Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240

September, 1976
New Information
Mailed to: E, D, C/1747/DS

Drip-proof Guarded
Frames 406AT-508AT
Ventilation Opening Details

Dc Motors
Life-Line S

Drip-proof Guarded, Life-Line S, Ventilation Opening Details



Dimensions, Inches Not to be used for construction purposes unless dimensions are approved.

Frame No.	AA	BB	D②	RA	RB	RC	RD	RE	RF	RG	RH	RK	RL	RM	RN	RO	RP	RQ
406AT	.250-20	.625	10.00	7.75	9.13	7.44	1.88	4.62	.50	7.00	11.62	8.76	4.75	5.00	5.81	9.75	.16	4.53
408AT	.250-20	.625	10.00	7.75	9.13	9.44	1.88	4.62	.50	7.00	13.62	8.76	4.75	5.00	5.81	9.75	.16	4.53
447AT	.375-16	.625	11.00	7.76	10.18	9.06	2.40	5.23	.62	8.25	14.06	12.25	5.62	6.00	6.90	13.25	.22	5.94
448AT	.375-16	.625	11.00	7.76	10.18	10.06	2.40	5.23	.62	8.25	15.06	12.25	5.62	6.00	6.90	13.25	.22	5.94
506AT	.375-16	.625	12.50	8.75	11.44	9.26	2.68	5.88	.50	9.06	14.88	13.75	6.38	6.62	7.50	15.00	.22	6.81
507AT	.375-16	.625	12.50	8.75	11.44	10.26	2.68	5.88	.50	9.06	15.88	13.75	6.38	6.62	7.50	15.00	.22	6.81
508AT	.375-16	.625	12.50	8.75	11.44	11.76	2.68	5.88	.50	9.06	17.38	13.75	6.38	6.62	7.50	15.00	.22	6.81

Frame No.	QA	QB	QC	QD	QE	QF	QH	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU
406AT	8.18	7.03	12.70	8.31	3.31	5.00	.38	7.82	6.50	5.00	5.00	8.50	6.82	7.50	7.12	7.76	1.24	6.75
408AT	8.18	7.03	15.20	10.81	3.31	5.00	.38	7.82	6.50	5.00	5.00	8.50	6.82	7.50	7.12	7.76	1.24	6.75
447AT	9.12	7.82	15.34	9.44	.75	7.81	.38	8.10	6.88	7.82	7.36	9.50	7.12	8.00	7.32	8.50	1.00	8.24
448AT	9.12	7.82	16.34	10.44	.75	7.81	.38	8.10	6.88	7.82	7.36	9.50	7.12	8.00	7.32	8.50	1.00	8.24
506AT	10.38	8.88	16.05	9.74	.75	8.62	.50	8.82	8.00	8.62	8.00	11.00	8.00	10.00	8.12	10.50	1.00	9.24
507AT	10.38	8.88	17.05	10.74	.75	8.62	.50	8.82	8.00	8.62	8.00	11.00	8.00	10.00	8.12	10.50	1.00	9.24
508AT	10.38	8.88	18.55	12.24	.75	8.62	.50	8.82	8.00	8.62	8.00	11.00	8.00	10.00	8.12	10.50	1.00	9.24

② "D" dimension will not be exceeded. For exact shaft height shown, liners up to .03 may be required.

Reproduced from Drawing 8975-D-14, sub. 1.

Notes:
1. Front bracket top opening is best for air inlet because it does not prevent access to brushes.
2. Front bracket may be rotated in steps of 180° but neutral may have to be reset.
3. Front bracket can not be rotated in steps of 90° unless it is either redrilled or reconnected for rocker rings.
4. Rear bracket may be rotated in steps of 90°.

Printed in U.S.A.

Westinghouse Electric Corporation
Large Motor Division
Buffalo, New York, U.S.A. 14240