

## Drive Isolation Transformers

The Acme Drive Isolation Transformers are specifically designed to accommodate the special voltages and kVA sizes unique to AC and DC motor drive applications.

### FEATURES

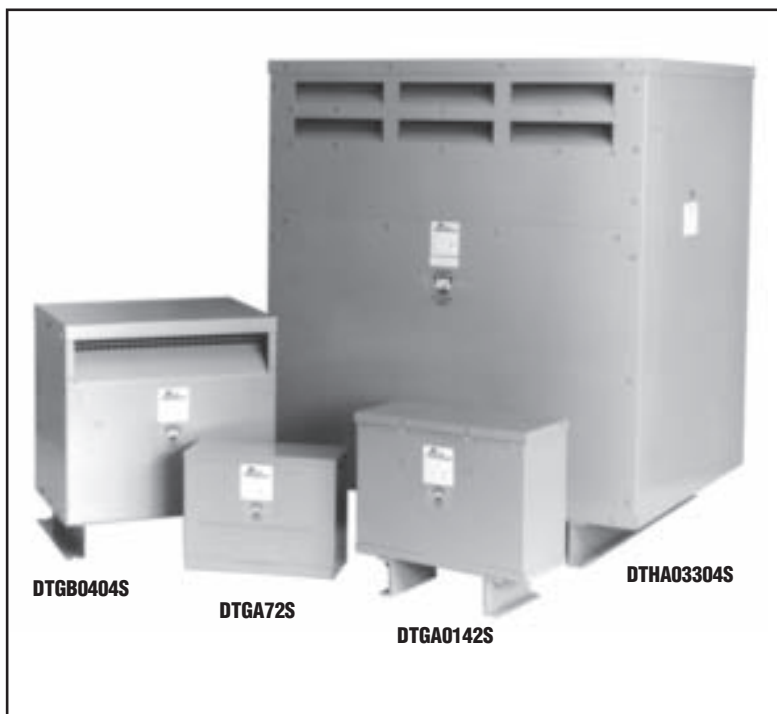
- **UL Type 3R Enclosures with Weather Shield on Ventilated Units (above 20 kVA).** Type 2 Enclosure without weather shield. UL Listed and CSA certified. 7.5–20.0 kVA are encapsulated, UL 3R.
- 3-Phase 60 Hertz.
- 180°C and 220°C insulation systems.
- Encapsulated and ventilated designs. All ventilated units, are of strip wound construction. Acme's reinforced core assemblies enhance quiet operation.
- Nominally 6% impedance.
- Designed for use with AC, adjustable frequency or DC drives.
- Full capacity taps are featured on all units. On 7.5 through 20 kVA units, taps are 1-5% ANFC and 1-5% BNFC. On 27 through 660 kVA units, taps are 2-2½% ANFC and 2-2½% BNFC.
- Full range of kVA ratings cover all standard drive systems.
- Ample wiring compartment for easy cable entry.
- Optional wall mounting brackets for certain sizes.

### Stress relief

Acme uses strip conductors (above 7.5 kVA) instead of wire for a DIT series that easily accommodates the severe electrical and mechanical stresses found in today's AC & DC motor drives. The inherent excellent line isolation of these transformers is further enhanced with the extra protection of Acme's Electrostatic Shield — free in all DIT's.

### Lower losses

The harmonic currents generated by AC & DC drives increase eddy current losses (heat) in transformer windings. The thicker the winding conductor, the greater the losses. Acme uses one turn per layer of thin strip conductor which provides lower eddy current losses than comparable wire wound units. Lower losses = cooler operation and longer transformer life.



### Reduced short circuit forces

Strip windings minimize axial short circuit forces that can cause mechanical displacement of the windings under fault conditions. For extra protection all designs 7.5 kVA and above use primary and secondary coils of equal axial length. This feature tends to negate axial short circuit forces, further improving transformer life expectancy.

### Selection instructions

If you know the motor horse-power, simply follow the drive system manufacturer's recommendation. Or, select the corresponding kVA from the chart at right.

For example, a 40 Hp motor requires a 51 kVA DIT.

H.P.	kVA
5.0	7.5
7.5	11.0
10.0	14.0
15.0	20.0
20.0	27.0
25.0	34.0
30.0	40.0
40.0	51.0
50.0	63.0
60.0	75.0
75.0	93.0
100.0	118.0
125.0	145.0
150.0	175.0
200.0	220.0
250.0	275.0
300.0	330.0
400.0	440.0
500.0	550.0
600.0	660.0

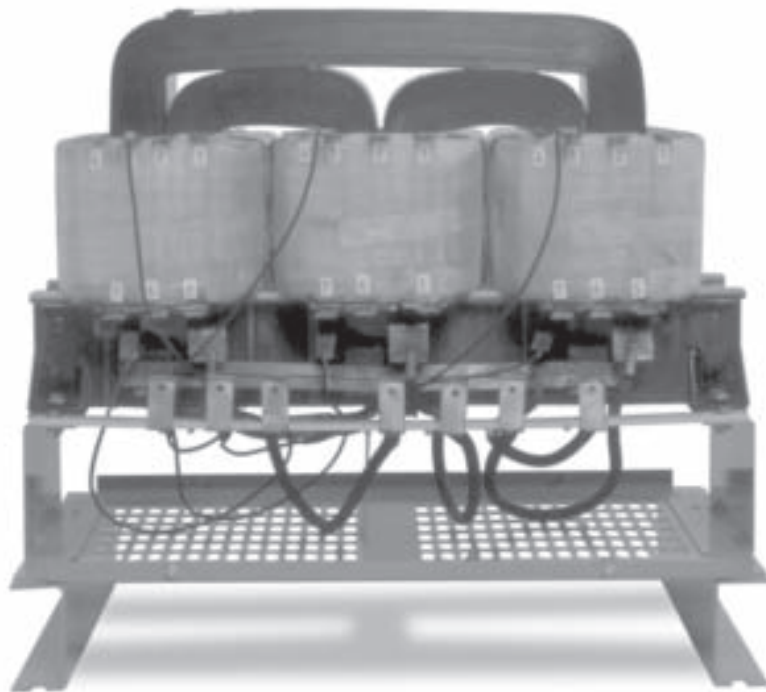
## Acme Advantages

### Wound Cores and Strip Winding mean lower losses

All Acme DITs above 7.5 kVA are wound with strip windings to ensure the lowest possible eddy current losses. All our DITs use a three leg wound core. This superior design has very low losses and quiet operation. Both of these features combine to significantly reduce losses and operating costs compared to other types of constructions.

### Copper terminations provide trouble-free operation

All Acme DITs up to and including 220 kVA have copper terminations. The transition from aluminum strip coil conductors to copper terminations is accomplished by a bonding process known as "Koldwelding™". This process has been used by Acme for over 25 years to provide a trouble-free, permanent bonding of the two metals.



Wound core construction showing all copper terminations



## SELECTION CHARTS



GROUP A		GROUP B		APPROX. DIMENSIONS <sup>③</sup>			APPROX. SHIP WEIGHT Lbs. (Kg.)	TYPE MTG. W - Wall F - Floor	WEATHER SHIELD P/N	DIM. DRAWING
kVA	Primary 460V Delta Secondary 230Y/133 CATALOG NO.	Primary 460V Delta Secondary 460Y/266 CATALOG NO.	HEIGHT	WIDTH	DEPTH					
7.5	DTGA72S or TS <sup>④</sup> (37)	DTGB72S or TS (34)	15.21 (38.6)	19.25 (48.9)	7.37 (18.7)	180 (81.6)	W	NA	F	
11.0	DTGA0112S or TS (37)	DTGB0112S or TS (34)	18.86 (47.9)	20.30 (51.6)	9.03 (22.9)	265 (120.0)	F <sup>①</sup>	NA	I	
14.0	DTGA0142S or TS (37)	DTGB0142S or TS (34)	18.86 (47.9)	20.30 (51.6)	9.03 (22.9)	270 (123.0)	F <sup>①</sup>	NA	I	
20.0	DTGA0202S or TS (37)	DTGB0202S or TS (34)	20.77 (52.8)	20.94 (53.2)	10.18 (25.9)	435 (197.0)	F <sup>①</sup>	NA	I	
27.0	DTGA0274S (38)	DTGB0274S (35)	25.50 (64.8)	24.39 (61.9)	19.37 (49.2)	320 (145.0)	F <sup>②</sup>	WSA1	E	
34.0	DTGA0344S	DTGB0344S	25.50 (64.8)	24.39 (61.9)	19.37 (49.2)	340 (154.0)	F <sup>②</sup>	WSA1	E	
40.0	DTGA0404S	DTGB0404S	25.50 (64.8)	24.39 (61.9)	19.37 (49.2)	395 (179.0)	F <sup>②</sup>	WSA1	E	
51.0	DTGA0514S	DTGB0514S	29.90 (75.9)	28.15 (71.5)	22.37 (56.8)	400 (181.0)	F <sup>②</sup>	WSA2	E	
63.0	DTGA0634S	DTGB0634S	29.90 (75.9)	28.15 (71.5)	22.37 (56.8)	550 (250.0)	F <sup>②</sup>	WSA2	E	
75.0	DTGA0754S	DTGB0754S	29.90 (75.9)	28.15 (71.5)	22.37 (56.8)	570 (259.0)	F <sup>②</sup>	WSA2	E	
93.0	DTGA0934S	DTGB0934S	35.90 (91.2)	31.90 (81.0)	26.88 (68.3)	685 (311.0)	F	WSA3	E	
118.0	DTGA01184S	DTGB01184S	35.90 (91.2)	31.90 (81.0)	26.88 (68.3)	765 (347.0)	F	WSA3	E	
145.0	DTGA01454S	DTGB01454S	41.52 (105.5)	32.90 (83.6)	29.88 (75.9)	990 (449.0)	F	WSA4	E	
175.0	DTGA01754S	DTGB01754S	41.52 (105.5)	32.90 (83.6)	29.88 (75.9)	1100 (499.0)	F	WSA4	E	
220.0	DTGA02204S	DTGB02204S	41.52 (105.5)	32.90 (83.6)	29.88 (75.9)	1120 (508.0)	F	WSA4	E	
275.0	DTGA002754S	DTGB002754S	45.60 (115.8)	39.50 (100.3)	35.50 (90.2)	2090 (948.0)	F	WSA5	E	
330.0	DTGA03304S ↓	DTGB03304S	45.60 (115.8)	39.50 (100.3)	35.50 (90.2)	2090 (948.0)	F	WSA5	G	
440.0		DTGB04404S	57.84 (146.9)	45.50 (115.6)	41.49 (105.4)	2295 (1043.2)	F	WSA7	G	
550.0		DTGB05504S	57.84 (146.9)	45.50 (115.6)	41.49 (105.4)	2580 (1172.7)	F	WSA7	G	
660.0		DTGB06604S	62.84 (159.6)	54.00 (137.2)	41.49 (105.4)	3700 (1678.3)	F	WSA6	G	
770.0		DTGB07704S	62.84 (159.6)	54.00 (137.2)	41.49 (105.4)	4044 (1838.2)	F	WSA6	G	
880.0		DTGB008804S	62.84 (159.6)	54.00 (137.2)	41.49 (105.4)	4230 (1922.7)	F	WSA6	G	
990.0		DTGB9902S ↓	62.84 (159.6)	54.00 (137.2)	41.49 (105.4)	4285 (1947.7)	F	WSA6	G	

GROUP C		GROUP D		APPROX. DIMENSIONS <sup>③</sup>			APPROX. SHIP WEIGHT Lbs. (Kg.)	TYPE MTG. W - Wall F - Floor	WEATHER SHIELD P/N	DIM. DRAWING
kVA	Primary 575V Delta Secondary 230Y/133 CATALOG NO.	Primary 575V Delta Secondary 460Y/266 CATALOG NO.	HEIGHT	WIDTH	DEPTH					
7.5	DTHA72S or TS (40)	DTHB72S or TS (43)	15.21 (38.6)	19.25 (48.9)	7.37 (18.7)	180 (81.6)	W	NA	F	
11.0	DTHA0112S or TS (40)	DTHB0112S or TS (43)	18.86 (47.9)	20.30 (51.6)	9.03 (22.9)	265 (120.0)	F <sup>①</sup>	NA	I	
14.0	DTHA0142S or TS (40)	DTHB0142S or TS (43)	18.86 (47.9)	20.30 (51.6)	9.03 (22.9)	270 (123.0)	F <sup>①</sup>	NA	I	
20.0	DTHA0202S or TS (40)	DTHB0202S or TS (43)	20.77 (52.8)	20.94 (53.2)	10.18 (25.9)	435 (197.0)	F <sup>①</sup>	NA	I	
27.0	DTHA0274S (41)	DTHB0274S (44)	25.50 (64.8)	24.39 (61.9)	19.37 (49.2)	320 (145.0)	F <sup>②</sup>	WSA1	E	
34.0	DTHA0344S	DTHB0344S	25.50 (64.8)	24.39 (61.9)	19.37 (49.2)	340 (154.0)	F <sup>②</sup>	WSA1	E	
40.0	DTHA0404S	DTHB0404S	25.50 (64.8)	24.39 (61.9)	19.37 (49.2)	395 (179.0)	F <sup>②</sup>	WSA1	E	
51.0	DTHA0514S	DTHB0514S	29.90 (75.9)	28.15 (71.5)	22.37 (56.8)	400 (181.0)	F <sup>②</sup>	WSA2	E	
63.0	DTHA0634S	DTHB0634S	29.90 (75.9)	28.15 (71.5)	22.37 (56.8)	550 (250.0)	F <sup>②</sup>	WSA2	E	
75.0	DTHA0754S	DTHB754S	29.90 (75.9)	28.15 (71.5)	22.37 (56.8)	570 (259.0)	F <sup>②</sup>	WSA2	E	
93.0	DTHA0934S	DTHB0934S	35.90 (91.2)	31.90 (81.0)	26.88 (68.3)	685 (311.0)	F	WSA3	E	
118.0	DTHA01184S	DTHB01184S	35.90 (91.2)	31.90 (81.0)	26.88 (68.3)	765 (347.0)	F	WSA3	E	
145.0	DTHA01454S ↓	DTHB01454S	41.52 (105.5)	32.90 (83.6)	29.88 (75.9)	990 (449.0)	F	WSA4	E	
175.0		DTHB01754S	41.52 (105.5)	32.90 (83.6)	29.88 (75.9)	1100 (499.0)	F	WSA4	E	
220.0		DTHB02204S	41.52 (105.5)	32.90 (83.6)	29.88 (75.9)	1120 (508.0)	F	WSA4	E	
275.0		DTHB002754S	45.60 (115.8)	39.50 (100.3)	35.50 (90.2)	2090 (948.0)	F	WSA5	E	
330.0		DTHB03304S	45.60 (115.8)	39.50 (100.3)	35.50 (90.2)	2090 (948.0)	F	WSA5	G	
440.0		DTHB04404S	57.84 (157.5)	45.50 (115.6)	41.49 (105.4)	2580 (1172.7)	F	WSA7	G	
550.0		DTHB05504S	57.84 (157.5)	45.50 (115.6)	41.49 (105.4)	2640 (1200.0)	F	WSA7	G	
660.0		DTHB006604S ↓	62.84 (159.6)	54.00 (137.2)	41.49 (105.4)	3700 (1678.3)	F	WSA6	G	

① Optional wall mounting kits – part # PL 79911 refer to Page 145.

② Optional wall mounting kits – part # PL 79912 refer to Page 145.

③ Dimensions may change and are not to be used for detailed construction purposes. Please contact the factory for certified dimensional drawings.

④ For factory added thermal protection, 7.5 thru 20.0 kVA change suffix '-2S' to '-TS'.

The number in ( )'s following the catalog number is the electrical wiring diagram number beginning on page 135.