



700 W. 47th Street, Suite 1000
Kansas City, MO 64112
(816) 753-1000
Facsimile: (816) 753-1536
www.polsinelli.com

Anthony L. Springfield
(816) 360-4291
aspringfield@polsinelli.com

February 17, 2009

FEB 17 2009

**BY FEDERAL EXPRESS
BY ELECTRONIC MAIL**

Christopher R. Guinn, Esq.
Simmons Cooper LLC
707 Berkshire Blvd.
P.O. Box 521
East Alton, IL 62024

**Re: David Hackethal v. A.W. Chesterton Inc., et al. Case No. 08-L-0791
Discovery Responses**

Dear Chris:

Pursuant to our discussions, enclosed are documents labeled SQD HCK00001-00092, in response to Plaintiff's supplemental discovery requests in the above referenced matter. Please give me a call to discuss at your earliest convenience.

Very truly yours,

Anthony L. Springfield

ALS

047542 / 129648
ALSPR 1737026.1

SC-SDC-1200

Cub

STANDARD AISE MILL TYPE AND ARE
UNIVERSAL TO ALL MANUFACTURERS.

BRAKE SIZE: 8"

AISE STD.

MOTOR TYPE MILLTYPE

ALL MFG'S.

INDEX 85T.

STANDARD WHEELS ONLY

[illegible]



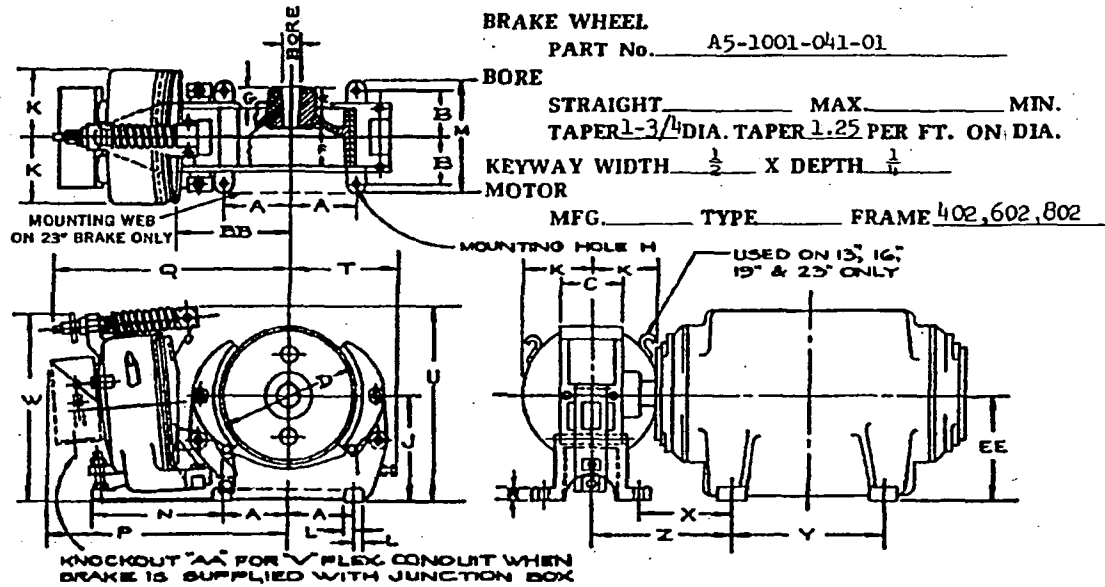
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
8"	3	2-5/8	2-3/8	5-3/8	16 $\frac{1}{2}$	8 $\frac{1}{4}$	7-5/8

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

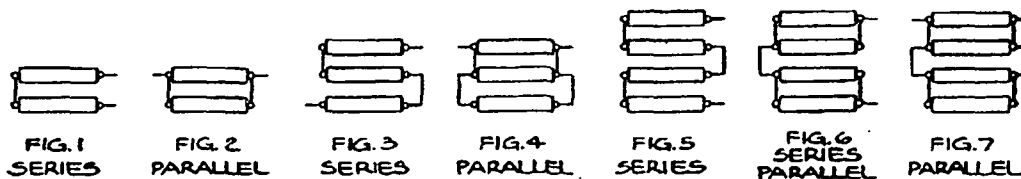
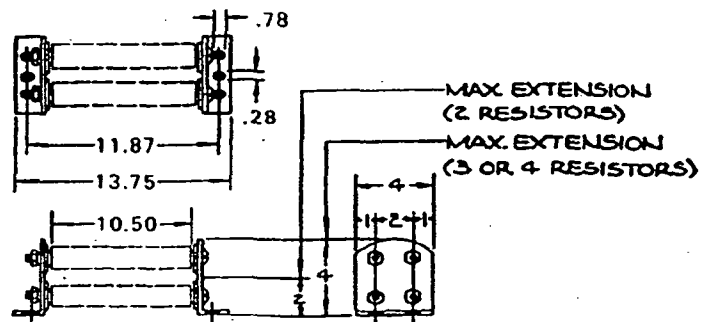
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00002

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5

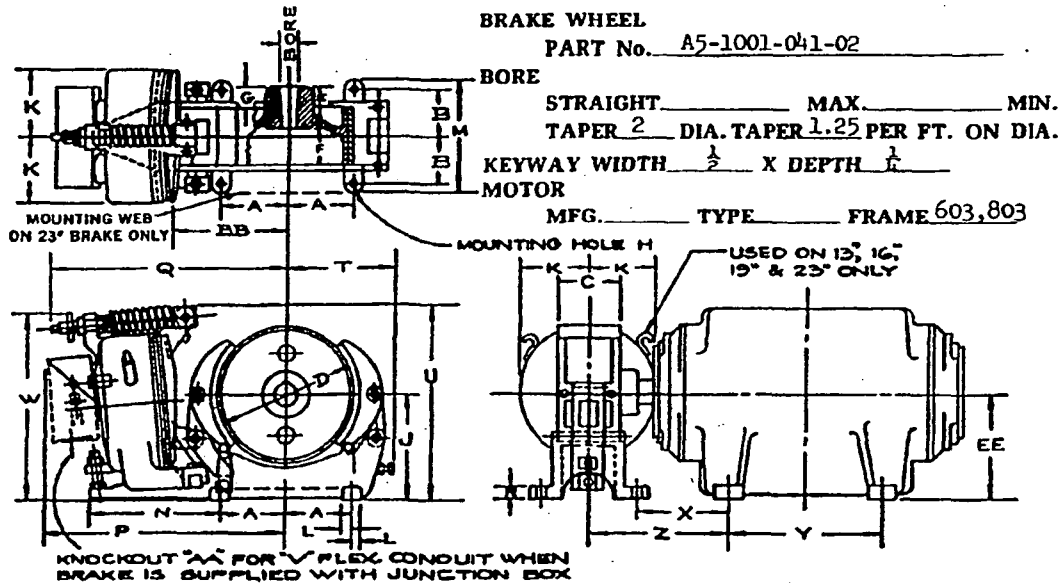


OUTLINE DRAWING **5010-1**

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
8"	3 $\frac{1}{2}$	2-1/8	2-3/8	6-1/8	18	9	8 $\frac{1}{2}$

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	.8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	1.0	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	1.3	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	1.6	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	1.9	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	2.3	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

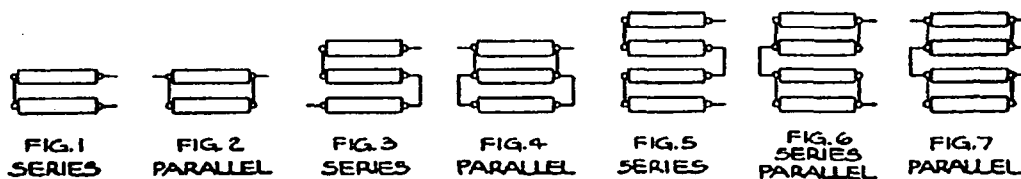
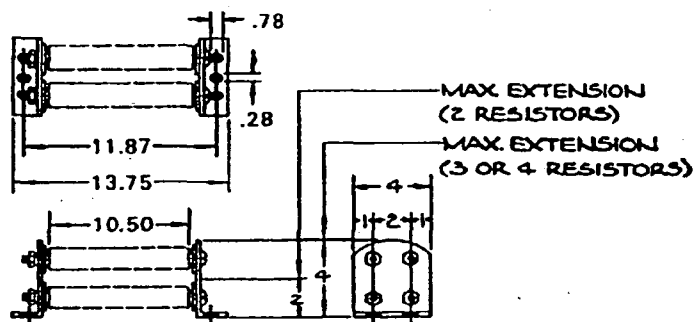
C. A. Schurr
 C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00004

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23". THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



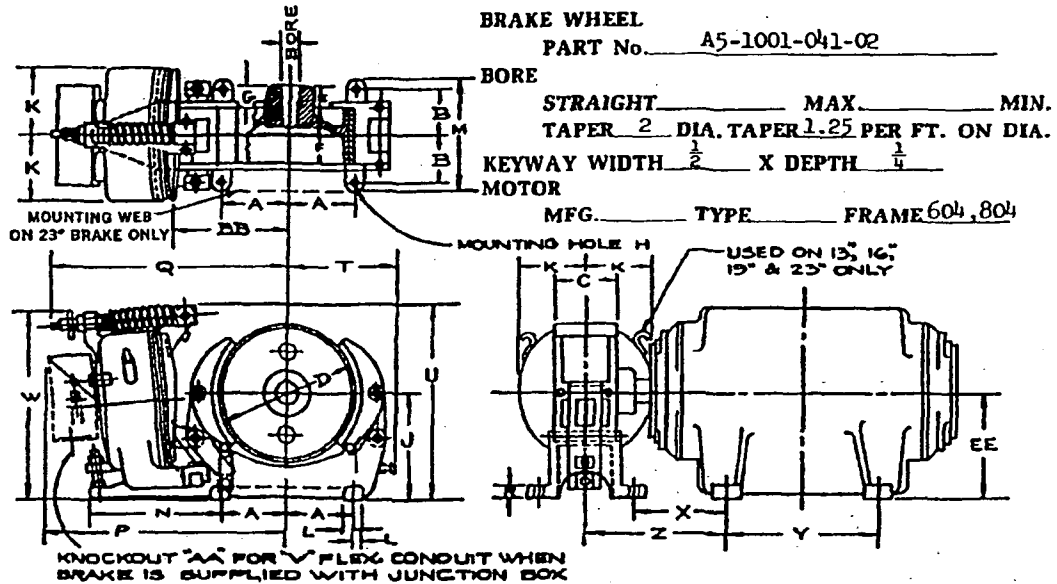
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
8"	3 $\frac{1}{2}$	2-1/8	2-3/8	6-5/8	19	9 $\frac{1}{2}$	9

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____
 Certified Correct on _____ H. P. _____
 Purch. _____ P. O. _____
 User _____ U. O. _____
 Square D S. O. _____ Engr. _____

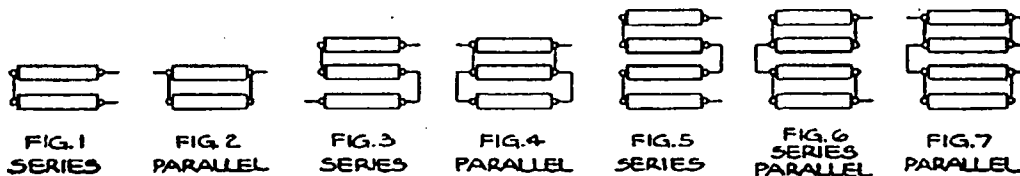
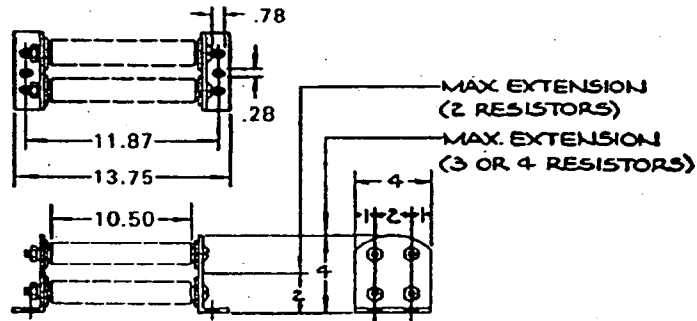
C. A. Schurr
 C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00006

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5

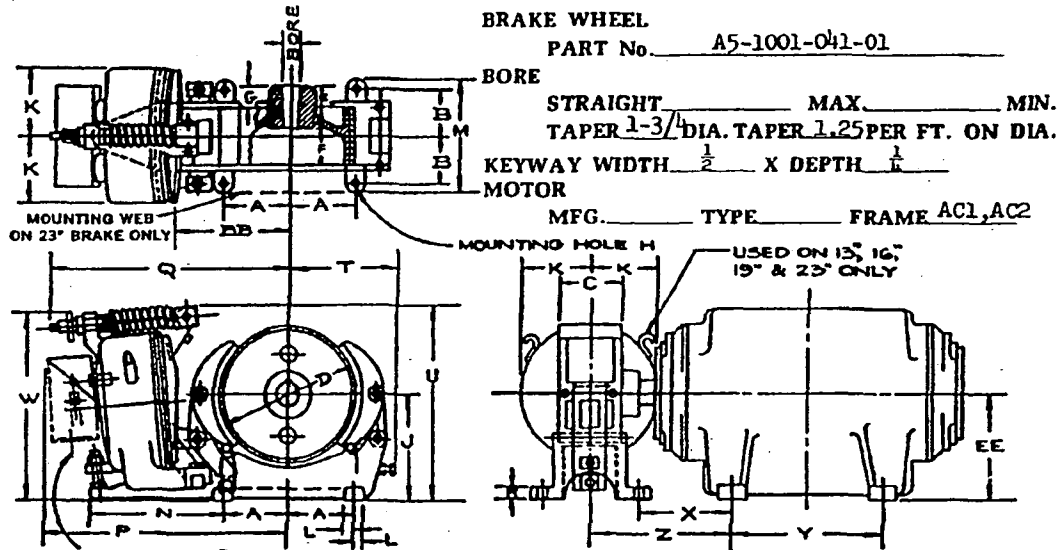


OUTLINE DRAWING 5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



KNOCKOUT "AA" FOR V FLEX CONDUIT WHEN
 BRAKE IS SUPPLIED WITH JUNCTION BOX

SIZE BRAKE	E	F	G	X	Y	Z	EE
8"	3	2-5/8	2-3/8	6-3/4	14-5/8	9-5/8	7

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....
 Certified Correct on..... H. P.....
 Purch..... P. O.....
 User..... U. O.....
 Square D S. O..... Engr.....

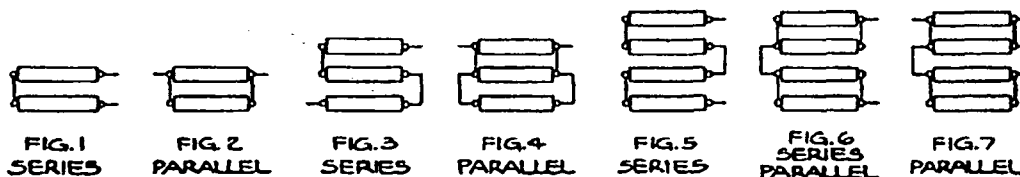
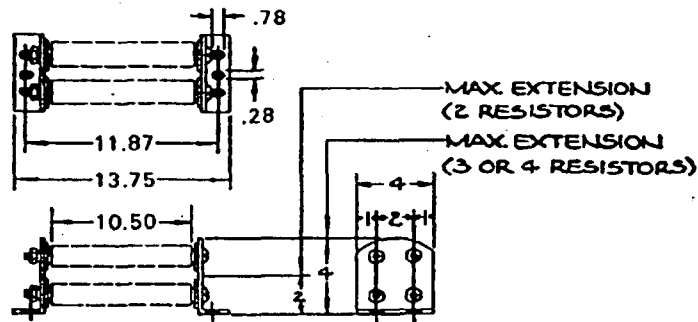
C. A. Schurr
 C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00008

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



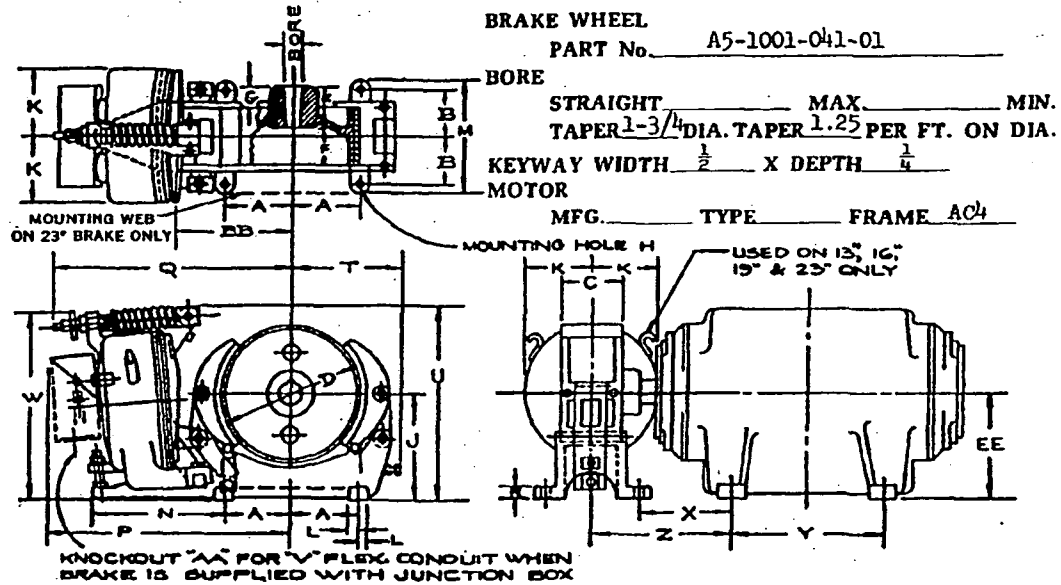
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
8"	3	2-5/8	2-3/8	7 1/4	15-3/8	10-1/8	8

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	.7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....
 Certified Correct on..... H. P.....
 Purch..... P. O.....
 User..... U. O.....
 Square D S. O..... Engr.....

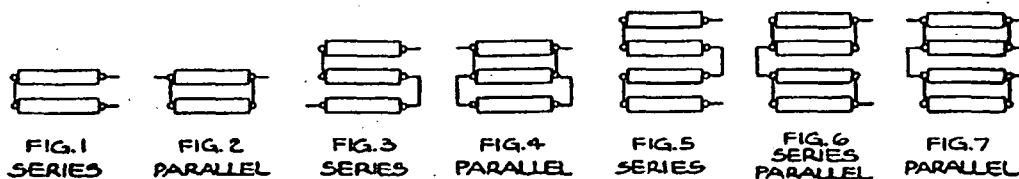
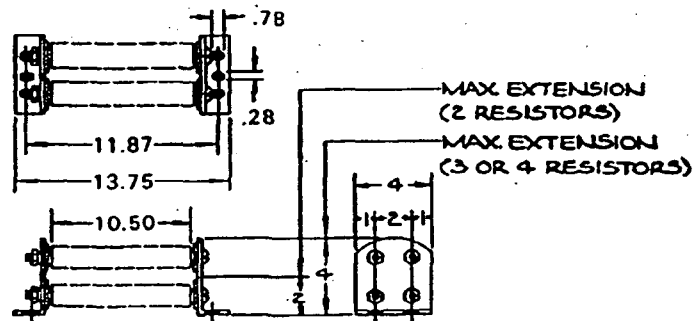
C. A. Schurr
 C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

**SQUARE D COMPANY**

SQD HCK00010

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23". THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



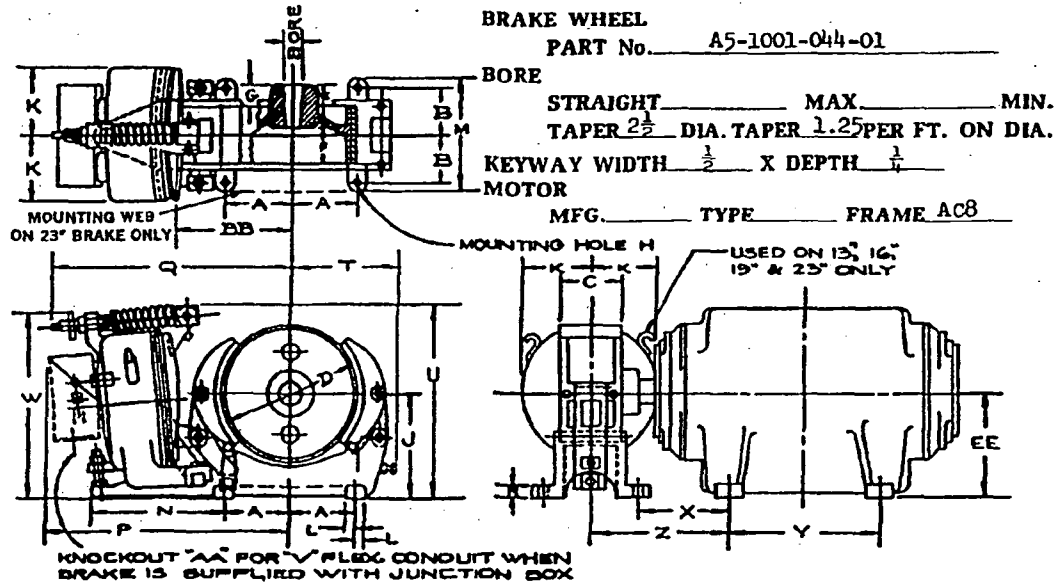
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
8"	4	1-5/8	2-3/8	7-3/4	21-3/8	10-5/8	9

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

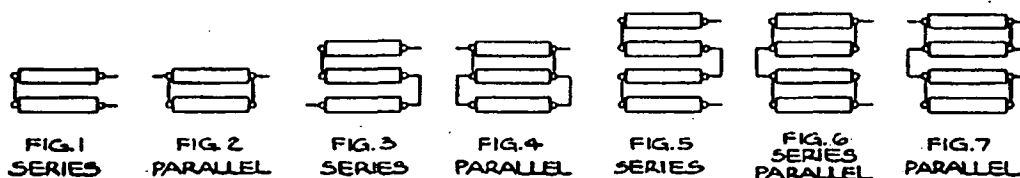
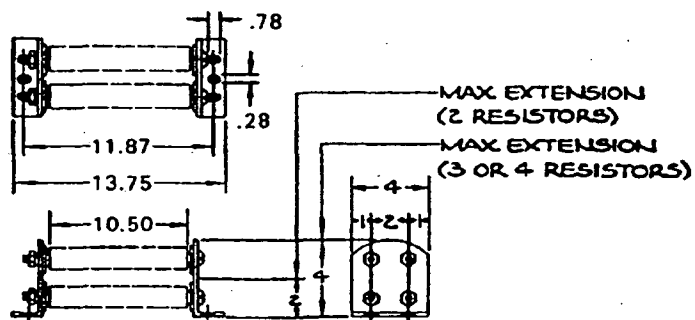
Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

C. A. Schurr
C. A. SCHURR, Chief Engineer

**OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"**
THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



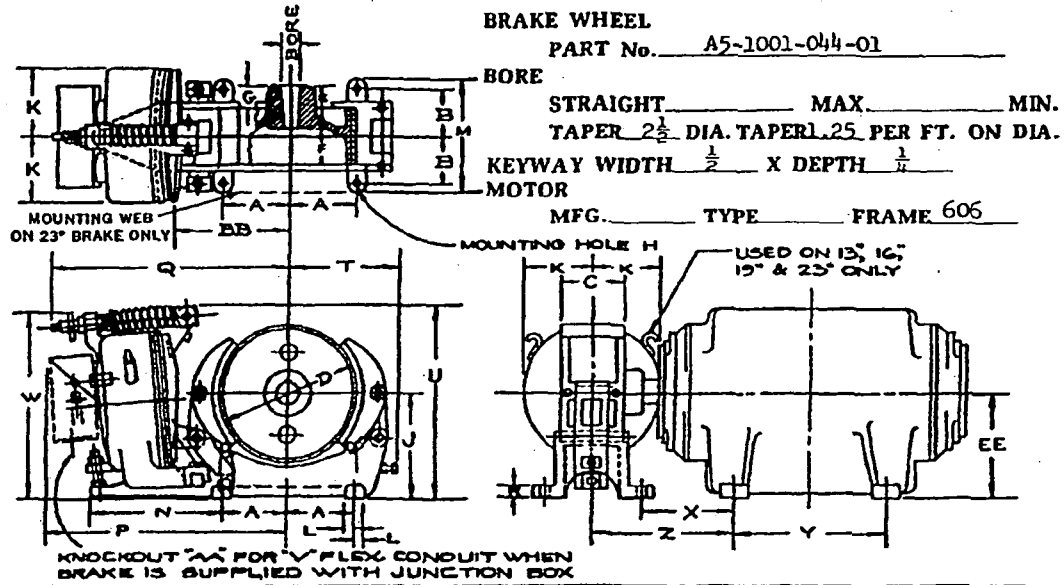
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
8"	4	1-5/8	2-3/8	6-5/8	21	9 1/2	10

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.....

Purch..... P. O.....

User..... U. O.....

Square D S. O..... Engr.....

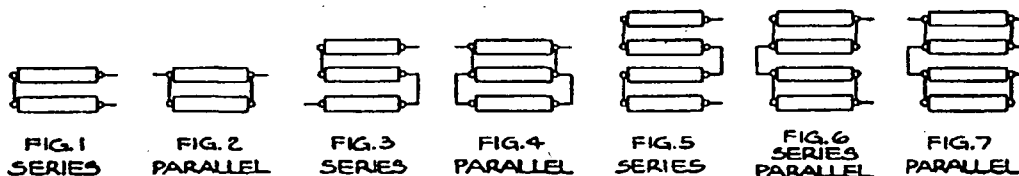
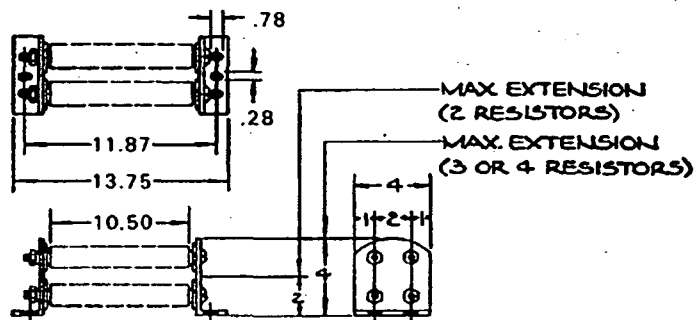
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00014

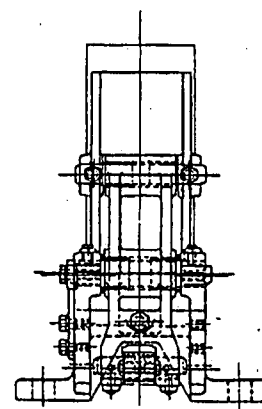
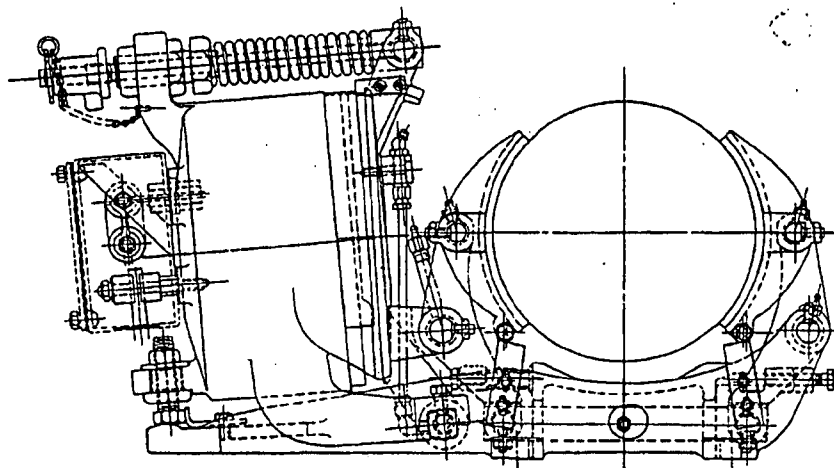
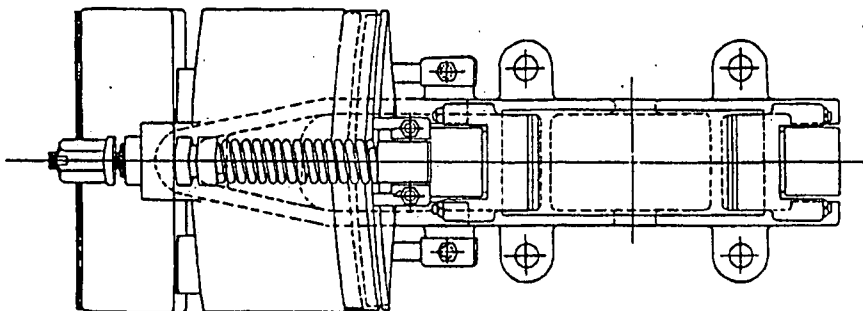
OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5

SQD HCK00016

REV.	DATE	REVISION DESCRIPTION	BY
1	1-15-50	ADD CENTER PILE & CORNER AND STOP BLOCKS & CLAMP	SAH
2	1-15-50	COMPLETE DRAWING AND ADD ADJUSTING CLAMP (L.H.)	SAH



GENERAL ARRANGEMENT
FOR S.M. SEE DRG. 71043

THE ELECTRIC CONTROLLER & MFG. CO.
CLEVELAND, OHIO U.S.A.
TITLE - 1" TYPE W.B. BRASS - 7045
WALL BRASS
CLY. M.B. 1-15-50
APPROVED <i>SAH</i> DRG. NO. 71045

DRG. 71045

UK-T
CD

BRAKE SIZE 13"
AISE STD.
MOTOR TYPE MILLTYPE
ALL MFG'S.

MOTOR TYPE MILLTYPE
ALL MFG'S.

SQD HCK00017



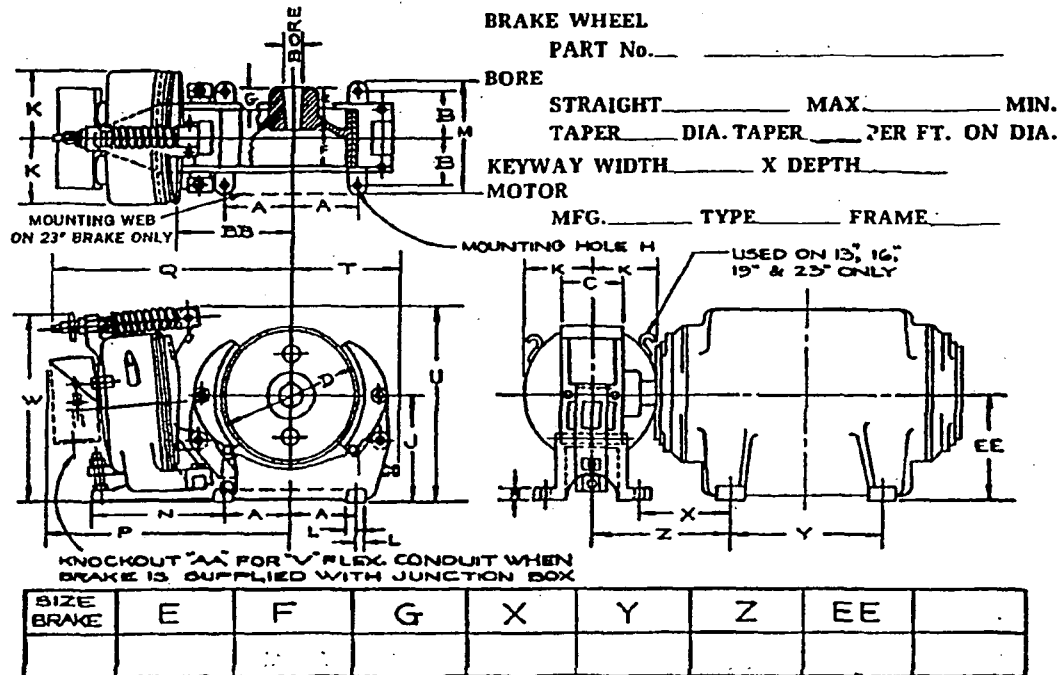
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

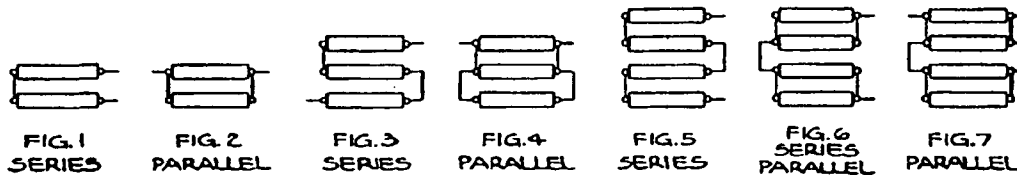
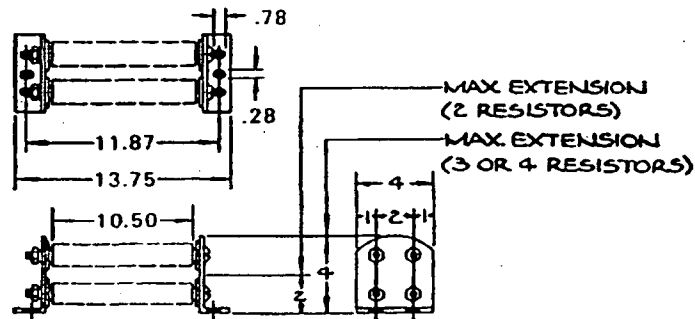
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00018

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



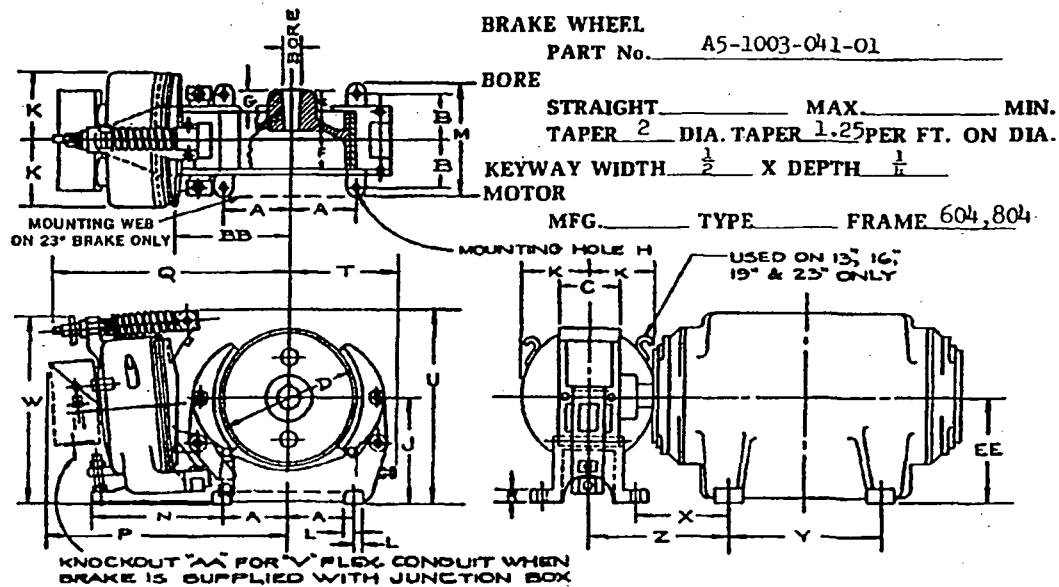
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
13"	3 1/2	4-3/8	2-1/8	6	19	10 1/2	9

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

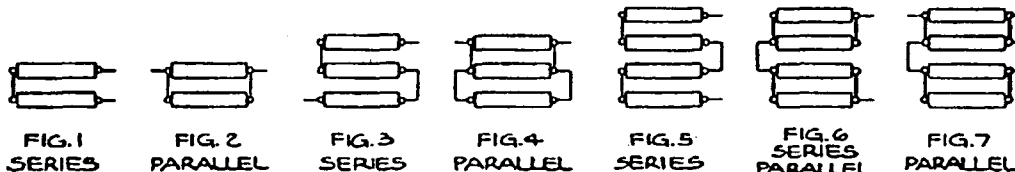
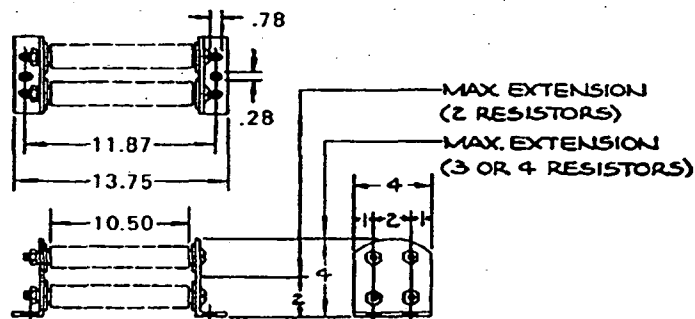
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00020

**OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"**
THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



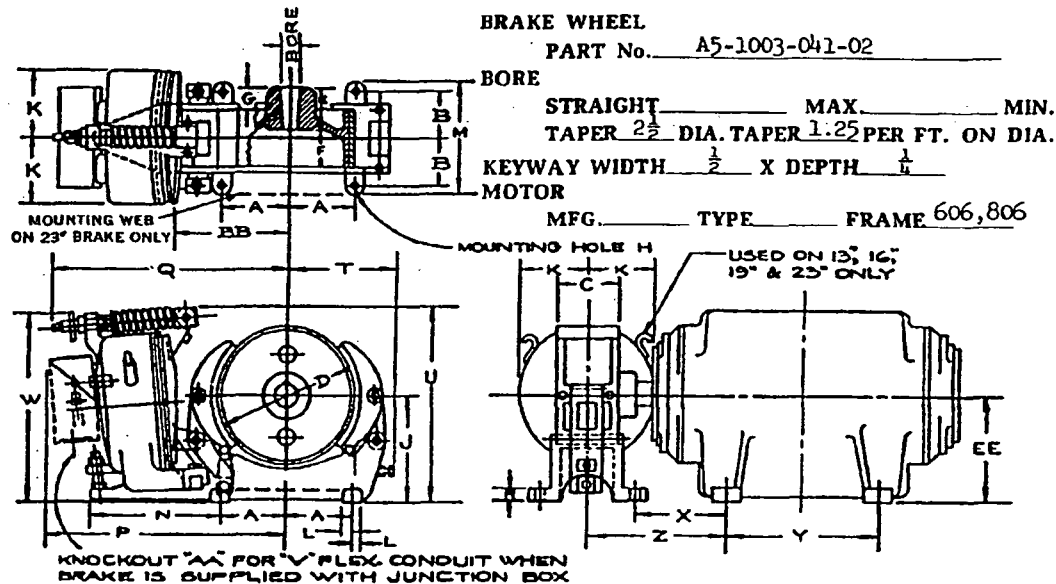
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE	
13"	4	3-7/8	2-1/8	6	21	10 1/2	10	

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	.7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.....

Purch..... P. O.....

User..... U. O.....

Square D S. O..... Engr.....

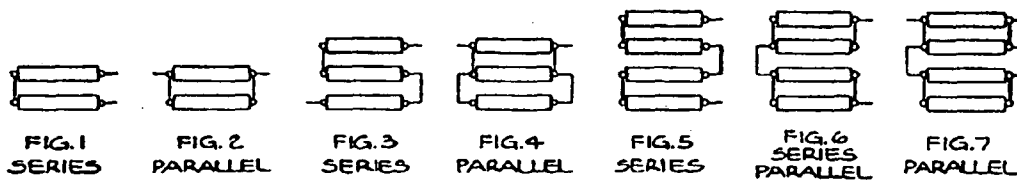
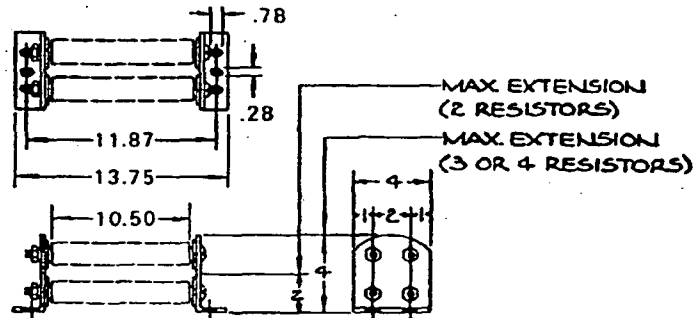
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

**SQUARE D COMPANY**

SQD HCK00022

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
 FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
 OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
 SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
 BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



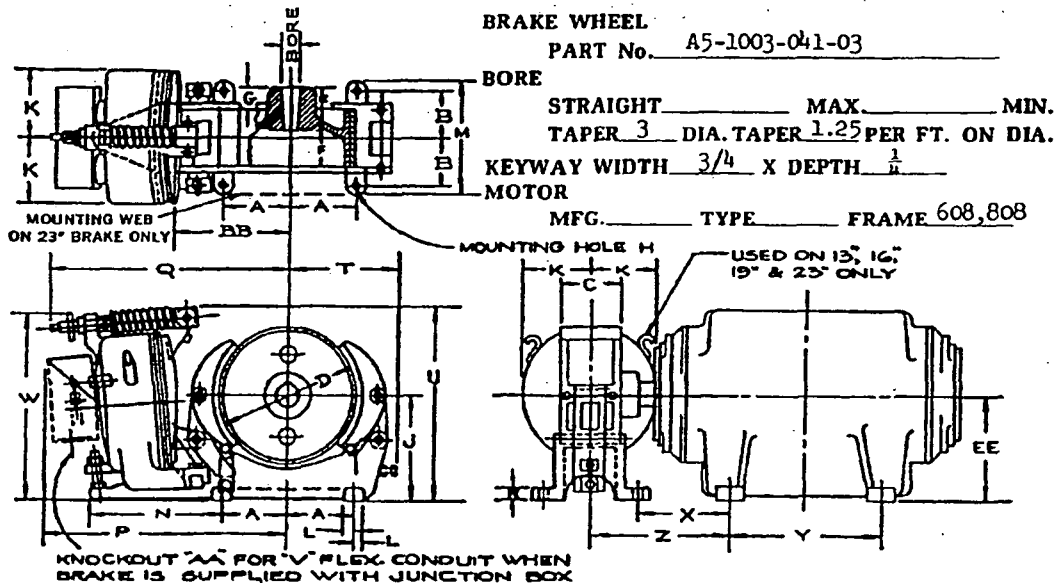
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
13"	$4\frac{1}{2}$	3-3/4	$2\frac{1}{2}$	$6\frac{1}{2}$	24-3/4	11	$11\frac{1}{4}$

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____
 Certified Correct on _____ H. P. _____
 Purch. _____ P. O. _____
 User _____ U. O. _____
 Square D S. O. _____ Engr. _____

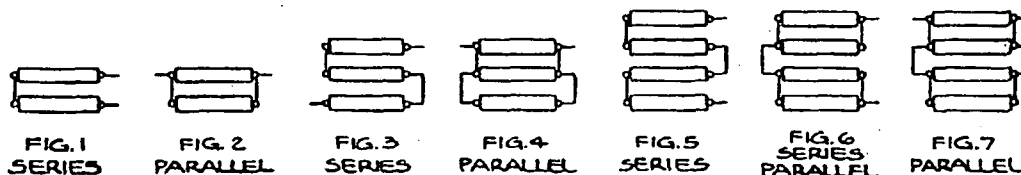
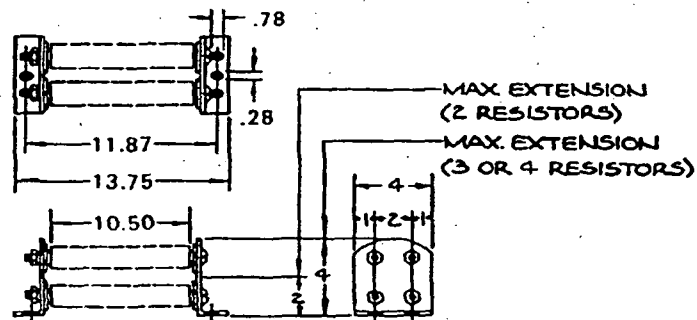
C. A. Schurr
 C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00024

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



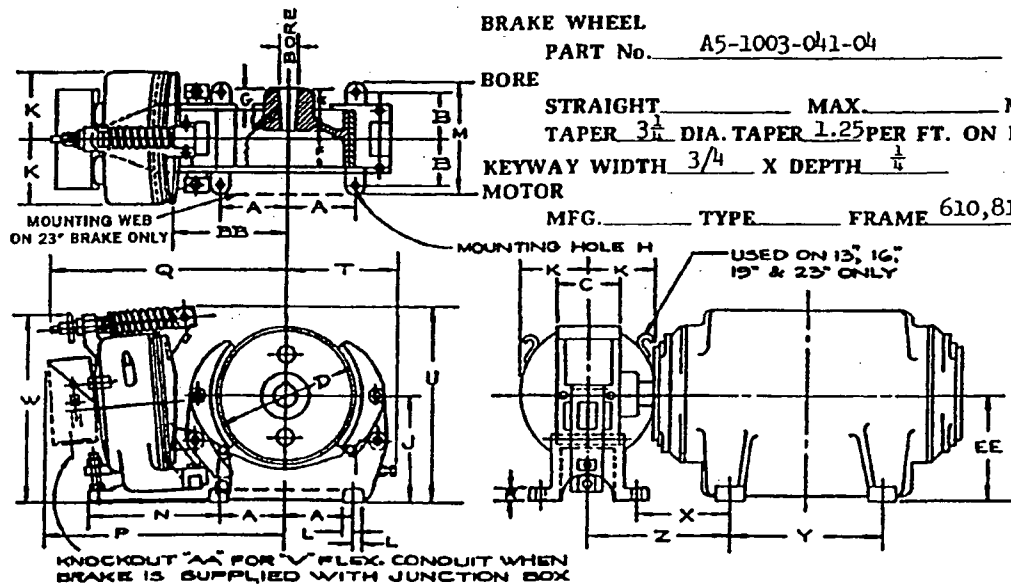
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)

BRAKE WHEELPART No. A5-1003-041-04**BORE**STRAIGHT _____ MAX. _____ MIN.
TAPER $3\frac{1}{4}$ DIA. TAPER 1.25 PER FT. ON DIA.KEYWAY WIDTH $3/4$ X DEPTH $1/4$ **MOTOR**MFG. _____ TYPE _____ FRAME 610,810

SIZE BRAKE	E	F	G	X	Y	Z	EE
13"	$4\frac{1}{2}$	$3-3/4$	$2\frac{1}{2}$	$7-1/8$	26	$11-5/8$	$12\frac{1}{4}$

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

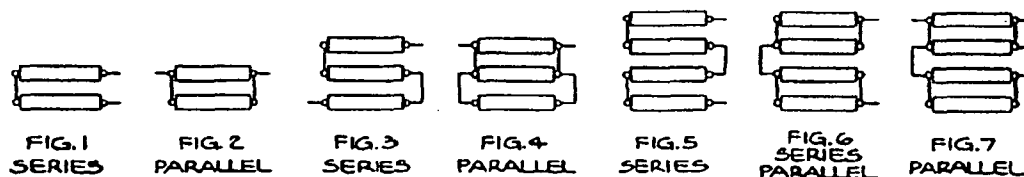
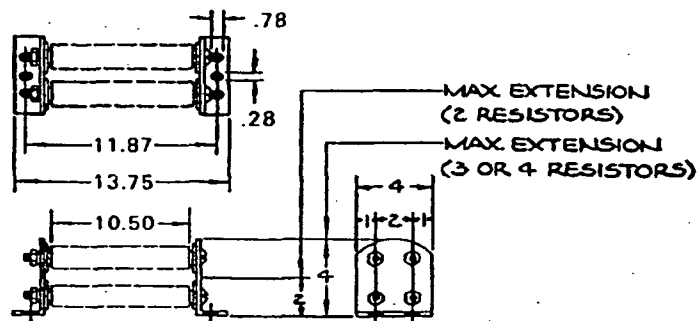
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

**SQUARE D COMPANY**

SQD HCK00026

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
 FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
 OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
 SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
 BRAKE COIL.

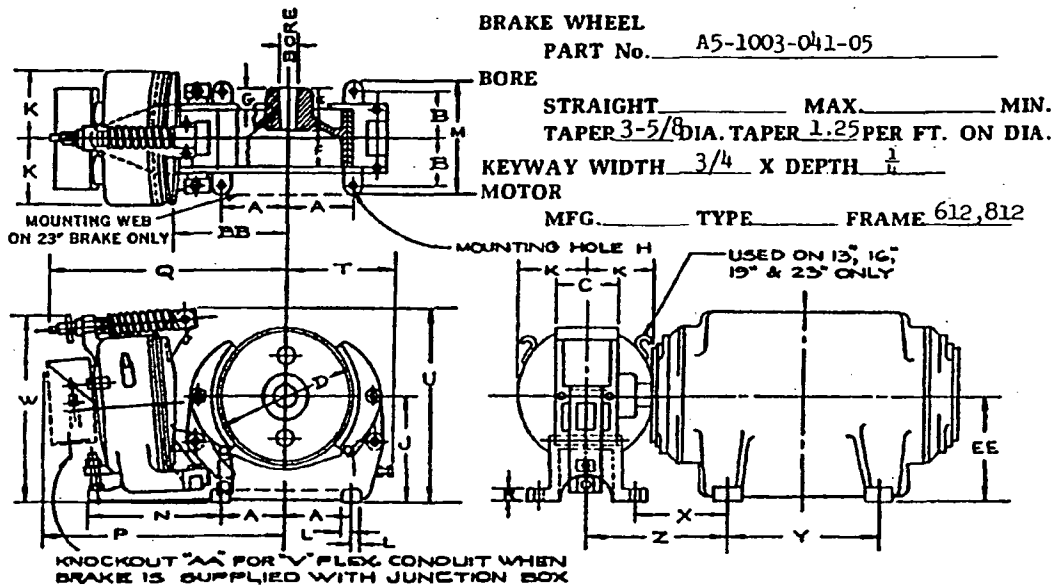


BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
13"	5	3 1/4	2 1/2	7-5/8	28 1/2	12-1/8	13-3/8

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.

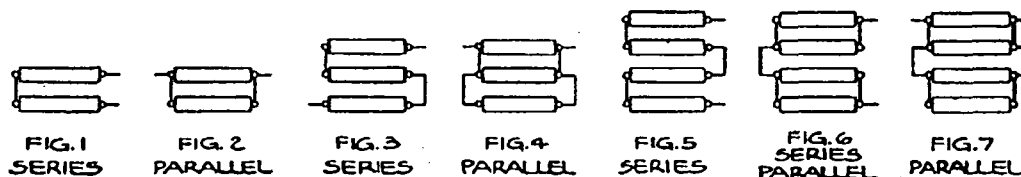
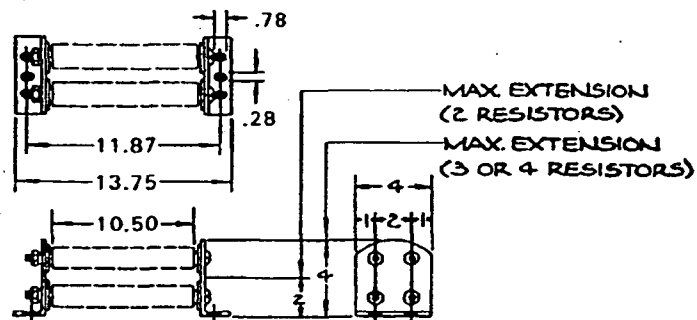
Purch..... P. O.

User..... U. O.

Square D S. O. Engr.....

C. A. Schurr
C. A. SCHURR, Chief Engineer

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



INDEX 13ST-7

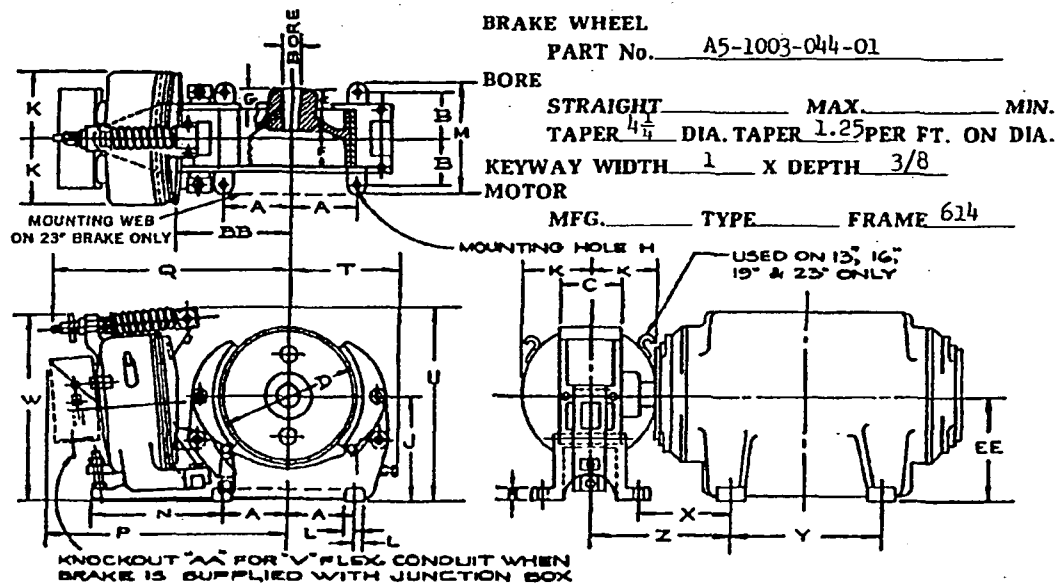
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
13"	5	3 $\frac{1}{4}$	2 $\frac{1}{2}$	8-5/8	16	13-1/8	14-3/4

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

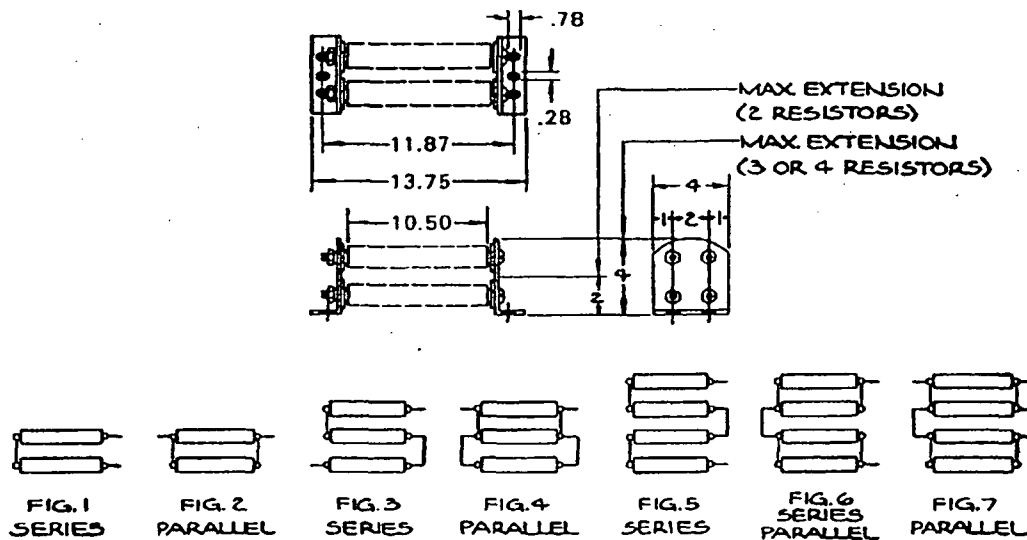
C. A. SCHURR, Chief Engineer

Supersedes DD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00030

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



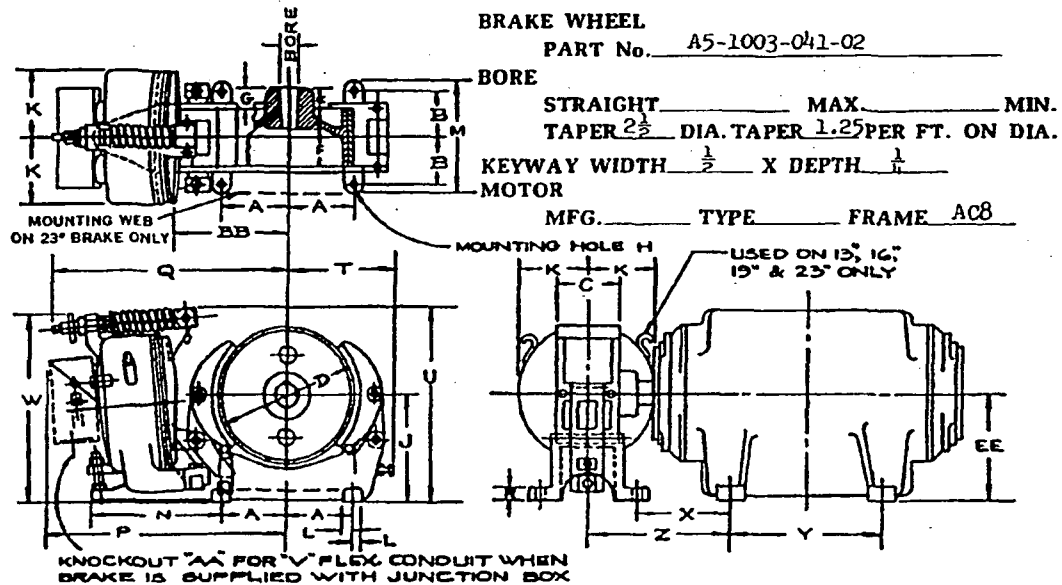
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
13"	4	3-7/8	2-1/8	7-1/8	18-7/8	11-5/8	9

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

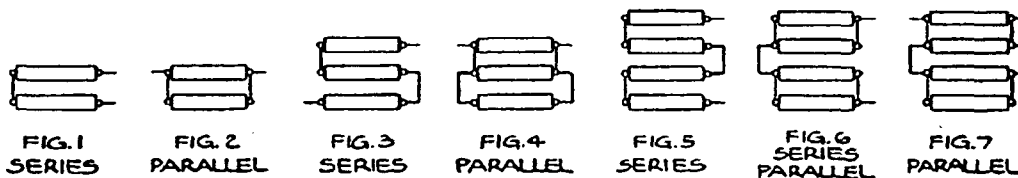
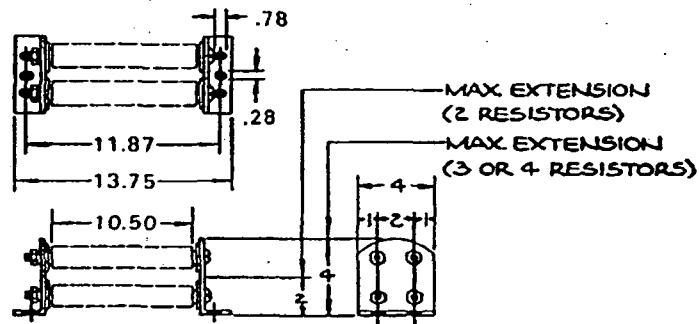
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00032

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)

BRAKE WHEEL

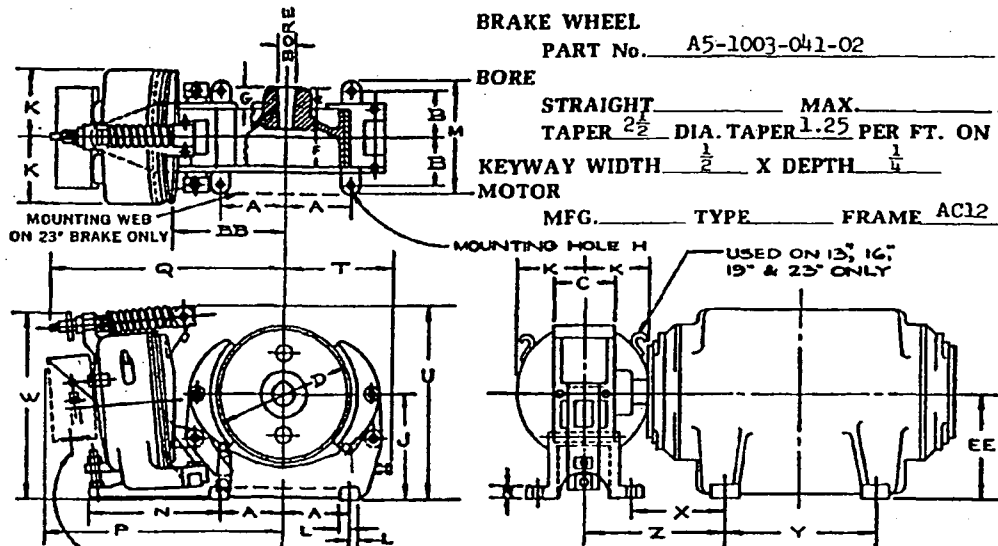
PART No. A5-1003-041-02

BORE

STRAIGHT _____ MAX. _____ MIN.
TAPER $2\frac{1}{2}$ DIA. TAPER 1.25 PER FT. ON DIA.KEYWAY WIDTH $\frac{1}{2}$ X DEPTH $\frac{1}{4}$

MOTOR

MFG. _____ TYPE _____ FRAME AC12

KNOCKOUT "AA" FOR "V" FLEX CONDUIT WHEN
BRAKE IS SUPPLIED WITH JUNCTION BOX

SIZE BRAKE	E	F	G	X	Y	Z	EE	
13"	4	3-7/8	2-1/8	7-7/8	20 $\frac{1}{4}$	12-3/8	10	

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

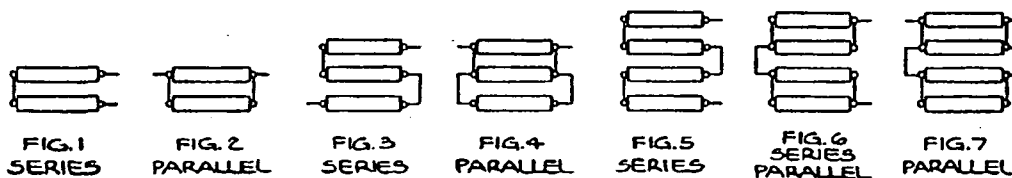
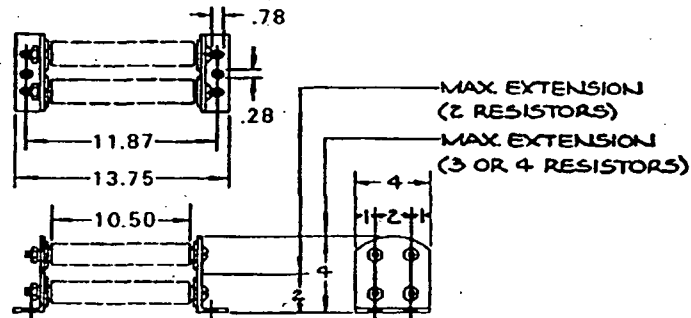
Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

C. A. SCHURR, Chief Engineer

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.

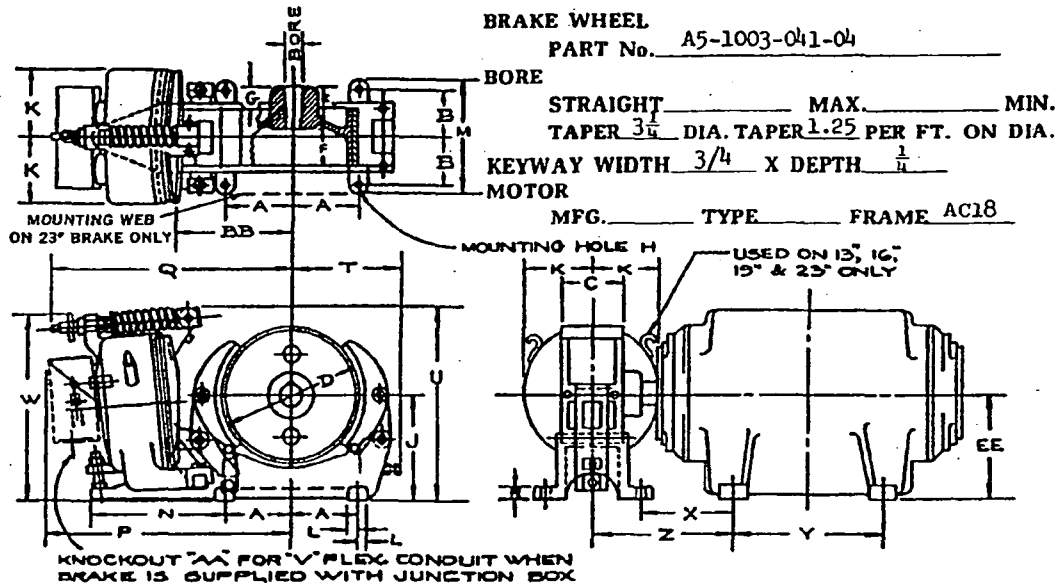


BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



AISE TYPE WB BRAKES

(All dimensions in inches)



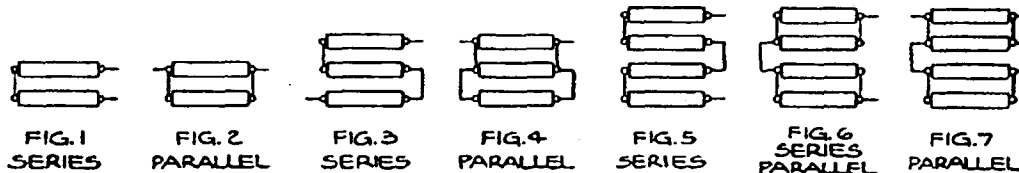
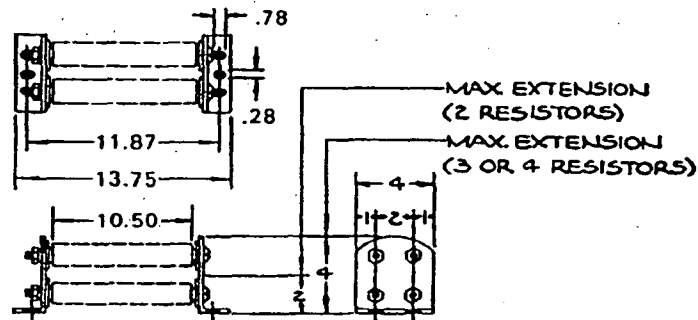
SIZE BRAKE	E	F	G	X	Y	Z	EE
13"	4 $\frac{1}{2}$	3-3/4	2 $\frac{1}{2}$	9-27/32	25-3/4	14-11/32	12 $\frac{1}{2}$

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____
 Certified Correct on _____ H. P. _____
 Purch. _____ P. O. _____
 User _____ U. O. _____
 Square D S. O. _____ Engr. _____

C. A. Schurr
 C. A. SCHURR, Chief Engineer

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



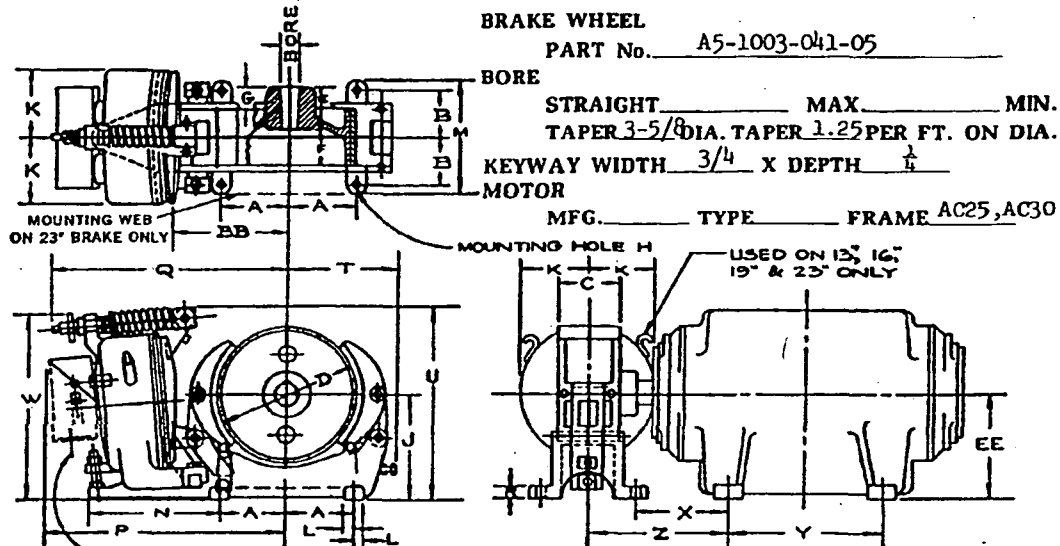
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



KNOCKOUT "AA" FOR "V" FLEX. CONDUIT WHEN
BRAKE IS SUPPLIED WITH JUNCTION BOX

SIZE BRAKE	E	F	G	X	Y	Z	EE
13"	5	3 $\frac{1}{4}$	2 $\frac{1}{2}$	11-5/16	30 $\frac{1}{2}$	15-13/16	14 $\frac{1}{2}$

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.....

Purch..... P. O.....

User..... U. O.....

Square D S. O..... Engr.....

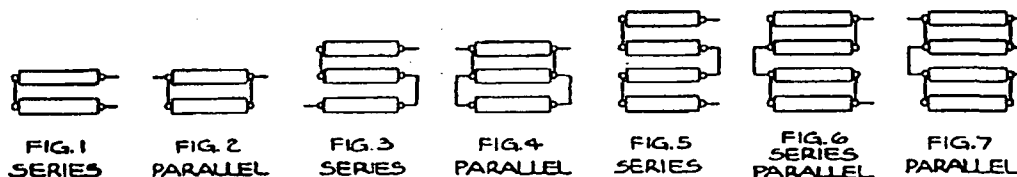
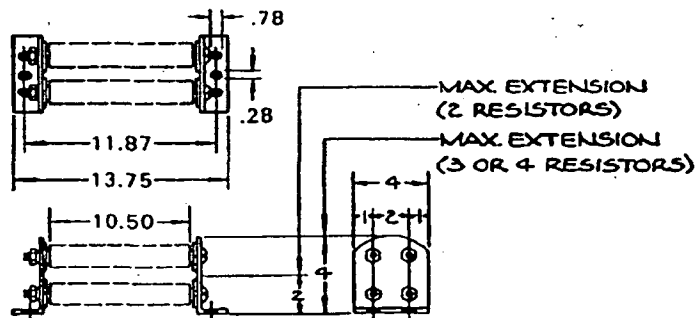
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes DD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00038

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5

WALTON

SQD HCK00040

BRAKE SIZE 16"
 AISE STD.
 MOTOR TYPE MILLTYPE
 ALL MFG'S.

MOTOR TYPE MILLTYPE
ALL MFG'S.

SQD HCK00041



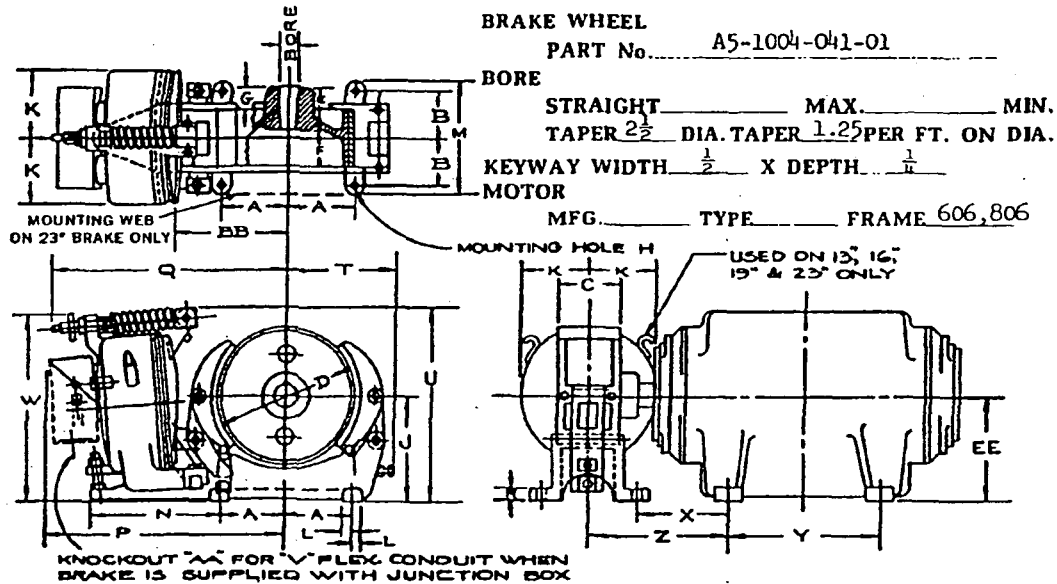
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



BRAKE WHEEL

PART No. A5-1004-041-01

BORE

STRAIGHT _____ MAX. _____ MIN.
TAPER $2\frac{1}{2}$ DIA. TAPER 1.25 PER FT. ON DIA.KEYWAY WIDTH $\frac{1}{2}$ X DEPTH $\frac{1}{4}$

MOTOR

MFG. _____ TYPE _____ FRAME 606, 806

SIZE BRAKE	E	F	G	X	Y	Z	EE
16"	4	5-7/8	3-1/8	6-5/8	21	12	10

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	.18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.....

Purch..... P. O.....

User..... U. O.....

Square D S. O..... Engr.....

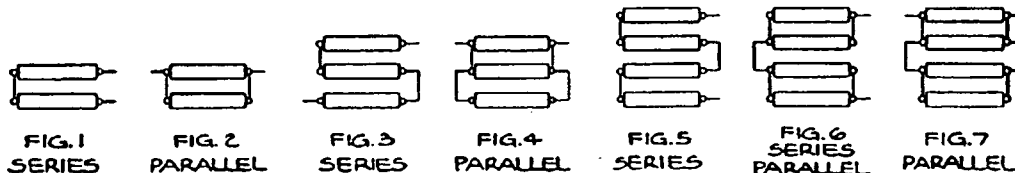
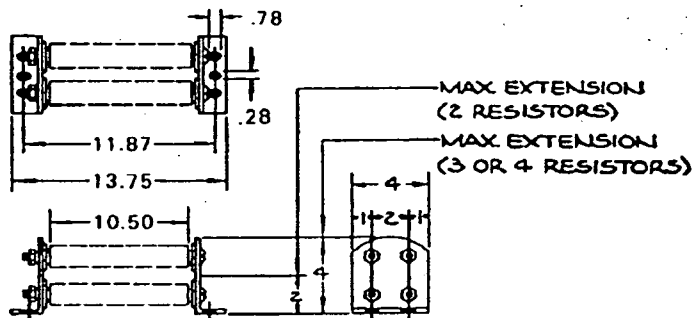
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

**SQUARE D COMPANY**

SQD HCK00042

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
 FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
 OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
 SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
 BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



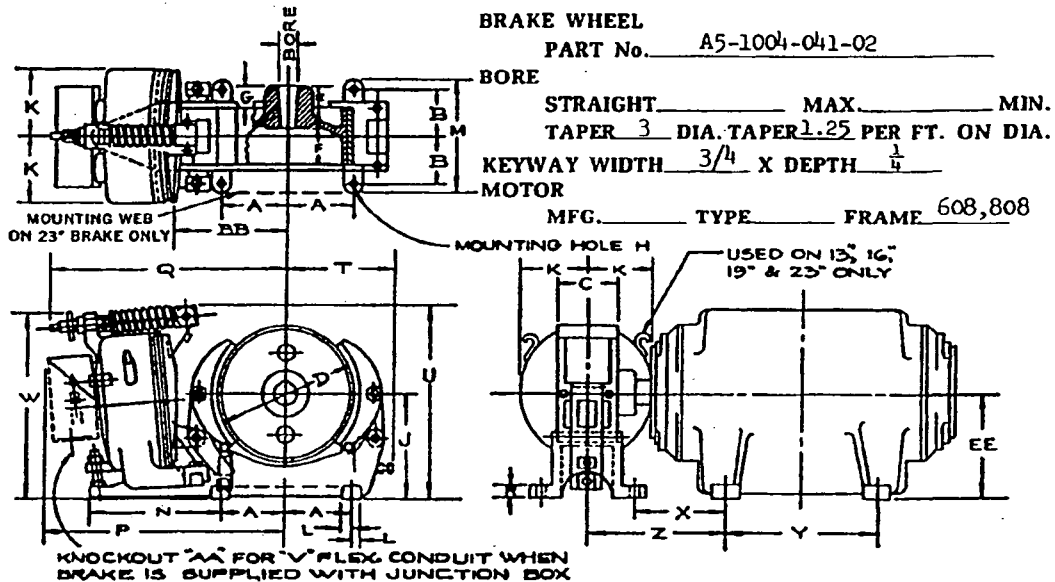
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
16"	4 1/2	5-3/8	3-1/8	6-3/4	24-3/4	12-1/8	11 1/4

SIZE BRAKE	A	B	C	D	H DIA.	I	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....
 Certified Correct on..... H. P.....
 Purch..... P. O.....
 User..... U. O.....
 Square D S. O..... Engr.....

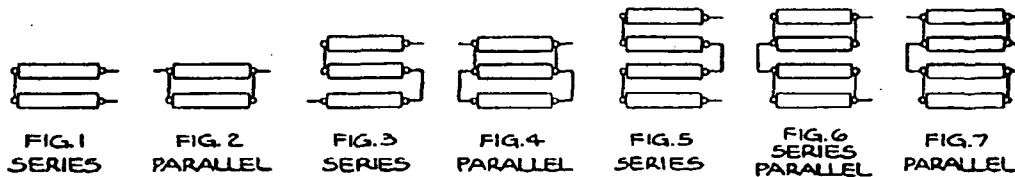
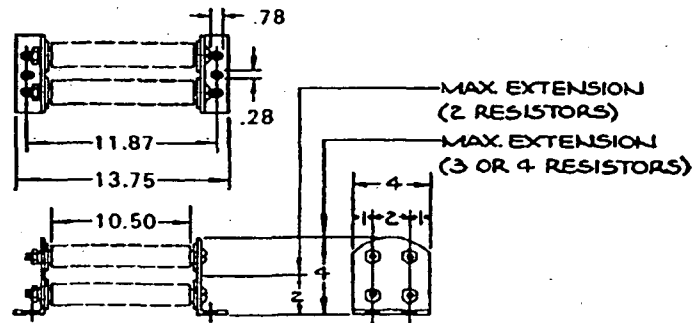
C. A. Schurr
 C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70


SQUARE D COMPANY

SQR HCK00044

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



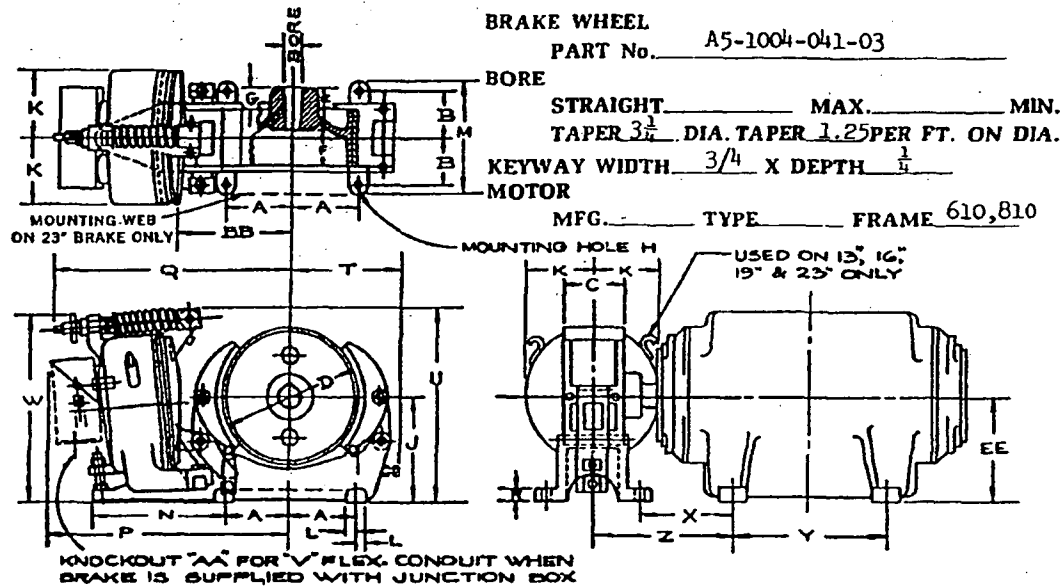
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
16"	4 $\frac{1}{2}$	5-3/8	3-1/8	7-3/8	26	12-3/4	12 $\frac{1}{4}$

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____
 Certified Correct on _____ H. P. _____
 Purch. _____ P. O. _____
 User _____ U. O. _____
 Square D S. O. _____ Engr. _____

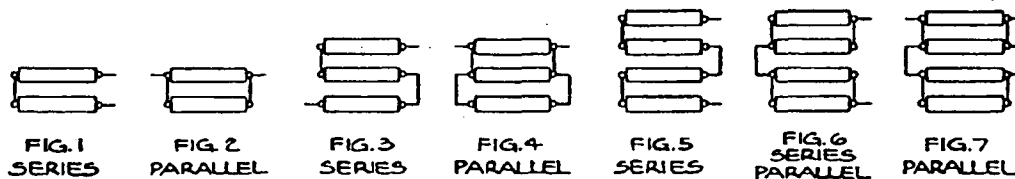
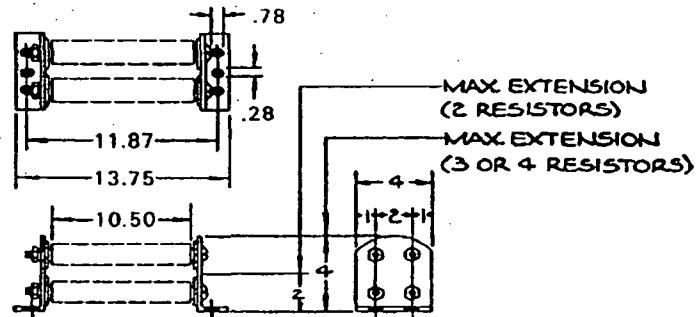
C. A. Schurr
 C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00046

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



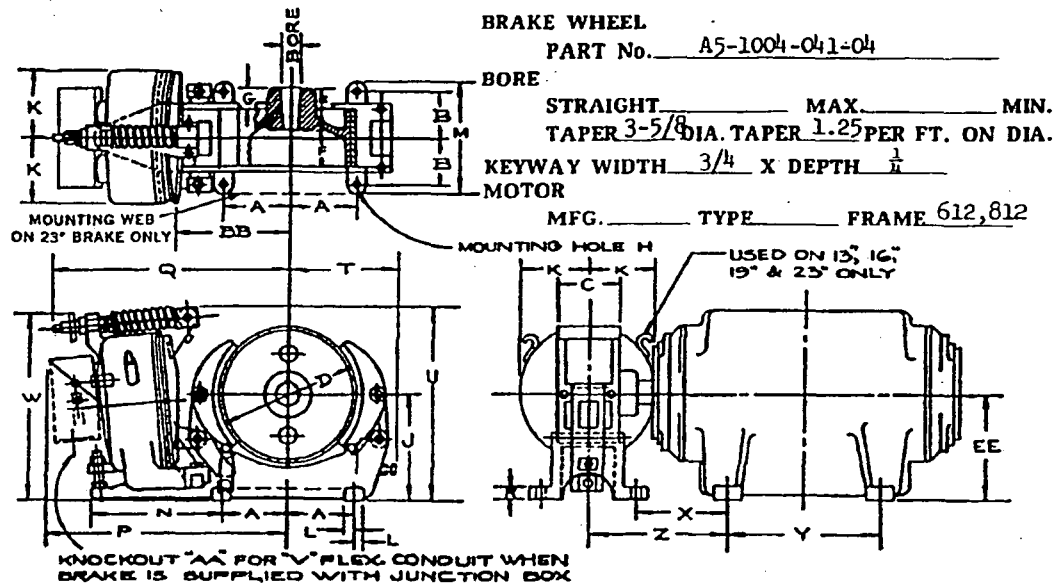
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
16"	5	4-7/8	3-1/8	7-7/8	28 $\frac{1}{2}$	13 $\frac{1}{4}$	13-3/8

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

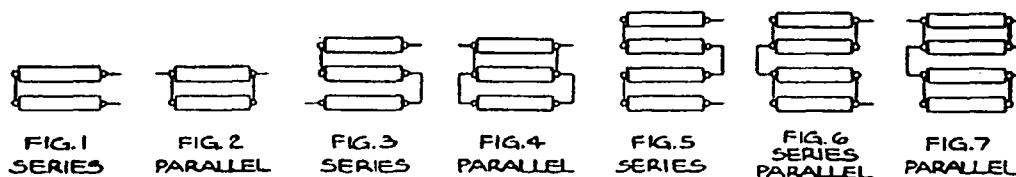
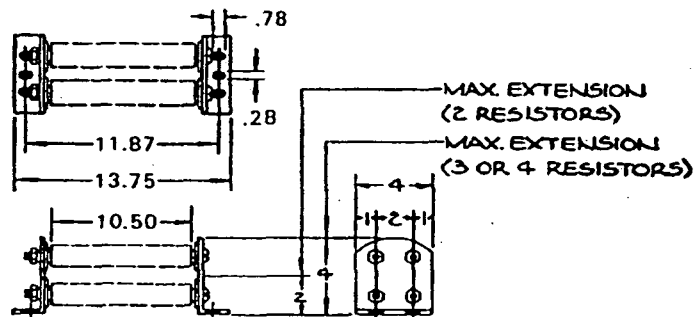
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes DD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00048

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
 FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
 OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
 SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
 BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



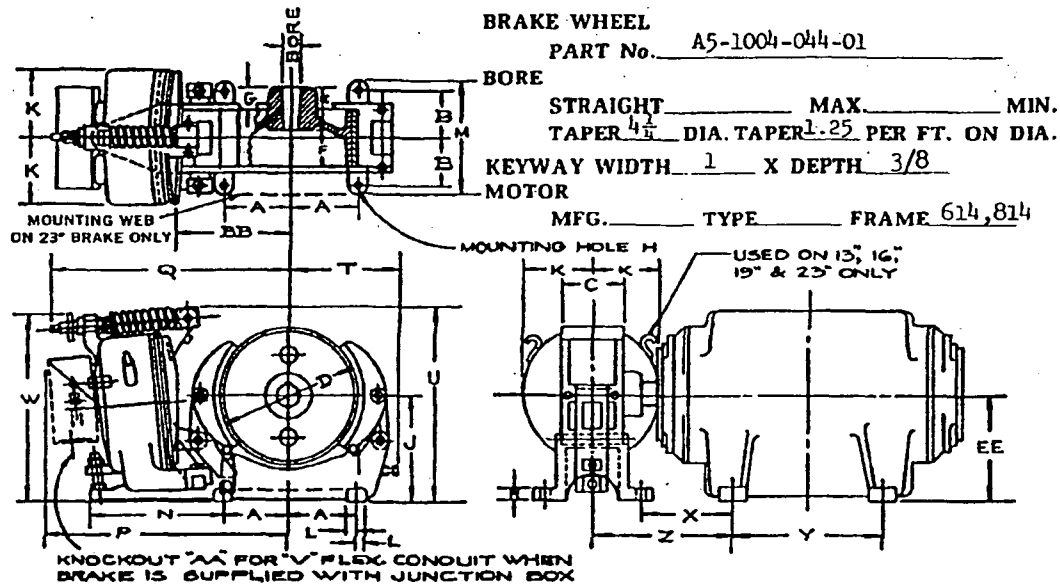
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
16"	5	4-7/8	3-1/8	8-7/8	32	14 1/4	14-3/4

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.

Purch..... P. O.

User..... U. O.

Square D S. O. Engr.....

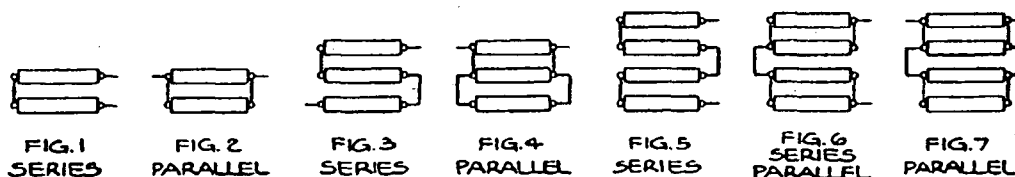
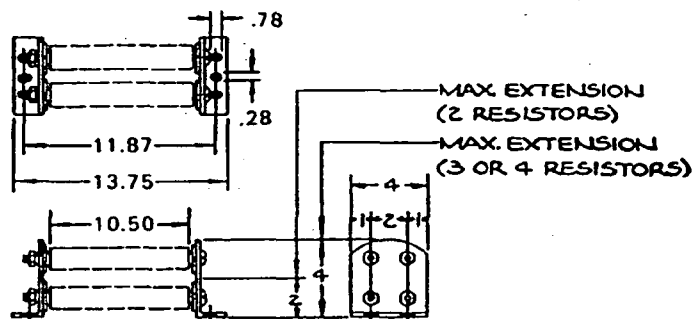
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00050

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
 FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
 OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
 SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
 BRAKE COIL.

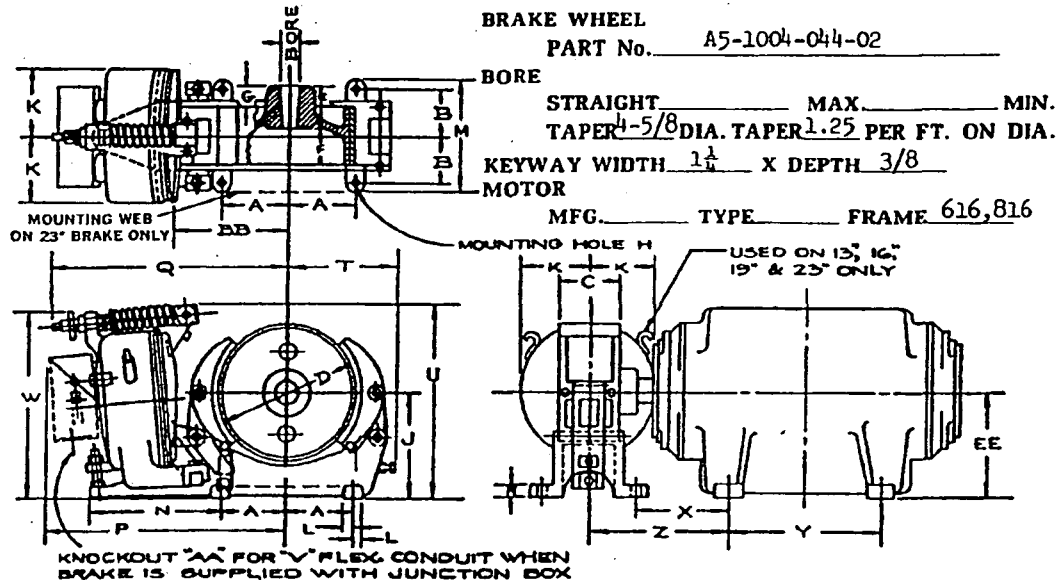


BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



AISE TYPE WB BRAKES

(All dimensions in inches)



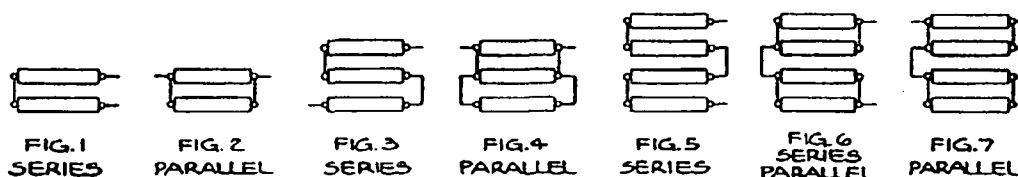
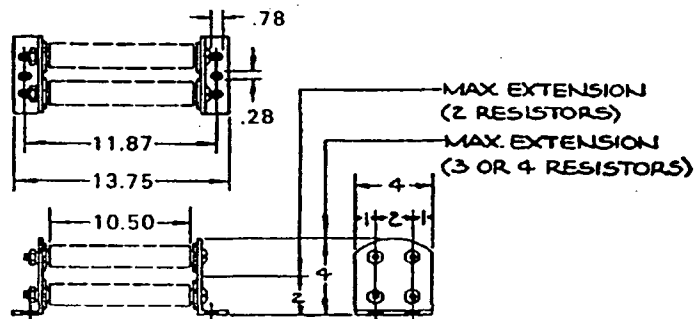
SIZE BRAKE	E	F	G	X	Y	Z	EE	
16"	5 $\frac{1}{2}$	4-3/8	3-1/8	10-1/8	35	15 $\frac{1}{2}$	16	

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....
 Certified Correct on..... H. P.....
 Purch..... P. O.....
 User..... U. O.....
 Square D S. O..... Engr.....

C. A. Schurr
 C. A. SCHURR, Chief Engineer

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



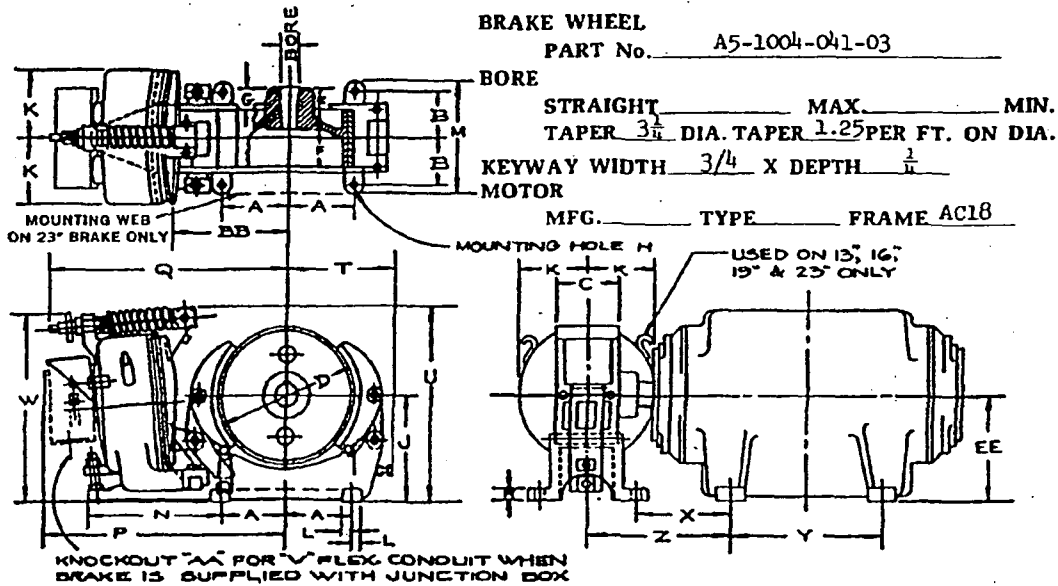
BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
16"	4 $\frac{1}{2}$	5-3/8	3-1/8	10-3/32	25-3/4	15-15/32	12 $\frac{1}{2}$

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....
Certified Correct on..... H. P.....
Purch..... P. O.....
User..... U. O.....
Square D S. O..... Engr.....

C. A. Schurr
C. A. SCHURR, Chief Engineer

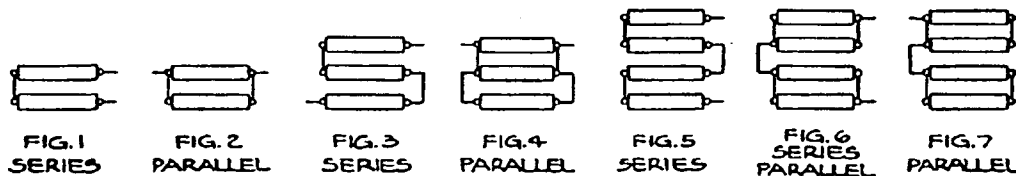
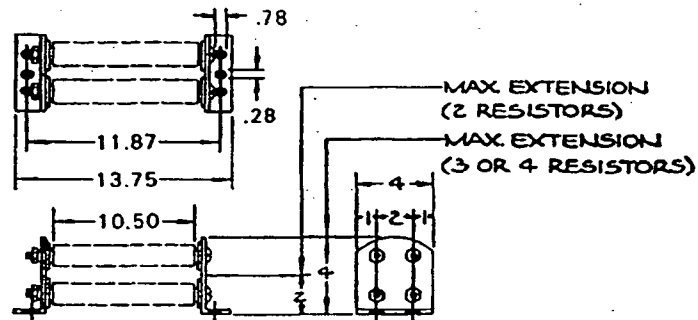
Supersedes OD 5010-1 Dated 3-70



SQUARE D COMPANY

SQD HCK00054

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



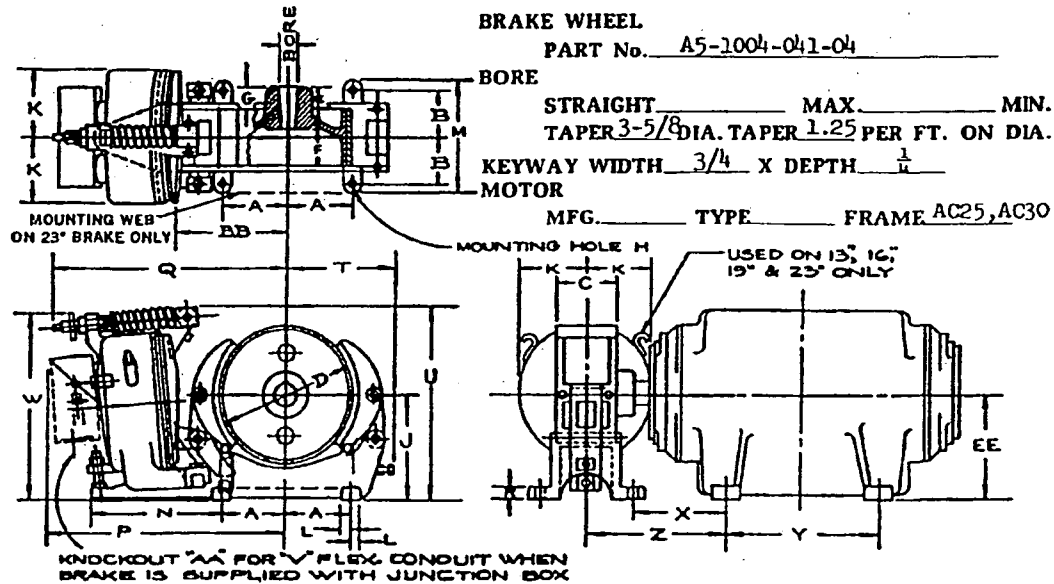
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE	
16"	5	4-7/8	3-1/8	11-9/16	30 1/2	16-15/16	14 1/2	

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

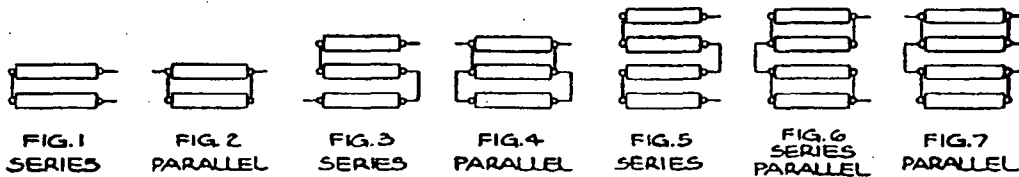
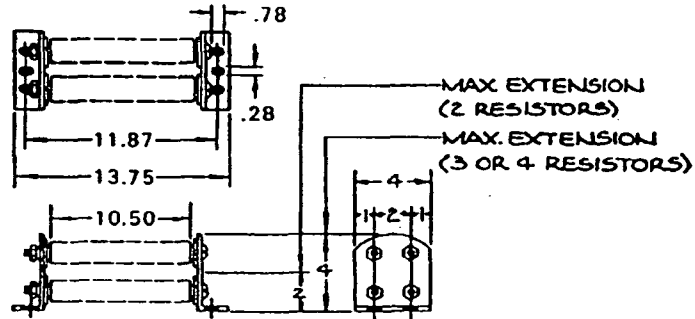
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00056

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



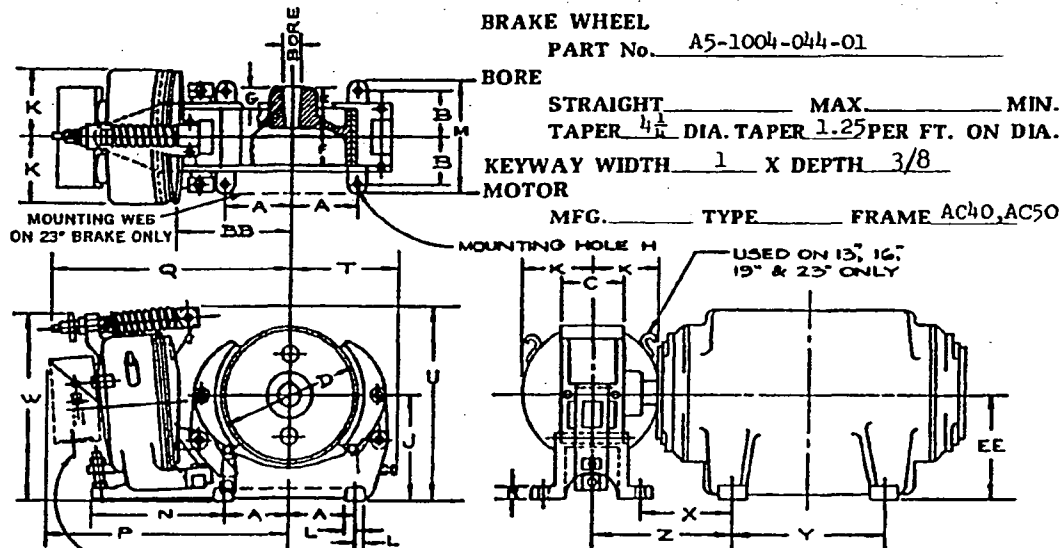
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)

KNOCKOUT "AA" FOR "V" FLEX CONDUIT WHEN
BRAKE IS SUPPLIED WITH JUNCTION BOX

SIZE BRAKE	E	F	G	X	Y	Z	EE
16"	5	4-7/8	3-1/8	13-1/8	35-3/8	18 1/2	17

SIZE BRAKE	A	B	C	D	H DIA.	I	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.....

Purch..... P. O.....

User..... U. O.....

Square D S. O..... Engr.....

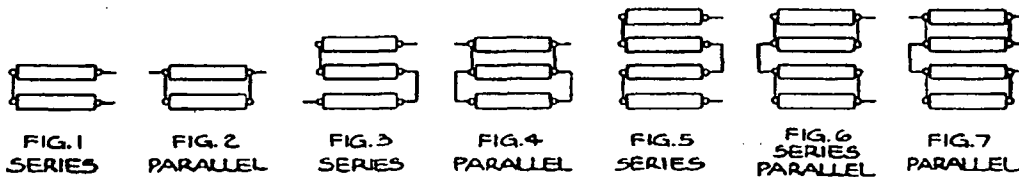
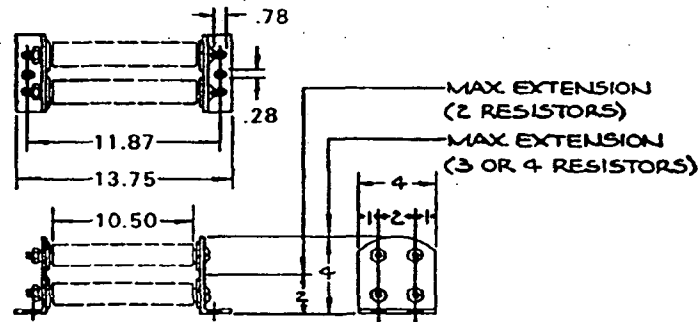
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00058

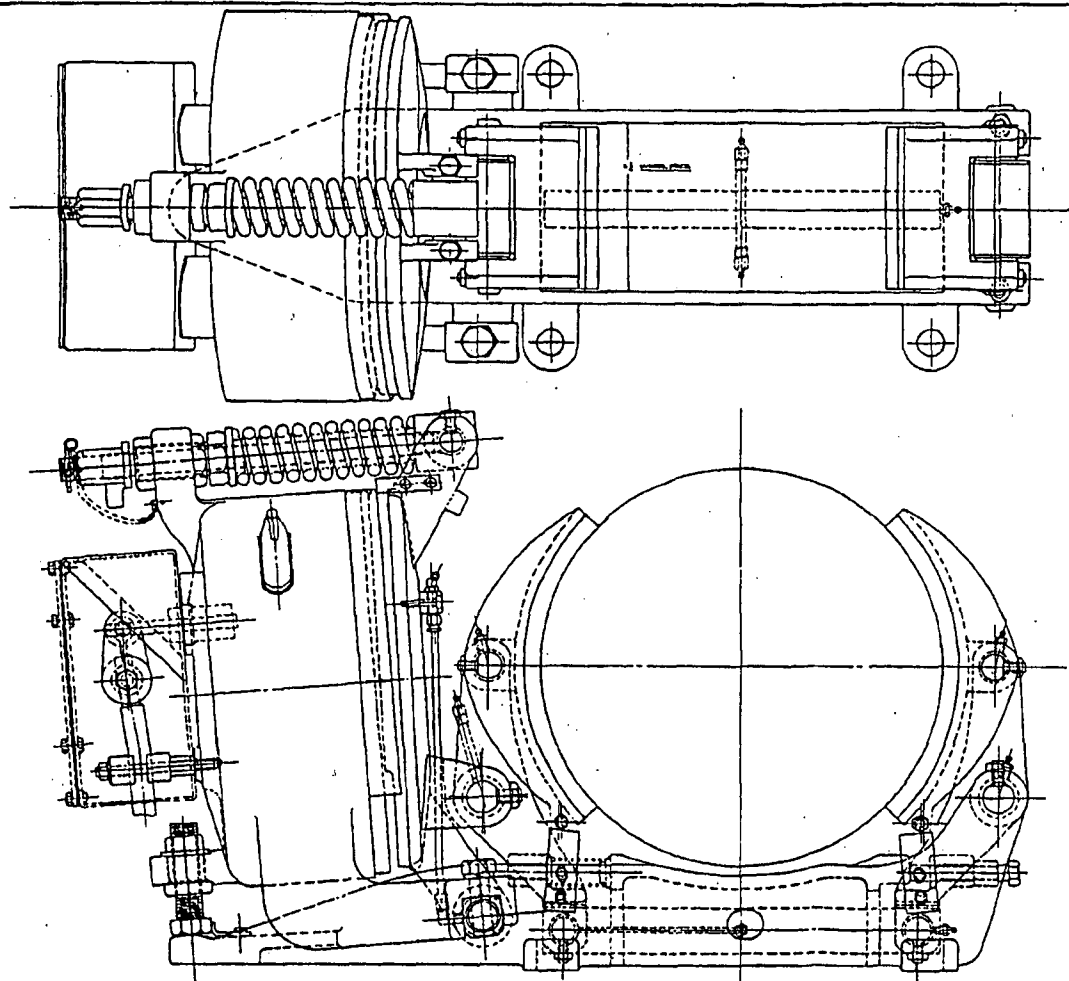
OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
 FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
 OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
 SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
 BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5

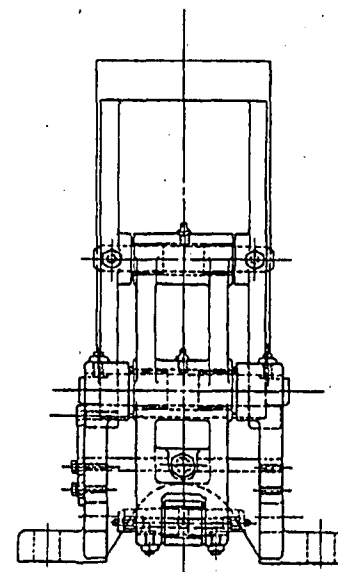
111

UK-T FILE. 68.



GENERAL ARRANGEMENT
(SEE END OF DRAWING FOR 71123)

SECTION



DESIGNED BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]
DATE: 10/11/23

DRG. 71123

SQD HCK00060

BRAKE SIZE 19"
AISE STD.
MOTOR TYPE MILLTYPE
ALL MFG'S.

MOTOR TYPE MILLTYPE
ALL MFG'S.

SQD HCK00061



OUTLINE DRAWING

5010-1

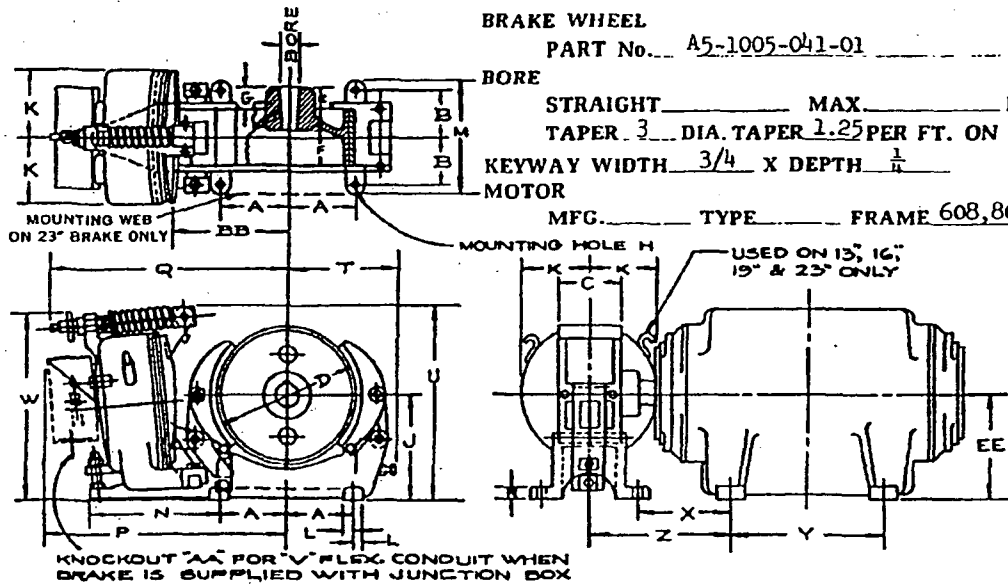
November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)

BRAKE WHEELPART No. A5-1005-041-01**BORE**

STRAIGHT _____ MAX. _____ MIN.

TAPER 3 DIA. TAPER 1.25 PER FT. ON DIA.KEYWAY WIDTH 3/4 X DEPTH 1/4**MOTOR**MFG. _____ TYPE _____ FRAME 608, 808

SIZE BRAKE	E	F	G	X	Y	Z	EE
19"	4 1/2	7-3/8	3-1/8	6-5/8	24-3/4	13-1/8	11 1/4

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.....

Purch..... P. O.....

User..... U. O.....

Square D S. O..... Engr.....

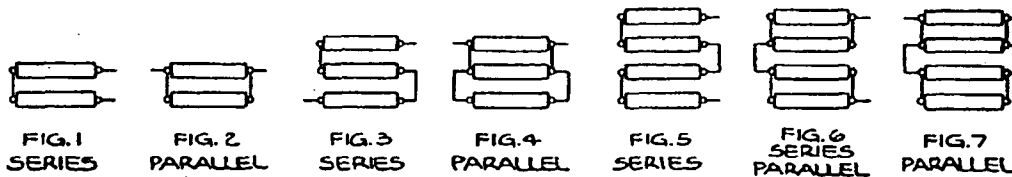
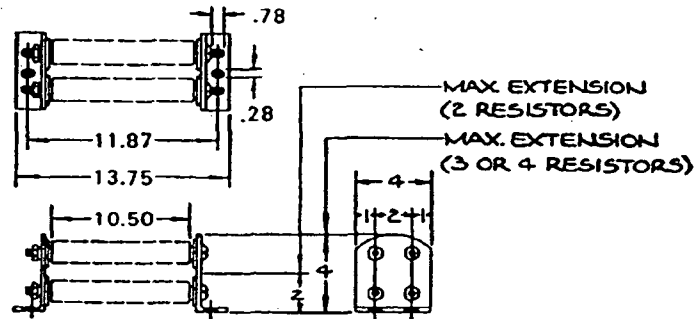
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

**SQUARE D COMPANY**

SQD HCK00062

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
 FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
 OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
 SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
 BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



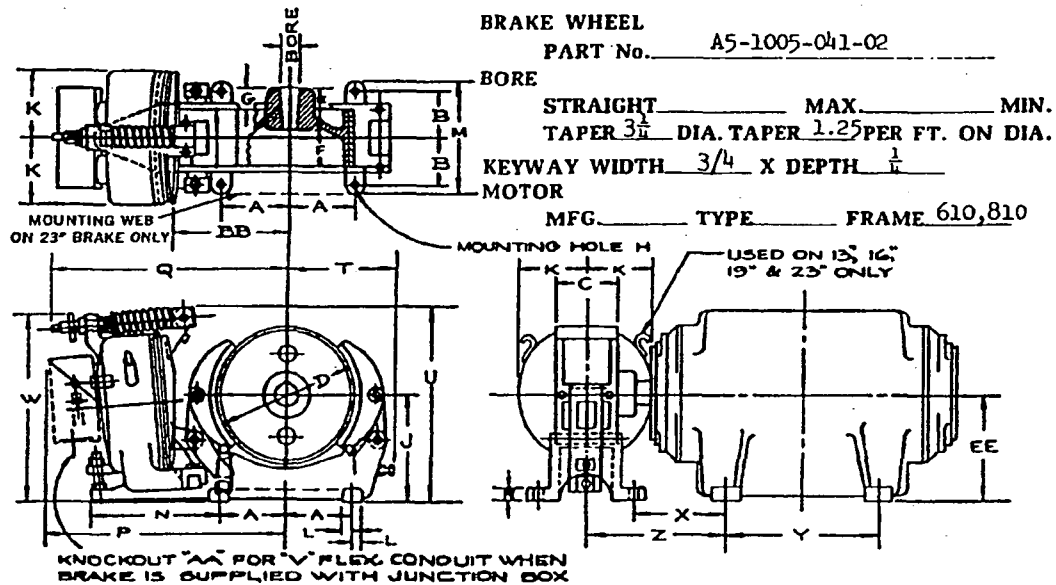
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
19"	4 $\frac{1}{2}$	7-3/8	3-1/8	7 $\frac{1}{4}$	26	13-3/4	12 $\frac{1}{2}$

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.....

Purch..... P. O.....

User..... U. O.....

Square D S. O..... Engr.....

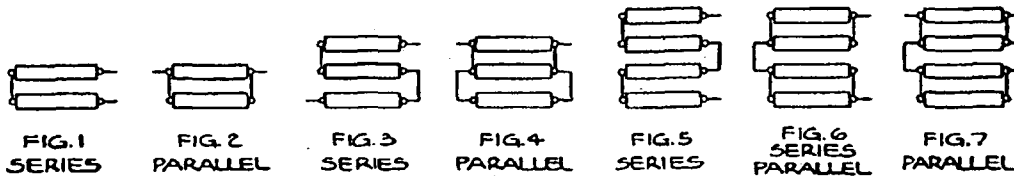
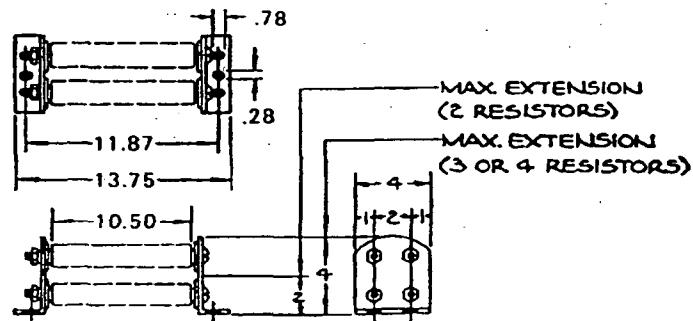
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00064

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
 FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
 OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
 SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
 BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



INDEX 19ST-3

OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)

BRAKE WHEEL

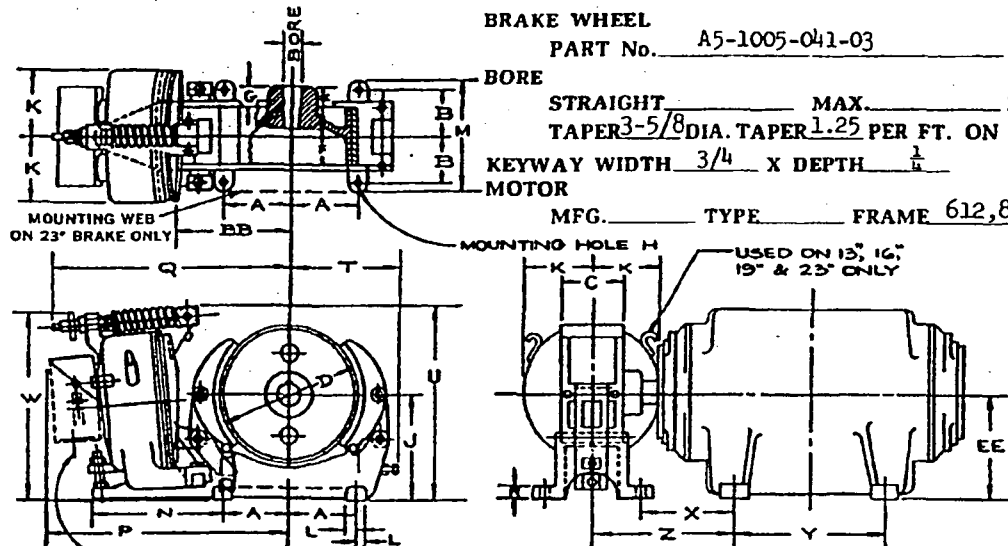
PART No. A5-1005-041-03

BORE

STRAIGHT _____ MAX. _____ MIN. _____
TAPER $3-5/8$ DIA. TAPER 1.25 PER FT. ON DIA.KEYWAY WIDTH $3/4$ X DEPTH $1/4$

MOTOR

MFG. _____ TYPE _____ FRAME 612,812

KNOCKOUT "AA" FOR V-FLEX CONDUIT WHEN
BRAKE IS SUPPLIED WITH JUNCTION BOX

SIZE BRAKE	E	F	G	X	Y	Z	EE	
19"	5	6-7/8	3-1/8	7-3/4	28 1/2	14 1/4	13-3/8	

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.....

Purch..... P. O.....

User..... U. O.....

Square D S. O..... Engr.....

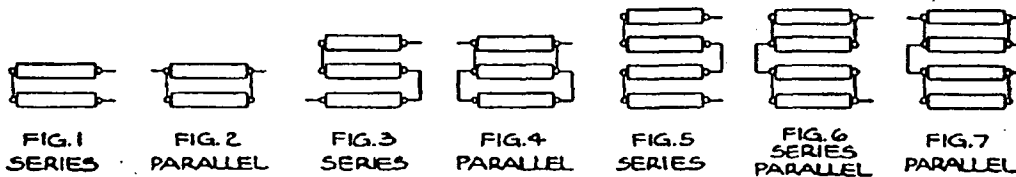
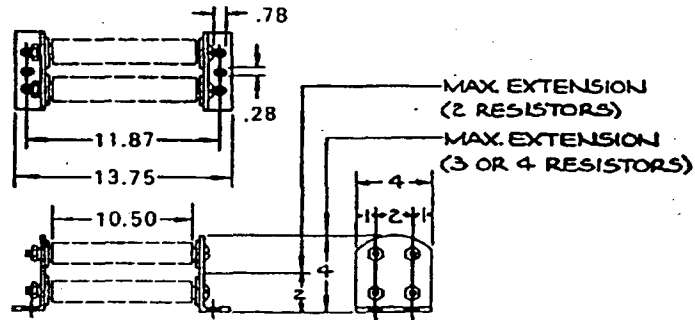
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

**SQUARE D COMPANY**

SQD HCK00066

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
 FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
 THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
 OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
 SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
 BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



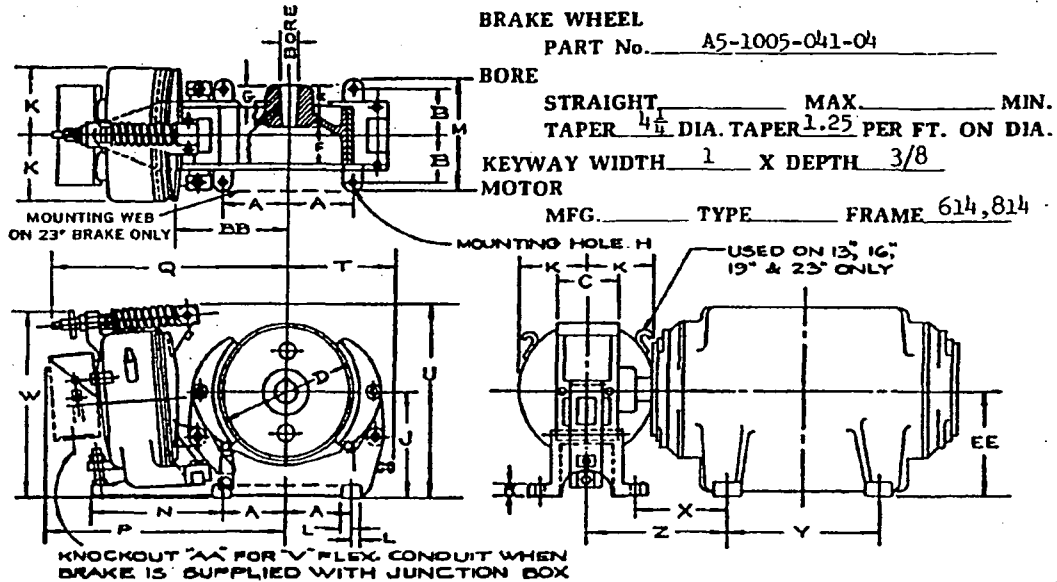
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
19"	5	6-7/8	3-1/8	8-3/4	32	15 1/4	14-3/4

SIZE BRAKE	A	B	C	D	H DIA	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....
 Certified Correct on..... H. P.....
 Purch..... P. O.....
 User..... U. O.....
 Square D S. O..... Engr.....

C. A. Schurr
 C. A. SCHURR, Chief Engineer

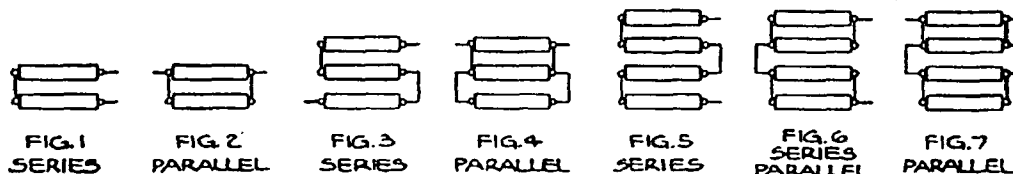
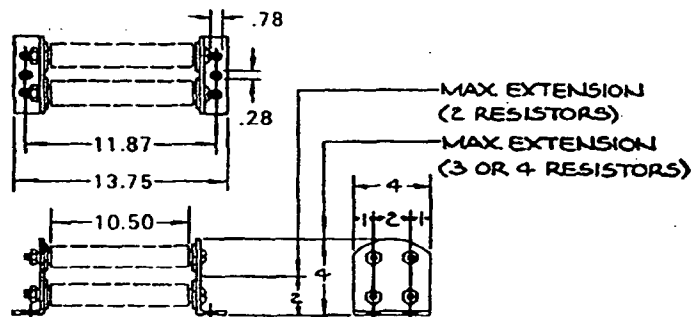
Supersedes OD 5010-1 Dated 3-70



SQUARE D COMPANY

SQD HCK00068

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



INDEX 19ST-5

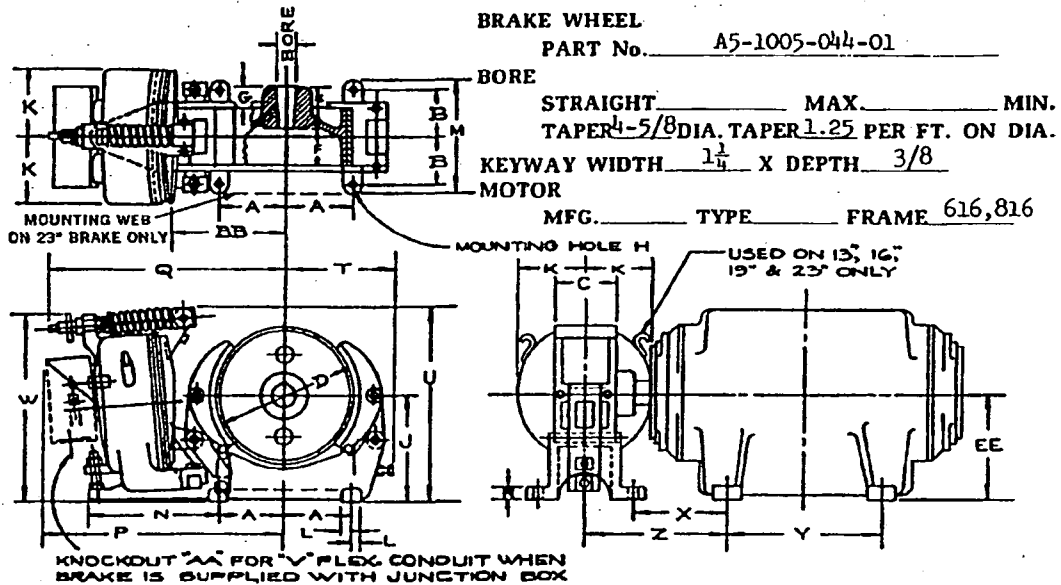
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
19"	5 $\frac{1}{2}$	6-3/8	3-1/8	10	35	16 $\frac{1}{2}$	16

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....

Certified Correct on..... H. P.....

Purch..... P. O.....

User..... U. O.....

Square D S. O..... Engr.....

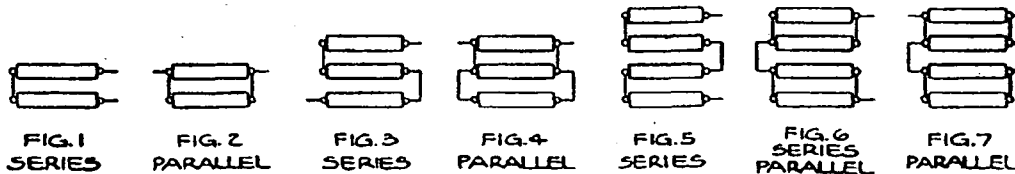
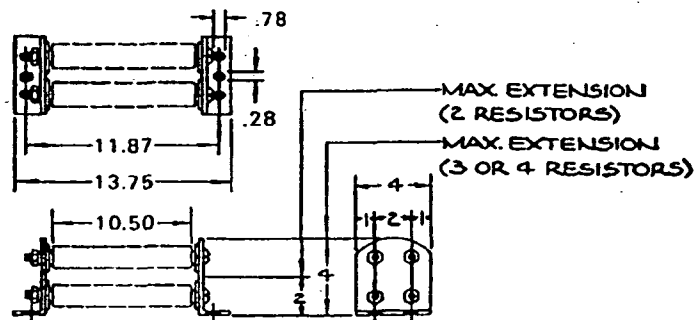
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

**SQUARE D COMPANY**

SQD HCK00070

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23". THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



INDEX 19ST-6

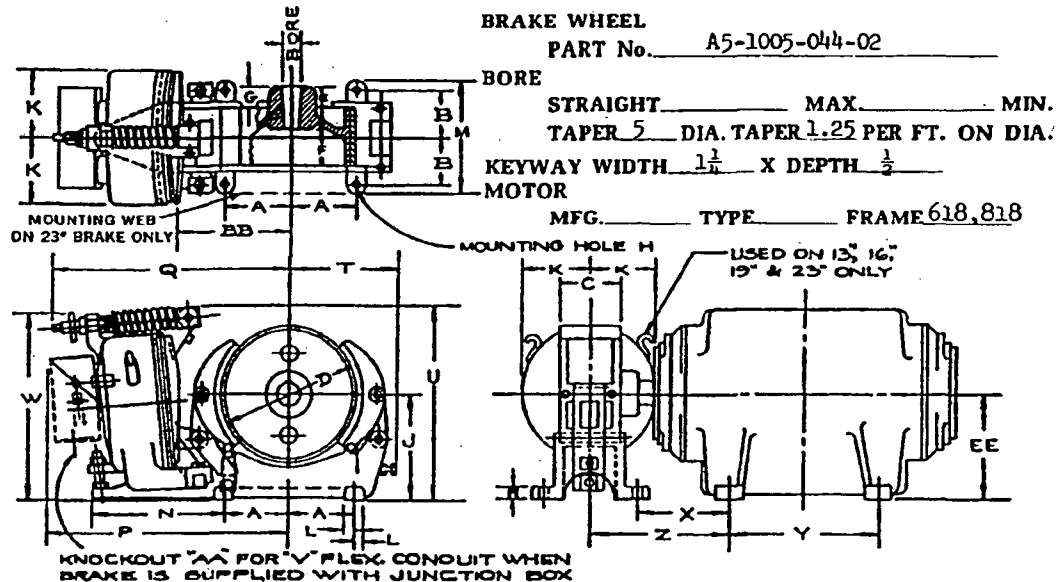
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
19"	6	5-7/8	3-1/8	9 1/2	39	16	17-3/4

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....
Certified Correct on..... H. P.....
Purch..... P. O.....
User..... U. O.....
Square D S. O..... Engr.....

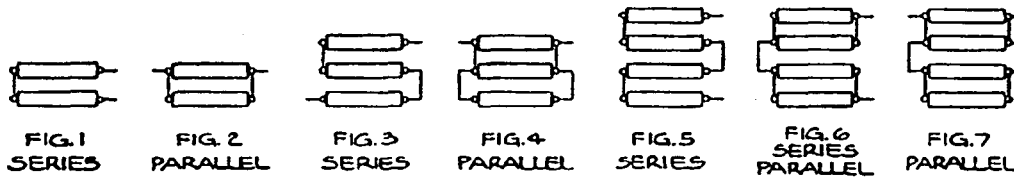
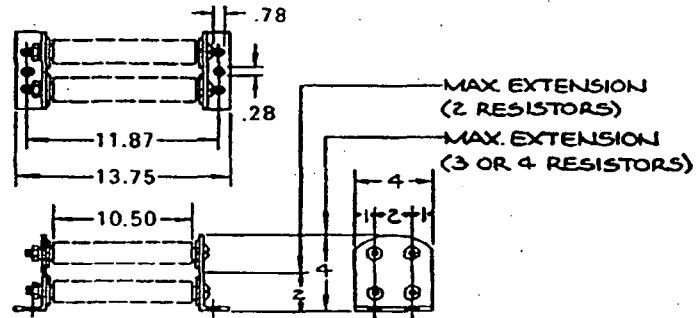
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00072

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.

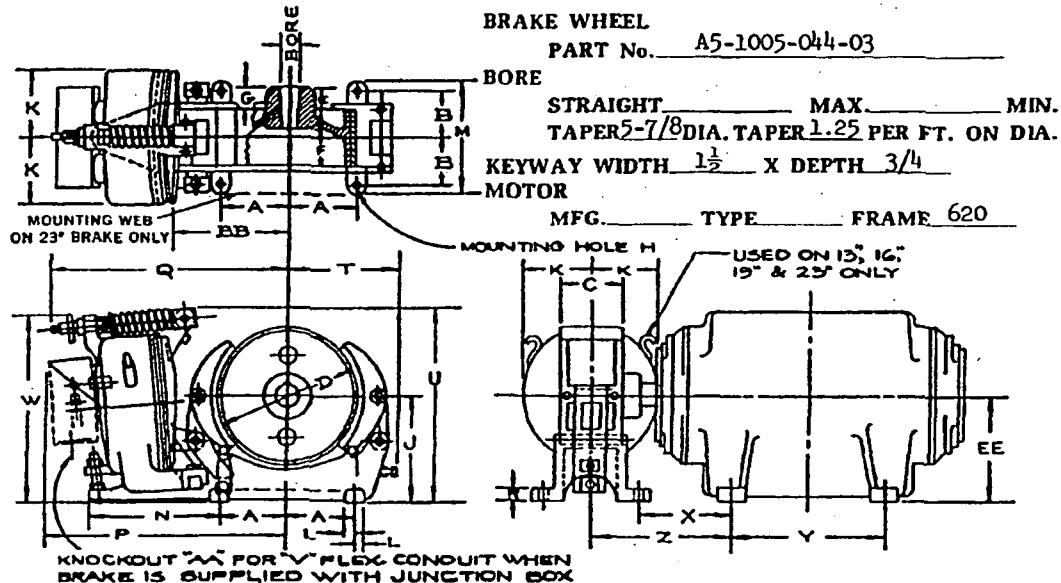


BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



AISE TYPE WB BRAKES

(All dimensions in inches)



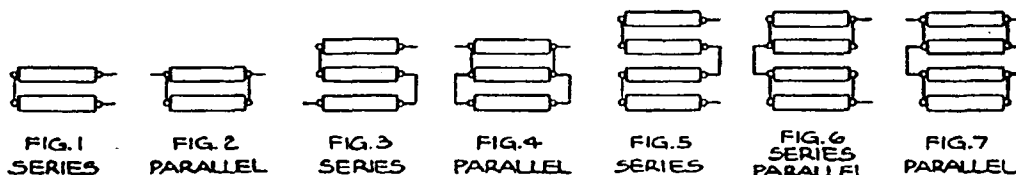
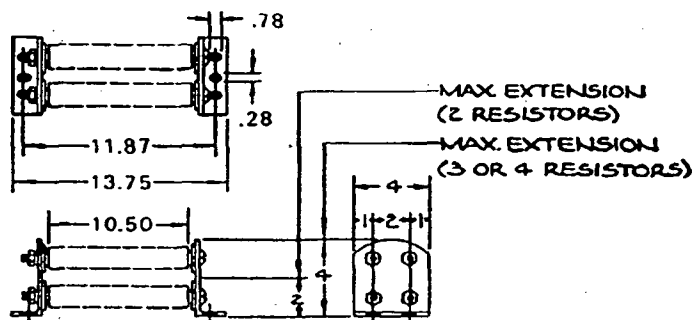
SIZE BRAKE	E	F	G	X	Y	Z	EE
19"	6-3/4	5-1/8	3-1/8	9 1/2	4 1/4	16	20-7/8

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____
 Certified Correct on _____ H. P. _____
 Purch. _____ P. O. _____
 User _____ U. O. _____
 Square D S. O. _____ Engr. _____

C. A. SCHURR, Chief Engineer

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



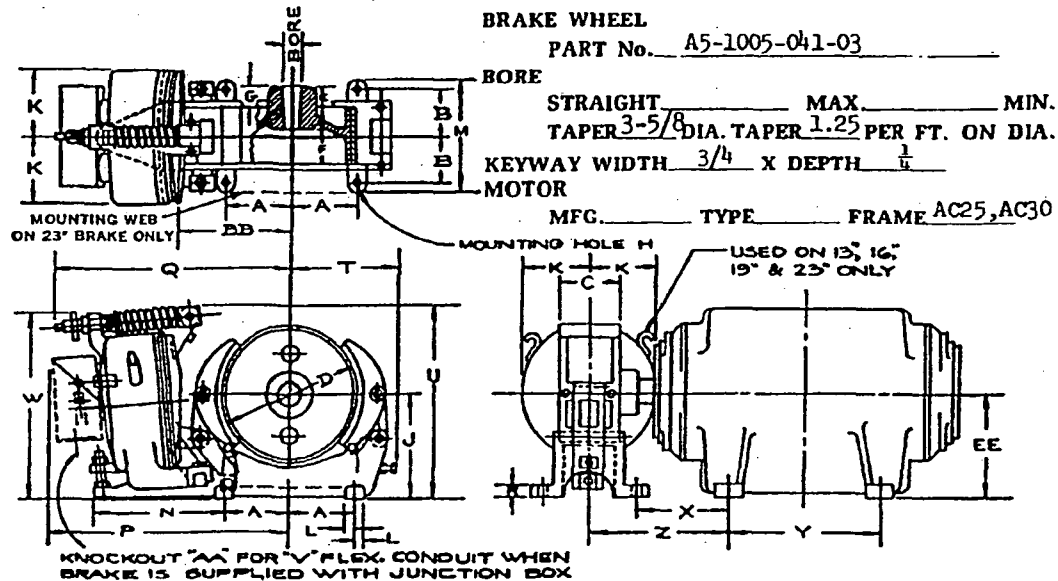
BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE
19"	5	6-7/8	3-1/8	11-7/16	30 1/2	17-15/16	14 1/2

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive _____ Winding _____

Certified Correct on _____ H. P. _____

Purch. _____ P. O. _____

User _____ U. O. _____

Square D S. O. _____ Engr. _____

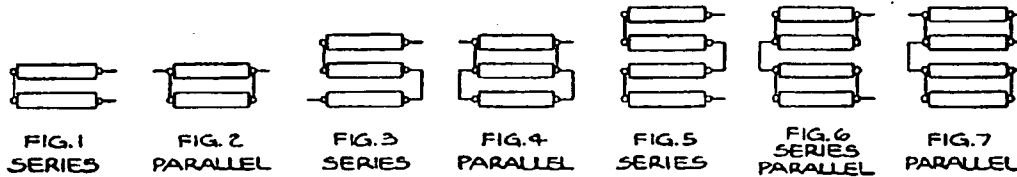
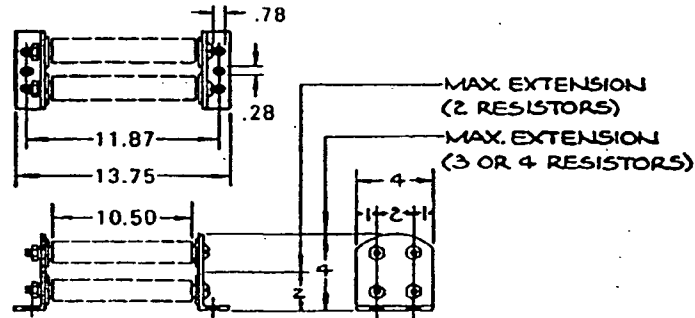
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010-1 Dated 3-70

SQUARE D COMPANY

SQD HCK00076

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS
FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23"
THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF
OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE
SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE
BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5



INDEX 19ST-9

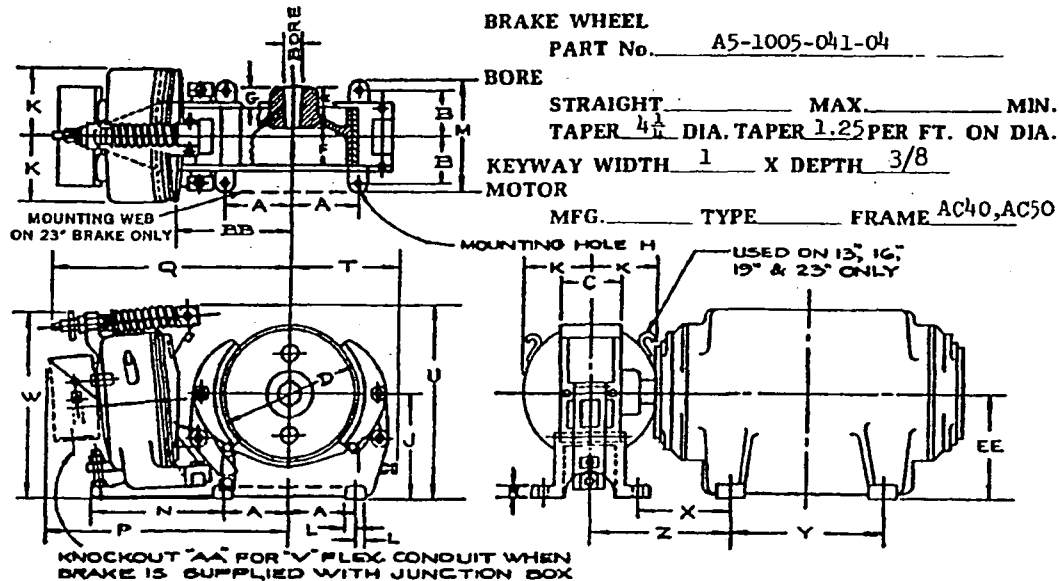
OUTLINE DRAWING

5010-1

November, 1970

AISE TYPE WB BRAKES

(All dimensions in inches)



SIZE BRAKE	E	F	G	X	Y	Z	EE	
19"	5	6-7/8	3-1/8	13	35-3/8	19 1/2	17	

SIZE BRAKE	A	B	C	D	H DIA.	J	K	L	M	N	P	Q	R	T	U	V	W	AA	BB
8"	3.25	2.88	3.25	8	.69	7	4.63	.81	7.38	11.31	17	18	.62	6.38	13.50	1	13.50	1.38	7.13
10"	4	3.13	3.75	10	.69	8.38	5.38	.88	8	12.25	19.13	20.13	.88	7.38	16.38	1.25	15.13	1.75	8.50
13"	5.75	4.50	5.75	13	.81	9.88	6.63	1	11	14	24	25.13	1	10	20.13	1.50	19.19	2	11
16"	7.50	5.38	6.75	16	1.06	12.13	7.75	1.13	13	15	26.88	27.50	1.25	11.50	22.75	2	22	2.50	12.63
19"	9.25	6.50	8.75	19	1.06	13.25	9.25	1.25	15.50	17.38	31.75	32.75	1.63	13.31	26.50	2.50	25.50	3	15.13
23"	11.75	8	11.25	23	1.31	15.88	10.94	1.50	19	19.63	36.13	38.50	1.63	17.25	31.63	3	30.50	3.63	18.75

Drive..... Winding.....
Certified Correct on..... H. P.....
Purch..... P. O.....
User..... U. O.....
Square D S. O..... Engr.....

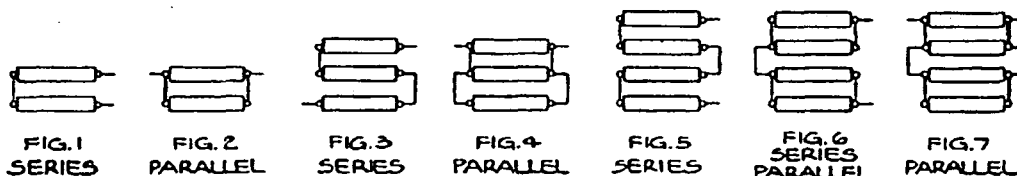
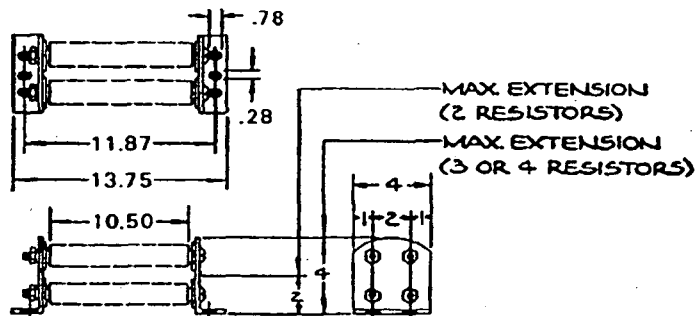
C. A. Schurr
C. A. SCHURR, Chief Engineer

Supersedes OD 5010 I Dated 3-70

**SQUARE D COMPANY**

SQD HCK00078

OUTLINE DIMENSIONS IN INCHES AND CONNECTIONS OF RESISTORS FOR USE WITH AISE TYPE WB SHUNT WOUND BRAKES SIZES 8" THRU 23" THESE BRAKES ARE SUPPLIED WITH COILS WHOSE CONTINUOUS RATING IN VOLTS IS ONE-HALF OR LESS OF LINE VOLTAGE. A NON-ADJUSTABLE UNENCLOSED RESISTOR IS SUPPLIED TO BE SEPARATELY MOUNTED BY THE USER AND PERMANENTLY CONNECTED IN SERIES WITH THE BRAKE COIL.



BRAKE SIZE	FOR 1 HOUR SERVICE			FOR 8 HOUR SERVICE		
	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION	CLASS 5010 TYPE NO.	NO. OF COILS	CONNECTION
115 VOLTS D.C.						
8"		2	FIG. 2		2	FIG. 2
10"		2	2		2	2
13"		2	2		2	2
16"		2	2		2	2
19"		4	7		4	6
23"		3	4		3	4
230 VOLTS D.C.						
8"	RO-11	2	FIG. 1	RO-81	2	FIG. 1
10"	RO-12	2	1	RO-82	2	1
13"	RO-13	2	1	RO-83	2	1
16"	RO-14	3	3	RO-84	3	3
19"	RO-15	4	6	RO-85	4	5
23"	RO-16	4	6	RO-86	4	6
550 VOLTS D.C.						
8"		2	FIG. 1		2	FIG. 1
10"		2	1		2	1
13"		2	1		2	1
16"		3	3		3	3
19"		4	5		4	5
23"		4	5		4	5

88112 ON DIM. TWO # 146

UK-T FILE 65

STAMP PT. NO. W-16043 ON THIS SIDE OF BRAKE BLOCK

3.135, .010 (DEPTH @ CENTER OF THE HOLES)
+.010
-.000
281 DIA.
688 C'DRILL
6 HOLES

82°
6" R.
45°
5 11/16
4 11/16
2 3/8
1 5/8
1 5/8
1 5/8
1 5/8

6 1/2
2 1/8
2 1/8

W 16043

BRAKE BLOCK
MAT'L: FRICTION MATERIAL
PER SPEC. 550900-305

INSP. PLAN

MED
MME-2
MPC-3
MPA
MPP-2
2/77
221
263
TOR
UK

THE ELECTRIC CONTROLLER & MFG. CO.
CLEVELAND OHIO

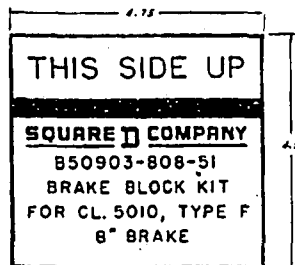
TITLE 16" TYPE WD BRAKE

DATE 7/11/33

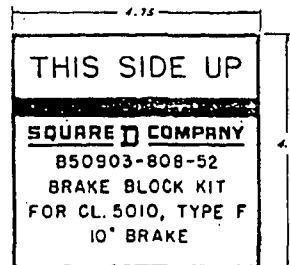
2-21-55

138 21-248 800 12-47

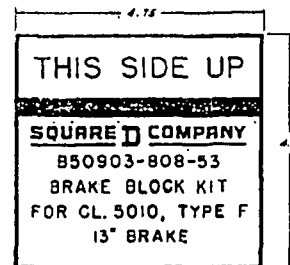
40



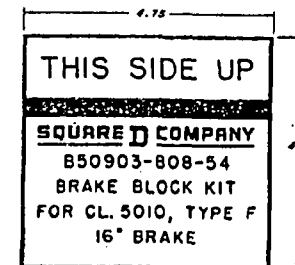
04 8" BRAKE BLOCK KIT CARTON LABEL



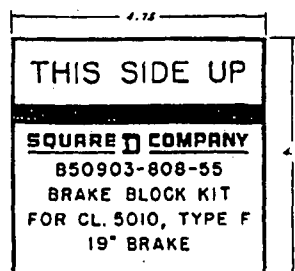
03 10" BRAKE BLOCK KIT CARTON LABEL



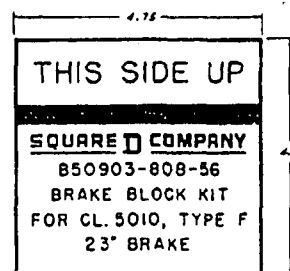
01 13" BRAKE BLOCK KIT CARTON LABEL



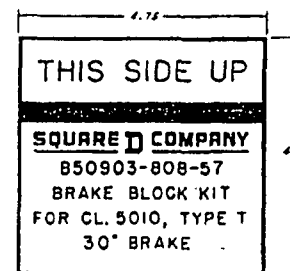
01 16" BRAKE BLOCK KIT CARTON LABEL



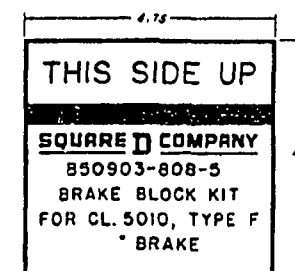
01 19" BRAKE BLOCK KIT CARTON LABEL



04 23" BRAKE BLOCK KIT CARTON LABEL



01 30" BRAKE BLOCK KIT CARTON LABEL



01 36" BRAKE BLOCK KIT CARTON LABEL

MATERIAL FOR PARTS 01, 03, 03, 04, 05, 06 & 07
APPROX. .0025 THK. PAPER / PRESSURE SENSITIVE
ADHESIVE BACKING / SPLIT LINER.
COLOR: WHITE BACKGROUND / BLACK
LETTERS AND BORDER

LABELS ARE DRAWN FULL SIZE

SQUARE D COMPANY	
CARTON LABELS FOR	
BRAKE BLOCK KITS	
DATE: 8/10/10	BY: [Signature]
050903-420	

SQD HCK00082

SQD HCK00083

027-20302-1

THIS SIDE UP

SQUARE D COMPANY

B50903-808-51
BRAKE BLOCK KIT
FOR CL. 5010, TYPE F
8" BRAKE

01 8" BRAKE BLOCK KIT CARTON LABEL

THIS SIDE UP

SQUARE D COMPANY

B50903-808-52
BRAKE BLOCK KIT
FOR CL. 5010, TYPE F
10" BRAKE

02 10" BRAKE BLOCK KIT CARTON LABEL

THIS SIDE UP

SQUARE D COMPANY

B50903-808-53
BRAKE BLOCK KIT
FOR CL. 5010, TYPE F
13" BRAKE

03 13" BRAKE BLOCK KIT CARTON LABEL

THIS SIDE UP

SQUARE D COMPANY

B50903-808-54
BRAKE BLOCK KIT
FOR CL. 5010, TYPE F
16" BRAKE

04 16" BRAKE BLOCK KIT CARTON LABEL

THIS SIDE UP

SQUARE D COMPANY

B50903-808-55
BRAKE BLOCK KIT
FOR CL. 5010, TYPE F
19" BRAKE

05 19" BRAKE BLOCK KIT CARTON LABEL

THIS SIDE UP

SQUARE D COMPANY

B50903-808-56
BRAKE BLOCK KIT
FOR CL. 5010, TYPE F
23" BRAKE

06 23" BRAKE BLOCK KIT CARTON LABEL

THIS SIDE UP

SQUARE D COMPANY

B50903-808-57
BRAKE BLOCK KIT
FOR CL. 5010, TYPE T
30" BRAKE

07 30" BRAKE BLOCK KIT CARTON LABEL

THIS SIDE UP

SQUARE D COMPANY

B50903-808-5
BRAKE BLOCK KIT
FOR CL. 5010, TYPE F
" BRAKE

08 " BRAKE BLOCK KIT CARTON LABEL

MATERIAL FOR PARTS 01, 02, 03, 04, 05, 06 & 07
APPROX .0005 THK. PAPER / PRESSURE SENSITIVE
ADHESIVE BACKING / SPLIT LINED.
COLOR: WHITE BACKGROUND / BLACK
LETTERS AND BORDER

LABELS ARE DRAWN FULL SIZE

SQUARE D COMPANY

NEW CARTON LABELS FOR
BRAKE BLOCK KITS

CLASS 1212 FOR P. FORM. NO. A

DATE 4-20-78 BY 4-20-78

050903-420

REV	DATE	BY	CHKD
001	4-20-78	4-20-78	
050903-420			

[illegible]

REV. DATE REVISION DESCRIPTION

A	1/15/54	CHANGED SPEC. NO. 368 TO 3-03-43
B	3-17-53	REVISED HOLE DRILL (CITY DIMS) (CITY SPEC)
C	3-18-53	ADDED CORNER R

146

UK-T FILE 65

UK-T FILE 65

(DEPTH @ CENTER OF THE HOLES)
34 ± .010

234 DIA.
562 C'DRILL
6 HOLES

6 1/2" R.

150°

45°

2 1/8"

1/16"

1/2 ± .022
- .000

1 ± .032 ARE ON BACK

W 13043

BRAKE BLOCK
MAT'L. FRICTION MATERIAL
PER SPEC. S50900-305

STAMP PART NO.
W-13043 ON THIS
SIDE OF BRAKE BLOCK

INSP. PLAN

TOLERANCE FOR FINISHED SURFACES

DECIMAL DIMENSIONS ± .003	UNLESS OTHERWISE SPECIFIED
FRACTIONAL DIMENSIONS ± .005	

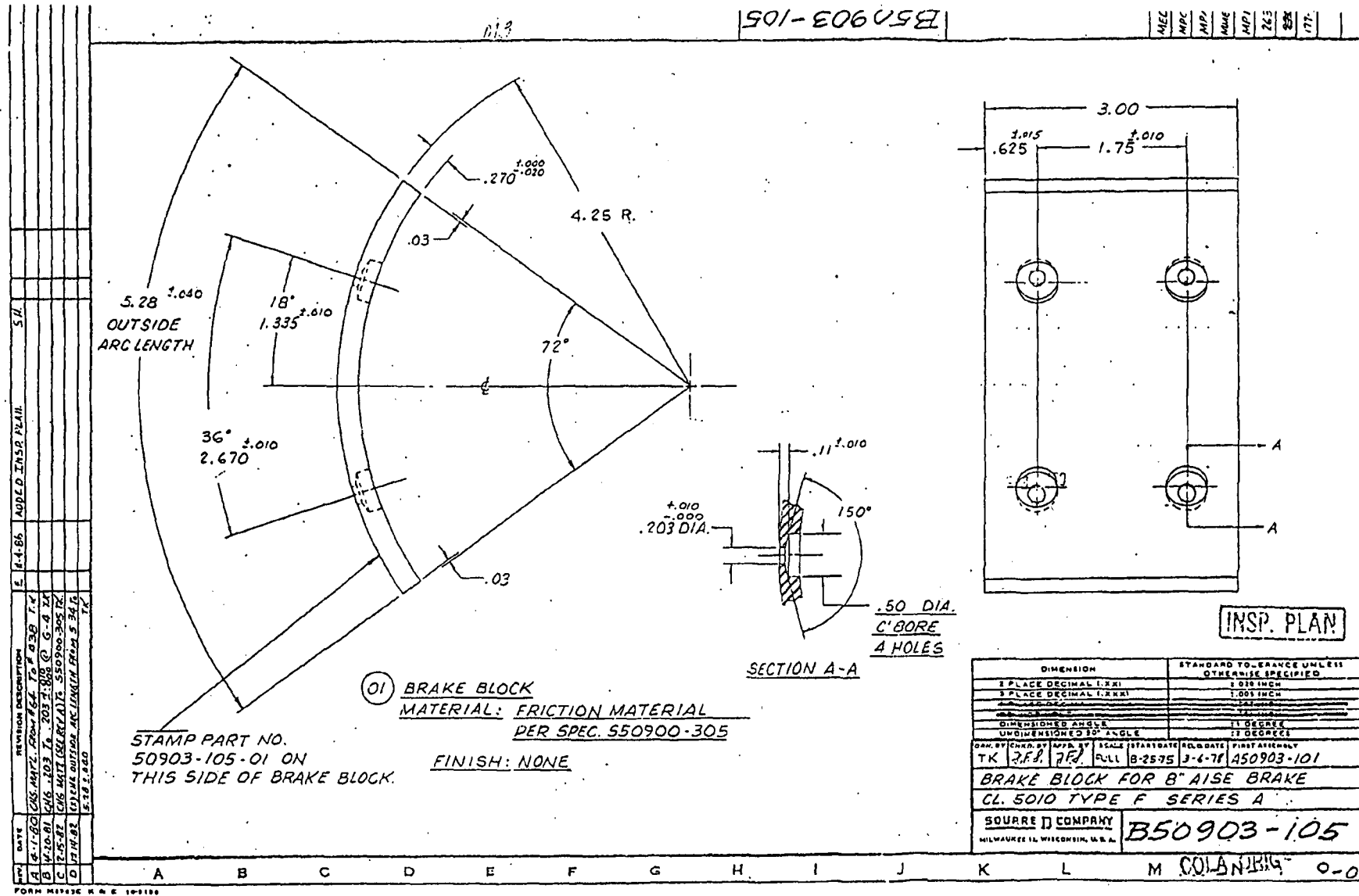
THE ELECTRIC CONTROLS & MFG. CO. REV. 13 TYPE - WB BRAKE

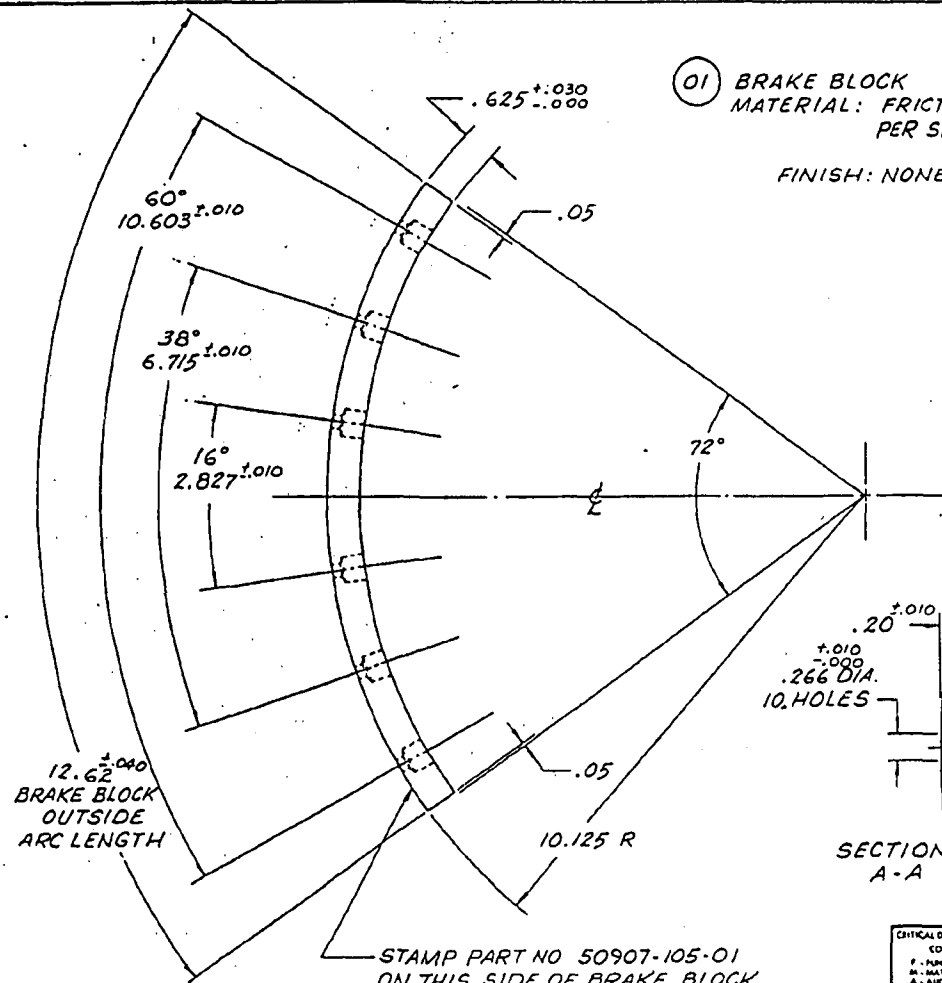
CLEVELAND, OHIO

71107

[illegible]

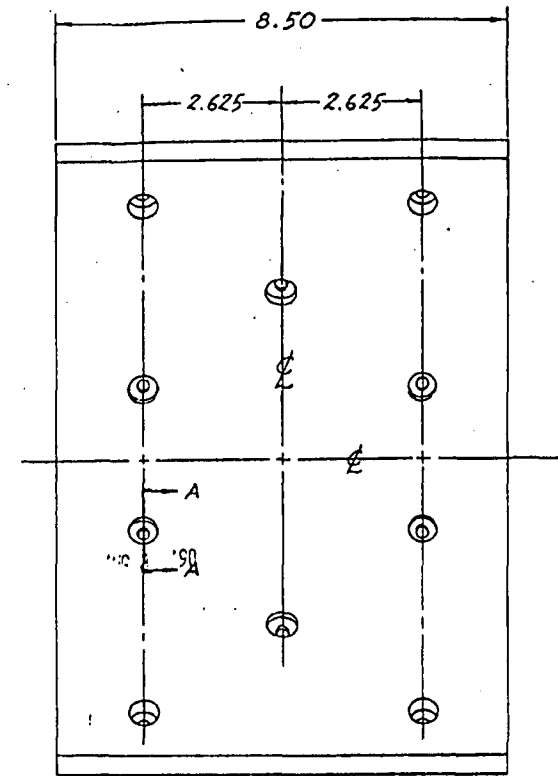
SAD HCK00088





01 BRAKE BLOCK
MATERIAL: FRICTION MATERIAL
PER SPEC. 550900-305

FINISH: NONE



INSR PLAN

W21A 0

CRITICAL DIMENSION CODE	TOLERANCE - INCHES				TOLERANCE - MILLIMETERS											
	LINEAR				LINEAR											
F - FUNCTION M - MATING A - ASSEMBLY	1 PLACE	±.040	2 PLACE	±.004	1 PLACE	±1.3	2 PLACE	±.10								
	3 PLACE	±.002	4 PLACE	±.002	3 PLACE	±0.3	4 PLACE	±.03								
	5 PLACE	±.002	6 PLACE	±.002	5 PLACE	±0.3	6 PLACE	±.03								
	7 PLACE	±.002	8 PLACE	±.002	7 PLACE	±0.3	8 PLACE	±.03								
DIM	ANGLES				ANGLES											
	1 PLACE	±.004	2 PLACE	±.002	1 PLACE	±0.15	2 PLACE	±.05								
	3 PLACE	±.004	4 PLACE	±.002	3 PLACE	±0.15	4 PLACE	±.05								
	5 PLACE	±.004	6 PLACE	±.002	5 PLACE	±0.15	6 PLACE	±.05								
± 1°	HOLDING				HOLDING											
	± 1°				± 1°											
	± 1°				± 1°											
	± 1°				± 1°											
SQUARE D COMPANY TITLE: BRAKE BLOCK FOR 19" AISE BRAKE CLASS 5010 TYPE F FORM 101A 0																
DATE DEN 10-4-78 DATE REL 2-18-79 DATE DEN 10-4-78 DATE REL 2-18-79 DATE DEN 10-4-78 DATE REL 2-18-79																
B50907-101 R3054.06																
B50907-105																

E	11-4-66	ADDED INSR PLAN	SH	B	4-18-81	CHG. .266 TO .266 ±.010, .000 @ H-4	TK	MED	MPC	2	221	REV.	
D	11-14-72	(N) CHG 11.62 TO 12.62 ±.040 @ A-3	TK	A	3-31-80	CHG. MAT'L FROM #C4 TO #13B	TK						
C	2-15-82	CHG. MAT'L (SEERK A) TO 550900-305	TK	REV.	DATE	REVISION DESCRIPTION	BY						

SQD HCK00090

