

NEW BRAKE DESIGN

For

C-FACE Motors from **3 hp - 30 hp**

NEMA Frame Motors **182TC - 256TC**



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GEN II

70 SERIES BRAKE

The Next Generation in Direct-Acting Brakes

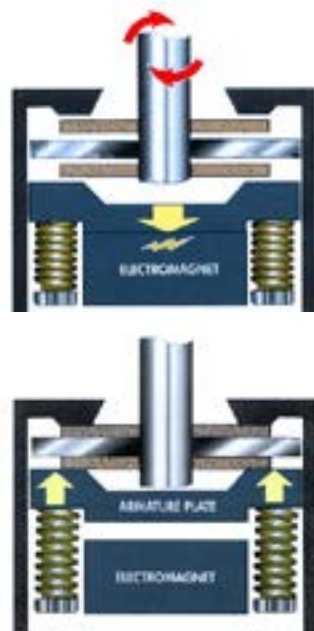
DIRECT REPLACEMENT
for Stearns® 87,000 Series Brakes

DINGS' TRADITIONAL DIRECT-ACTING DESIGN

Dings brakes operate on a very simple principle: while the motor is running with power engaged, an electromagnet within the brake pulls back the pressure plate, allowing the friction discs and motor shaft to rotate freely. When power is cut to the motor, the electromagnet releases, instantly stopping the rotating discs and preventing the motor shaft from turning. This design has these advantages:

- One moving part
- No complicated linkages to break or fail
- Fail safe - spring-set design
- No complicated hydraulics or pneumatics

Dings direct-acting design provides **years of trouble-free performance.**



WITH MORE... FEATURES

- Direct replacement for STEARNS® 87,000 Series
- No disassembly required for mounting
- External manual release with auto reset
- One moving part for longer life
- Splined hub
- Torque adjustable
- RoHS Compliant
- All position brake available



Small air gap - one moving part, increases brake life



Simple torque adjust

External side manual release with automatic reset

Accessible mounting holes for easy mounting- No need to disassemble brake to attach to motor

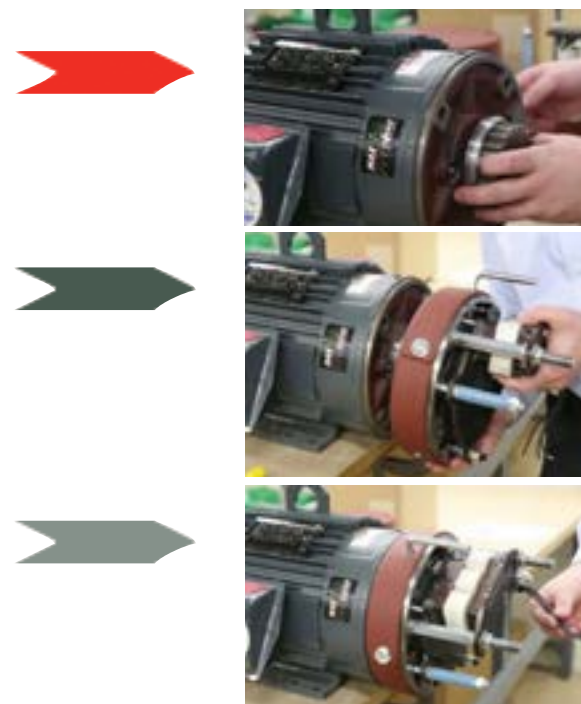


Competitor brakes require disassembly of the brake for mounting to motor no access to mounting holes



FASTER... INSTALLATION

DINGS design allows access to the mounting holes, so NO disassembly is required for mounting. Competitor brakes require disassembly before mounting.



1. Place and secure brake hub on motor shaft

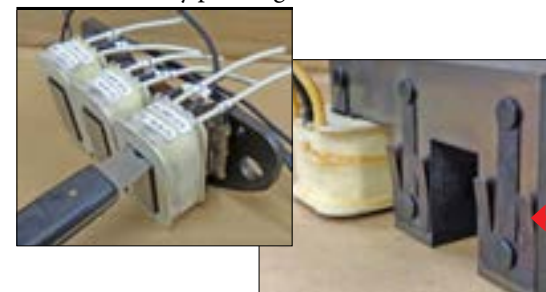
2. Place brake over hub and bolt to motor

3. Wire brake coil & replace brake cover

EASIER... MAINTENANCE

EASY to access parts for maintenance. NEW easily removable coils when source voltage changes.

Remove coils by pressing on tabs



Torque adjustable Using torque adjust nuts

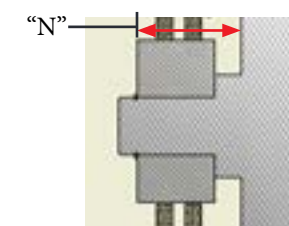


Simple air gap adjustment

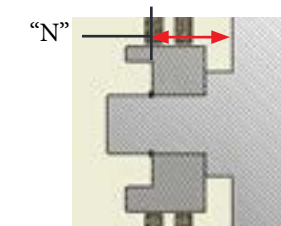


ADDED... FLEXIBILITY

Interchangeable with Dings current designs or Stearns® 87,000 Series brakes.



Dings standard hub



Dings hub modified to replace Stearns®

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70 Series GEN II End Mount

Drip-proof NEMA 2, CSA 2, IP43 Enclosure

Torque: 10 to 105 lb-ft

Specifications & Dimensions

NEMA Frame sizes 182TC through 256TC/UC

AK: 8.5" Register

AJ: 7.25" Bolt Circle

Maximum RPM: 3600

CSA File #LR13814

CSA APPROVAL PENDING IF HIGHLIGHTED

RoHS Compliant

Coil insulation: Class H standard

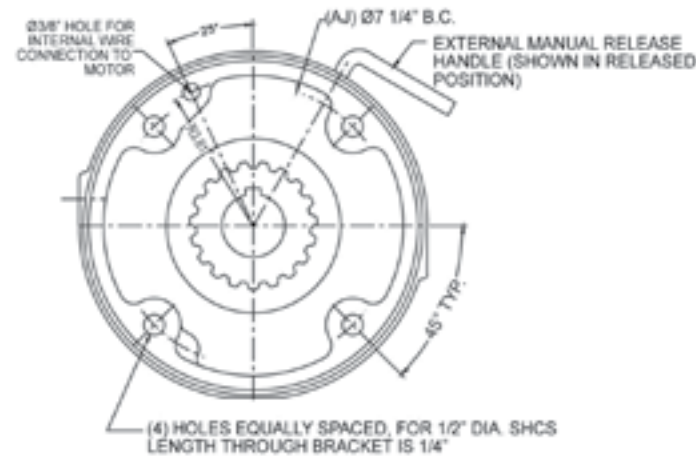
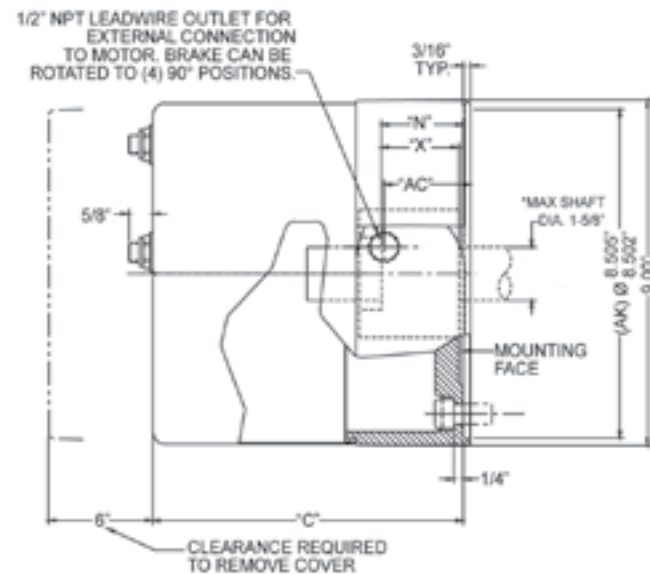
External paint: Red primer

Lead wires: Internal or conduit connections

Nameplate:

-Cast iron brake nameplates are etched stainless steel

-Cast iron/steel brake nameplates are mylar with removable protective film



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NEMA 2 / IP43 Enclosure DINGS STANDARD

Torque lb-ft	Model # Dings Standard	Replaces Dings 2-post Brake Models	Replaces Dings 4-post Brake Models	Construction	Weight lbs.	Thermal Capacity HPS/Min	Inertia WK ² Lb-Ft ²	Dimensions in inches				List Price
								C	N	X	AC	
10	71010-ES41	6-71010-96	6-71010-97	Cast Iron/Steel	30	10	.047	6.91	1.50	1.00	1.13	\$
	71010-EC41	R71010	-	Cast Iron	41	10	.047	6.91	1.50	1.00	1.13	\$
15	71015-ES41	6-71015-96	6-71015-97	Cast Iron/Steel	30	10	.047	6.91	1.50	1.00	1.13	\$
	71015-EC41	R71015	-	Cast Iron	14	10	.047	6.91	1.50	1.00	1.13	\$
25	72025-ES41	6-72025-96	6-72025-97	Cast Iron/Steel	32	11	.075	6.91	2.00	1.50	1.13	\$
	72025-EC41	R72025	-	Cast Iron	43	11	.075	6.91	2.00	1.50	1.13	\$
35	72035-ES41	6-72035-96	6-72035-97	Cast Iron/Steel	32	11	.075	6.91	2.00	1.50	1.13	\$
	72035-EC41	R72035	-	Cast Iron	43	11	.075	6.91	2.00	1.50	1.13	\$
50	73050-ES41	6-73050-96	6-73050-97	Cast Iron/Steel	37	12	.103	7.47	2.50	2.00	1.69	\$
	73050-EC41	R73050	-	Cast Iron	48	12	.103	7.47	2.50	2.00	1.69	\$
75	74075-ES41	6-74075-96	6-74075-97	Cast Iron/Steel	42	13	.131	8.03	3.00	2.50	2.25	\$
	74075-EC41	R74075	-	Cast Iron	53	13	.131	8.03	3.00	2.50	2.25	\$
105	74105-ES41	NEW	NEW	Cast Iron/Steel	42	13	.131	8.03	3.00	2.50	2.25	\$
	74105-EC41	NEW	NEW	Cast Iron	53	13	.131	8.03	3.00	2.50	2.25	\$

NEMA 2 / IP43 Enclosure STEARNS® REPLACEMENT

Torque lb-ft	Model # Stearns® Replacement	Replaces Stearns® Model Number	Construction	Weight lbs.	Thermal Capacity HPS/Min	Inertia WK ² Lb-Ft ²	Dimensions in inches				List Price
							C	N	X	AC	
10	71010-ES4S	1-087-011-00	Cast Iron/Steel	30	10	.045	6.91	1.13	1.00	1.13	\$
	71010-EC4S	N/A	Cast Iron	41	10	.045	6.91	1.13	1.00	1.13	\$
15	71015-ES4S	1-087-021-00	Cast Iron/Steel	30	10	.045	6.91	1.13	1.00	1.13	\$
	71015-EC4S	N/A	Cast Iron	41	10	.045	6.91	1.13	1.00	1.13	\$
25	71025-ES4S	1-087-031-00	Cast Iron/Steel	30	11	.074	6.91	1.13	1.00	1.13	\$
	71025-EC4S	N/A	Cast Iron	41	11	.074	6.91	1.13	1.00	1.13	\$
35	72035-ES4S	1-087-041-00	Cast Iron/Steel	32	11	.074	6.91	1.13	1.00	1.13	\$
	72035-EC4S	N/A	Cast Iron	43	11	.074	6.91	1.13	1.00	1.13	\$
50	72050-ES4S	1-087-051-00	Cast Iron/Steel	32	12	.077	6.91	1.63	1.50	1.13	\$
	72050-EC4S	N/A	Cast Iron	43	12	.077	6.91	1.63	1.50	1.13	\$
75	73075-ES4S	1-087-061-00	Cast Iron/Steel	37	13	.077	7.47	1.63	1.50	1.69	\$
	73075-EC4S	N/A	Cast Iron	48	13	.077	7.47	1.63	1.50	1.69	\$
105	74105-ES4S	1-087-081-00	Cast Iron/Steel	42	13	.136	8.03	2.13	2.00	2.25	\$
	74105-EC4S	N/A	Cast Iron	53	13	.136	8.03	2.13	2.00	2.25	\$

Stearns® is a registered trademark of Rexnord Corporation.

70 Series GEN II End Mount

NEMA 4 / 4X, IP56* , CSA4 Enclosure with hub seal for TEFC applications

Torque: 10 to 105 lb-ft

Specifications & Dimensions

NEMA Frame sizes 182TC through 256TC/UC

AK: 8.5" Register

AJ: 7.25" Bolt Circle

Maximum RPM: 3600

CSA File #LR13814

CSA APPROVAL PENDING IF HIGHLIGHTED

RoHS Compliant

Coil insulation: Class H standard

Enclosure: Cast iron

External paint:

NEMA 4, Red primer

NEMA 4X, FDA approved white epoxy

Lead wires: Conduit connections

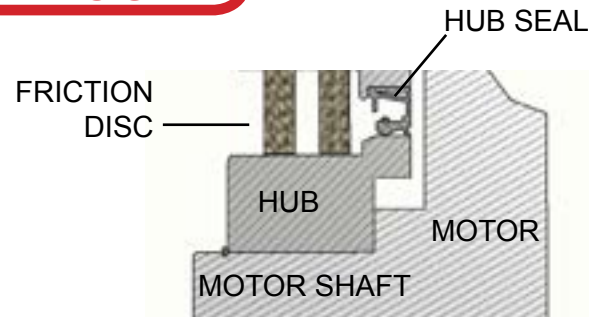
Nameplate: Etched stainless steel

*To obtain full IP56 protection, the customer shaft, hub bore, key and keyway's mating surface(s) must be sealed to meet IP56. Considerations should be reviewed to appropriately seal mounting hardware as well. Contact factory for details and/or assistance.

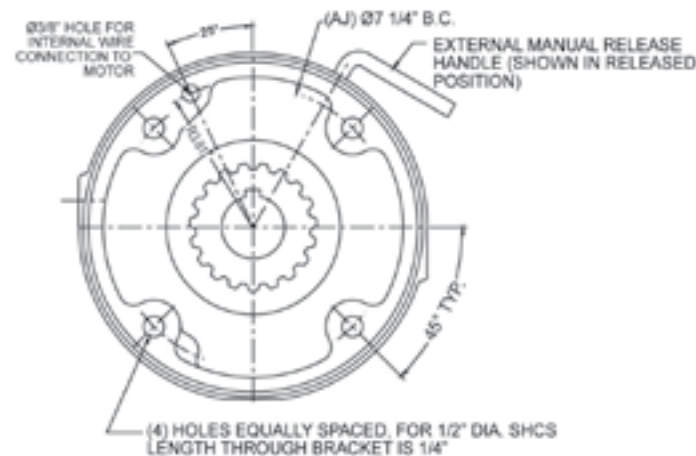
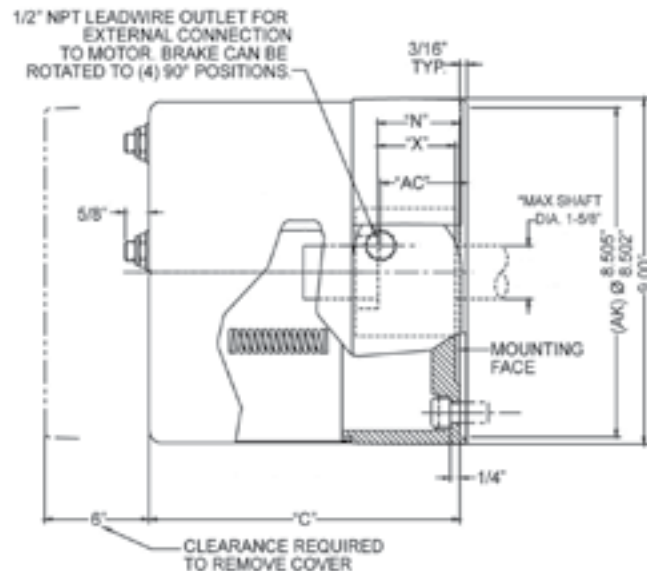


NEW HUB SEAL DESIGN

Dings New Twin Hub Seal provides positive NEMA 4/4X, IP56 particle and liquid protection.



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NEMA 4 / IP56 Enclosure DINGS STANDARD WITH HUB SEAL

Torque lb-ft	Model # Dings Standard	Replaces Dings 2-post Brake Models	Replaces Dings 4-post Brake Models	Construction	Weight lbs.	Thermal Capacity HPS/Min	Inertia WK ² Lb-Ft ²	Dimensions in inches				List Price
								C	N	X	AC	
10	71010-SC61	R71010-4	6-71010-57	Cast Iron	41	10	.047	6.91	1.50	1.00	1.13	\$
15	71015-SC61	R71015-4	6-71015-57	Cast Iron	41	10	.047	6.91	1.50	1.00	1.13	\$
25	72025-SC61	R72025-4	6-72025-57	Cast Iron	43	11	.075	6.91	2.00	1.50	1.13	\$
35	72035-SC61	R72035-4	6-72035-57	Cast Iron	43	11	.075	6.91	2.00	1.50	1.13	\$
50	73050-SC61	R73050-4	6-73050-57	Cast Iron	48	12	.103	7.47	2.50	2.00	1.69	\$
75	74075-SC61	R74075-4	6-74075-57	Cast Iron	53	13	.131	8.03	3.00	2.50	2.25	\$
105	74105-SC61	NEW	NEW	Cast Iron	53	13	.131	8.03	3.00	2.50	2.25	\$

NEMA 4 / IP56 Enclosure STEARNS® REPLACEMENT

Torque lb-ft	Model # Stearns® Replacement	Replaces Stearns® Model Number	Construction	Weight lbs.	Thermal Capacity HPS/Min	Inertia WK ² Lb-Ft ²	Dimensions in inches				List Price
							C	N	X	AC	
10	71010-SC6S	1-087-012-00	Cast Iron	41	10	.045	6.91	1.13	1.00	1.13	\$
15	71015-SC6S	1-087-022-00	Cast Iron	41	10	.045	6.91	1.13	1.00	1.13	\$
25	71025-SC6S	1-087-032-00	Cast Iron	41	11	.045	6.91	1.13	1.00	1.13	\$
35	72035-SC6S	1-087-042-00	Cast Iron	43	11	.074	6.91	1.13	1.00	1.13	\$
50	72050-SC6S	1-087-052-00	Cast Iron	43	12	.077	6.91	1.63	1.50	1.13	\$
75	73075-SC6S	1-087-062-00	Cast Iron	48	13	.105	7.47	1.63	1.50	1.69	\$
105	74105-SC6S	1-087-082-00	Cast Iron	53	13	.136	8.03	2.13	2.00	2.25	\$

WASHDOWN NEMA 4X / IP56 Enclosure BISSC Certified DINGS STANDARD WITH HUB SEAL

Torque lb-ft	Model # Dings Standard	Replaces Dings 2-post Brake Models	Replaces Dings 4-post Brake Models	Construction	Weight lbs.	Thermal Capacity HPS/Min	Inertia WK ² Lb-Ft ²	Dimensions in inches				List Price
								C	N	X	AC	
10	71010-SC6W	6-71010-93	6-71010-94	Cast Iron	41	10	.047	6.91	1.50	1.00	1.13	\$
15	71015-SC6W	6-71015-93	6-71015-94	Cast Iron	41	10	.047	6.91	1.50	1.00	1.13	\$
25	72025-SC6W	6-72025-93	6-72025-94	Cast Iron	43	11	.047	6.91	2.00	1.50	1.13	\$
35	72035-SC6W	6-72035-93	6-72035-94	Cast Iron	43	11	.075	6.91	2.00	1.50	1.13	\$
50	73050-SC6W	6-73050-93	6-73050-94	Cast Iron	48	12	.075	7.47	2.50	2.00	1.69	\$
75	74075-SC6W	6-74075-93	6-74075-94	Cast Iron	53	13	.103	8.03	3.00	2.50	2.25	\$
105	74105-SC6W	NEW	NEW	Cast Iron	53	13	.131	8.03	3.00	2.50	2.25	\$

WASHDOWN NEMA 4X / IP56 Enclosure BISSC Certified STEARNS® REPLACEMENT

Torque lb-ft	Model # Stearns® Replacement	Replaces Stearns® Model Number	Construction	Weight lbs.	Thermal Capacity HPS/Min	Inertia WK ² Lb-Ft ²	Dimensions in inches				List Price
							C	N	X	AC	
10	71010-SC6T	1-087-012-B0	Cast Iron	41	10	.045	6.91	1.13	1.00	1.13	\$
15	71015-SC6T	1-087-022-B0	Cast Iron	41	10	.045	6.91	1.13	1.00	1.13	\$
25	71025-SC6T	1-087-032-B0	Cast Iron	41	11	.045	6.91	1.13	1.00	1.13	\$
35	72035-SC6T	1-087-042-B0	Cast Iron	43	11	.074	6.91	1.13	1.00	1.13	\$
50	72050-SC6T	1-087-052-B0	Cast Iron	43	12	.077	6.91	1.63	1.50	1.13	\$
75	73075-SC6T	1-087-062-B0	Cast Iron	48	13	.105	7.47	1.63	1.50	1.69	\$
105	74105-SC6T	1-087-082-B0	Cast Iron	53	13	.136	8.03	2.13	2.00	2.25	\$

Stearns® is a registered trademark of Rexnord Corporation.

70 Series GEN II End Mount

NEMA 4 / 4X, IP56 , CSA4 Enclosure **without hub seal** for non-TEFC applications

Torque: 10 to 105 lb-ft

Specifications & Dimensions

NEMA Frame sizes 182TC through 256TC/UC

AK: 8.5" Register

AJ: 7.25" Bolt Circle

Maximum RPM: 3600

CSA File #LR13814

CSA APPROVAL PENDING IF HIGHLIGHTED

RoHS Compliant

Coil insulation: Class H standard

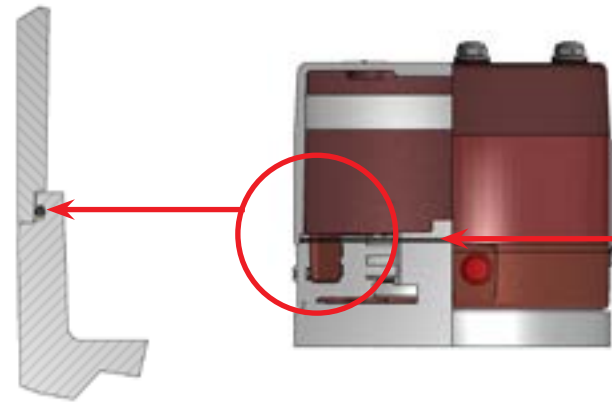
Enclosure: Cast iron

External paint: NEMA 4, Red primer

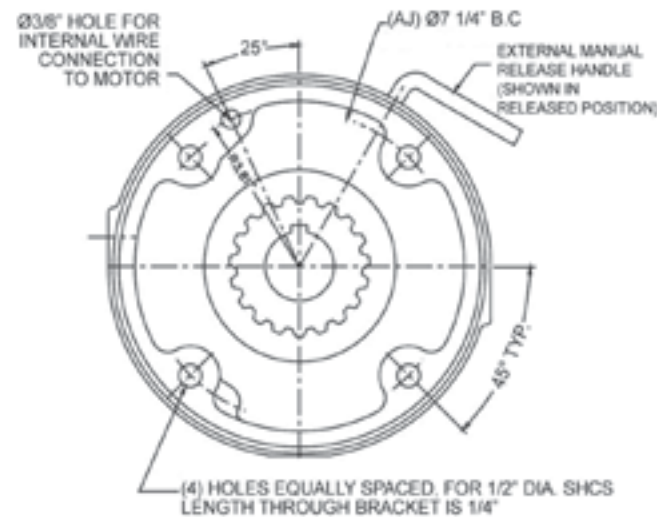
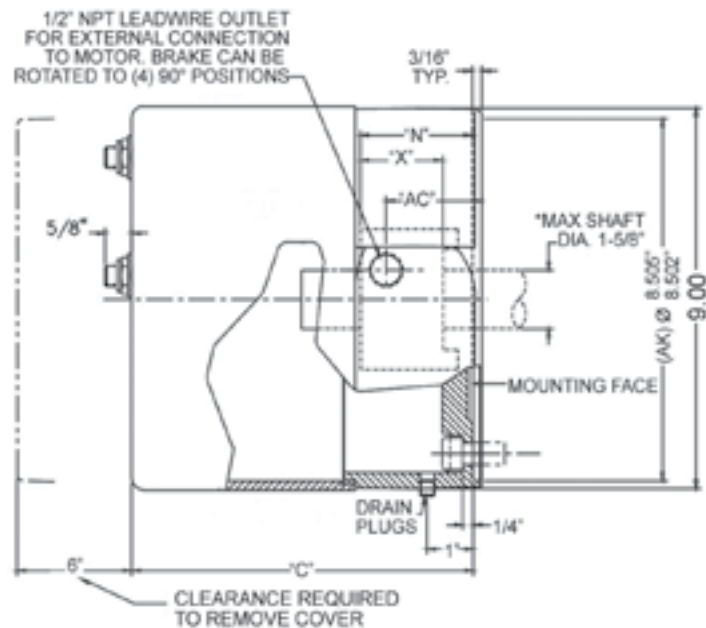
NEMA 4X, FDA approved white epoxy

Lead wires: Internal or conduit connections

Nameplate: Etched stainless steel



Cast iron bracket and cover O-ring seal provides positive NEMA 4/4X - IP56 particle and liquid protection



NEMA 4 / IP56 Enclosure **WITHOUT HUB SEAL** DINGS STANDARD

Torque lb-ft	Model # Dings Standard	Replaces Dings 2-post Brake Models	Replaces Dings 4-post Brake Models	Construction	Weight lbs.	Thermal Capacity HPS/Min	Inertia WK ² Lb-Ft ²	Dimensions in inches				List Price
								C	N	X	AC	
10	71010-EC61	R71010-37	6-71010-58	Cast Iron	41	10	.047	6.91	1.50	1.00	1.13	\$
15	71015-EC61	R71015-37	6-71015-58	Cast Iron	41	10	.047	6.91	1.50	1.00	1.13	\$
25	72025-EC61	R72025-37	6-72025-58	Cast Iron	43	11	.075	6.91	2.00	1.50	1.13	\$
35	72035-EC61	R72035-37	6-72035-58	Cast Iron	43	11	.075	6.91	2.00	1.50	1.13	\$
50	73050-EC61	R73050-37	6-73050-58	Cast Iron	48	12	.103	7.47	2.50	2.00	1.69	\$
75	74075-EC61	R74075-37	6-74075-58	Cast Iron	53	13	.131	8.03	3.00	2.50	2.25	\$
105	74105-EC61	NEW	NEW	Cast Iron	53	13	.131	8.03	3.00	2.50	2.25	\$

WASHDOWN NEMA 4X / IP56 Enclosure **WITHOUT HUB SEAL** DINGS STANDARD

Torque lb-ft	Model # Dings Standard	Replaces Dings 2-post Brake Models	Replaces Dings 4-post Brake Models	Construction	Weight lbs.	Thermal Capacity HPS/Min	Inertia WK ² Lb-Ft ²	Dimensions in inches				List Price
								C	N	X	AC	
10	71010-EC6W	R71010-91	6-71010-92	Cast Iron	41	10	.047	6.91	1.50	1.00	1.13	\$
15	71015-EC6W	R71015-91	6-71015-92	Cast Iron	41	10	.047	6.91	1.50	1.00	1.13	\$
25	72025-EC6W	R72025-91	6-72025-92	Cast Iron	43	11	.075	6.91	2.00	1.50	1.13	\$
35	72035-EC6W	R72035-91	6-72035-92	Cast Iron	43	11	.075	6.91	2.00	1.50	1.13	\$
50	73050-EC6W	R73050-91	6-73050-92	Cast Iron	48	12	.103	7.47	2.50	2.00	1.69	\$
75	74075-EC6W	R74075-91	6-74075-92	Cast Iron	53	13	.131	8.03	3.00	2.50	2.25	\$
105	74105-EC6W	NEW	NEW	Cast Iron	53	13	.131	8.03	3.00	2.50	2.25	\$

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70 Series GEN II End Mount

BRAKE SELECTION GUIDE

① Select Model

Dings Standard Models		Stearns® Replacement Models	
Torque lb-ft	Model #	Torque lb-ft	Model #
10	71010	10	71010
15	71015	15	71015
25	72025	25	71025
35	72035	35	72035
50	73050	50	72050
75	74075	75	73075
105	74105	105	74105

② Select Enclosure Type

Enclosure Type	Material	Model #
NEMA 2 / IP43	Cast Iron/Steel	ES4
NEMA 2 / IP43	Cast Iron	EC4
NEMA 4 / 4X / IP56 without hub seal	Cast Iron	EC6
NEMA 4 / 4X / IP56 with hub seal	Cast Iron	SC6

NOTE: NEMA 4X / IP56 Washdown enclosure is selected in step #3, "Hub Type"

③ Select Hub Type or Washdown (BISSC)

Standard Hub	1
Hub to replace Stearns® brake	S
Dings Washdown (BISSC)	W
Stearns® Washdown (BISSC)	T

7 1 0 2 5 - E C 6 1 - 5 3 K - V O R

④ Select Voltage

Suffix	Standard Voltages
Y	110/220V, 50Hz
H	115V, 60Hz 95V, 50 Hz
M	230V, 60Hz 190V, 50Hz
O	460V, 60Hz 380V, 50Hz
U	230/460V, 60 Hz or 190/380V, 50 Hz
5	208-230/460V, 60 Hz
R	115/230V, 60 Hz
1	115/208-230V, 60 Hz
T	220/440V, 60 Hz
P	575V, 60 Hz

⑤ Select Phase

Suffix	Phase
1	Single Phase
3	Three Phase

⑥ Select Hub Bore

Suffix	Bore Size	Keyway
F	7/8"	3/16" x 3/32"
H	1 1/8"	1/4" x 1/8"
J	1 1/4"	1/4" x 1/8"
K	1 3/8"	5/16" x 5/32"
M	1 5/8"	3/8" x 3/16"

⑦ Select Options

Suffix	Option Description
A	Adapter to Larger Frame Size(s)
AB	Reverse Adapter to Smaller Frame Size(s)
F	Foot Mounting Bracket
H	Heavy-Duty Rotating Friction Disc with Hardened Steel Hub
M	Marine/Maritime Duty with MIL-SPEC paint per TT-P-645 & MIL-DTL-15090
N	Marine/Maritime Duty - Plated or painted internal parts & exterior painted with special high solid epoxy paint (non-military)
P	Tropical Protection for Coil(s)
R	Internal Space Heater
S	Stainless Steel Stationary Disc
T	Through Shaft Hole in Brake Cover
VO	Vertical Mounting, over motor
VU	Vertical Mounting, under motor
XS	Micro-Switch Warning

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70 Series GEN II End Mount

ENCLOSURES

The IP Code, International Protection Marking, IEC Standard 60529, classifies and rates the degree of protection provided against the intrusion of dust and water by electrical enclosures. This rating system is published by the International Electromechanical Commission (IEC).

DINGS VS. STEARNS® ENCLOSURE RATINGS

Dings Drip-proof Enclosure = IP43 Standard / Stearns® Drip-proof Enclosure = IP23 Standard

Dings Waterproof Dust-tight = IP56 Standard / Stearns® Waterproof Dust-tight = IP54 Standard

First Digit: Solid Particle Protection

The first digit indicates the level of protection that the enclosure provides against access to hazardous parts (e.g., electrical conductors, moving parts) and the ingress of solid foreign objects.

Level	Object size protected against	Effective against
2	>12.5mm	Fingers or similar objects.
4	>1mm	Most wires, screws, etc.
5	Dust Protected	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact.
6	Dust Tight	No ingress of dust; complete protection against contact.

Second Digit: Liquids

Protection of the equipment inside the enclosure against harmful ingress of water.

Level	Protected against	Testing for	Details
3	Spraying water	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect.	Test duration: 5 minutes Water volume: 0.7 litres per minute Pressure: 80-100 kPa
4	Splashing of water	Water splashing against the enclosure from any direction shall have no harmful effect.	Test duration: 5 minutes Water volume: 10 litres per minute Pressure: 80-100 kPa
5	Water jets	Water projected by a nozzle (6.3 mm) against enclosure from any direction shall have no harmful effects.	Test duration: at least 15 minutes Water volume: 12.5 litres per minute Pressure: 30 kPa at distance of 3 m
6	Powerful water jets	Water projected in powerful jets (12.5 mm nozzle) against the enclosure from any direction shall have no harmful effects.	Test duration: at least 3 minutes Water volume: 100 litres per minute Pressure: 100 kPa at distance of 3 m

BRAKE TESTING SUMMARY

Dings design and test engineers have performed a series of brake performance tests in order to refine the design. Tests included cycle tests to achieve maximum brake life and torque tests under load conditions to determine friction disc wear rate.

TEST DETAILS

- Quantity of brakes tested : over 100
- Cycle test: 25 lb-ft, 50 lb-ft and 75 lb-ft brakes
- Torque test : 25 lb-ft and 75 lb-ft brakes tested for friction disc life at 100% capacity

TEST RESULTS

- Cycle test: 3 millions cycles with ZERO failures
- Torque test:

# Friction discs per brake	1	2	3	4
Average cycles before reaching max air gap	60K	50K	40K	40K
Average number of air gap adjustments before friction disc replacement	3	5	10	15

NOTE: Your wear rate may differ due to change in speed, load, over-hanging load and cycle rate.



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