

Marine, Maritime & Navy Brakes

Solenoid-Actuated Brakes

	Marine		Marine		Maritime		Navy
Description	Suitable for many shipboard and severe duty applications		Suitable for many shipboard and severe duty applications		Suitable for many Coast Guard, shipboard and severe duty applications when "ductile iron" is specified		Designed to Military Specification
Compliance (Note A)	IEEE 45 ABS		IEEE 45 ABS		IEEE 45 Federal Standard 46 ABS		MIL-DTL-16392D (Ships)
Spring Set Operation (Note E)	Armature Actuated Brake (AAB)		Solenoid Actuated Brake (SAB)				
Stearns Series (Note B)	350	360	1-056-200-K0	1-087-0xx-K0 1-082-0xx-K0 1-086-0xx-K0	1-087-Mxx	1-082-4xx 1-086-4xx	1-087-6xx 1-082-6xx 1-086-6xx
Enclosure	IP 56	IP 56	IP 56	(Note C) IP 54, IP 56	IP 55		IP 56
Enclosure Finish	DI - Water Based Primer Alum - anodize MIL-A-8525 F		Water Based Primer		Alkyd Primer MIL TT-P-645C		Enamel MIL-E-15090
Coil	Encapsulated Construction Class H Insulation		Injection Molded Construction Class B Insulation		Injection Molded Construction Class B Insulation		Encapsulated Class H
Endplate or Mount Plate Material	Steel		Cast Iron		Ductile Iron		Ductile Iron
Housing Material	Cast Aluminum or Ductile Iron		Cast Iron		Ductile Iron		Ductile Iron
Support Plate Material	N/A		Steel	(Note H)	Ductile Iron		Ductile Iron
Pressure Plate & Stationary Disc Material	N/A		Brass		Brass		Brass
Self Adjusting (Note G)	No. Gap By Gage		No. Gap By Scale	Yes	Yes		Yes
Manual Release (Note D)	Optional		Maintained		Maintained		Non-Maintained

- A. IEEE 45 compliance nameplate is optional. ABS Certificate SB374021
 B. Additional options and modifications are included in the full 12 digit part number
 C. IP 56 with side release option available in 1-087-000-K0 & 1-082-000-K0
 D. The maintained release holds the brake in a release condition until the brake is electrically, or manually, re-engaged
 The non-maintained ("deadman") release is manually held in the released condition, re-setting when the force is removed
 E. Spring-set, Solenoid with coil & linkage actuated brake (SAB), AC or DC voltage coil
 Spring-set, Armature actuated direct-acting brake (AAB), DC voltage coil
 F. Carrier ring friction disc is standard with the 350 & 360 series and is an option in the SAB brakes
 G. Stainless Steel Self-Adjust is standard with the 1-08x-600 and 1-087-M00
 H. 1-087: cast aluminum; 1-082: cast iron; 1-086: ductile iron
 I. Dimensions may differ from catalog brakes; dimensional drawings available on request.

Armature-Actuated Brakes

MIL-B-16392C is inactive for new design and is no longer required, except for replacement purposes, per statement issued by Naval Sea Systems Command in June of 2001. The armature-actuated brake (AAB) was designed in consultation with Naval specification authorities as a suitable Commercial off the shelf (COTS) motor brake.

Series 350

**Pressure Plate Mount
Internal Maintained Manual Release**

Torque (lb-ft)	Model Number	NEMA Frame Size
75	3-51-734H0	182TC-256TSC
110	3-51-744H0	182TC-256TSC
110	3-51-744J0	284TC-286TSC
110	3-51-744K0	324TC-405TSC
180	3-51-844J0	284TC-286TSC
180	3-51-844K0	324TC-405TSC
300	3-51-944K0	324TC-405TSC

Series 360

**Magnet Body Mount
Internal Maintained/ Optional External
Non-Maintained Manual Release**

Torque (lb-ft)	Model Number	NEMA Frame Size
60	3-61-644H0	182TC-256TSC
60	3-61-644J0	284TC-286TSC
75	3-61-734H0	182TC-256TSC
110	3-61-744H0	182TC-256TSC
110	3-61-744J0	284TC-286TSC
180	3-61-844J0	284TC-286TSC
180	3-61-844K0	324TC-405TSC
300	3-61-944K0	324TC-405TSC
300	3-61-944L0	444TC

Mining Brakes - MSHA Certified

Stearns 1-082-3X4-06 series of electric fail-safe motor brakes are now certified for use in underground mines by the federal Mine Safety and Health Administration (MSHA).

Stearns is the only supplier of MSHA certified motor brakes.

MSHA approves and certifies products for use in underground coal and gassy mines to ensure that they do not cause a fire or explosion.

Features:

Fan Guard Mounted

Mounting face: 12.5" AK, 11.0" AJ
(NEMA 324 and 326 TC, NEMA 364 and 365 TC, NEMA 404 and 405 TC)

Static Torque: 125 through 330 lb-ft

Spring-Set Electrically-Released

Enclosure Material: Cast Iron

Manual Release Type: Side lever, latching with automatic reset when electric power is applied to the brake coil

Enclosure Protection: IP 56

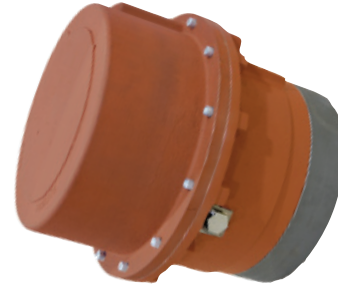
Self-Adjust Design: Automatic adjustment for friction disc wear - to reduce maintenance

Class H Coil Insulation

Thermal Cut-Out Switch

Electrical Connections terminate at terminal block

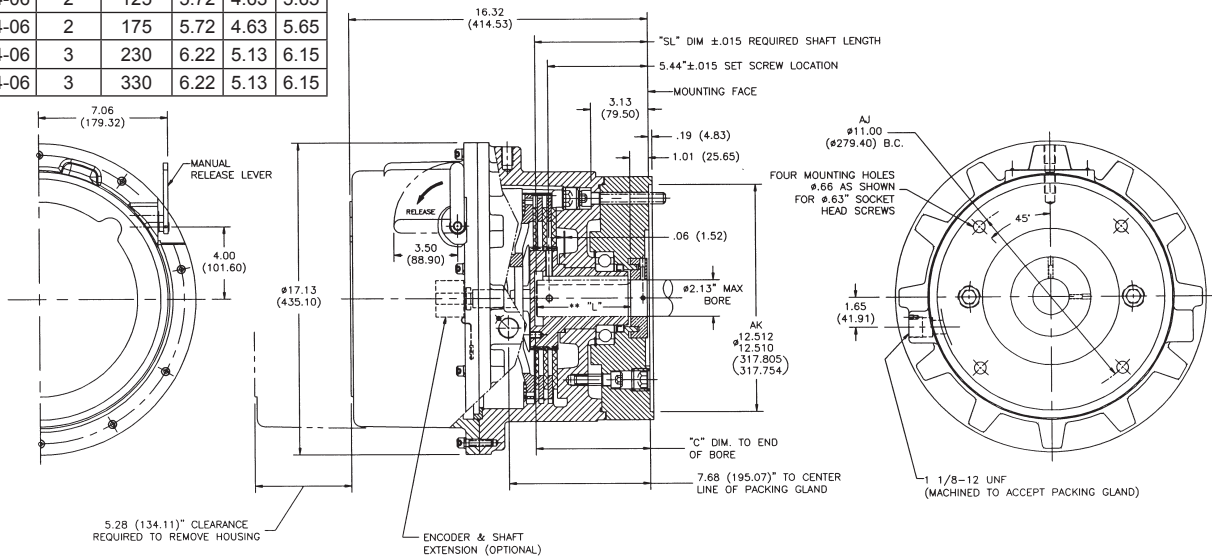
MSHA Certification Number: 18-XPA070006-0



Options:

- Internal Encoder
- Internal Electric Heater
- Electrical Release Indicator Switch
- Carrier Ring Friction Discs

Model No. IP56	No. of Discs	Torque Lb-Ft	C	**L	SL
1-082-314-06	2	125	5.72	4.63	5.65
1-082-324-06	2	175	5.72	4.63	5.65
1-082-334-06	3	230	6.22	5.13	6.15
1-082-344-06	3	330	6.22	5.13	6.15



** "L" DIM. APPLIES TO MAXIMUM KEYWAY SLOT LENGTH.

Ordering Information - specify¹:

Model No.	Enclosure	Nominal Static Torque lb-ft (Nm)
1-082-314-06	IP56	125 (169)
1-082-324-06	IP56	175 (237)
1-082-334-06	IP56	230 (312)
1-082-344-06	IP56	330 (447)

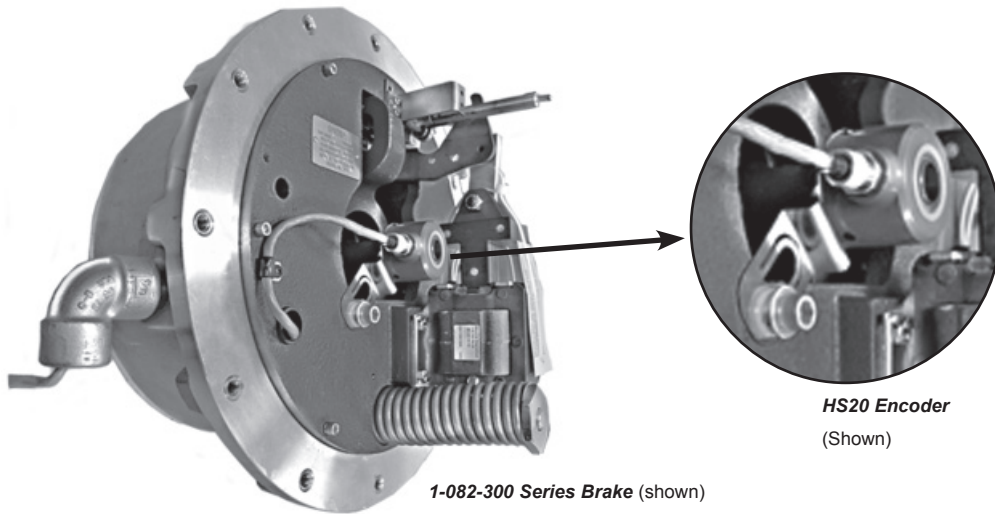
- Model Number
- Bore & keyway²
- Voltage²
- Options
- Leadwire packing gland - left or right (looking towards brake mounting face). Note: encoder option requires that the encoder wiring enters the brake from the opposite side of all of the other brake wiring.

¹ These brakes need to be purchased from the motor manufacturer, as the required shaft length (dimension "SL" above) is not standard.

² Refer to Stearns Catalog page 37

Encoder Brakes

Stearns Solenoid Actuated Brakes with Internally Mounted Encoder



Features

- Available in frame sizes 182TC - 505TC
- All enclosure ratings available, including hazardous location
- Separate conduit exits are provided for the brake and encoder leads, to minimize potential electrical interference
- Choice of popular encoder manufacturers

Benefits

- Encoder located in protected environment enclosed inside the brake housing
- Simplified encoder mounting - using a hub or shaft-mount encoder - and it's already done!
- Reduced package length - an internal encoder does not add any length to the brake
- Lower installed cost

Ordering Information

Stearns brakes with internal encoders are purchased through the motor manufacturer, as the required shaft length and diameter are non-standard. An internal encoder is not a retrofit option, like a brake coil, heater or switch. To order the brake motor package, specify the brake model and encoder option from table on following page.

Encoder Brakes (Con't)

Stearns Solenoid Actuated Brakes with Internally Mounted Encoder

Ordering Information

For Stearns Solenoid Actuated Brakes (SABs), with internal encoders

Industrial Locations

Frame Size	Brake Series	Torque Range (lb-ft)	Encoder Options ¹	Connector / Cable ²	Stearns Drawing No. ³
182TC - 256TC	1-087-EX2	25 - 105	Dynapar HS20 BEI HS20 BEI HS25	M12, 8 Pin / 15' M12, 8 Pin / 5m 10 Pin / 20'	1087E00ED 1087E00ED
324TC - 405TC	1-081-XXX	125 - 230	Dynapar HS20 BEI HS20 BEI HS25	M12, 8 Pin / 15' M12, 8 Pin / 5m 10 Pin / 20'	10810022ED 10810022ED
324TC - 405TC	1-082-XXX	125 - 440	Dynapar HS20 BEI HS20 BEI HS25	M12, 8 Pin / 15' M12, 8 Pin / 5m 10 Pin / 20'	10820022ED 10820022ED
444TC - 505TC	1-086-XXX	500 - 1000	Dynapar HS20 BEI HS20 BEI HS25 BEI HS35M	M12, 8 Pin / 15' M12, 8 Pin / 5m 10 Pin / 20' 10 Pin MS / 15'	10860022ED 10860022ED 10860022ED 10860022E35D

Division 1 Hazardous Location⁴

182TC - 256TC	1-087-3X8	10 - 105	Dynapar HS20 BEI HS20	M12, 8 Pin / 15' M12, 8 Pin / 5m	1087308D ⁵ 1087308D ⁵
324TC - 405TC	1-082-3X4	125 - 330	Dynapar HS20 BEI HS20 BEI HS25	M12, 8 Pin / 15' M12, 8 Pin / 5m 10 Pin / 20'	1082304D ⁶ 1082304D ⁶

¹ Encoders are Optical, 1024 PPR.

² Cables are shielded. Lengths are from encoder connector, inside the brake (not from outside of brake housing)

³ Request this drawing for shaft design requirements

⁴ No motor shaft modifications required, beyond the brake requirements for a standard hazardous location brake.

⁵ Drawing 1087308D brake model mounts close-coupled to the motor end bell.

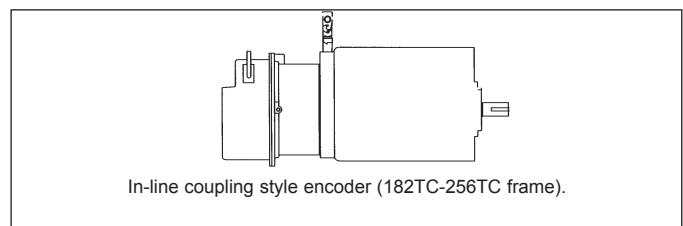
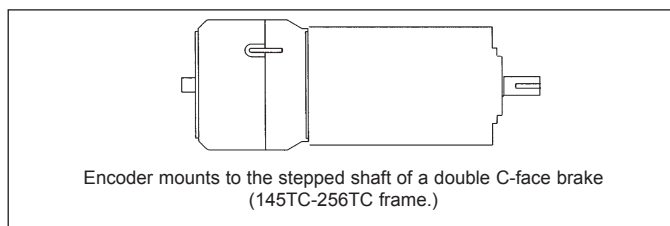
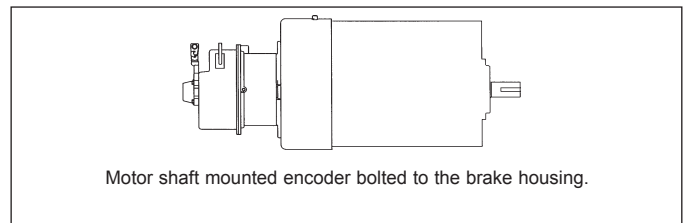
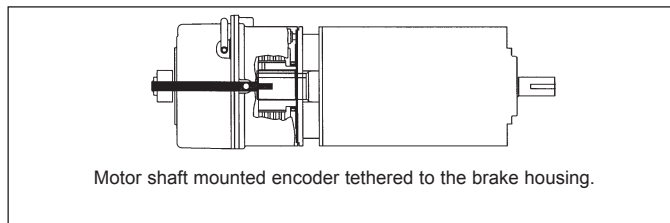
For the brake model that mounts to the motor fan guard, refer to drawing 10873081D.

For the brake model that mounts to the motor fan guard - with a slinger - refer to drawing 10873052D.

⁶ Drawing 1082304D brake model mounts close-coupled to the motor end bell.

For the brake model that mounts to the motor fan guard, refer to drawing 10823042D.

In addition to the fully enclosed brake with internal encoder options, encoders can be adapted externally to Stearns brakes:



Worldwide Sales and Service

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MIDWEST REGION

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Cudahy, WI 53110
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tony.hughes@rexnord.com

C-PTS - MIDWEST

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Liberty, MO 64068
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MID-ATLANTIC REGION

N.O. Holder & Associates, Inc.
4109 East North Street, Suite 400 (29615)
P.O. Box 25603
Greenville, SC 29616
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jay@noholder.com

N.O. Holder & Associates, Inc.

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Telephone: (252) 266-3552
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keith@noholder.com

NORTHEAST REGION

Open
5150 S. International Drive
Cudahy, WI 53110
Telephone: (414) 272-1100

OHIO VALLEY REGION

Open
5150 S. International Drive
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Industrial Motor and Controls

4540 Glenbrook Dr.
Willoughby, OH 44094
Telephone: (440) 510-2481
ken.simko@imcrep.com

PHILADELPHIA REGION

Brisbane Industrial Drives Company, Inc.
1432 State Route 903
Jim Thorpe, PA 18229
Telephone: (570) 325-3684
Fax: (570) 325-3870
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SOUTHEAST REGION

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