



NOTE  
 1. ALL SS PLATE: BRUSHED NO. 4 FINISH, NATURAL COLOR  
 2. ALL ALUM ALLOY: 6061 T6, CLEAR ANODIZED  
 3. ITEM# 49, THREADED ROD, 1 OF 4 SHOWN  
 4. ITEM# 50, NUTS FOR THREADED RODS (ITEM#49), NOT SHOWN  
 5. SEE SHEET 21 FOR ITEMS# 13,34,35. PURCHASE FROM STOCK DRIVE/STERLING INSTRUMENTS, PAGE 10-39, CATALOG 790-2. USE 3/8 ID SERIES

SEE SHEET 21 FOR ITEMS# 13, 34, 35. SEE NOTE #5

SEE NOTES #3&4

NOTES ON BILL OF MATERIALS:  
 VENDOR COLUMN IN BILL OF MATERIALS INCLUDES RAW MATERIALS AND FINISHED PARTS  
 TOP NUMBER IN BALLOONS: ITEM NUMBER. LISTED IN BILL OF MATERIALS, FIRST COLUMN.  
 BOTTOM NUMBER IN BALLOONS: TOTAL QUANTITY OF THIS ITEM USED IN THIS ASSEMBLY. LISTED IN BILL OF MATERIALS, FORTH COLUMN.  
 SOME IDENTICAL ITEMS USED MORE THAN ONCE MAY HAVE MULTIPLE BALLOONS, FOR CLARITY.

ITEM NO.	DESCRIPTION	PART NUMBER	Vendor	QTY.
1	Main mount plate, alum alloy	SR 01.0	Industrial Metal Supply	1
2	Gear head & adaptor	Included with item #18	Minarik	1
3	Main shaft, 12MM, 303 SS	AAS-A9-230	Nordex, Inc.	1
4	Gearmotor mount, Alum alloy	RS 04.0	Industrial Metal Supply	1
5	Ball bearing double row	5885K460	McMaster-Carr	1
6	Ball bearing single row	6153K750	McMaster-Carr	1
7	Snap ring, external	90967A165	McMaster-Carr	1
8	Crank wheel, SS	RS 08.0	Industrial Metal Supply	1
9	Crank linkage, Alum alloy	RS 09.0	Industrial Metal Supply	1
10	Ball bearing, SS	6138K660	McMaster-Carr	2
11	Snap ring, Internal	91580A191	McMaster-Carr	2
12	Shoulder screw, SS hex socket, .375X.5	Shoulder screw, SS hex socket, .375X.5	Common hardware	1
13	Inner race spacers, as required, see drawing	See sheet 21	Stock Drive/Sterling	group
14	Plate, 1/4 thick, alum alloy	RS 14.0	Industrial Metal Supply	1
15	Shaker deck support, alum alloy, .375 plate	RS 15.0	Industrial Metal Supply	2
16	Carrage plate, Alum alloy .375 thick	RS 24.0	Industrial Metal Supply	1
17	Snap ring, Internal, 32MM	98394A453	McMaster-Carr	1
18	Motor, gear, & adaptor (see item 2)	AKM22D-CKBNR-00	Minarik	1
19	Electromagnet: for container hold down	5698K412	McMaster-Carr	1
20	Isolator top mount, back left, fab. from 1/4 alum alloy angle	RS 21.0	Industrial Metal Supply	1
21	Isolator mount bracket, top, back right, fab from 1/4 alum alloy angle	RS 21.0	Industrial Metal Supply	1
22	Vibration isolator for test	V10Z83-17056	Advanced Antivibration Components	4
23	Isolator mount bracket, top, front left, fab from 1/4 alum alloy angle	RS 21.0	Industrial Metal Supply	1
24	Isolator mount, top, front right, fab from 1/4 alum alloy angle	RS 24.0	Industrial Metal Supply	1
25	Vibration isolator mount, bottom, back RT & LT, 3/8 cold rolled steel	RS 25.0	Industrial Metal Supply	2
26	Vibration isolator mount support, bottom RT & LT, 3/8 cold rolled steel	RS 26.0	Industrial Metal Supply	2
27	Vibration isolator spacer, 3/8 cold rolled steel plate	RS 27.0	Industrial Metal Supply	1
28	Vibration isolator spacer, fab from .75 dia. alum alloy round stock	RS 28.0	Industrial Metal Supply	2
29	Bellows coupling	BKL 4.5/12/16	R+W	1
30	Carrage rail	LWFF 42	IKO	1
31	Linear bearing carrage	LWFF 42 carrage	IKO	1
32	Magnet mount bar, alum alloy	MS 0X.0	Industrial Metal Supply, Inc.	1
33	Shoulder screw, hex socket, SS, .375X.75	Shoulder screw, hex socket, SS, .375X.75	Common hardware	1
34	Inner race spacers, SS, see drawing	See sheet 21	Stock Drive/Sterling	group
35	Inner race spacers, SS, see drawing	see sheet 21	Stock Drive/Sterling	group
36	SHCS hex socket, SS, 10-24X.75	SHCS hex socket, SS, 10-24X.75	Common hardware	10
37	FHCS hex socket, SS, 10-24X.75	FHCS hex socket, SS, 10-24X.75	Common hardware	4
38	SHCS hex socket, SS, 4-.7X12MM	SHCS hex socket, SS, 4-.7X12MM	Common hardware	6
39	SHCS hex socket, SS, 1/4-20X1.000	SHCS hex socket, SS, 1/4-20X1.000	Common hardware	8
40	SHCS hex socket, SS, 10-32X.625	SHCS hex socket, SS, 10-32X.625	Common hardware	2
41	FHCS hex socket, SS, 6-1.0X16	FHCS hex socket, SS, 6-1.0X16	Common hardware	4
42	SHCS hex socket, SS, 3/8-16X1.25	SHCS hex socket, SS, 3/8-16X1.25	Common hardware	2
43	SHCS hex socket, SS, 3/8-16X1	SHCS hex socket, SS, 3/8-16X1	Common hardware	2
44	Lock washer, SS, 3/8	Lock washer, SS, 3/8	Common hardware	4
45	Nylock nut, hex, 3/8-16	Nylock nut, hex, 3/8-16	Common hardware	4
46	Lock washer, SS, #10	Lock washer, SS, #10	Common hardware	4
47	FHCS hex socket, SS, 10-24X.5	FHCS hex socket, SS, 10-24X.5	Common hardware	4
48	Set screw, hex socket, cup point, 1/4-20X.75	Set screw, hex socket, cup point, 1/4-20X.75	Common hardware	1
49	Threaded rod, SS, 10-24	Threaded rod, SS, 10-24	Common hardware	4
50	Machine hex nut, SS, 10-24 (not shown)	Machine hex nut, SS, 10-24	Common hardware	1
51	Motor amplifier (not shown)	-	Minarik	1
52	Electromagnet power supply (not shown)	57245K85	McMaster-Carr	1
53	Cable, continuous flex, see drawing (not shown)	S 960 series	SAB, Inc.	1

**UNLESS OTHERWISE NOTED**

DIMENSIONS ARE IN INCHES  
 TOLERANCES: .XX +-.030 .XXX +-.010  
 FRACTIONAL±  
 ANGULAR: MACHINE± BEND±

DO NOT SCALE DRAWING  
 INTERPRET GEOMETRIC TOLERANCE PER:

FINISH 63 MATERIAL PER SPEC. SHEETS

**FOR CONSTRUCTION**



# SCIENCE STORMS

MUSEUM OF SCIENCE AND INDUSTRY, CHICAGO

**ORIGINAL**

#	DATE	DESCRIPTION OF REVISIONS
1		
2		
3		
4		
5		
6		

APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE AS NOTED	JOB #
DRAWN BY RLH	DATE 7/15/09

DRAWING TITLE  
 RISE AND SINK DRIVE ASSEMBLY EXPLODED VIEW BOM

SHEET NO. / FILE NAME  
 AL.S2-1-2-2.9

2009-02-02 B&S Main explode BOM