LBFS08

Basic model | **Motor-less Single Axis Actuator**

Low-profile type

Ordering method

LBFS08 - [ ] [ ] [ ] - [ ]

Model	Lead	Shape	Motor specification	Stroke
	24: 24 mm 12: 12mm 6: 6 mm	S: Straight R: Right attachment L: Left attachment	Y: Y specification (see below) P: P specification (see below) K: K specification (see below) A: A specification (see below) N: N specification (see below)	50 to 1250 (50 mm pitch)

[Caution]

This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
For special parts for motor installation, install and adjust on your side.

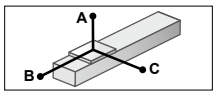
LBFS08 (200W)

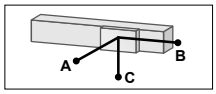
Specifications

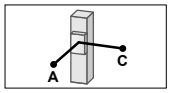
Applicable motor		200 W		
Repeatability Note 1		±0.005 mm		
Deceleration mechanism		Rolled ball screw ϕ 14 (C7 class)		
Stroke		50 mm to 1250 mm (50 mm pitch)		
Maximum speed Note 2		1440 mm/sec	720 mm/sec	360 mm/sec
Ball screw lead		24 mm	12 mm	6 mm
Maximum payload Note 3	Horizontal	40 kg	80 kg	100 kg
	Vertical	8 kg	18 kg	30 kg
Rated Thrust Note 3		142 N	284 N	569 N
Dinamic loading moment (MY,MP,MR)		99.4 / 99.4 / 158.3		
Maximum dimensions of cross section of main unit		W 83 mm × H 56 mm		
Overall length	Straight	ST + 287.5 mm		
	Bending	ST + 268.5 mm		
Degree of cleanliness Note 4		Equivalent to ISO Class 4 (ISO 14644-1)		
Intake air Note 5		130 Nℓ/min~		
Using ambient temperature and humidity		0 to 40 °C, 35 to 80 %RH (no condensation)		

Note 1. Positioning repeatability in one direction. ±0.01 for the Bending configuration.
Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed. If the effective stroke exceeds 650 mm, the ball screw may resonate. (Critical speed)
Note 3. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note 4. When using in a clean environment, attach a suction air joint. The degree of cleanliness is the cleanliness level achieved when using at 1000 mm/sec or less.
Note 5. The required suction amount will vary according to the operating conditions and operating environment.

Allowable overhang Note







LBFS08-24(200W)

Horizontal installation (Unit: mm)

	A	B	C
15kg	505	228	213
25kg	557	154	169
45kg	1089	113	154

Wall installation (Unit: mm)

	A	B	C
15kg	213	228	505
25kg	169	154	557
45kg	154	113	1089

Vertical installation (Unit: mm)

	A	C
4kg	810	810
8kg	461	461

LBFS08-12(200W)

Horizontal installation (Unit: mm)

	A	B	C
30kg	739	160	208
50kg	531	85	113
80kg	339	43	58

Wall installation (Unit: mm)

	A	B	C
30kg	208	160	739
50kg	113	85	531
80kg	58	43	339

Vertical installation (Unit: mm)

	A	C
10kg	543	543
18kg	304	304

LBFS08-6(200W)

Horizontal installation (Unit: mm)

	A	B	C
30kg	2623	188	284
60kg	1436	81	122
100kg	936	38	57

Wall installation (Unit: mm)

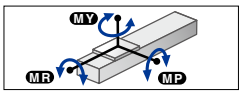
	A	B	C
30kg	284	188	2623
60kg	122	81	1436
100kg	57	38	936

Vertical installation (Unit: mm)

	A	C
15kg	428	428
30kg	214	214

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.
Note. Service life is calculated for 500 mm stroke models.

Static loading moment



(Unit: N-m)

MY	MP	MR
249	249	393

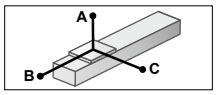
LBFS08 (400W)

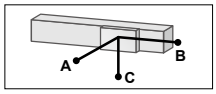
Specifications

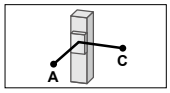
Applicable motor		400 W		
Repeatability Note 1		±0.005 mm		
Deceleration mechanism		Rolled ball screw ϕ 14 (C7 class)		
Stroke		50 mm to 1250 mm (50 mm pitch)		
Maximum speed Note 2		1440 mm/sec	720 mm/sec	360 mm/sec
Ball screw lead		24 mm	12 mm	6 mm
Maximum payload Note 3	Horizontal	50 kg	95 kg	115 kg
	Vertical	15 kg	28 kg	37 kg
Rated Thrust Note 3		289 N	578 N	1156 N
Dinamic loading moment (MY,MP,MR)		99.4 / 99.4 / 158.3		
Maximum dimensions of cross section of main unit		W 83 mm × H 56 mm		
Overall length	Straight	ST + 287.5 mm		
	Bending	ST + 268.5 mm		
Degree of cleanliness Note 4		Equivalent to ISO Class 4 (ISO 14644-1)		
Intake air Note 5		130 Nℓ/min~		
Using ambient temperature and humidity		0 to 40 °C, 35 to 80 %RH (no condensation)		

Note 1. Positioning repeatability in one direction. ±0.01 for the Bending configuration.
Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed. If the effective stroke exceeds 650 mm, the ball screw may resonate. (Critical speed)
Note 3. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note 4. When using in a clean environment, attach a suction air joint. The degree of cleanliness is the cleanliness level achieved when using at 1000 mm/sec or less.
Note 5. The required suction amount will vary according to the operating conditions and operating environment.

Allowable overhang Note







LBFS08-24(400W)

Horizontal installation (Unit: mm)

	A	B	C
15kg	407	228	201
30kg	422	121	132
50kg	961	87	121

Wall installation (Unit: mm)

	A	B	C
15kg	201	228	407
30kg	128	131	336
50kg	121	87	961

Vertical installation (Unit: mm)

	A	C
8kg	400	400
15kg	240	240

LBFS08-12(400W)

Horizontal installation (Unit: mm)

	A	B	C
30kg	616	160	205
60kg	386	66	88
95kg	245	32	43

Wall installation (Unit: mm)

	A	B	C
30kg	205	160	616
60kg	88	66	386
95kg	43	32	245

Vertical installation (Unit: mm)

	A	C
14kg	386	386
28kg	195	195

LBFS08-6(400W)

Horizontal installation (Unit: mm)

	A	B	C
40kg	1538	134	202
80kg	988	54	81
115kg	702	29	44

Wall installation (Unit: mm)

	A	B	C
40kg	202	134	1538
80kg	81	54	988
115kg	44	29	702

Vertical installation (Unit: mm)

	A	C
18kg	356	356
37kg	174	174

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.
Note. Service life is calculated for 500 mm stroke models.

Applicable motor

• Applicable servo motor

Specification	Flange size	□ 60
	Wattage	200 W

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-02
		SGM7J-02
		SGMXJ-02
	Keyence Corp.	SV- □ 020
		SV2- □ 020
		SV3- □ 020
	Mitsubishi Electric Corp.	HG-KR23
		HK-KT23
		HK-MT23
	Sanyo Denki	R2 □ A06020
	Tamagawa Seiki	TSM3202
		TSM4252
		TSM4262
	Delta Electronics	ECM-A3L-C□20401
	Siemens	1FL6032-2AF
	Schneider	BCH2LD023
P	Omron Electronics	R88M-K20030
		R88M-1M20030
	Panasonic Corp.	MSMF02
		MHMF02
		MHMG-022
K	Kingservo	KSMA02LI
		KSMA02LG

Specification	Flange size	□ 60
	Wattage	400 W

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-04
		SGM7J-04
		SGMXJ-04
	Keyence Corp.	SV- □ 040
		SV2- □ 040
		SV3- □ 040
	Mitsubishi Electric Corp.	HG-KR43
		HK-KT43
		HK-MT43
	Sanyo Denki	R2 □ A06040
	Tamagawa Seiki	TSM3204
		TSM4254
		TSM4264
	Delta Electronics	ECM-A3H-C □ 20604
	Siemens	1FL6034-2AF
	Schneider	BCH2LD043
	Fanuc Corp.	βiS1/6000-B
K	Kingservo	KSMA04LI
		KSMA04LG
	Omron Electronics	R88M-K40030
		R88M-1M40030
	Panasonic Corp.	MSMF04
		MHMF04
		MHMG-042

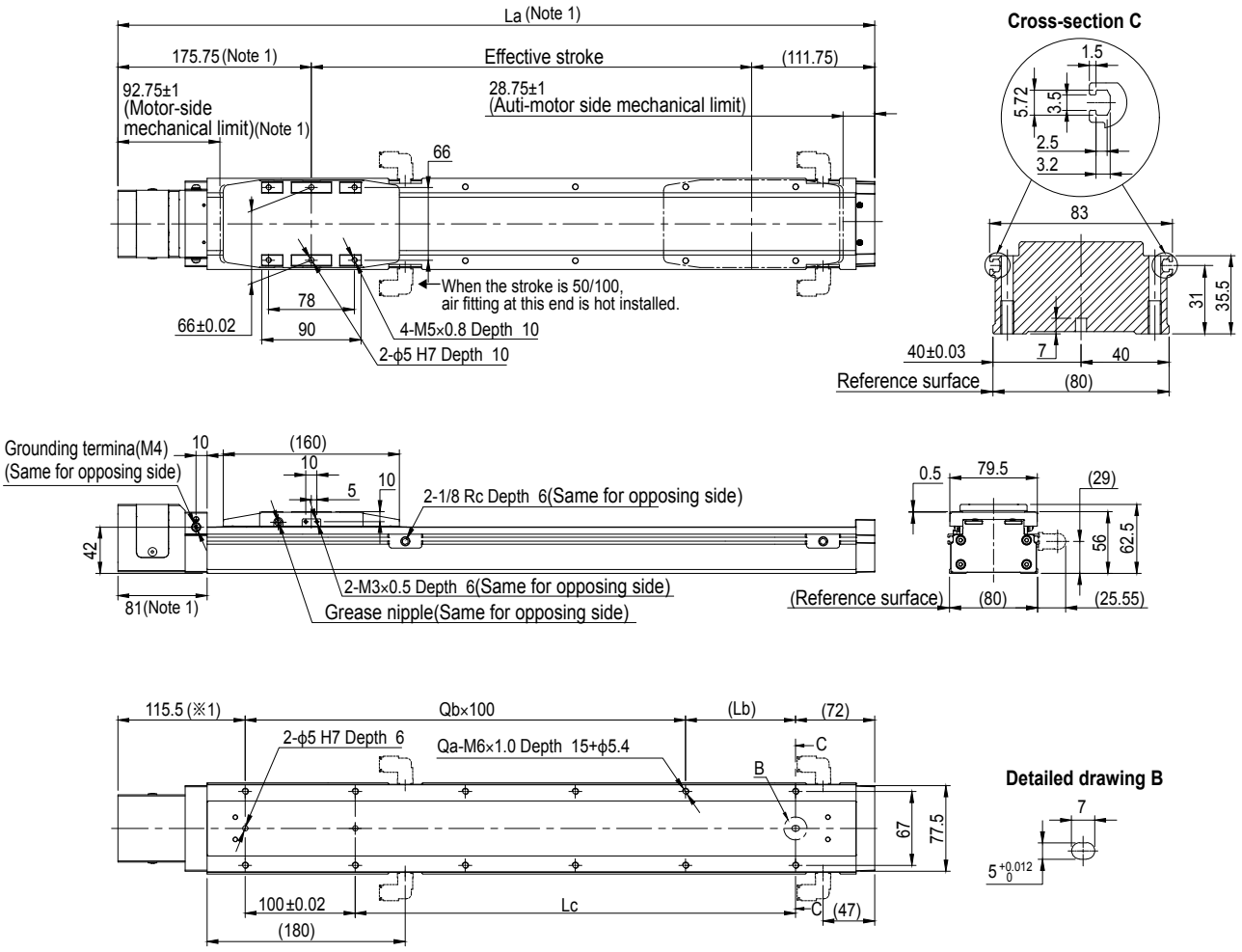
• Applicable stepping motor

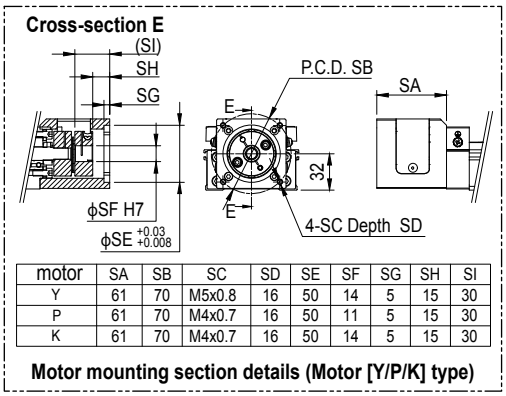
Specification	Flange size	□ 60

Motor specification	Manufacturer	Model
A	Oriental Motor	AZM66
		AZM69
		ARM66
		ARM69
		RKS56
N	NEMA standard	NEMA23

Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A and N, the parts dedicated for bending cannot be used.

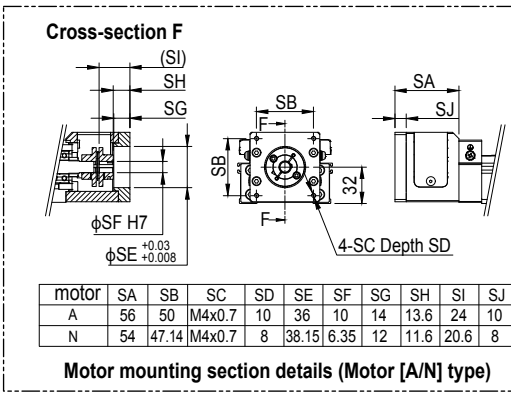
LBFS08 Straight type (S)





motor	SA	SB	SC	SD	SE	SF	SG	SH	SI
Y	61	70	M5x0.8	16	50	14	5	15	30
P	61	70	M4x0.7	16	50	11	5	15	30
K	61	70	M4x0.7	16	50	14	5	15	30

Motor mounting section details (Motor [Y/P/K] type)



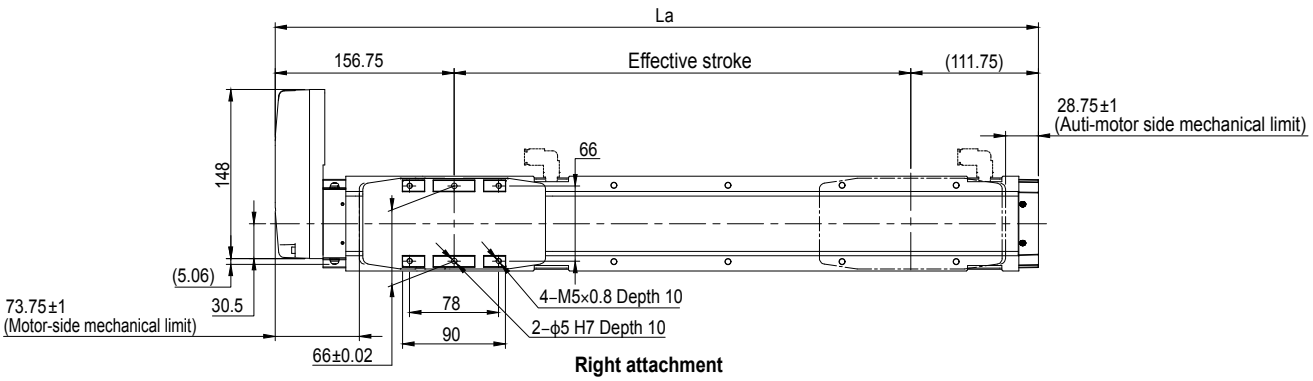
motor	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ
A	56	50	M4x0.7	10	36	10	14	13.6	24	10
N	54	47.14	M4x0.7	8	38.15	6.35	12	11.6	20.6	8

Motor mounting section details (Motor [A/N] type)

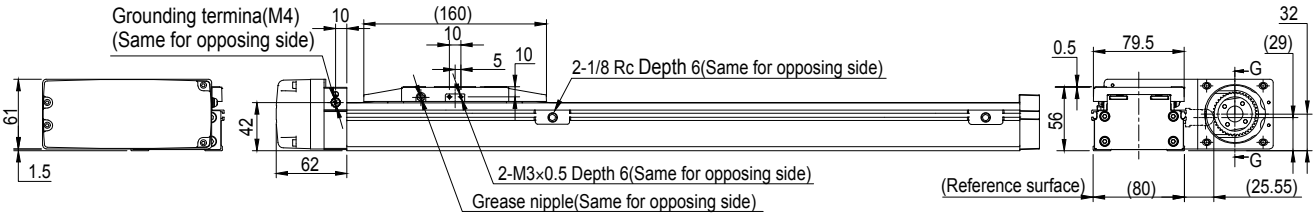
Note 1. Motor specifications: For A, the stated dimensions will be -5mm. Please refer to the specifications table for details.
Note. For the installation through hole,the length under head <<45mm or more >> is recommended for the hex socket head bolts <M5×0.8>. In the installation tap hole, the length under head <<thickness of stand +15mm or less>> is recommended for the hex socket head bolts <M6×1.0> used to install the main unit.
Note. Grease gun nozzle (recommended) Part number: KFU-M3861-00

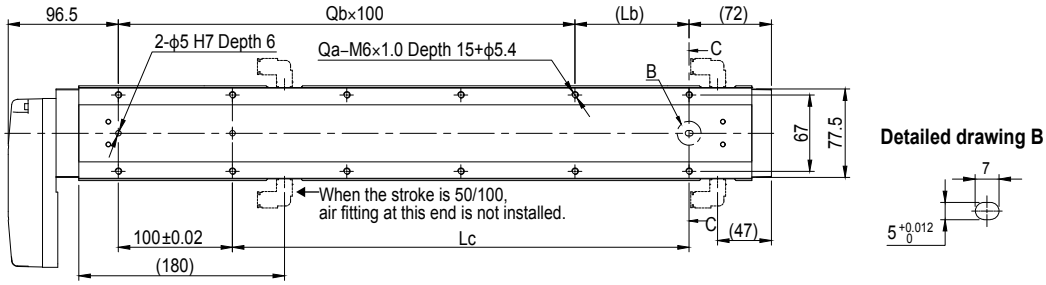
Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La		337.5	387.5	437.5	487.5	537.5	587.5	637.5	687.5	737.5	787.5	837.5	887.5	937.5	987.5	1037.5	1087.5	1137.5	1187.5	1237.5	1287.5	1337.5	1387.5	1437.5	1487.5	1537.5
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
Weight (kg)		3.25	3.52	3.79	4.06	4.33	4.60	4.87	5.14	5.41	5.68	5.95	6.22	6.49	6.76	7.02	7.29	7.56	7.83	8.10	8.37	8.64	8.91	9.18	9.45	9.72
Maximum speed (mm/sec)	Lead 24	1440												1224	1080	936	864	792	720	648	576	512	432	432	360	360
	Speed setting	-												85%	75%	65%	60%	55%	50%	45%	40%	36%	30%	30%	25%	25%
	Lead 12	720												612	540	468	432	396	360	324	288	256	216	216	180	180
	Speed setting	-												85%	75%	65%	60%	55%	50%	45%	40%	36%	30%	30%	25%	25%
	Lead 6	360												306	270	234	216	198	180	162	144	126	108	108	90	90
	Speed setting	-												85%	75%	65%	60%	55%	50%	45%	40%	35%	30%	30%	25%	25%

LBFS08 Bending type (R/L)

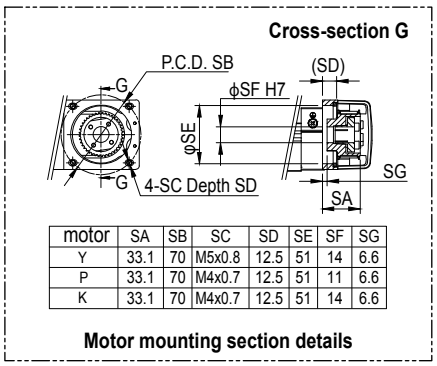


Right attachment



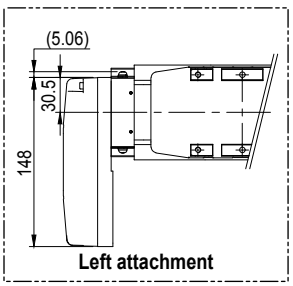


Detailed drawing B

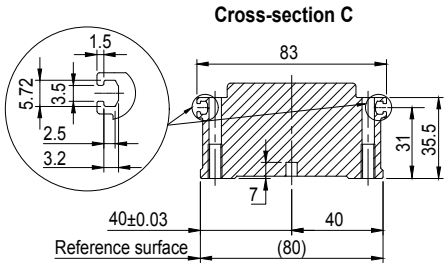


motor	SA	SB	SC	SD	SE	SF	SG
Y	33.1	70	M5x0.8	12.5	51	14	6.6
P	33.1	70	M4x0.7	12.5	51	11	6.6
K	33.1	70	M4x0.7	12.5	51	14	6.6

Motor mounting section details



Left attachment



Note. For special parts for motor installation, install and adjust on your side.Refer to your motor manual for tuning or adjustment.
Note. For the installation through hole,the length under head <<45mm or more >> is recommended for the hex socket head bolts <M5×0.8>. In the installation tap hole, the length under head <<thickness of stand +15mm or less>> is recommended for the hex socket head bolts <M6×1.0> used to install the main unit.
Note. Grease gun nozzle (recommended) Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La		318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5	1368.5	1418.5	1468.5	1518.5
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
Weight (kg)		3.06	3.35	3.63	3.92	4.21	4.50	4.78	5.07	5.36	5.65	5.93	6.22	6.51	6.80	7.08	7.37	7.66	7.95	8.23	8.52	8.81	9.10	9.38	9.67	9.96
Maximum speed (mm/sec)	Lead 24	1440												1224	1080	936	864	792	720	648	576	512	432	432	360	360
	Speed setting	-												85%	75%	65%	60%	55%	50%	45%	40%	36%	30%	30%	25%	25%
	Lead 12	720												612	540	468	432	396	360	324	288	256	216	216	180	180
	Speed setting	-												85%	75%	65%	60%	55%	50%	45%	40%	36%	30%	30%	25%	25%
	Lead 6	360												306	270	234	216	198	180	162	144	126	108	108	90	90
	Speed setting	-												85%	75%	65%	60%	55%	50%	45%	40%	35%	30%	30%	25%	25%