

Sanki

Piezo



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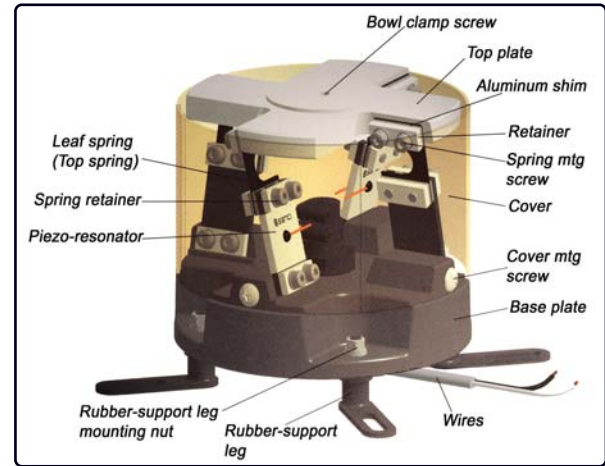
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S1101M

PIEZO BOWL TYPE FEEDERS



Sanki's PIEZO vibratory drives are suited for a wide range of applications and different bowls may be installed at any position with a center or a peripheral lock. Non-standard tooling can also be installed by drilling mounting holes in the top plate. The drive unit has no coil or iron core and is durable as well as simple in its design.



■ Dimensions ■

(Unit in mm)

Symbol	A	B	C	D	G	H	L	O
PEF-90A	90	100	100	50	175	80	M6	---
PEF-120A	120	130	115		205	110		
PEF-150A	150	160	137	---	225	130	M8	4-M5
PEF-190A	190	210	187		290	180	M12	3-M5
PEF-230A	230	260	205	330	220	M16		3-M8
PEF-300A	300	320	225	414	270		M16	3-M10
PEF-390B	390	440	252	534	380	M16		4-M10
PEF-460B	460	530	304	645	465			

■ Specifications ■

Model	90A	120A	150A	190A	230A	300A	390B	460B
Input Voltage	AC(V) 0 ~ 250							
Input Current (Standard bowl)	8	15	37	65	90	165		
Resonating Frequency *1	255	240	233	210	165	152	120	100
Spring angle (Standard)	(deg) 15							
Piezo-Resonator type	SR-1639B	SR-2443B	SR-3860B	SR-5086A1		SR-65100A1	SR-68105C	SR-80116A
Piezo-Resonator number	2			3				
Paint color	Nittoko S2-1034 for unit / Nittoko S3-309 for cover							
Unit Weight	1.7	3.3	5.3	12.3	17.8	32.6	54	105
Max. Bowl Diameter	120	150	250	310	370	500	620	760
Max. Bowl weight	0.3	0.6	2	3	5	8	14	25
Max. work weight	0.2	0.4	0.8	1.5	2.5	3	5	
Operating temperature range	(°C) 0 ~ 40							
Operating humidity range	-No condensation (%RH) 10 ~ 90							
Applicable Controller	Standard			P311				
	Feedback			P311 - F				

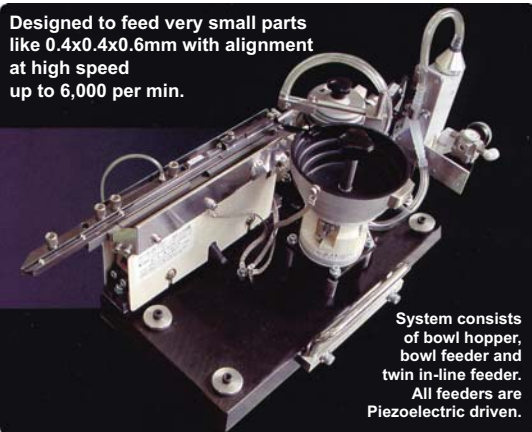
Note 1 : Varies depending on the way of bowl mounting. (Values in this table are for the system with a bare bowl.)

Note 2 : Workpiece weight is different from bowl capacity. For the capacity, see dimensions of bare bowl.

Note 3 : If the feed rate varies due to variations in workpiece weight, a feedback controller may be used to automatically correct for the condition

■ RELATED PRODUCTS ■

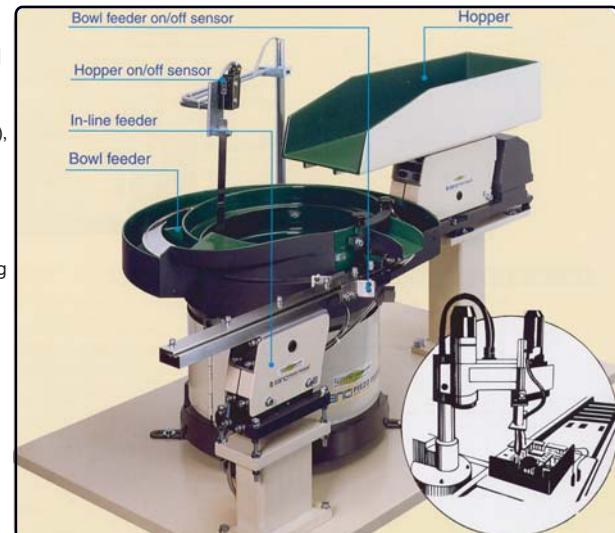
Designed to feed very small parts like 0.4x0.4x0.6mm with alignment at high speed up to 6,000 per min.



System consists of bowl hopper, bowl feeder and twin in-line feeder. All feeders are Piezoelectric driven.

■ TYPICAL LAYOUT ■

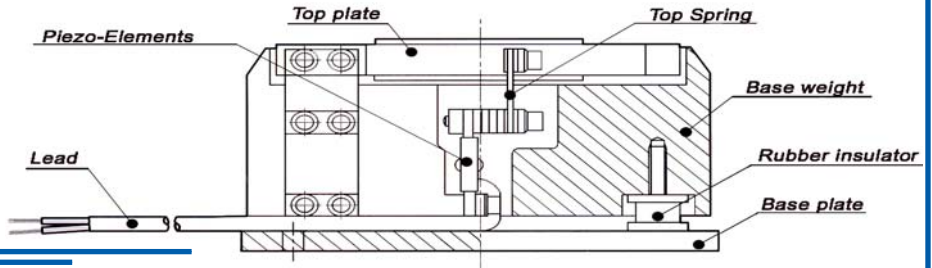
Piezo feeder systems typically consist of a hopper (to maintain proper parts volume in the bowl), a bowl feeder with parts level sensor and an in-line feeder with high level sensor. Mirai Inter-Tech is happy to provide fully tooling systems or individual components according to your needs.



PIEZO *i* - SERIES BOWL TYPE FEEDERS

■ FEATURES ■

- A base weight is provided at the cover to increase the moment of inertia. The important reactive force absorptivity further stabilizes vibration. Such stable vibration is available even at higher feed rates.
- Shorter height makes it easy to coordinate the vertical layout.
- The driving angle can be adjusted before machining. Micro-adjustment is possible according to the properties of each workpiece.



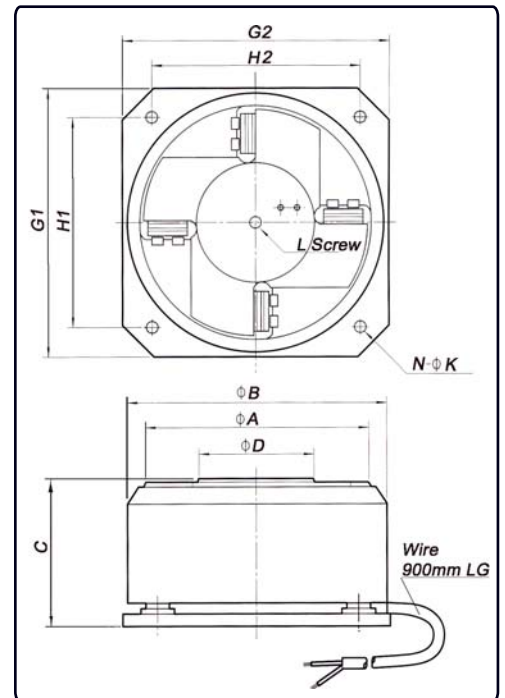
■ DIMENSIONS ■

(Unit in mm)

Model	A	B	C	D	G1	G2	H1	H2	L	N-K	Bowl Dia
PEF-110i-H	95	110	59	80	115	140	95	120	M6	3-φ10	120
PEF-150i-H	136	155	88.5	70	160	160	125	125	M8	4-φ7	150, 198
PEF-190i-H	190	214	105	90	214		PCD 180		M12	4-R3.5x20	190, 250

■ SPECIFICATIONS ■

		Standard			High freq.	Power up type	
		PEF-110i	PEF-150i	PEF-190i	PEF-150i-H	PEF-150i-3	PEF-150i-3H
Input Voltage	AC(V)	0 ~ 250					
Input Current (Standard bowl)	(mA)	10	20	60	20	20	20
Resonating Frequency *1	(Hz +/- 10 Hz)	280	200	160	245	200	245
Driving angle (Standard)	(deg)	10	15	15	15	15	15
Piezo-Resonator type		SR-1230	SR-2443C	SR-3860B1	SR-2443C	SR-2443C	SR-2443C
PIEZO-Resonator number	(pcs)	2	2	3	2	3	3
Surface paint		Nittoko S3-309 for unit / Nittoko S45-837 mat finish for baseplate					
Unit Weight	(Kgs)	2.5	6.5	11.8	6.5	6.5	6.5
Max. Bowl Diameter	(mm)	120	250	310	250	250	250
Max. Bowl weight	(Kgs)	0.5	2	3	2	2	2
Max. work weight	(Kgs)						
Operating temperature range	(°C)	0 ~ 40					
Operating humidity range	(%RH)	10 ~ 90					
Applicable Controller	Standard	P111	P111	P311	P111	P311	P311
	Feedback	P111-F	P111-F	P311-F	P111-F	P311-F	P311-F



Note 1 : Varies depending on specifications of the bowl tooling. (Values in this table are for the system equipped with a bare Sanki bowl).
 Note 2 : This workpiece weight is different from the capacity. For the capacity, see dimensions of bare bowl.
 Note 3 : If the feed rate significantly varies due to variations in workpiece weight, use a Sanki feedback controller.
 Note 4 : Each model has R (Bowl CW turning) type and L (Bowl CCW turning) types.

■ RELATED PRODUCTS ■

P SERIES DRIVE POWER CONTROLLER

A compact VVVF power supply capable of changing the voltage and frequency to any level with PWM control system. Both voltage and frequency are displayed by digital LED

FEED-BACK CONTROLLER & PIEZO SENSOR

Designed to monitor bowl vibration with an external accelerometer (see photo), and adjust the output signal to keep the feed rate consistent.

SENSOR TIMER CONTROLLER

A digital controller using a single chip micro-computer to provide on & off (with delay) and product low outputs.

HOPPER

The use of a horizontal workpiece transfer trough helps prevent bridging of the workpiece. The transfer trough is vibrated very quietly. Both Piezo and Electromagnetic hoppers are available.

SPECIALTY FEEDER SYSTEM

Drum feeders can be a compact and cost effective solution for your feeding application. They are best for small, simple parts with modest feed rate, and can be delivered quickly !

TWIN INLINE FEEDER

Used to feed parts inline and return over flow parts.

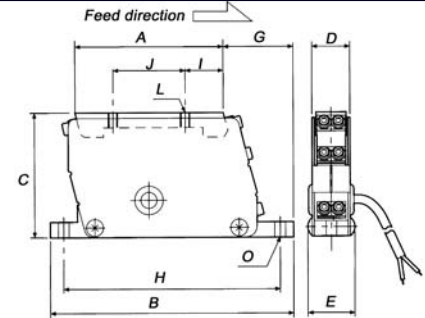
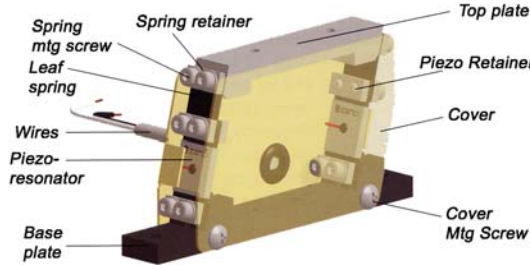
PIEZO IN-LINE TYPE FEEDERS

A wide range of in-line feeders are available from Sanki. Operating frequency can be set as high as 400Hz and vibration amplitude can be set to well under 0.02mm. The smallest drive weighs 0.25 kg in total and the largest one weighs 17 kg in total with a maximum permissible chute weight of 5 kg and maximum chute length of 700 mm. With all Sanki in-line feeders, once the controller frequency and amplitude are set there is no need to make any further adjustments. Directly mounted, intermediate spring, and rubber-support equipped types are available, and should be chosen according to the application.



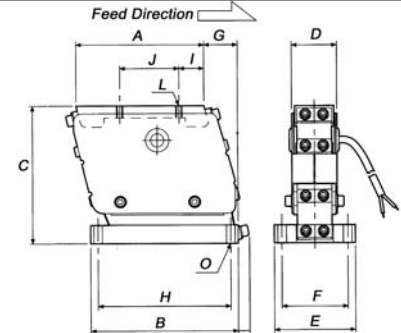
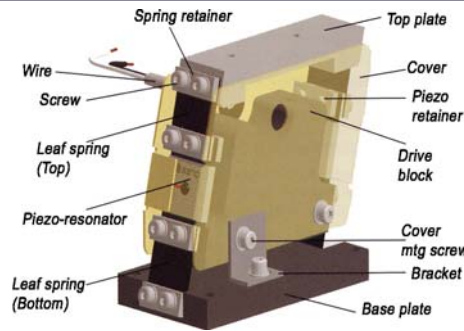
DIRECT MOUNTING TYPE

A simple construction. The highest feed rate is attainable. As the reactive force is directly transmitted to the mounting frame, however, this type is limited to compact feeders.



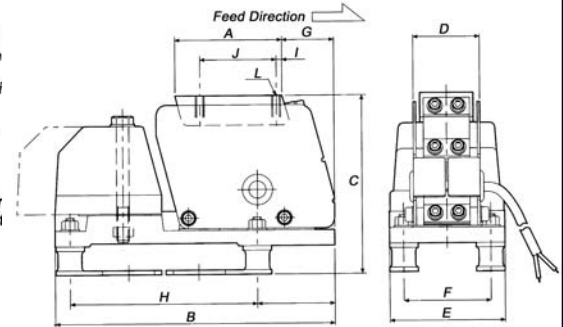
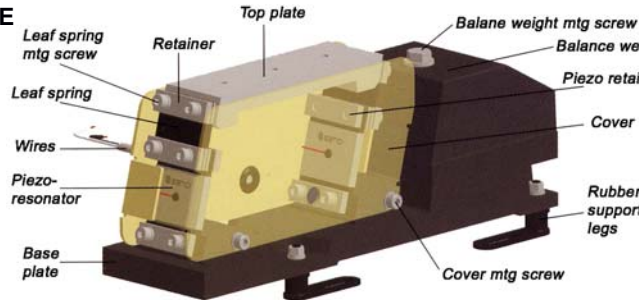
INTERMEDIATE SPRING TYPE

The feeder is installed between the drive unit and the mounting frame via an intermediate spring to reduce the reactive force applied to the frame. Capable of smoothly feeding medium and large-sized workpieces with less vibration.



RUBBER-SUPPORT LEG TYPE

The feeder is fixed to the frame with rubber supports to significantly reduce the reactive force so that minimal vibration is transmitted to the baseplate. Suitable for high-speed feeding of medium and large sized workpieces.



DIMENSIONS (Unit in mm)

Model	Symbol	A	B	C	D	E	F	G	H	I	J	L	O
PEF-L5A	type	82	135	68	21.4	26.4	---	39	120	21	40	2 X M5	---
PEF-L15A		106	165	77	29.4	34.4	---	43	145	22	50	2 X M5	2 - Dia 6
PEF-L25A	Intermediate spring type	87	100	92	31.4	55	45	23	90	17	40	2 X M4	2 - Dia 7
PEF-L60A		123	140	119	48.2	75	62	30	128	16	40	3 X M5	4 - Dia 6
PEF-L125A	Rubber-support leg type	164	192	155	61.6	100	80	40	176	23	52	3 X M6	4 - Dia 7
PEF-L30AG		56	145	92	34.4	60	45	27	97	3	40	2 X M4	4 - Dia 9
PEF-L75AG		72	175	110	48.4	75	60	33	110	12	40	2 X M5	4 - R3.5 x 20
PEF-L150AG		128	280	121	52.6	80	65	32	190	23	40	3 X M5	4 - R3.5 x 20
PEF-L200AG		170	330	155	64.6	90	70	44	220	26	52	3 X M6	4 - R3.5 x 20
PEF-L250AG		190	390	185	79.6	100	80	55	260	30	60	3 X M8	4 - R3.5 x 20

SPECIFICATIONS

Items	Model	Direct mounting type		Intermediate spring type			Rubber-support leg type				
		L5A	L15A	L25A	L60A	L125A	L30AG	L75AG	L150AG	L200AG	L250AG
Input Voltage	AC(V)	0 ~ 250									
Input Frequency	(Hz)	60 ~ 300									
Input Current	(mA)	5	8	8	17	24	7	13	20	30	41
Resonating Frequency	(Hz +/- 10 Hz)	160	135	130	110	86	182	158	110	105	75
Drive Type		Piezo-resonator									
Max. Overall Chute Length	(mm)	200	250	300	350	500	300	400	500	600	700
Max. Chuhite Width	(mm)	15	20	22	33	45	20	34	45	48	50
Max. Chute Weight	(Kgs)	0.2	0.3	0.5	1.2	2.5	0.6	1.5	3.0	4.0	5.0
Operating temperature range	(C)	0 ~ 40									
Operating humidity range	(%RH)	10 ~ 90									
Paint color		Nittoko S2-1034 for uunit / Nittoko S3-309 for cover									
Weight	(Kgs)	0.5	0.8	1.4	3.8	9	2	3.5	7	13	18
Applicable Controller	Standard	P111			P311		P111			P311	
	Feedback	P111-F			P311-F		P111-F			P311-F	

PRESENTED BY:

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