

# Applications of Uras Vibrators to Hoppers and Chutes

## Anti-bridging for hoppers

By installing Uras vibrators to the walls of hoppers, bridging can be prevented.

The results vary in accordance with the characteristics of the powder being processed, the model, quantity, position, and operating method of the vibrators being used.

## Recommended Vibrators for Conical or Square Hoppers Without Reinforcements.

Select a Uras vibrator model from the following table based on the thickness (t) of the hopper wall. These are constructions with welds reduced to a minimum.

The peak to peak amplitude at the center of the installed Uras vibrator is 0.3mm to 0.5 mm.

Refer to the following table for the thickness (t) of the hopper and make the necessary adjustments.

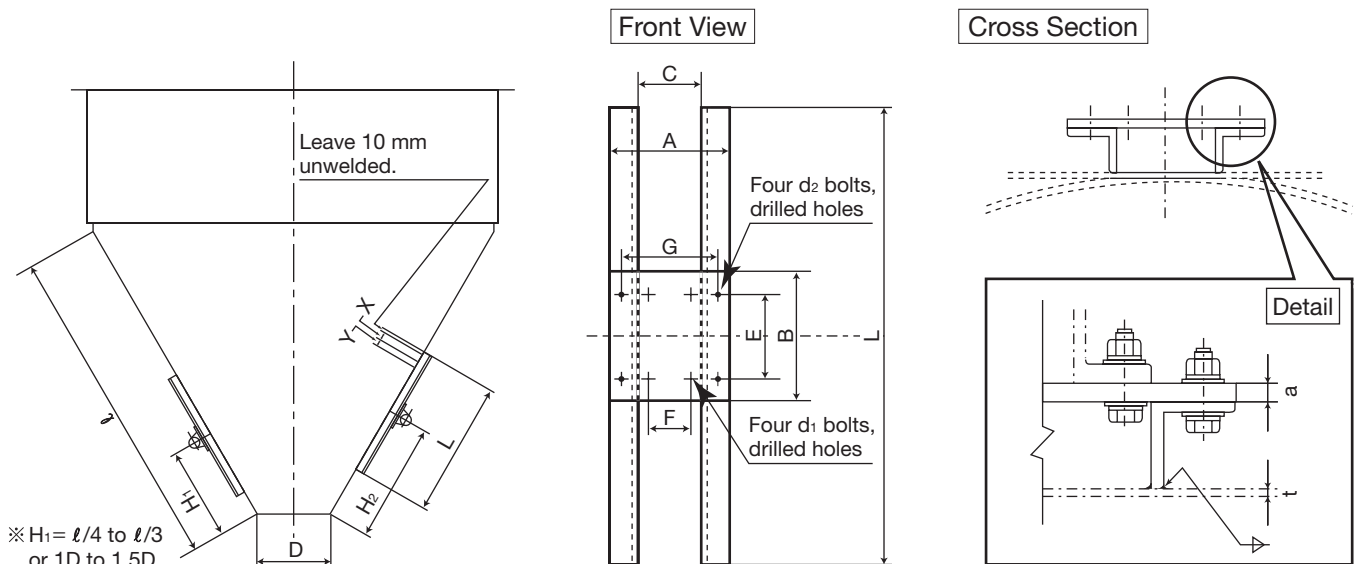
Units: L=m, Others=mm

Uras Vibrator Model	Angled Steel Base Dimensions	Hopper Wall Thickness (t)	E	F	G	A	B	C	L(m)	a	d <sub>1</sub>	d <sub>2</sub>	X	Y	Bolt Size d <sub>1</sub>	Bolt Size d <sub>2</sub>
KEE-0.5-2C	30×30×3	1.6~2.3	120	40	90	120	150	60	0.5~0.7	6	10	10	75	50	8×30	8×30
KEE-1-2C	30×30×5	2.3~3.2	120	40	90	120	150	60	0.6~0.8	6	10	10	75	50	8×30	8×30
KEE-2-2C	40×40×5	3.2~4.5	120	40	100	140	150	60	0.7~1.0	9	10	10	75	50	8×35	8×35
KEE-3.5-2B	50×50×6	4.5~6	150	90	170	220	190	120	0.8~1.2	12	14	14	75	50	10×40	10×40
KEE-6-2B	65×65×6	6~9	190	110	210	275	240	145	0.9~1.3	12	18	18	75	50	16×55	16×55
KEE-10-2B	75×75×9	9~12	220	120	240	315	280	165	1.1~1.5	16	22	22	100	80	20×60	20×60
KEE-16-2	90×90×10	12	240	140	280	370	310	190	1.2~1.6	16	26	26	100	80	24×80	24×70
KEE-23-2	100×100×13	16	260	150	300	400	330	200	1.4~1.8	19	26	26	100	80	24×80	24×70
KEE-30-2	130×130×15	16~19	310	170	370	500	390	240	1.4~1.8	22	33	33	150	100	30×100	30×90
KEE-40-2	150×150×15	19~22	350	220	450	600	440	300	1.5~2.0	25	39	39	150	100	36×120	36×100

Note 1. When installing two or more of the vibrators to one hopper, they (H<sub>1</sub> and H<sub>2</sub>) must be separated by a minimum of 100mm.

- Before welding the angled steel base to the hopper, temporarily secure the base and ensure that it is flat.
- Always use a spring washer, a plain washer and a nut when fastening a bolt.
- Use 8T bolts (chromium molybdenum steel) when installing the Uras KEE-2-2C.

## Assembly and Installation of an Angled Steel Base

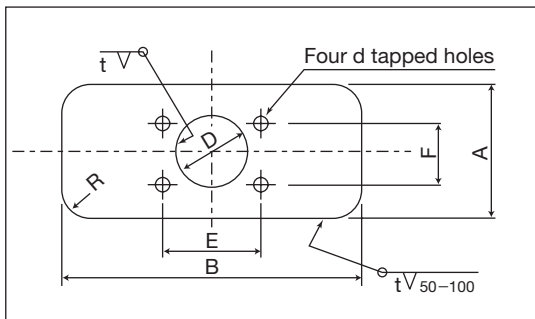


## Recommended Vibrators for Compact Hoppers and Chutes

Units=mm

Even when using Uras vibrators with compact hoppers and chutes, Murakami recommends the use of an angled steel base. Refer to the previous table for recommended sizes. If space is restricted use a base that meets the specifications shown in the following table.

Uras Vibrator Model	Hopper Wall Thickness (t)	Base Plate Dimensions	Base Plate Thickness	E	F	A	B	D	R	Tapped Hole Size
KEE-0.5-2C	1.2~2.3	75×300	12	120	40	75	300	40	30	8
KEE-1-2C	2.3~3.2	90×400	12	120	40	90	400	40	30	8
KEE-2-2C	3.2~4.5	200×500	16	120	40	200	500	80	40	8
KEE-3.5-2B	4.5~6	220×500	16	150	90	220	500	120	50	12
KEE-6-2B	6~9	250×550	22	190	110	250	550	140	60	16
KEE-10-2B	9~12	300×600	25	220	120	300	600	150	60	20



### Support Wire (optional)

A wire to prevent the vibrator from falling is available for use with Uras vibrators on hoppers. When ordering a wire, inform the Sales representative the model of the Uras vibrator being used.

