# Hopper scales

Reliable accuracy



Advanced weighing and dosing systems for static, dynamic, and continuous weighing.





### Reliable accuracy

## **Hopper scales**

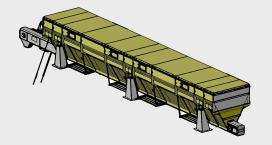
Type JesHopper - efficient and reliable charge weighers.

The hopper scales are designed and constructed to accommodate the demand for optimum operational reliability in modern process industries. With the JesHopper scale it is possible to dose large batches. The hopper scales are designed for quick, precise, and reliable intake- and outloading of material such as grain and feedstuff.

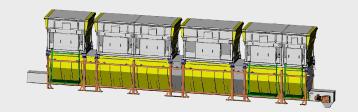
All Jesma's hopper scales are designed and supplied with a modular construction, securing easy transport and a high degree of flexibility. In addition, the hopper scale can be extended without any mayor rebuilds if it later proves necessary.

#### Our standard range of hopper scales handles capacities from 200-10.000 kg.

Jesma offers the following type of hopper scales:



Single hopper scale type: Single JesHopper



Double hopper scale type: Double JesHopper

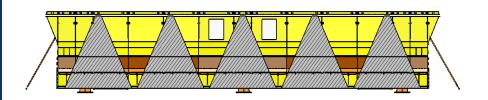
#### A standard JesHopper construction

- Modular sectional design, adapted to customer requirements.
- Constructed in St. 37.2
- Integrated calibration platforms
- Intermediate plate above chain conveyor\* for even distribution of material and efficient and reliable emptying.
- With canvas seal between cover and weighing bin, and after-bin for the double hopper version.
- Lid (cover) ready for connection of feeding devices.

<sup>\*</sup>The scales are as standard supplied for mounting of customer chain conveyor, however Jesma can offer the chain conveyor according to customer and project requirements.

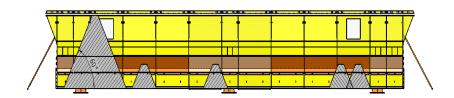
## Optimum filling of a JesHopper

With optimum feeder locations and identical batch sizes it is possible to install a high capacity scale in the shortest possible space.



## Uneven filling of a JesHopper

At variations in the individual charge size and the location of the feeders it can be necessary to extend the length of the hopper scale.

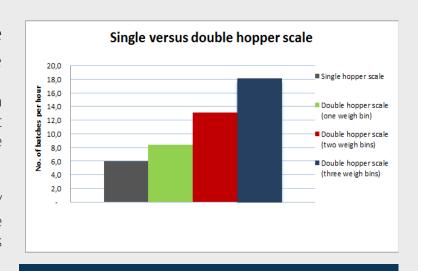


## The difference between a single hopper and double hopper Scale

The main difference between a single- and a double hopper scale is the possibility to start the weighing of a new charge, before the chain conveyor is empty.

The double JesHopper has a higher batch/ hour capacity, as the construction allows the weighing bin to be filled while the previous batch is being emptied.

To further increase the number of charges / hour the double hopper scale can be divided into 2 or more weighing bins, which allows simultaneous feeding from several dosing devices at the same time.



The graph shows the increase in number of charges with the different hopper scale models.

The calculations based on the following specifications: batch size: 3,5 t and 6 components/batch.

## Selecting your JesHopper

Weighing capacity, number of products and the location of the feeder outlets are key elements when selecting your Jeshopper.

To find the best suitable JesHopper several operational details are considered:

- What are the sizes of the individual batches?
- How many charges are planned per hour?
- How many components are included in each charge?
- What are the densities of the material?
- Which length do you need?
- What is the location of the feeding devices?
- What are the sizes and the filling speeds of the feeders?
- What type of chain conveyor is used, and what is the capacity?

The length of the scale is designed according to the location of the feeders and the filling from each of these.

\*The double hopper scale from Jesma can be supplied in a low height version.



## Reliable accuracy

## JesHopper® single

#### Single hopper

The hopper scale type JesHopper is a moduarly designed single hopper scale, it is constructed to meet the demands for optimum operational reliability in moderne process industries.

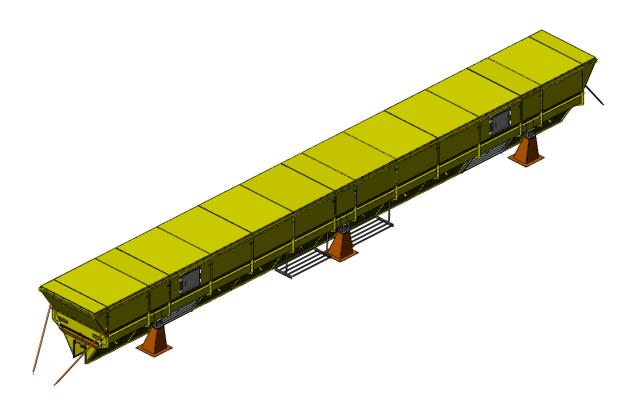
- Intelligent modular design with weighing bin mounted on load cells.
- Sections in increments of 600 mm.
- High flexibility and easy extension of the scale.
- Easy calibration, as test platforms are included.

#### The weighing process

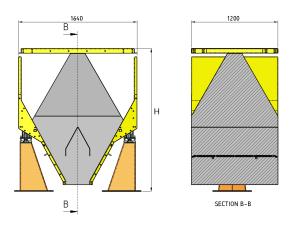
Material is filled using dosing devices through the lid, when reaching the desired amount of material/product, the scale is emptied by the chain conveyor in the bottom of the weigh bin.

When the charge is removed from the bin, the next charge can be initiated.

Available prepared for an client chain conveyor, or offered as a complete unit including chain conveyor.



#### Capacity of the scale



Capacity (kg)	Accuracy (kg)	Height (mm)
1500	+/- 0,5	1800
3000	+/- 1,0	2200
5000	+/- 1,5	2500

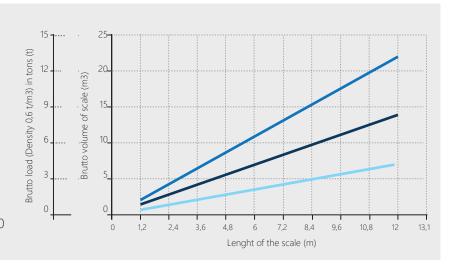
The table includes guiding examples of capacities for the single JesHopper. Length is determined based on capacity requirements and placement of feeding devices.

Final measurements are preliminary and subjectable to change during the construction phase.

The given capacity is at a uniform filling with one filling point for each 1800 mm. Furthermore, the filling must be equally divided between the filling points. Otherwise the capacity reduces accordingly.

Calculated with a density of 0.6 kg/l Brutto volume of the scale measured in m3.

Size: 1500 Size: 2000 Size: 2500



#### Required emptying capacity (T/H)

	Kilo/charge												
		200	400	600	800	1000	1500	2000	2500	3000	3500	4000	5000
	1	1	1	2	2	3	5	6	8	9	11	12	15
	2	1	2	4	5	6	9	12	15	18	21	24	30
	3	2	4	6	7	9	14	18	23	28	32	37	46
	4	3	5	7	10	12	19	25	31	37	43	49	62
٦	5	3	6	9	12	16	23	31	39	47	54	62	78
, hour	6	4	8	11	15	19	28	37	47	56	66	75	94
Jes/	7	4	9	13	18	22	33	44	55	66	77	88	110
Charges/	8	5	10	15	20	25	38	51	63	76	89	101	126
0	9	6	11	17	23	29	43	57	72	86	100	115	143
	10	6	13	19	26	32	48	64	80	96	112	128	160
	11	7	14	21	28	35	53	71	89	106	124	142	177
	12	8	16	23	3	38	58	78	97	117	136	156	194
	13	9	17	25	34	42	64	85	106	127	148	170	212
	14	9	18	28	37	46	69	92	115	138	161	184	230
	15	10	20	30	40	50	74	99	124	149	173	198	248



### Reliable accuracy

## JesHopper® double

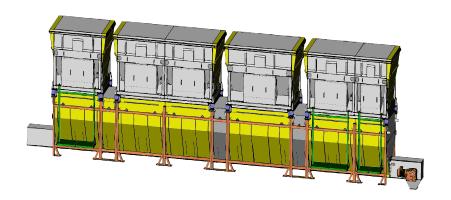
#### Double hopper

The hopper scale type JesHopper is designed and constructed to accommodate the demand for high batch capacities in the modern process industries.

The combination of a weighing bin and after-bin allows the weighing to happen, while the previous batch is being emptied.

Together with a sturdy construction the JesHopper provides market leading batch capacities and gives you a reliable, efficient, and accurate weighing system.

- Intelligent modular design with weighing bin mounted on load cells.
- Sections of 1800 and 2400 mm.
- Easy calibration, as platforms are included.
- The capacity of the JesHopper EEB can be increased by dividing the weighing bin into 2 or more sections.

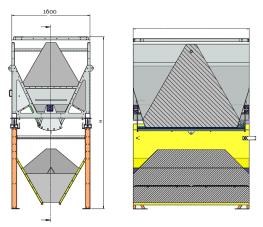


#### The weighing process

The products are added successively from the feeders, and when the final charge is achieved, the material is released into the after-bin through the integrated and pneumatically operated slide system. When the slide system is closed the next charge can be dosed while the previous charge is emptied from the after-bin.

Available prepared for an client chain conveyor, or offered as a complete unit including chain conveyor.

#### Capacity of the scale



<sup>\*</sup> all measurements are guiding only.

Capacity (kg)	Accuracy (kg)	Height (mm)
3.000	+/- 0,5	3500
5.000	+/- 1,0	3850
10.000	+/- 1,5	3900

The table includes guiding examples of capacities for the double JesHopper. Length, is determined based on capacity requirements and placement of feeding devices.

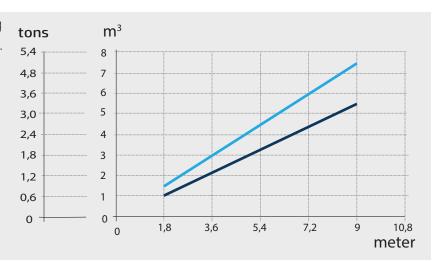
Final measurements are preliminary and subjectable to change during the construction phase.

The given capacity is at a uniform filling with one filling point for each 1800 mm. Furthermore the filling must be equally divided between the filling points. Otherwise the capacity is reduced accordingly.

Calculated with a density of 0.6 kg/l Gross volume of the scale measured in m3.

Size: D3000 Size: D3500





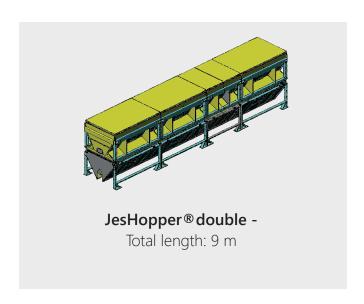
#### Required emptying capacity (T/H)

Kilo/charge											
_		1000	2000	3000	4000	5000	6000	7000	8000	9000	10.000
	5	8	15	23	30	38	45	53	60	68	75
	6	9	18	27	36	45	54	53	72	81	90
	7	11	21	32	42	53	63	74	84	95	105
	8	12	24	36	48	60	72	84	96	108	120
	9	14	27	41	54	68	81	95	108	122	135
hour	10	15	30	45	60	75	90	105	120	135	150
/s/ h	11	17	33	50	66	83	99	116	132	149	165
Charges/	12	18	36	54	72	90	108	126	144	162	180
Cha	13	20	39	59	78	98	117	137	156	176	195
	14	21	42	63	84	105	126	147	168	189	210
	15	23	45	68	90	113	135	158	180	203	225
-	16	24	48	72	96	120	144	168	192	216	240
	17	26	51	77	102	128	153	179	204	230	255
	18	27	54	81	108	135	162	189	216	243	270
	19	29	57	86	114	143	171	200	228	257	285
	20	30	60	90	120	150	180	210	240	270	300

## **Example of JesHopper**















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