Maschinen für die Hutindustrie

BAHNER Sand Bag Press Type 322

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Final shape and position is mostly given to the hat bodies by sand-bagging. This operation is an ironing process with the aid of pressure and heat.

The following is a description of the different designs of sand bag presses we manufacture, with their advantages and disadvantages. Please study this booklet thoroughly and compare the various designs before selecting the design you prefer, in order to enable us to supply you with the type of sand bag press which will best fill your special production requirements.

Heating of Sand Bags

a) <u>With steam (saturated steam of 3 atue)</u>

The sand bags are put on a steam-heated plate and heated up. The sand bag plates we deliver are electrically welded from steel. They are delivered for a normal working pressure of 3 atue, however, are tested for 6 atue, according to safety regulations.

The steam temperature is depending on the respective steam pressure:

Bar g	Bar abs.	Temperature
0	1	99,09 centigrade (°C)
0,25	1,25	104,8 centigrade (°C)
0,5	1,5	110,79 centigrade (°C)
1	2	119,62 centigrade (°C)
1,5	2,5	126,79 centigrade (°C)
2	3	132,88 centigrade (°C)
2,5	3,5	138,19 centigrade (°C)
3	4	142,92 centigrade (°C)

From this scale you will see that the required temperature degree for sand-bagging is reached at 2,5 to 3 atue.

This method of sand-bagging is still being used. It is very economical since most hat factories have sufficient steam at their disposal. Large sand-bags can be chosen. They are flexible and adjust ot the brim of the hat very easily. Thus even heavy-bent brims can be flatted out. The disadvantage to this method of sand-bagging is that part of the sand bags are in the process of being heated up at all times and thus cannot be used for the actual work, i.e. for sand-bagging. The machine, therefore, needs much space.

b) <u>Electrically</u>

This above mentioned disadvantage has led to the method of heating the sand bags electrically. This can be done with the aid of heating-wires. The disadvantage to this is, however, that heating of sand

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bags can only be done at a low-voltage of 42 volts according to safety regulations, meeting local codes and standard.

The electrically heated sand bags we deliver are heated by special heating wires, using an alternating current AC of 42 Volts. With this sand bag the temperature can be adjusted higher regulating from 20 – 100°C. This is often regarded an advantage. The output is about double as high since the sand bag does not require any resting time during which it is being heated up. Many hat factories, for this reason, are choosing this method of heating the sand bags and accept the fact that the electrically heated sand bags are subject to wear and tear. It is not as flexible as indirect heated sand bags due to the inter-woven thin heating wires. The ironing effect, however, is excellent. The hat is ironed completely in one operation, at a relatively high temperature.

Heating: Primary 220 volts AC transformed to secondary 42 volts as standard. Primary 110 V AC transformed to secondary 42 volts as option.

Design of Sand Bag Presses

The steam-heated sand bag presses have been designed a vertical models.

The electrically heated sand bag press, on the other hand, can be supplied a s vertical model.

Lifting and Lowering the sand bag

The sand bag can be lifted and lowered different ways

a) <u>By Hand</u>

Floor model, steam-heated (can also be delivered with sand bags electrically

1. Handy table model (can only be delivered electrically heated)
2. Quick and easy operation
3. No dead time for the heating-up of sand bags on the heating plate
4. Heating-up of sand bags electrically
5. Temperature adjustment by electrical valve
6. Does not require much power and space
7. Suitable for use in the hat manufacturing as well as in the retail business
   You do not depend on an energy source, however, you have to use remarkable energy to lift the sand bag. You, therefore, are limited in the weight of sand bags.

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b) Pneumatically

Floor model, steam-heated (can also be delivered with sand bags heated electrically).

The sand bag press with pneumatic sand bag lifting device lifts extremely easily even the heaviest of sand bag weights. It can be considered the most universal machine. However, there must be on hand a pneumatic system always which supplies compressed air to the machine.

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The normal air pressure is 6 atue.

If desired, the machine having electrically heated sand bags can be provided with an automatic lifting device. Thus you will be able to exactly control the time during which the sand bag rests on the hat, ironing it. The time for this can be steplessly adjusted from 5 to 600 seconds, as required.

Additional Steaming Device for Sand-Bagging

Normally, the front part of the sand bag press is designed as a wooden table. On request, this table can be designed as a steel-plate made of rust- and acid-resistant steel sheet. In the middle of the steel sheet plate there will be a round hole into which a steam nozzle is built-in- The hat, at this place, can be steamed by foot pedal operating. It is of advantage, for different kinds of work, or different brim shapes (brim positions) respectively, to have this additional steaming device available

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Measurements and Weight of Sand Bag Presses

Type	Description	Number of Sand Bags	Kind of Handling	Type of Heating	Dimensions in mm / inch			Measurements of Crating mm/inch			Weight in kg/lbs w/o Sand		Plus Weight of Sand for 1 Sand Bag kg / lbs	Remarks
					Length	Width	Height	Length	Width	Height	net gross	seaworthy		
1-322	Sand Bag Press, Tabel Model	1	Hand	electrically	750 / 29,5	750 / 29,5	1500 / 59,1	900 / 35,4	900 / 35,4	1400 / 55,1	48 / 105,82	110 / 242,51	35-40 / 77,16-88,18	State AC on order. Measurements and weights w/o table
322	Sand Bag Press with Segment Lifting Device	2	Hand	steam	1300 / 51,2	900 / 35,45	2500 / 98,4	1500 / 59,1	1100 / 43,1	1000 / 39,4	350 / 771,62	450 / 992,08	40 / 88,18	**Steam-heated:** 3 Atue Service Pressure. **Electrically-Heated:** Please state AC-voltage
				electrically							370 / 815,71	470 / 1036,17		
322	Sand Bag Press with Segment Lifting Device	3	Hand	steam	1800 / 70,9	900 / 35,4	2500 / 98,4	1950 / 76,8	1100 / 43,1	1000 / 39,4	500 / 1102,31	630 / 1388,91	40 / 88,18	
				electrically							530 / 1168,45	660 / 1455,05		
322	Sand Bag Press with Segment Lifting Device	4	Hand	steam	2200 / 86,6	900 / 35,4	2500 / 98,4	2350 / 92,6	1100 / 43,1	1000 / 39,4	600 / 1322,77	720 / 1587,33	40 / 88,18	
				electrically							640 / 1410,96	760 / 1675,51		
322	Sand Bag Press with Segment Lifting Device	5	Hand	steam	2500 / 98,4	900 / 35,4	2500 / 98,4	2650 / 104,3	1100 / 43,1	1000 / 39,4	700 / 1543,24	820 / 1807,79	40 / 88,18	
				electrically							750 / 1653,47	870 / 1918,02		
2-322	Sand Bag Press Pneumatic Lifting Device	2	Compressed Air	steam	1500 / 59,1	1000 / 39,4	2500 / 98,4	1600 / 63,0	1150 / 45,5	2600 / 102,4	340 / 749,57	440 / 970,03	50-60 / 110,23-132,28	**Steam-heated:** 3 Atue Service Pressure. **Electrically-Heated:** Please state AC-voltage **Compressed Air:** approx 300 ltr / min. for 4 places, 6 Atue Service Pressure
				electrically							360 / 793,66	460 / 1014,13		
3-322	Sand Bag Press Pneumatic Lifting Device	3	Compressed Air	steam	2100 / 82,7	1000 / 39,4	2500 / 98,4	2000 / 78,7	1150 / 45,5	2600 / 102,4	455 / 1003,1	585 / 1289,7	50-60 / 110,23-132,28	
				electrically							185 / 407,86	715 / 1576,31		
4-322	Sand Bag Press Pneumatic Lifting Device	4	Compressed Air	steam	2600 / 102,4	1000 / 39,4	2500 / 98,4	2700 / 106,3	1150 /45,5	2600 / 102,4	560 / 1234,59	590 / 1300,73	50-60 / 110,23-132,28	
				electrically							600 / 1322,77	820 / 1807,79		

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Sand Bag Press Type 322 - pneumatically operated

The sand bag press is of very sturdy construction, completely electrically welded, from steel sheet, and consists basically of a heating plate which is heat-insulated underneath. A wooden table is attached in fron of the heating plate, at the same level as the plate itself. The sand bags are lifted by pneumatically operating cylinders. The hat is put on the aluminium block. The operator's left hand, then, moves it underneath the sand bag, the operator´s right hand at the same time is operating the pneumatic valve. With the aid of the pneumatically operating cylinders., all weights of sand bags, even the heaviest, can be lifted up and let down easily. The sand bags are braked off smoothly while they are lifted towards the top or let down towards the bottom, thus avoiding any heating are vibration of the machine.

The illustration shows the sand bag press provided with a steam-heated heating plate. The normal steam pressure is 3 atue. Prior to delivery of the sand bag press, the heating plate is tested to 6 atue (according to safety regulations). At a steam pressure of 3 atue the temperature is 143 centrigrade (°C). Experience has shown that this temperature is high enough for sand-bagging.

The sand bag presses are delivered complete, including sand bag tensioning device, sand bag tensioning device, sand bags, and sand filling. If the order is for a sand bag press with steam-heated heating plates, we also deliver a safety valve if so desired by the customer. This safety valve is tested to 3 atue. The sand bag press can also be supplied with a plate of rust- and acid-resistant steel sheet to replace the wooden table in front of the heating plate. In this case, a steaming device is attached in the middle of this pre-built steel plate. This device is operated by a foot pedal. Thus, you can steam once more in addition, which may be suitable for certain operations.

The sand bag press can also be delivered with electrically heated sand bags, upon request by the customer. In this case, a transformer in installed at each individual sand bag unit. It supplies the electrically heated sand bag with low-voltage heating current.

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Technical Data

	2 heads	3 heads	4 heads
Measurements			
Lenght	1400 mm	2000 mm	2530 mm
	55,1 inch	78,7 inch	99,6 inch
Width	1000 mm	1000 mm	1000 mm
	39,4 inch	39,4 inch	39,4 inch
Height	2530 mm	2530 mm	2530 mm
	99,6 inch	99,6 inch	99,6 inch
Dimensions of seaworthy packed case			
Lenght	1600 mm	2200 mm	2700 mm
	63 inch	86,6 inch	106,3 inch
Width	1200 mm	1200 mm	1200 mm
	47,2 inch	47,2 inch	47,2 inch
Height	2400 mm	2400 mm	2400 mm
	94,5 inch	94,5 inch	94,5 inch
Weight			
Net	340 kg	455 kg	560 kg
	749,57 lbs	1003,1 lbs	1234,59 lbs
gross	410 kg	525 kg	660 kg
	903,9 lbs	1157,43 lbs	1455,05 lbs

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