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rationel kornservice



SAMPLE CLEANER

rationel SLN3

MANUAL

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FUNCTIONAL DESCRIPTION

A sample cleaner for cleaning and grading by size as a means of selecting grain for seed, malting, feed ect.

The deawner bottom gate is closed and the pre weighed sample fed into the deawner. The lid (pos. 2) is closed and the machine starts when the knob (pos. 1) is pushed into pos. ON. After 0 - 60 sec. (adjustable) the deawner automatically discharges the sample on to the top screen (pos. 12). The light waste is air lifted into the cyclone and deposited into the plastic bag (pos. 16).

The grain passes through the top screen and the large impurities are carried over. The grain is then carried over the second screen (pos. 13). Grain is then returned to the lower grading screen. The grading screen is kept clean by rubber balls. The prime material (good grain) feeds into the right hand collecting tray (pos. 6). The undersize grain feeds into the left-hand tray (pos. 5). The sand, weed and large impurities are feed into a third collecting tray on the left-hand side of the cleaner (pos. 15).

INSTALLATION

Delivery consists of:

1 PCs Sample cleaner mod. SLN 3 with standard sieves for malting barley.

Top sieve.... 4,5 x 20 mm perforation.

Second sieve 1,5 x 3,5 + 2,0 Ø mm perforation.

Third sieve (grading sieve) 2,5 x 20 mm ISO 5223

Top and second sieve 300 x 350 mm.

Grading sieves 300 x 470 mm.

5 PCs Plastic trays of uniform weight.

1. Unpack the sample cleaner, check for transport damage and make sure that all the items are delivered.
2. The cleaner must be installed horizontally to ensure even distribution of kernels on the sieves.
3. Be sure to have the cleaner positioned at a comfortable working height. (Table 60 - 65 cm. above floor.)
4. Turn switch (pos. 1) to off position.
5. Check that power supply conforms to specification on sample cleaner 230 V + PE, 50 HZ, or as ordered.
6. Connect to power supply. The noise reducing front cover should be closed during operation.
7. If there is any active suction of air from above the cleaner, be careful not to influence the outlet of the cyclone, distance must be a minimum of 40 cm.

OPERATION

Cleaning and grading of sample

1. Place 2 of the plastic trays in position, just beneath the outlet of the small and prime grains (pos. 5 and 6.) Place a third plastic tray at the left side outlet (pos. 15).
2. Always use an airtight plastic bag on the cyclone outlet and attach it using the spring clip (pos. 16).
3. Check the setting of the airflow and outlet feeding rate regulator (pos. 10 and 4) and that the sieves conform to the product that is to be cleaned and graded. (See recommended settings page 5) Set the deawner time on the potentiometer (pos. 17). Adjustable from 1 - 6. 0 = immediately, 1 = 10 seconds, 2 = 20 seconds.
4. Place an empty tray on an appropriate balance and tare the balance and weigh 1-kg sample (If using a % balance fill in approx. 1 kg.)
5. Close the deawner bottom by pushing the handle (pos. 3).
6. Open the deawner lid (pos. 2) and pour in the sample.
7. Close the lid (pos. 2)
8. Press switch pos. 1 to ON position and the cleaning will start. If no deawning is desired, the outlet can be manually opened by pushing the right switch (pos. 1) to pos. Man.
9. After the required deawning time the outlet (pos. 3) is automatically opened.
10. After completed cleaning lift cover (pos. 2).
11. The good grain and the undersized grain are weighed and % impurities calculated. (% balance read)
12. Check that sieves are kept clean. If necessary sieves can be cleaned with a brush or by light knocking with a stick on the two upper sieves (pos. 12 and 13).

Changing of sieves

1. Push switch (pos. 1) to OFF position.
2. Lift the two springs on front of sieve to upright position and pull the sieve out.
3. Push in the new sieve with the smooth surface upwards. On the upper sieve the non-perforated edge to front of cleaner, the second sieve with the non-perforated edge to rear of cleaner.
4. On the grading screen (pos. 14), lift the Plexiglas cover and pull out the sieve. Push in the new sieve with the non-perforated towards the rear and the smooth surface up.
5. Move down the springs and lock.

RECOMMENDED SIEVES AND SETTINGS

Product	Top sieve	Second sieve	3.grading sieve	Air	Outlet
Grain	4,5 x 20,0	1,5x3,5/2,0 Ø	See page 5	7-10	6
Malting barley	4,5 x 20,0	1,5x3,5/2,0 Ø	2,5 x 20	7-10	6
S. rape	2,8/3,0 Ø	Blind sieve	1,0 x 20	5	1
W. rape	3,0 Ø	Blind sieve	1,0/1,25 x 20	6	1-2
Linseed	No sieve	1,8/ 2,0 Ø	1,8/2,2 x 20	3-5	1-2
Maize	11,0/12,0 Ø	4,5 Ø	6,0 Ø	15	10-12
Peas	9,0/10,0 Ø	Blind sieve	3,0/3,5 Ø	15	8-10
	9,0/10,0 Ø	3,0/3,5Ø	4,5 x 20		
Beans	11/13 Ø	Blind sieve	3,5 x 20	15	10-12
Sunflower.	10/12 Ø	Blind sieve	2,0/2,5 x 20	7-9	8-10

Ø = round x = slot / = or
Grain = Barley, wheat, rye and oat.

Note: All the above settings are intended as guidelines, as kernel size and shape varies due to climate and other reasons. Also national standard procedures may require specific sieve sizes to be used.

Ideal time for grain to pass from deawner housing onto top sieve is 18 - 20 seconds.
If you have any special products, send us a sample for testing.

GRADING SIEVES INTERVENTION

Product	Sieves
Barley malt	2,5 x 20
Barley feed	2,2 x 20*
Hard wheat	1,9 x 20*
Soft wheat	2,0 x 20*
Rye	1,8 x 20*

* EEC intervention regulations.

ADJUSTMENT AND SETTINGS

Air regulation

Airflow should be set with air regulator (pos. 10) and should be as high as possible without removing whole kernels.

Regulation of deawner time

Deawning time is set with the potentiometer (pos. 17) on the front plate. Deawner time for winter barley up to 30 seconds, summer barley normally 15 seconds. Wheat 15 seconds but if with chaff up to 30 seconds. Oat and rye do not normally need to be deawned.

Peas, Beans, Sunflower and rape needs no deawning. Maize 15 seconds, but only if plant parts in the sample.

Regulation of outlet time from deawner

It is important that the outlet handle (pos. 4) is set so that the min. time for grain to pass from deawner on to the sieves is 18 - 20 seconds. See about setting page 5. When using the extension hopper the outlet handle can regulate the deawner time

Deawner pins

For barley and other grains use 33 mm pins, for maize beans etc. use 28-mm pins. (Option)

Rubber balls

The grading sieve (third sieve) is kept clean by rubber balls. The rubber balls are placed in three separate sections; there are 10 in each section.

MAINTENANCE AND TROUBLE SHOOTING

Note that no parts should be greased!

If the deawner bottom does not open when activated, press with your right hand thumb on the release bolt (pos. 3) and then activate the magnet by pushing contact (pos. 1) to pos. man, then remove your thumb and the bottom opens.

If the magnet does not pull, open the bottom gate by pressing up under the lock above the release bolt (pos. 3).

If the magnet does not work, call your electrician. A blown fuse, the contact or a broken wire probably causes the problem. The fuses are in the electrical box under the bottom screens. In case the magnet has been unscrewed, it must be adjusted so that it just releases the bolt.

TECHNICAL SPECIFICATIONS

Motor	0,37 kW
	230 V/50 Hz or as ordered.
Sample size approx.	1 kg
Noise level	82 dB(A)
Height	970 mm
Width top	580 mm
Width bottom	413 mm
Length	680 mm
Weight	85 kg

EXTRA EQUIPMENT

Sieves

Electronic balance with % calculation

Computer program for calculation of results

Extension hopper for cleaning of small lots.

Through trays and bag holder.

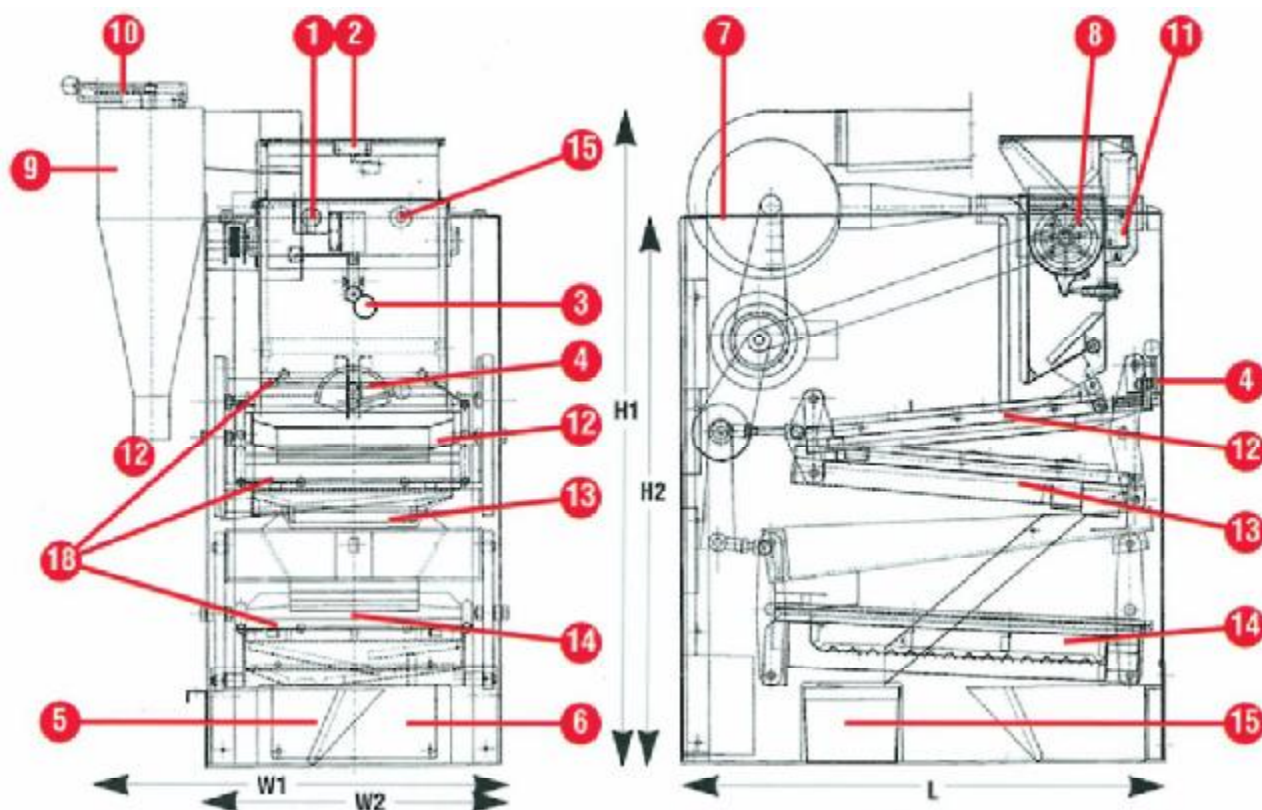
SIEVES

The following sieves are normally in stock.

Sieve 1 and 2	Sieve 1 and 2	Grading sieves	Grading sieves
300 x 350 mm	300 x 350 mm	300 x 470 mm	300 x 470 mm
Round Holes	Oblong holes	Round holes	Oblong holes
0,8	0,8	2,8	0,8
1,5	1,0	3,0	0,9
1,8	1,25	3,5	1,0
2,0	1,5	4,0	1,25
2,1	1,6	4,5	1,5
2,4	1,8	5,0	1,6
2,5	2,0	6,0	1,8 *
2,6	2,1	6,5	1,9
2,75	2,2	7,0	2,0 *
2,8	2,4	7,5	2,1
3,0	2,5	8,0	2,2 *
3,5	2,8	9,0	2,3
4,0	3,0	10,0	2,4
4,5	3,25	11,0	2,5 *
5,0	3,5		2,6
5,5	3,75		2,8
6,0	4,0		3,0
6,5	4,5		3,5
7,0	5,0		4,0
8,0	7,0		4,5
9,0	8,0		5,0
10,0	10,0		5,5
11,0			6,0
12,0			6,5
13,0			7,0
14,0			

* = ISO 5223

DESCRIPTION OF DRAWING



1. Switch for start and manual release of deawner
2. Filling Cover
3. Deawner outlet
4. Outlet regulation
5. Tray for small grains
6. Tray for prime grains (good)
7. Fan
8. Deawner
9. Cyclone
10. Air regulation
11. Electro magnet for automatic discharge of deawner
12. Top screen
13. Lower screen
14. Grading screen
15. Tray for sand, weed and non aspirated waste
16. Plastic bag for aspirated waste
17. Potentiometer deawner time
18. Springs

EC- DECLARATION OF CONFORMITY

MANUFACTURER:

Pfeuffer GmbH
Flugplatzstraße 70
97318 Kitzingen

hereby declare that

MACHINE:

Sample Cleaner
Mod. SLN3

is in conformity with the provisions in the COUNCIL DIRECTIVE of 14 June 1989 on mutual approximation of the laws of the Member States on the safety of machines (89/392/EEC as amended by directives 91/368/EEC, 93/44/EEC and 93/68/EEC) with special reference to Annex 1 of the Directive on essential safety and health requirements in relation to the construction and manufacture of machines.

Kitzingen, 19.08.08

Lothar Pfeuffer
General Manager / QM