

HOTRACO HELPS



FWS-4N

Feed weigher

Hotraco Agri BV

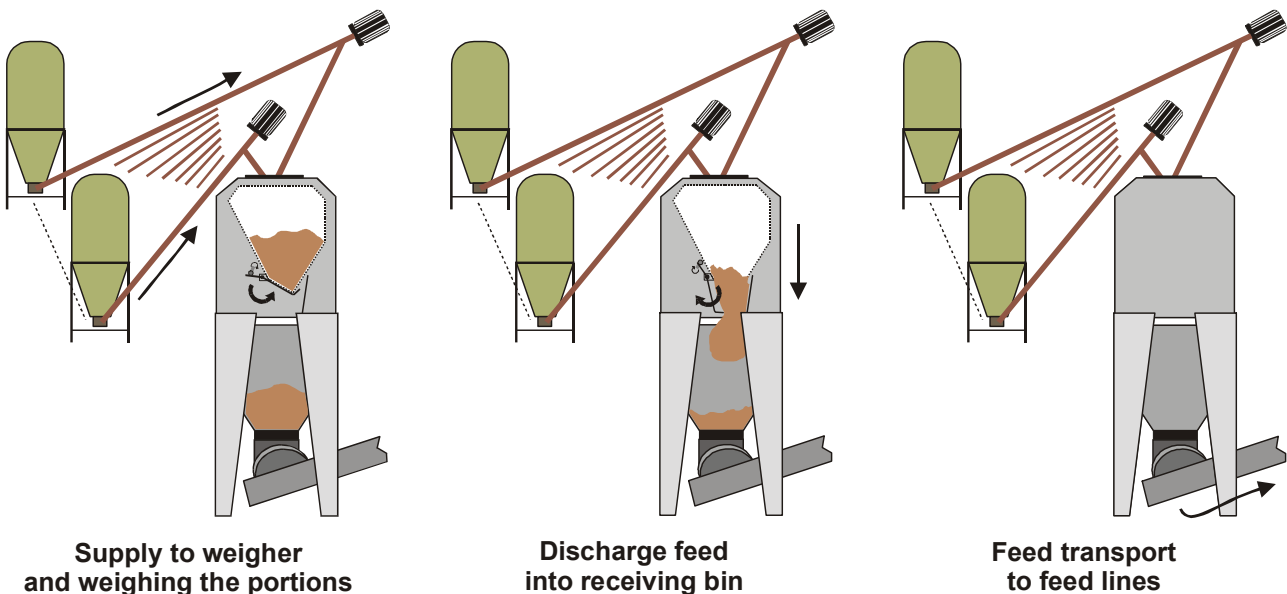
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General

The FWS-4N can be applied to weigh dry granular animal feed. The feed is supplied through one or multiple supply augers at the top of the feed weigher. When using multiple supply augers, the top of the feed weigher can be fitted with the optional TRECH-FWS. The weighed feed portions are discharged from underneath the feed weigher. The feedweigher can be mounted onto a console OS-FWS, and a receiving bin (OPV-FWS) can be placed under the feed weigher. Both, the console and the receiving bin are optional available.

Feed weighing principle

One or multiple supply augers fill the FWS-4N's weighing bin with a certain amount of feed. When the feed supply has stopped, the FWS-4N weighs the amount of feed in its weighing bin. The results of the weighing are processed by a central computer. The weighed portion can be discharged by means of an external signal from your central computer. The portion drops in the receiving bin and the discharge auger transports the portions to the feed lines. In the mean time the supply auger is already filling the FWS-4N's weighing bin for the next portion. This process can repeat itself continuously, so a constant supply of weighed feed is realised. See drawing.



Control

The FWS-4N can be controlled three ways;

- Automatic, through central computer signal
- Manual, through button on FWS-4N
- Manual, through switch on panel

The feed weigher must be placed in a dry (free from aggressive gasses) room, to prevent caking of feed to the weighing bin.

Discharge auger capacity

The discharge capacity is always lower than the filling capacity of the used supply auger. Because of this, the discharge auger capacity must be lower than the capacity of the supply auger. To calculate the feed weigher discharge capacity **DC** [kg/h] the next values must be taken in consideration:

- **FC** = filling capacity supply auger [kg / h]
- **SG** = specific gravity of feed [kg / dm³]
- **FA** = filling amount [kg]
- **EC** = effective content FWS-4N = 75 dm³
- **Ct** = weighing time constant (depending on number of feed components)

$$FA = EC \times SG$$

$$DC = \frac{FA}{(FA / FC) + Ct}$$

The table below can be used as a guideline to give you an estimate discharge capacity.

Points of departure are:

- EC** = 75 dm³
- Ct** = 0,00250 with 1 feed component (total weighing time 9 sec)
- Ct** = 0,00333 with 2 feed components (total weighing time 12 sec)
- Ct** = 0,00417 with 3 feed components (total weighing time 15 sec)

Discharge capacity DC [kg/h] with 1 feed component

SG [kg/dm ³]	FC [kg/h]								
	2000	3000	4000	5000	6000	7000	8000	9000	10000
0,5	1765	2500	3158	3750	4286	4773	5217	5625	6000
0,6	1800	2571	3273	3913	4500	5040	5538	6000	6429
0,7	1826	2625	3360	4038	4667	5250	5793	6300	6774
0,8	1846	2667	3429	4138	4800	5419	6000	6545	7059

Discharge capacity DC [kg/h] with 2 feed components

SG [kg/dm ³]	FC [kg/h]								
	2000	3000	4000	5000	6000	7000	8000	9000	10000
0,5	1698	2368	2951	3462	3913	4315	4675	5000	5294
0,6	1742	2455	3086	3649	4154	4610	5023	5400	5745
0,7	1775	2520	3190	3795	4345	4846	5305	5727	6117
0,8	1800	2571	3273	3913	4500	5040	5538	6000	6429

Discharge capacity DC [kg/h] with 3 feed components

SG [kg/dm ³]	FC [kg/h]								
	2000	3000	4000	5000	6000	7000	8000	9000	10000
0,5	1636	2250	2769	3214	3600	3938	4235	4500	4737
0,6	1688	2348	2919	3418	3857	4247	4596	4909	5192
0,7	1726	2423	3036	3580	4065	4500	4893	5250	5575
0,8	1756	2483	3130	3711	4235	4710	5143	5538	5902

Technical specifications

Electrical

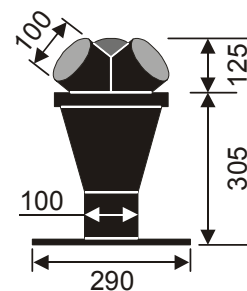
Power supply	: 230 Vac ± 10%, 50/60 Hz
Power consumption	: max. 50 W
Fuse	: T 0,5 A (dim. 5 x 20 mm)
Output voltage	: 0 - 5 Vdc
Release valve motor	: 24 Vdc / 2A
Alarm relay	: 0,5 A, 24 Vac/dc

Complies with EC directives

EMC	: 2004 / 108 / EC
Low tension	: 2006 / 95 / EC

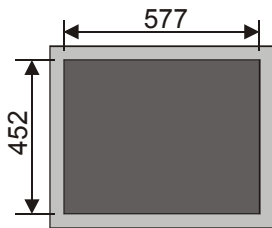
Mechanical

Operating temperature range	: -10 °C...40 °C
Volume weighing bin	: 98 dm ³
Material feed weigher	: Galvanised steel
Weight feed weigher	: approx. 40 kg

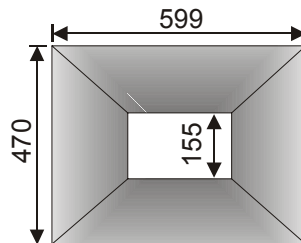


Front view TRECH-FWS (optional)

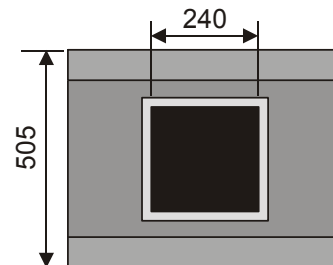
Dimensions



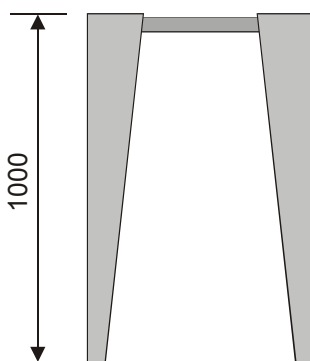
Top view OS-FWS (optional)



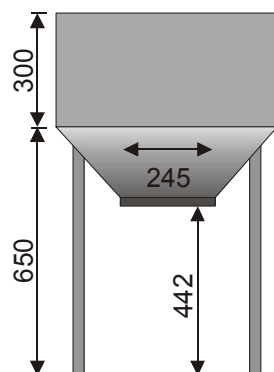
Top view FWS-OPV (optional)



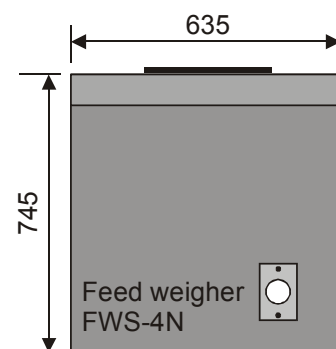
Top view FWS-4N



Front view OS-FWS (optional)



Front view FWS-OPV (optional)



Front view FWS-4N

Dimensions in mm