

Filling machine F-60



Technical data

format range:

Tube length:	70 - 180 mm
Tube diameter:	18 - 30 mm
Tablet diameter:	10 - 25 mm
Tablet thickness:	3,5 - 10 mm

Please observe that the above mentioned intervals can be handled only with more than one set of format parts.

At request the machine can be equipped to handle tablets with a diameter up to 30 mm. This however will result in drawbacks on machine speed i.e. capacity.

Machine data:

capacity:	Nominal up to 60 tubes a minute or 60000 tablets an hour, depending on the number of tablets per tube.
voltage:	3 x 380 V and earth, 50 Hz
power:	appr. 6 kW.
compressed air:	6 bar, appr. 600 L/minute.
weight:	appr. 400 kg (F60 with tablet table, tube hub and cap feeder)

The above mentioned capacity can only be reached at proper production conditions and at a minimum of broken tablets. Ideal production conditions are temperatures of 18-20 °C and a relative humidity of 15-20%.

General Description

The tablets are fed either directly from the tablet press outlet, eventually via a conveyor, over two chutes with each a distributor to a tablet table or the tablets can be fed from a centrifugal tablet feeder. The distributors provide an even distribution of tablets into the eight channels. The tablets are then fed from the chutes on to the tablet table where they are distributed into a 8-channel cassette. From this cassette a controlled number of tablets are let into the tubes via the rotation filling tubes.

As an option GORDIC F-60 can be equipped with an AIRSLIDE®. This AIRSLIDE® is multifunctional and provides gentle distribution, dedusting and online buffering of tablets.

The GORDIC F-60 is equipped with 3 dust suction points in the tablet feeding unit. One under the distribution arms, one at the filling point and one under the tablet table. If a AIRSLIDE is implemented one additional dust exhaust must be included as a part of the air supply system.

Tablet feeding

The tablets are fed either directly from the tablet press outlet, eventually via a conveyor, over a chute with a distributor arm to a tablet table. As an alternative can the tablets be fed from a centrifugal tablet feeder. The tablets are fed from the chute on to the tablet table where they are distributed into a 8-channel cassette. From this cassette a controlled number of tablets are let into the tubes via the rotation filling tubes. The distributor arm provide an even distribution of tablets into the twelve channels.



Distribution arm.

The GORDIC F-60 is equipped with 3 dust suction points in the tablet feeding unit. One under the distribution arms, one at the filling point and one under the tablet table.

Tube feeding

The filling machine is as standard equipped with an internal tube hub.



Internal tubehub.

Empty tubes are fed automatically into filling position from a tube supply. Three different types of tube supply units are available:

1. *Unscramble* for tubes, delivered in bulk. This unscramble has a capacity of 3.500-5000 tubes which are oriented in the unscramble and placed on a tube conveyor. The tube conveying system is equipped with security function for ejection of wrongly oriented tubes.
2. *Foldable external tube hub.*
3. *External tube hub(s).*

Please note that all three units requires a "conveying unit for empty tubes".

For a closer description of the above mentioned tube supply units please select a topic on the menu to the left.

Cap feeding

Caps are fed from a vibrator cap feeder, via two channels, to the capping station where they are fixed by vacuum. Two tubes are capped at the same time with individual pneumatic cylinders. The cap feeder can be loaded with up to 2000 caps at the time, depending on cap size.

As an option the F-60 can be equipped with an additional cap pre-feeder, including a conveying system.

Filling machine

The filling machine is fully automated and protected against personal injuries according to the valid CE-norm.

In the eight channel cassette on the tablet table, the tablets are counted. When the preselected number of tablets are accumulated in each of the eight channels, they are gently filled into eight tubes, first passing through the eight rotating in-feeder tubes. This ROTAFILL®-system, is a unique system especially

developed for fast and gentle filling of tablets in tubes. With this system tablets with a crushing strength of only 40 N can be handled at full operational speed.

After filling, the tubes are transported on a belt conveyor towards the capping station. During transport a control unit controls if the tubes are filled to the correct level. Wrongly filled tubes are rejected. The tubes are then capped automatically and a sensor controls if a cap is present and correctly positioned. Rejected tubes are not capped.

After capping, the tubes are discharged two by two and can be taken care of manually or transported away on a conveying unit. We however strongly recommend the implementation of a conveying unit for filled tubes. Rejected tubes and significant badly capped tubes are ejected. Ink jet printing is preferably made during transport on the conveying unit.

The F-60 can be equipped with format parts for different tablets, tubes and caps. Change from one format to another is normally made within one hour. Simple format changes, like change from one tube length to another, are done much faster.