

TRANSITUBE®

tim plast Anlagenbau GmbH

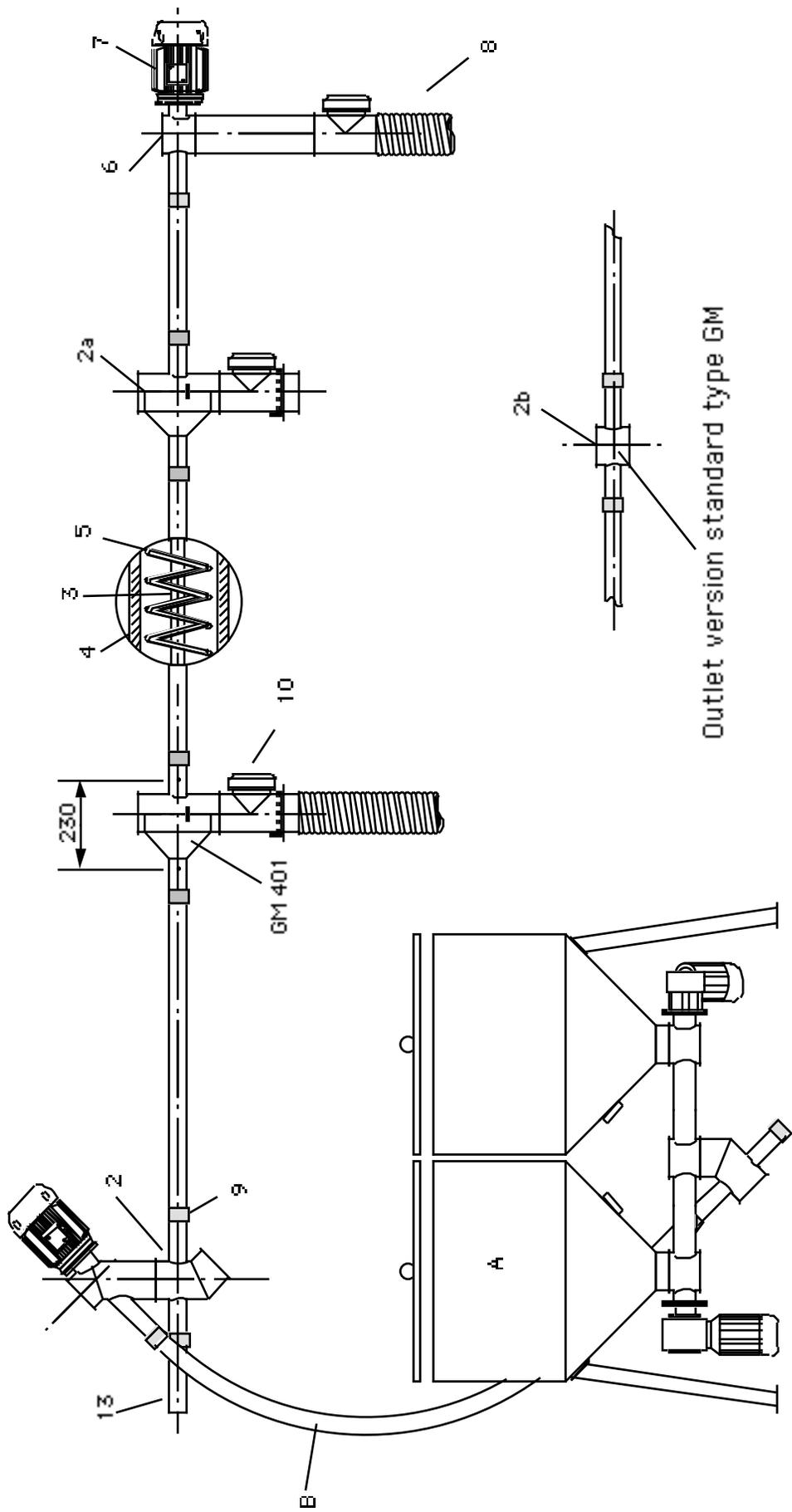
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Multiple Feeder



Assembly list "PM"

A	Dosing unit
B	Feeder type PS/PC
1	Diaphragm
2	Inlet probe
2a	Intermediate outlet type "GM 401"
2b	Intermediate outlet type "GM"
3	Inner tube
4	Outer tube
5	Spiral
6	Security outlet
7	Motor
8	Flexible drop tube
9	Quick connection clasp
10	Level indicator (opt. capacitive)
11	Articulated connecting clasp
12	Emptying plate
13	Diaphragm

DESCRIPTION & OPERATION :

A/ Description

The PM flexible feeder used for the feeding of several machines, is similar to the "PS or PC" series, except that it has several intermediate outlets type GM or GM 401 and one security outlet (discharge point closed to the motor).

Each intermediate outlet is equipped with one manual valve and one level control which allow the automatic run of the installation.

For most cases the multiple feeder type PM placed on the top of the machines, must be connected to a feeder type "PS or PC" for the elevation.

The feeder type "PS or PC" can operate alone to feed the machine 1, the operating of the PM feeder produce automatically the start up of the complete line.

The feeder type PM can also be connected to an intermediary hopper, allowing a continuous stock of material and dissociating the operating of several feeders in serie.

In the length of the unit is greater than 20 mt, the system will be broken down into two feeder sections relayed together.

The first machine of the line is generally feed by the elevator feeder type "PS or PC". The multiple feeder must be connected at the outlet of the first feeder, or intermediary **hopper.**

B/ Operating

Level controls detecting the lack of the material and will start the system.

The material is conveyed to the outlet n° 1 and continuous to fill up until the saturation of the descending tube. Once saturation is attained, the material is conveyed to outlet n° 2 until saturation and so on, right up to the last outlet.

The system stops when the material covers all the level controllers (except the security outlet).

The feeder will start up again when a level controller is uncovered and it will continuous operation until all the level controllers are covered again (except the security outlet).

The security outlet allows to discharge the left over material inside the tube and the incorporated detector stops the system in case of defectived controller in the intermediate outlet.

ASSEMBLING INSTRUCTIONS :

A/ Assembly of the outer tube type TE

The assembling must be done starting from the admission probe.

* Put the rubber seal as described on the scheme.

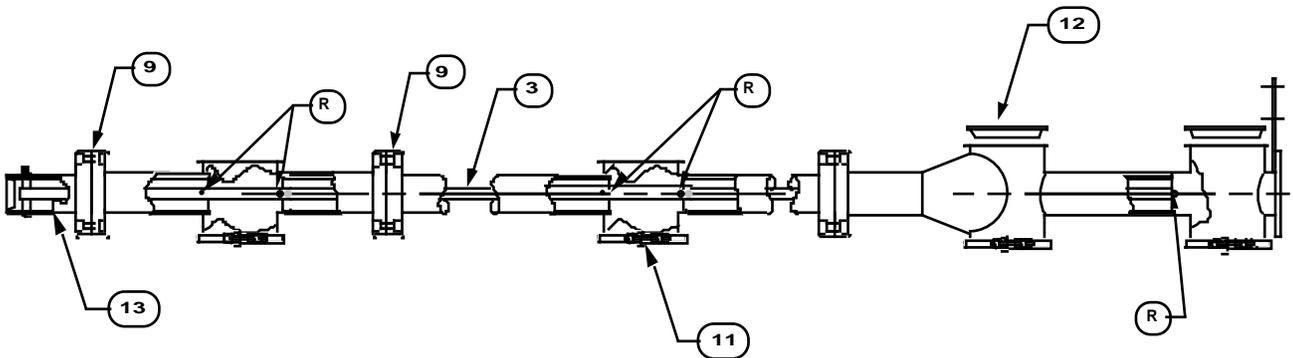
Important !!

The white seal must be mounted on the polyamid tube or diaphragm.
The black seal must be mounted on the metallic part.

- * Tight the collars (9) checking that the admission and the evacuation probes are **in the same way**.
- * Do the same operation with the tube and the intermediate outlet , and so on until **the security outlet**.
- * Check that all the tubes stop against the rivets (R) of the probes.
- * Sometimes, stainless steel outer tubes can be supplied instead of polyamide outer tubes.
- * The maximum length of the outer tube is 6 mt.
- * For a longer unit, connect the two tube with a pipe type CCS

B/ Assembly of the inner tube type TI

- * The inner tube (3) is fixed on the diaphragm (13) by a retainer but is free **at the discharge end !**



Assembling the outer and inner tube

C/ Assembly of the spiral

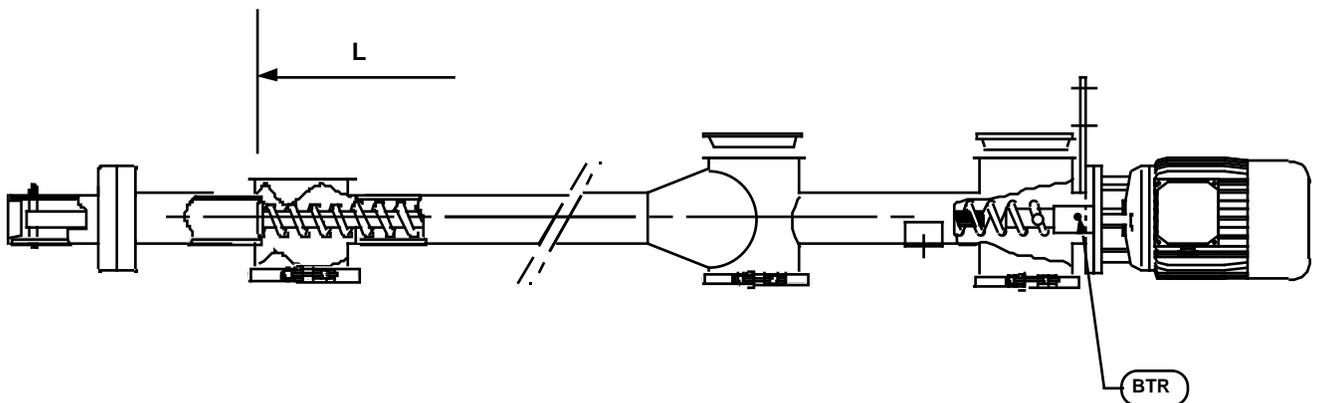
Motor side : * Fix it to motor shaft thanks to the srew.

Outlet side : * Check that the spiral does not go beyond the limit "L".
* On this side there is a "ring" at the end of the spiral.

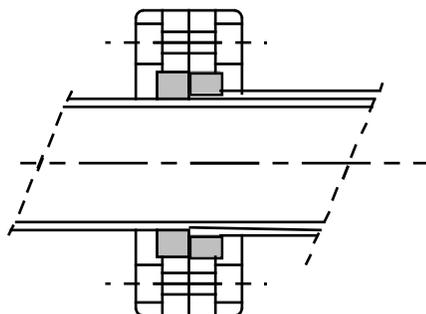
CAUTION ! As the spiral is ballanced, avoid it from over bending or twisting while the assembling.

D/ How to shorten a flexible feeder

- * Disconnect the spiral from coupling sleeve.
- * Cut the spiral on the sleeve side.
- * Refasten the sleeve
- * Cut the same length of the outer and inner tube.
- * Do not forget to plug the inner tube with the cemented cork.



Assembling the spiral



Assembling the rubber seals

GENERAL INSTRUCTIONS

A/ Motor

- * The motor must be protected by a starter of which thermal relay must be adjusted according to the motor amperage.
- * Caution : If the feeder starts frequently, a starter with a timer is necessary.
- * As the automatic operation of the feeder is made by a membrane or an capacitive level controller, make sure that they will work correctly.

B/ Degree of flexibility

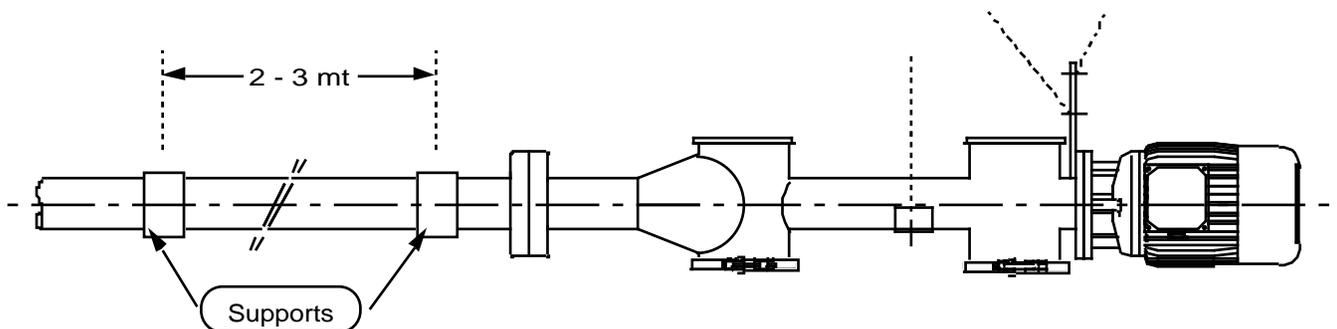
Respect the minimum bend radius for each model of the feeder :

R = 1,5 mt for type 30 und 39
2,0 mt for type 53
2,5 mt for type 70 und 80

Keep a minimum straight length of 700 mm from the connecting collars

C/ Supporting the feeder

- * If a supporting is necessary (usually every 2-3 meters) you can use supporting collars, but never take a rope or a cable for supporting it will damaged the polyamide tube.



START UP

A/ Preliminary Adjustments

Before operating check :

- * All devices are well fixed.
- * All level controllers work correctly including the security outlet.
- * The spiral is at the right length.
- * Check the rotation direction of the spiral.
 - clockwise for thread on the left.
 - anti-clockwise for thread on the right.
- * The motors run correctly (check the amperage) and the rotation direction.
- * The diaphragm is not completely open.
- * When starting for the first time, press the on/off button intermittently until the feeder run noiseless.
- * **The Feeder must not run empty for more than 10 seconds !!**
- * Place a drum under the security outlet to reclaim the left over material.

B/ Output Adjustment

- * Regulate the intake of the material by sliding more or less the diaphragm while the feeder is running.
- * A too wide diaphragm opening, allowing an overloading of the spiral and may damage **the feeder.**
- * When the output is adjusted, tight the diaphragm by fixing the collar type CS.

C/ Start-up

During the start-up, close all the valves and check the general operating of the system.

Check that any leak or vibrations appears.

Then open all the valves and the system will run automatically.

Caution !! During the first running hours, the spiral might be lengthen. Cut it, if is necessary only on the motor side.

D/ Maintenance

Periodicaly :

- * Check the length of the spiral which must never bump against the retainer.
- * Check all the level controller, they must be work correctly.

