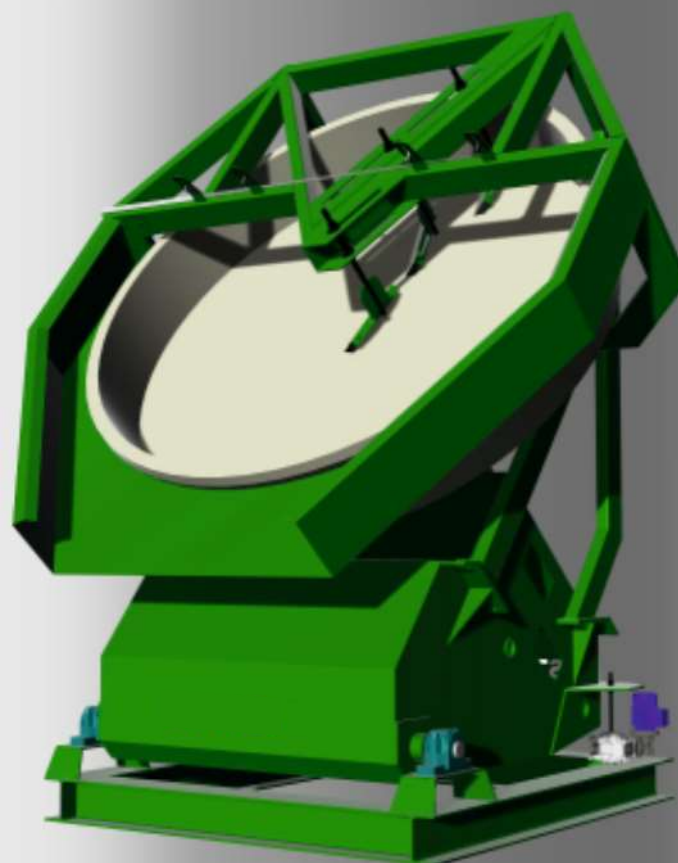


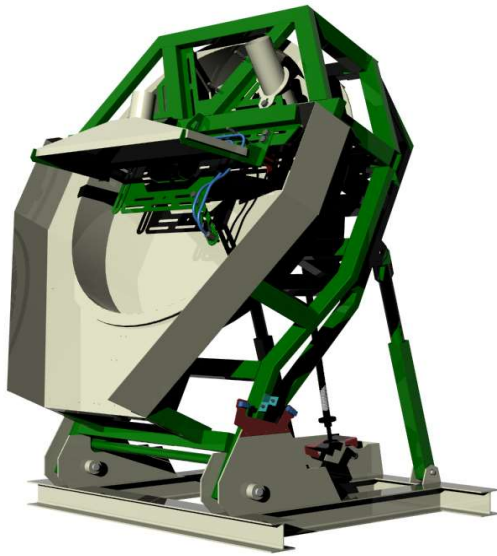
Granulators-pelletizers,  
granulating lines

**PILOTOP**

MACHINE &  
EQUIPMENT



Machine & Equipment

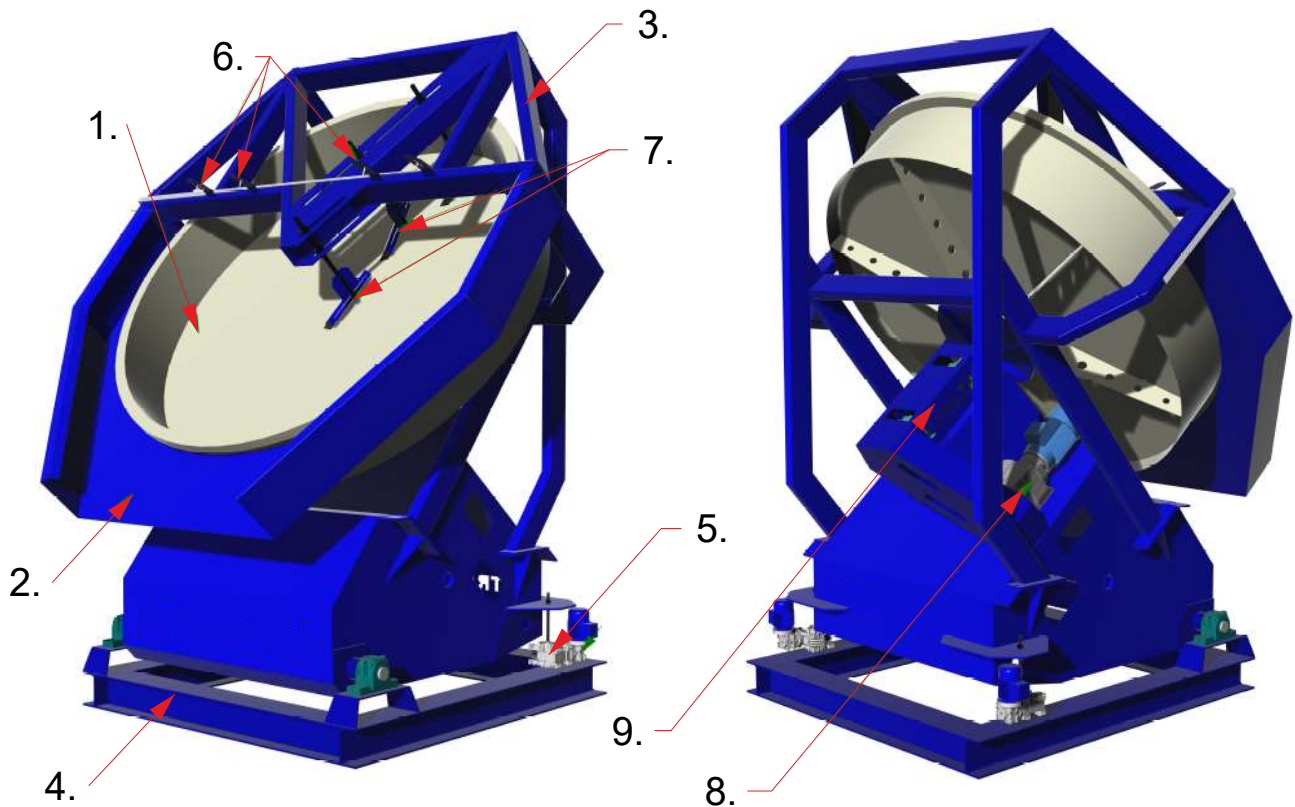


Granulators-pelletizers for granulation, production of compound fertilizers, granulated limestones, feed pellets

A disc granulator (pelletizer) is often chosen for its ability to produce a product in the form of beads. It is widely used to process everything from chemical powders, fly ash, and soil amendments to minerals and ores, fertilizers, and more. One of the reasons why disc granulators are so successful is that they allow operators to adjust several variables during production to achieve the necessary product size and quality.

Disc granulator-pelletizer is a technological device where an integral part of granulation is a suitable material for granulation, liquid binder and material movement. The material is continuously fed to the disc, where it is in motion as the disc rotates. The spray system mounted on top of the disc has multiple spray nozzles that spray the binder onto the material and make it sticky. This stickiness and the continuous supply of material and binder when the disc rotates causes the particles to clump together. As the accumulated particles continue to roll on the rotating disk, they trap additional layers and the dispersion particles merge into larger units. During this process, the granules become denser and finer. The gaps between the collected particles are filled with other smaller particles, and the gaps between these are filled with even smaller particles, and so on. As a result of the centrifugal force on the disc, the granules classify themselves into streams based on their size. The small granules accumulate on the inside of the disc and as they grow, they work their way to the edge of the disc. As soon as they reach the required size, the granules are poured over the edge of the disc onto the collecting conveyor.

# Disc granulator SPG 3000



1. Rotating disc
2. Granule discharge
3. Supporting structure of the disc
4. Granulator support structure
5. Disc tilt drive
6. Irrigation system
7. Wiper blades
8. Drive disc rotation
9. Disc drive gearbox

Variable parameters of the disc granulator.

#### **Disk speed**

The rotation speed of the disk is adjusted by a frequency converter (VFD). Variable speed is equally important and is used along with angle adjustment to achieve optimal coverage of the material on the disc.

#### **Disc angle**

The disc angle is adjusted by a lifting screw, which is electrically driven. The angle and speed settings are to some extent dependent on each other.

#### **Material dispensing speed**

The dispensing speed of material onto the disc is also adjustable via a frequency converter (VFD).

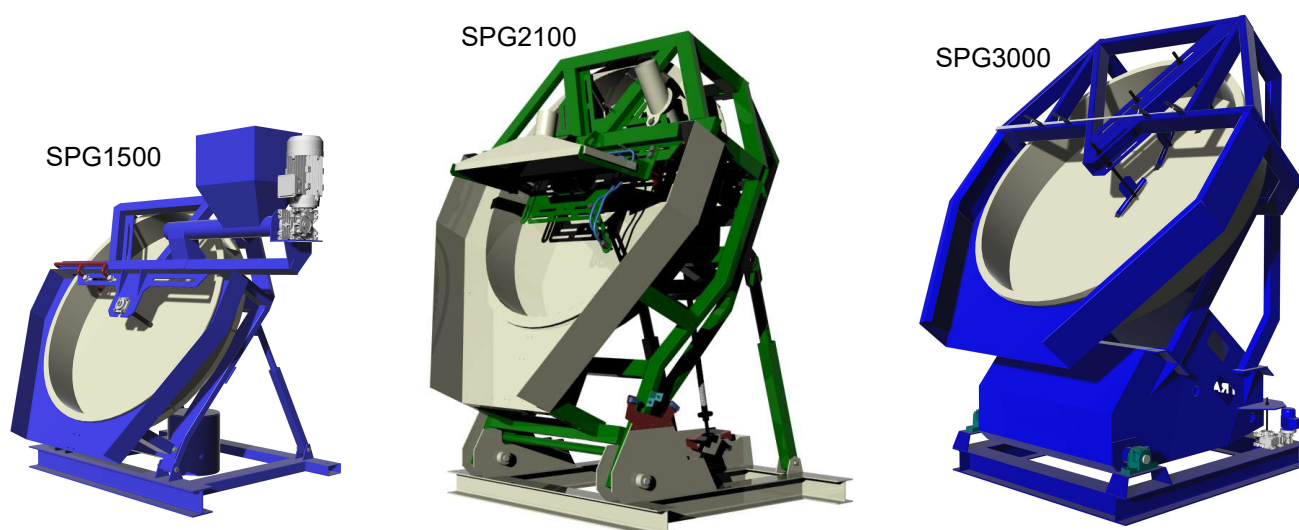
#### **Binder spraying speed and location**

The binder spray pressure (amount) is also adjustable, as is the location of the binder spray nozzles. Operators can respond to changes in the material by means of pressure and the location of the binder spray and thus regulate the size of the granules.

#### **Positioning the Plow/Scraper**

When liquid is sprayed onto the disc and mixed with the material feed, deposits can start to form on the bottom and side wall of the disc. Wiper blades remove this build-up and create a smooth surface. They also help

## Overview of types and sizes of granulators



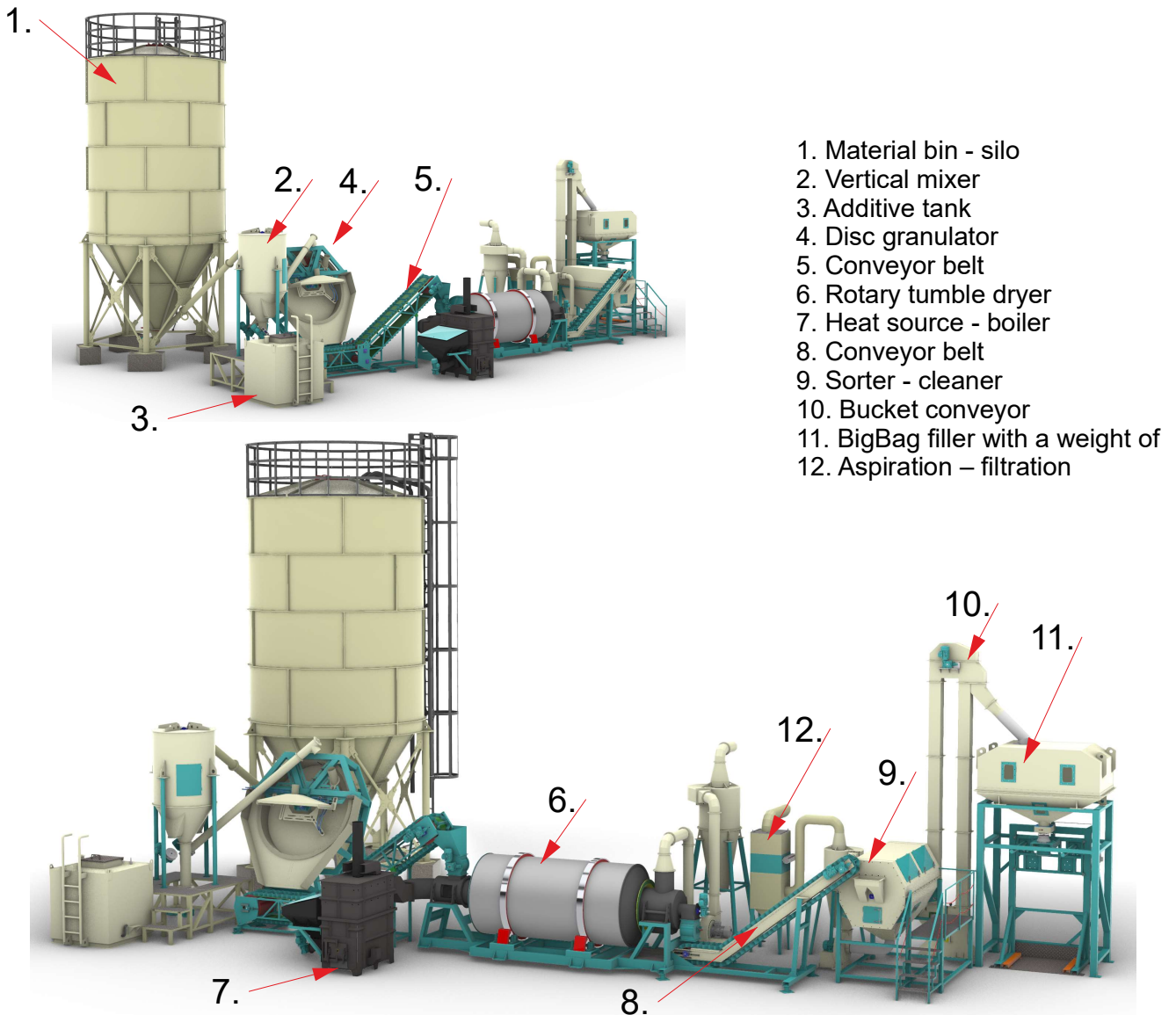
Granulator type	The diameter of the disc	Disc depth in mm	Disc rotation speed, n/min	Electrical input in kW	Granulator performance in kg/h
SPG1000	1000	250	25	3,2	500
SPG1500	1500	300	23	4,5	750
SPG1800	1800	300	20	5,7	900
SPG2100	2100	320	18	5,9	1200
SPG2500	2500	350	18	7,5	1800
SPG3000	3000	400	16	9,5	2500
SPG3500	3500	450	14	11,0	3500
SPG3800	3800	550	12	15,6	4600
SPG4200	4200	550	10	18,5	5000

The indicated performance is a conversion of material with a specific weight of 1m<sup>3</sup>/1000 kg.

# Stationary granulating line

## Granulating line

Stationary granulating line SPG1000 – 4200 is a technological device ensuring the processing of material into the form of granules for further use. The granulating line processes the material into the final product, i.e. granules in the shape of balls with a diameter of 1-20 mm. The hourly performance of the line and granulator depends on the specific weight of the granular material, the required output size of the granules and the final humidity. Depending on the type of line, the hourly output ranges from 500 kg to 5 t/hour. When combining multiple granulators, the output can be multiplied..



# Contact

## **PILOTOP**

---

### MACHINE & EQUIPMENT

---

**PILOTOP** s.r.o.  
Štefánikova 220/20h  
742 21 Kopřivnice

---

*Business representation*

**Jurij Ruščak**  
[info@dilotop.com](mailto:info@dilotop.com)  
**+420 602 407 975**

---

*Projection, development,  
production and service*  
CEO

**Jaroslav Janák**  
[tech@dilotop.com](mailto:tech@dilotop.com)  
**+420 722 675 237**

---

[www.dilotop.com](http://www.dilotop.com)