caleva

OPTIONS

VARIABLE DENSITY TWIN SCREW EXTRUDER

VD-TSE 70 (PRODUCTION EXTRUDER)

PRODUCT OPTIONS

How do I change the extruder configuration to make extrudate of different diameter?

Several factors can influence the size of the pellets produced in the extrusion and spheronization process.

By far the most important is the diameter of the extrudate produced by the extruder.

Both Axial and Cone configurations are available in a range of die hole diameters.

With the axial configuration hole diameters are offered from 0.5mm to 8.0 mm.

With the cone configuration hole diameters are offered from 0.5 mm to 1.0 mm

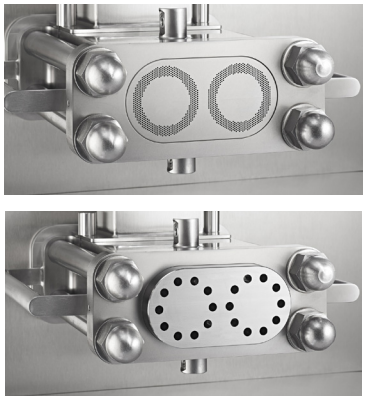
How do I increase extrudate density or make the density as low as possible?

The density of the extrudate will be influenced by the ease of extrusion and will be based to a lesser extent by the formulation composition. By far the largest influence of the extrudate density is the ratio of the extrudate hole depth to diameter.

We recommend you consider a minimum depth to diameter 0.5 and a maximum depth to diameter ratio of 4.0.

When using axial configuration with the Caleva Variable Density Twin Screw Extruder through the complete range of hole diameters, the depth to diameter ratio can be offered from 0.5 to 4.0.
Other options are technically possible to manufacture and can be offered.

Talk to us if you have special requirements.

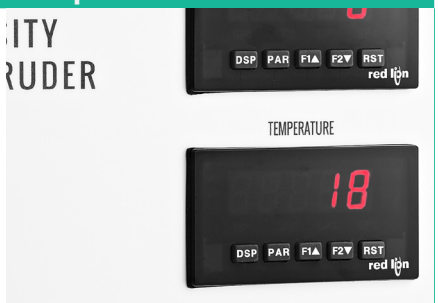


How do I control, and monitor, the temperature of the extrusion process?

All extrusion causes heat to be generated. The amount of heat can be managed by modification of the formulation and by using a water cooling jacket around the extrusion shaft.
To manage the temperature of the production a temperature read out is a necessary accessory

The Caleva VD-TSE 70 has a full water jacket as standard with no additional charge.

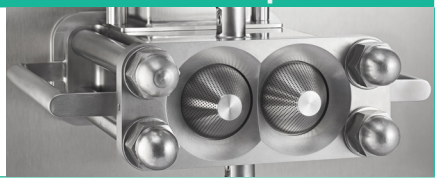
Caleva also offers as standard and for no additional charge a digital display of the temperature of the product as it leaves the extruder die.



The standard configuration is Axial. A Cone configuration is available as an option

In order to allow you to take full advantage of the Variable Density possibilities of the VD-TSE the axial configuration is considered as standard.

Caleva also offers a modern Cone configuration as an option.
This can be purchased as a retrofit or at the time of the origional purchase.



TRAINING AND VALIDATION OPTIONS

INSTALLATION AND TRAINING AT THE CUSTOMER SITE

Several options for training, installation and validation are offered. The details and options will depend on the location of the customer site and the equipment This can be provided on a world wide basis.

FACTORY ACCEPTANCE TEST AT THE CALEVA SITE

We make our own quality check before the extruder is shipped (a copy is supplied to the customer) and thus a separate FAT is not normally necessary but can be offered if required. The customer will be responsible for all his or her expenses incurred in getting to and from the Caleva site.

CUSTOMER TRAINING AT THE CALEVA SITE

Training is recommended if extrusion and spheronization is a relatively new technique to the company or if new staff would benefit from it.

VALIDATION AND IQ/OQ DOCUMENTATION PACKAGE

Recommended if required for regulatory purposes.

- **At Caleva site:**
  The IQ/OQ package can be completed as far as possible at the Caleva site by us. The customer can attend. An additional set of blank documents will be provided to allow the customer to re-do the IQ/OQ in their own facility.
- **At customer site:**
  IQ/OQ and installation completed at the customer site at the same time as installation and training (training is charged separately).

MATERIAL CERTIFICATES (INCLUDED IN IQ/OQ)

In line with current standards Caleva does not automatically supply copies of material certificates for product contact parts. Caleva can provide free of charge a certificate naming the product contact parts and confirming that we or our suppliers can provide full traceability to original certificates if this is requested.

If certified copies of material certificates are required then these can be provided at an additional cost.

TALK TO US

Please call us without obligation

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OPTIONS

CALEVA SPHERONIZER 700

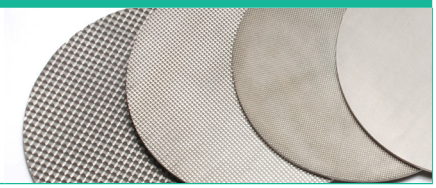
PRODUCTION SPHERONIZER

PRODUCT OPTIONS

Can I use spheronization discs with different disc patterns?

Yes, caleva offer a range of patterns suitable for your formulation and process.

The options for cross hatch patterned discs are:-
-Large: 6 mm x 6 mm x 2 mm deep
-Standard: 3 mm x 3 mm x 1 mm deep
-Fine: 2 mm x 2 mm x 0.67 mm deep
-Extra Fine: 1 mm x 1 mm x 0.33 mm deep



My process generates a lot of dust during the spheronization stage. Is there a disc with a more gentle action?

Sometimes the spheronization process generates dust. This could be due to the formulation being too dry and friable.
There are two possible options to look at:-
Try making the formulation a little more cohesive by adding additional binder solution or modify the binder.
A better option may be to use a radial cut disc offering gentler processing. Radial designs are thought to be less aggressive and damaging to the spheroids as they are being formed.

The options are to use the extra fine disc or, by preference, a Radial cut disc of Caleva design. This offers the gentlest form of marumerization (another term for spheronization).
Ask us about options for a radial disc.

How can I manage to spheronize products that are rather sticky?

Sometimes formulations are sticky and I you may have to clean my equipment after each run. There is a way that might help to manage this problem

There are two solutions that Caleva can suggest. Experience has shown that the Extra-Fine cut on the disc can make a significant improvement. Another option is to ask Caleva to coat both the spheronizer disc and the walls of the spheronizer drum (bowl) with a PTFE coating. We recommend that if stickiness is likely to be a problem you have the drum and disc coated at the time of purchase.

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