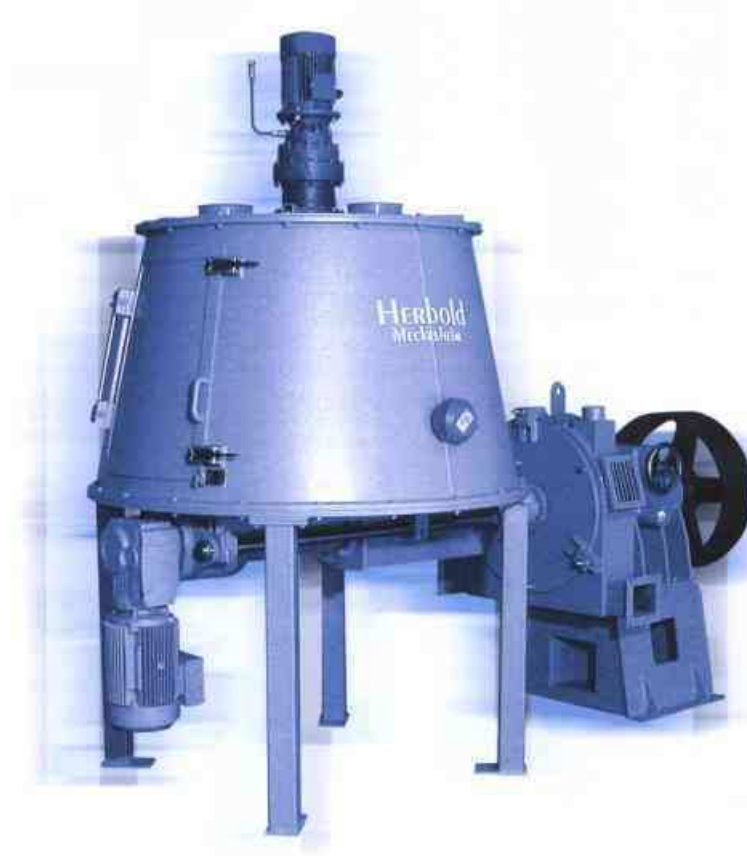


Plastcompactors Series HV



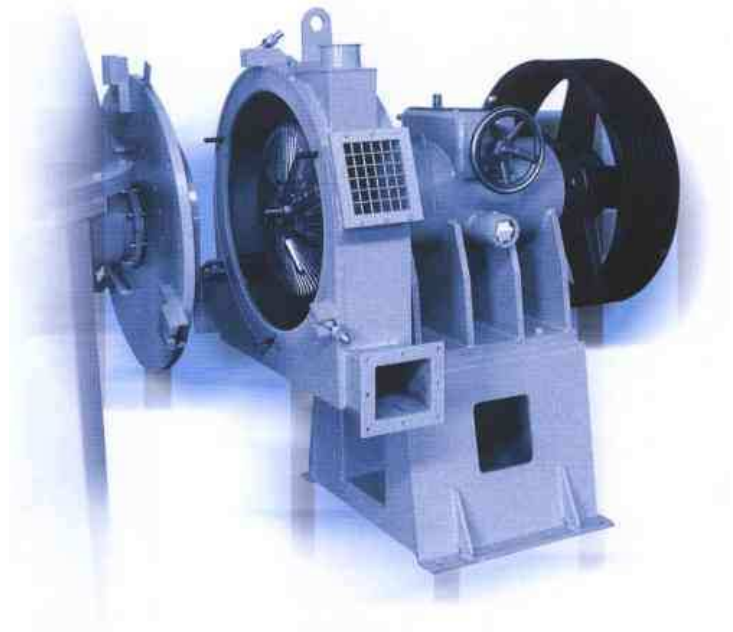
Plastcompactor HV 50

- Agglomeration of powders, fibres, film and foam materials
- Drying of powders, fibres, film and foam materials
- Re-crystallisation of PET flakes
- Compounding of thermo-plastics with fillers

Applications

Herbold HV Series plastcompactors are used for the processing and preparation of plastics:

- the agglomeration of powders, fibres, film and foam materials.
- the drying of powders, fibres, film and foam materials.
- the re-crystallisation of PET flakes
- the compounding of thermo-plastics and fillers



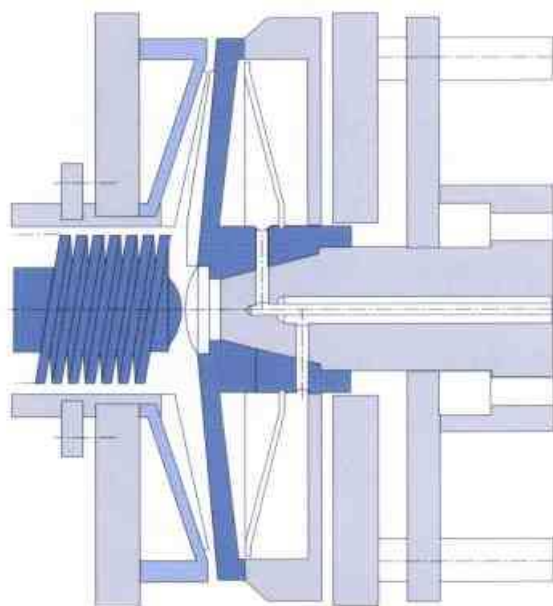
Materials that can be processed include PC, PE, PP, PS, PA, PET, PVC, ABS and other thermo-plastics, together with composite materials in either wet or dry form, with a high throughput performance in fully automatic, continual operation, and with the lowest possible use of personnel.

Agglomeration is carried out on clean or washed plastics. The result is a viscous, high-density granulate.

Drying is carried out on film, fibres and foam materials at the end of the washing and separating process.

Crystallisation is carried out on PET flakes after being broken down by a hot-washing process.

Compounding is carried out on plastics and fillers.

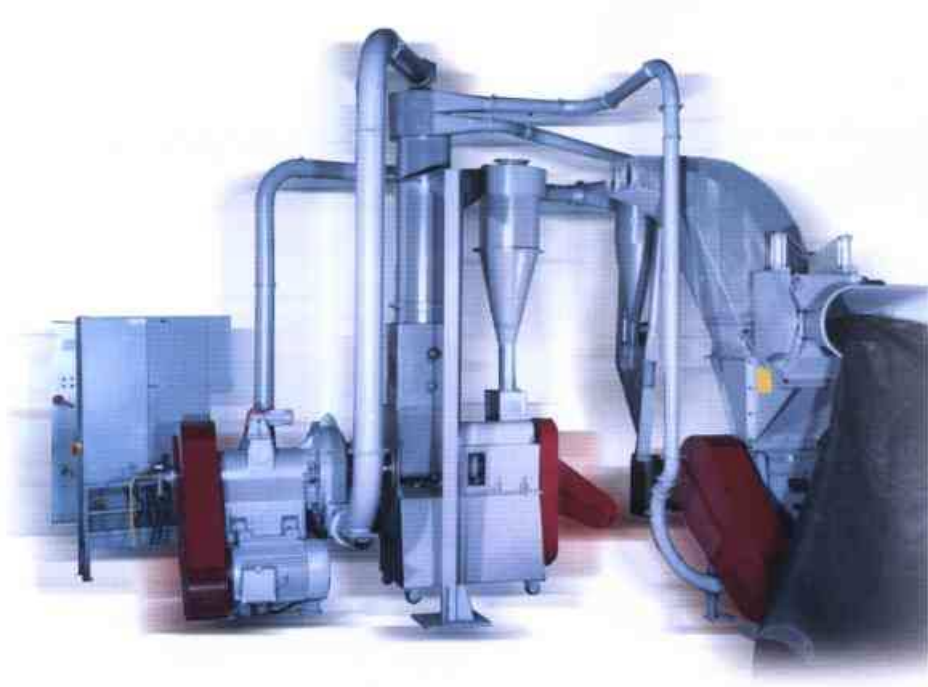


Compaction zone with rotor and stator discs

The process

Processing takes place under continuous operation between a rotating and a fixed compaction disc, both discs being equipped with screw-fitted, replaceable kneading rails. The pre-granulated material (from 0-10 to 0-25 mm depending on type) is conveyed continuously from a feed silo through the centre of the fixed disc into the processing area by means of a feed screw. The material is rapidly heated up by the friction against and between the compactor discs.

*Plastcompactor
HV 30 with
roller feeding
device for
non-woven
fabrics and
mesh basket
hopper for
edge trims and
tapes*



Agglomeration

- The pre-granulated material is warmed up until it starts to soften and the surface starts to fuse. This results in worm-shaped formations up to 60 mm in length, which are then sucked off and reduced to the required agglomerate size in a granulator. The agglomerate size can be changed by selecting a different screen size in the follow-up granulator. The reground final product is fed through an air separator that separates out the dust and fine particles contained in the agglomerate and feeds them back into the compactor for re-processing. The melting temperature of the material is not reached during this process.

Drying

- The pre-granulated material is warmed up until all the moisture will be removed. The agglomeration temperature may be reached during this process, although it is not necessary. Even in the case of difficult materials (e.g. stretched film with a thickness of less than 20 µm), residual moisture levels of well below 2 % can be achieved, which in the case of most materials enables a successful further processing in normal extruders or injection-moulding machines.

Compounding

- The pre-granulated material is first prepared, if necessary in a mixer, and then warmed up until all the filler has been absorbed.

Crystallisation

- The extrusion of the granulated material between the compactor discs aligns the molecules and brings about the crystallisation of the polyester. The melting point is not reached. The IV-value (viscosity) remains almost unchanged.

Depending on the intended purpose, the systems consist of one or more of the following components:

- Primary granulator in the form of a cutter, shredder or a combination of the two
- Pneumatic transport
- Flake silo 3 - 30 m³ capacity with emptying device and feeding screw
- Dosing of additives
- Compactor with motorised disc adjustment and water-cooling
- Pneumatic transport
- Secondary granulator with screen sizes from 4 to 12 mm
- Air separator for the separation and recycling of fine particles in the final product
- Electrical system and automatic process controls

Performance data (examples)

Starting material	Granulate density g/l	HV 30/55 Throughput kg/h	HV 30/75 Throughput kg/h	HV 30/90 Throughput kg/h	HV 50/110 Throughput kg/h	HV 50/132 Throughput kg/h	HV 50/160 Throughput kg/h	HV 70/160 Throughput kg/h	HV 70/200 Throughput kg/h	HV 70/250 Throughput kg/h
PE film 20 µm	335	200-400	400-600	500-600	600-800	750-1000	800-1200	900-1200	900-1500	1000-1600
PE foam	345	200-400	300-500	400-600	450-600	500-700	600-1000	700-1000	800-1200	900-1300
PP fibre	345	150-300	200-350	250-400	300-500	400-600	480-700	500-800	600-1000	700-1200
PS film 10-20 µm	450	150-300	200-300	250-350	300-500	400-600	450-700	500-800	600-1000	700-1200
PS hard foam (blocks or plates)	400	180-300	200-300	250-350	300-500	400-600	450-700	500-800	600-1000	700-1200
PVC hard film 10-30 µm	560	250-400	350-500	250-400	300-500	400-600	450-700	500-800	600-1000	700-1200
PVC soft film	500	250-400	350-500	250-400	300-500	400-600	450-700	500-800	600-1000	700-1200
PVC soft foam	510	250-400	300-500	250-400	300-500	400-600	450-700	500-800	600-1000	700-1200
PA film	470	200-300	250-300	300-500	400-800	450-900	500-1000	600-1000	700-1200	800-1500
PA 6 fibre	420	150-300	250-300	300-500	400-800	450-900	500-1000	600-1000	700-1200	800-1500
PA 6.6 fibre	450	100-200	120-250	150-300	250-400	300-500	400-600	500-800	600-900	750-1000
Polyester film 20-80 µm	600	200-400	250-300	300-500	400-600	450-750	500-800	600-900	750-1000	800-1200
Polyester fibre	600	200-400	250-300	300-500	400-600	450-750	500-800	600-900	750-1000	800-1200
Polyester foam	500	100-200	150-250	200-400	250-500	300-600	350-800	400-1000	500-1000	600-1000
PET deep-drawn film	540	200-300	300-500	350-500	600-1000	700-1200	800-1400	900-1500	1000-1600	1000-1800
PET cuttings (bottles)	510	200-400	250-400	350-500	600-1000	700-1200	800-1400	900-1500	1000-1600	1000-1800
PP fabric	380	150-200	250-400	300-500	400-600	500-750	600-800	700-1000	800-1000	900-1200
Polyester-based carpet	360	100-250	150-300	200-350	350-500	400-600	500-800	600-900	700-1000	800-1200
PP base	330	100-250	150-300	200-350	350-500	400-600	500-800	600-900	700-1000	800-1200

In contrast to other comparable processes and equipment,

- the process works continuously
- accurate control is possible at all times, because the settings of "Feeding Screw Revolutions" and "Disc separation" do not allow only one but two setting parameters, no components need to be changed, and the settings can be altered during continuous operation
- wear costs are low, even in the case of abrasive materials. The main wear components are the screw-fitted kneading rails on the compactor, which can easily and quickly be replaced
- The design does not use screens and is therefore relatively resistant to foreign bodies
Specifications are not binding and subject to change without notice.



Our product range

- Granulators
- Pulverizing systems
- Shredders
- Hammer mills
- Guillotines
- Washing systems
- Plastcompactors

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