

Thermo Scientific NanoLab Compounder Package

The Thermo Scientific NanoLab compounder package contains the tools to mix or compound Nano particles (Nano tubes) in a base polymer. Based on recommendations from users in the industry and Universities it is recommended to:

- use the standard Thermo Scientific HAAKE MiniLab micro compounder for temperatures up to 350°C
- use the control panel for quick test runs, trials and the cleaning
- employ the application software to run defined and reproducible tests
- compound Nano particles and do rheometry with counter-rotating screws
- use the co-rotating screws for applications with additives requiring less shear force

The new Thermo Scientific NanoLab package (557-2195) consists of:

- 557-2190 HAAKE MiniLab with co-rotating screws
- 557-2266 Set of counter-rotating screws with adjustment tool and gears
- 557-2258 HAAKE MiniLab application software

Possible further options to this package are:

- 557-2265 HAAKE MiniLab II - Set of rod dies (0.5, 1.0, 1.5 and 2.0 mm diameter)
- 557-2263 Conveyor belt for HAAKE MiniLab
- 557-2254 Force Feeder 230V/ 50-60Hz
- 557-2255 Force Feeder 110V/ 50-60Hz
- 557-2256 Manual feeding device

Features:

- HAAKE MiniLab with hardened barrel (58 HRC) and hardened screws (50 HRC) to reduce wear and contamination with very hard Nano tubes
- Both screw options (co- and counter rotating screws) to enhance flexibility
- Counter rotating screws for best mixing of Nano tubes
- Counter rotating screws for stable volume feeding the re-circulating channel to allow rheometry in the slit die
- Co-rotating screws to compound thoroughly even shear sensitive materials

Further reading and references:

Numerous researcher are successfully using the Thermo Scientific HAAKE MiniLab for compounding polymers and additives using only very little volume of test material to get the first material data predicting macro production. The following references are worth while reading to get insight information on „How To“ compound or mix materials homogeneously which tend to agglomerate fast building strong clusters.



Fig. 1: Thermo Scientific HAAKE MiniLab II compounder with co- and counter-rotating screws (Photo Thermo Fisher Scientific 008, 0010)