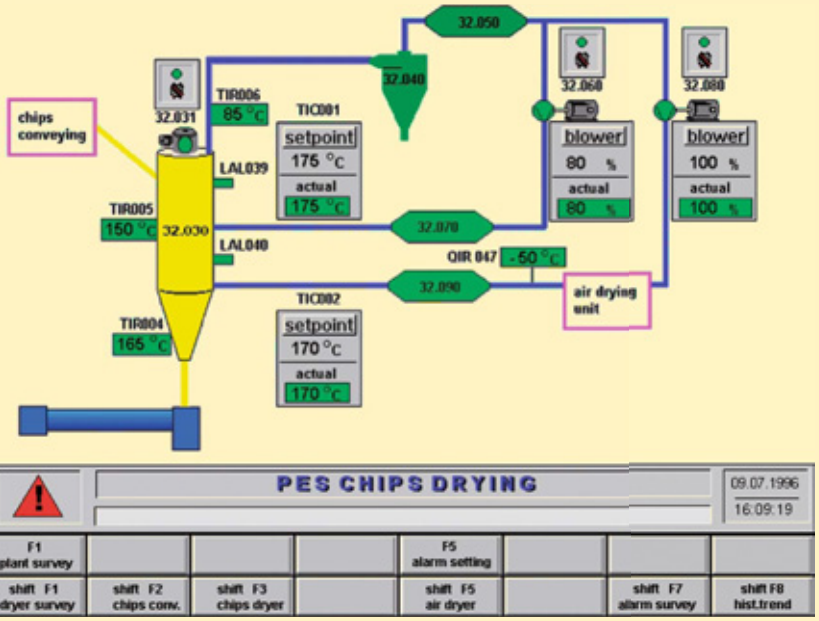
Polyester Chips Dryer

Program
Polyester chips dryers from 30 - 3000 kg/h.

Application
Drying of Polyester chips or flakes down to 20 ppm moisture for:
- textile filaments
- micro filaments
- staple fibre
- technical yarns
- POY, FOY, FDY
- Bico-spinning
- Non woven spinning

Energy consumption for 1000 kg chips
(based on a dryer of 750 kg/h)

Heating	kWh	80
Drives	kWh	13
Instrument air	Nm^3/h	0,2
Cooling water	m^3/h	0 (not required)



Advantages

- continuous chips drying system
- crystalline and amorphous chips can be dried due to incorporated crystallizer
- low energy consumption, also at reduced capacity
- high flexibility 40-110% without mechanical modification
- residual moisture of chips as low as 15 ppm
- extremely sharp hold up spectrum ensures the same treatment for all chips
- drying by hot dry air, no nitrogen required
- heat recovery is not required due to special design
- no maintenance and no cleaning required for the dryer
- no cooling water required due to special design
- continuous operation, throughput is controlled by extruder
- large number of sizes allows optimum selection of dryer

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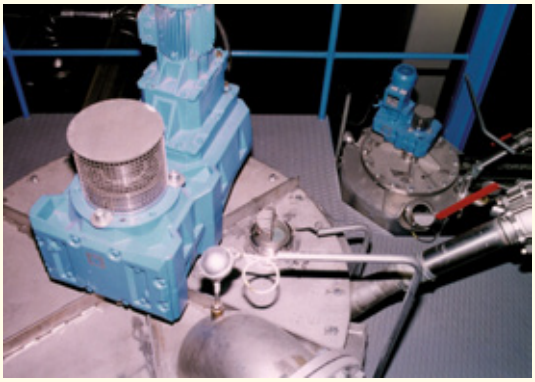
- closed air circuit, no waste air, no intake of fresh air
- air flow adjusted by blower speed
- own design of air drying unit with integrated heat recovery

Process Description

The Aquafil Engineering dryer is a solid-bed dryer with integrated crystallizer. The upper part is equipped with a chips lifter. The chips lifter keeps the chips moving, not allowing them to stick together during heat up. The chips are flowing through the dryer forced by gravity. The filling of the dryer can be done by several methods according to customer request and available space. The drying is effected by hot dry air which passes through the dryer in opposite direction to the chips. The dried air has a dew point below -40°C. The air is circulated in a closed circuit by Roots blowers. There is no intake of fresh air. So it must be removed only the moisture of the chips and not of the intake of fresh air.

The air leaves the dryer at the top, passes a cleaning system to separate the dust and is returned to the blowers and air drying unit. The air required for the heating and drying of chips can be recycled completely or partially. The humidity of dry air is measured continuously.

Cooling of air is not required resulting in reduced energy consumption. Cooling water is not required.



Chips Dryers in Korteks, Turkey

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