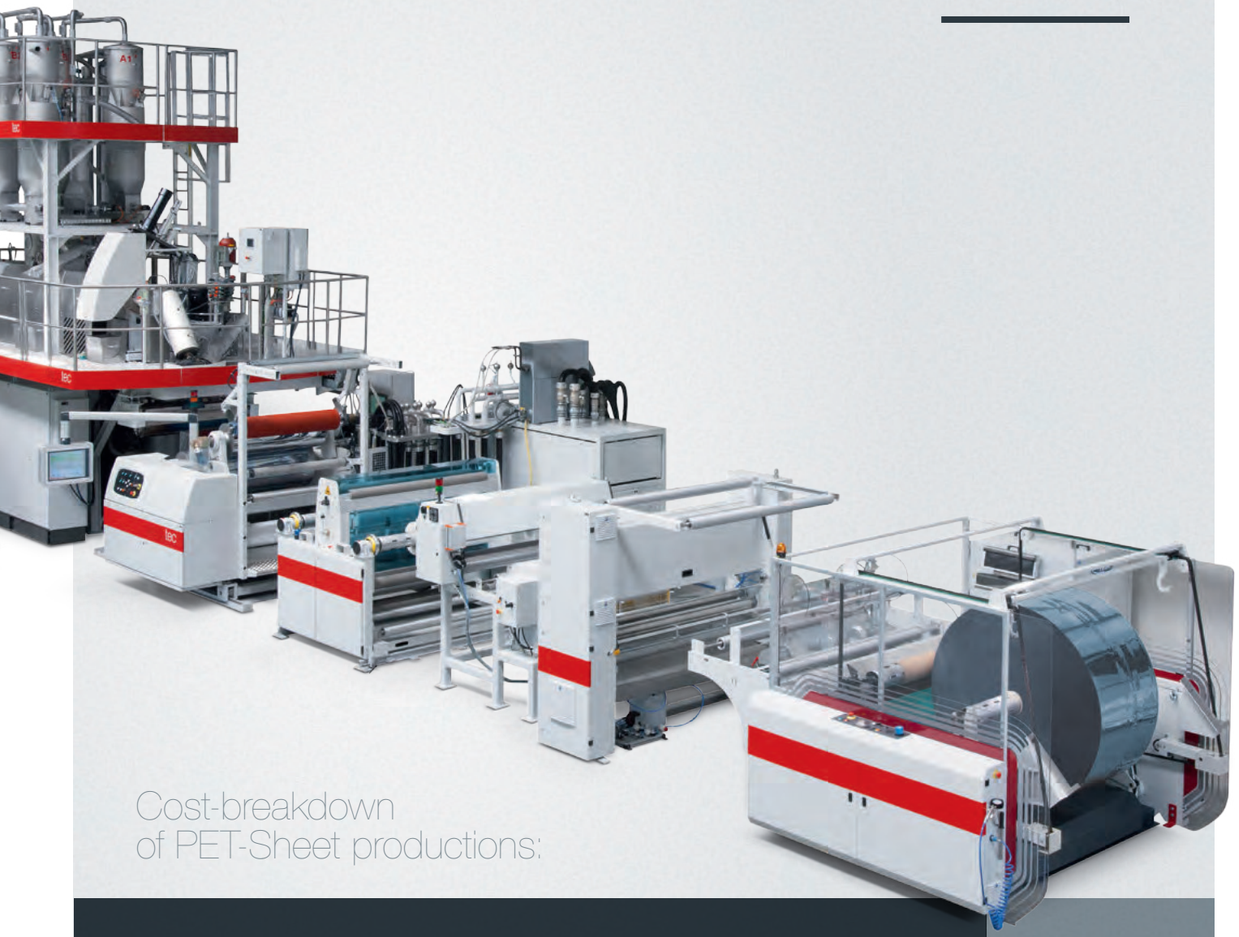
THE KEY FOR ECONOMIC PET SHEET PRODUCTION



Cost-breakdown
of PET-Sheet productions:

80 %
material
cost

20 %
machine
cost

Zero-waste policy and processing as much PCR flakes as possible is your competitive advantage

When analyzing the net cost of the semi-final product PET sheet, the result is a simple, but very clear picture. As shown in the chart, 80 % of the overall cost is material related, whereas only 20 % is associated with machinery, which includes all terms of costs regarding production like labor, electricity, investment, floor space, etc.

The market price development of the past years clearly shows a difference between PET flakes and PET virgin material, ranging from a 10 to 25 % lower price for an acceptable quality of PET flakes.

In-house skeleton material as a cut-off from thermoforming is traded with major price variations, anywhere from 10 to 50 % less than virgin material. This mid-term trend of course shows slight variations through market fluctuations.

Depending on the thermoforming process, the in-house waste is around 20 to 40 % of the thermoformed sheet. Since approx. 10 % can be obtained from edge trims, just the remaining 50 % of PCR material have to be sourced on the market. To figure out this example and to show the potential in savings per year, see the following table.

Calculation example viscoSHEET capacity for 1000 kg/h equals 7000 t p.a. (in comparison with 30 % virgin content) :

Material-type Input	Market price (value per ton)	Production goal (no use of virgin) share in %	absoulte value in USD
Bottle flakes	USD 1.100	70	5.39 m.
In-house waste	USD 700	30	1.47 m.
Virgin	USD 1.350	0	0.00 m.
Total			**6.86 m.**

The best strategy for a PET sheet producer:

- **use as much PCR flakes as possible - the cheapest material with adequate iV for sheet extrusion available on the market**
- **use the edge trims from sheet production + skeleton waste from thermo-forming and**
- **as a non-integrated sheet producer, buy back the in-house waste from your thermoforming customers.**

Your personal calculation for 1000 kg/h equals 7000 t p.a.:

MATERIAL-TYP INPUT	MARKET PRICE (value per ton)	PRODUCTION GOAL (NO USE OF VIRGIN) share in %	absoulte value in
Bottle flakes			
In-house waste			
Virgin			
Total			