

Möllers presents  
innovative  
packaging solutions



# Future means Palletless

50% saving of packaging costs of each load unit

- omission of all pallet costs
- high transport stability
- absolute water tightness
- recyclable wrapping materials
- positive carbon footprint

load unit without pallet



load unit with pallet



# Bags on Pallet

Stack configuration:

11 layers

5 bags / layer

55 bags each 25 kg

total 1,375 kg

Cost of empty pallet:

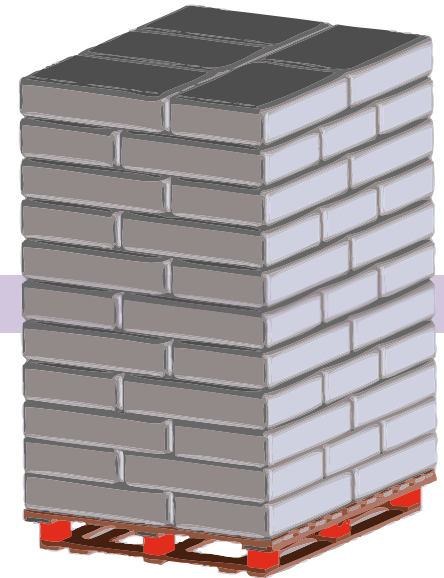
12.00 Euro

Cost of stretch film:

film thickness 140  $\mu\text{m}$

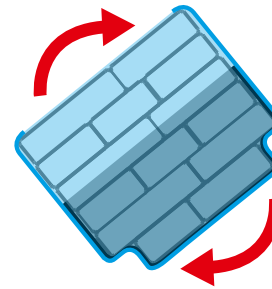
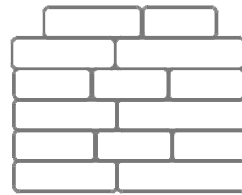
1200 gr / pallet

2.58 Euro



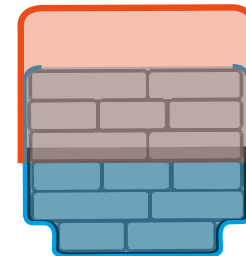
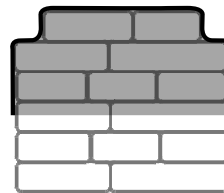
# The Idea

1. goods stacked up to 12 layers, last layer in a reduced stacking pattern



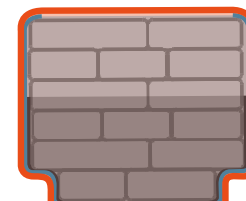
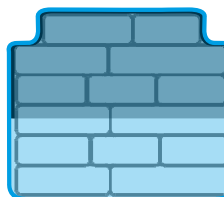
4. stack pressing and turning by 180°, the top layer now forms the base of the load

2. application of base film sheets



5. wrapping of reverse hood

3. wrapping of inner hood



6. palletless package is ready for removal

# The Process

1. wrapping of inner hood



3. stack pressing and turning by 180°



2. film underwrap



4. wrapping of reverse hood



# Palletless Package

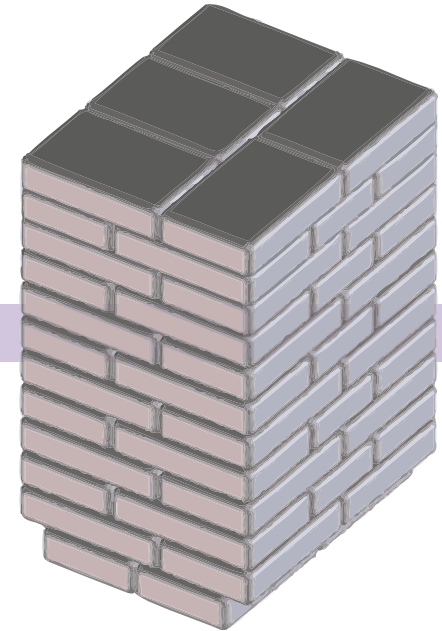
## Stack configuration:

11 + 1 layers

total 59 bags / package

total weight 1,475 kg

(other configurations possible)



## Costs of wrapping materials:

0.49 kg base sheets

2.50 kg stretch film

6.62 Euro

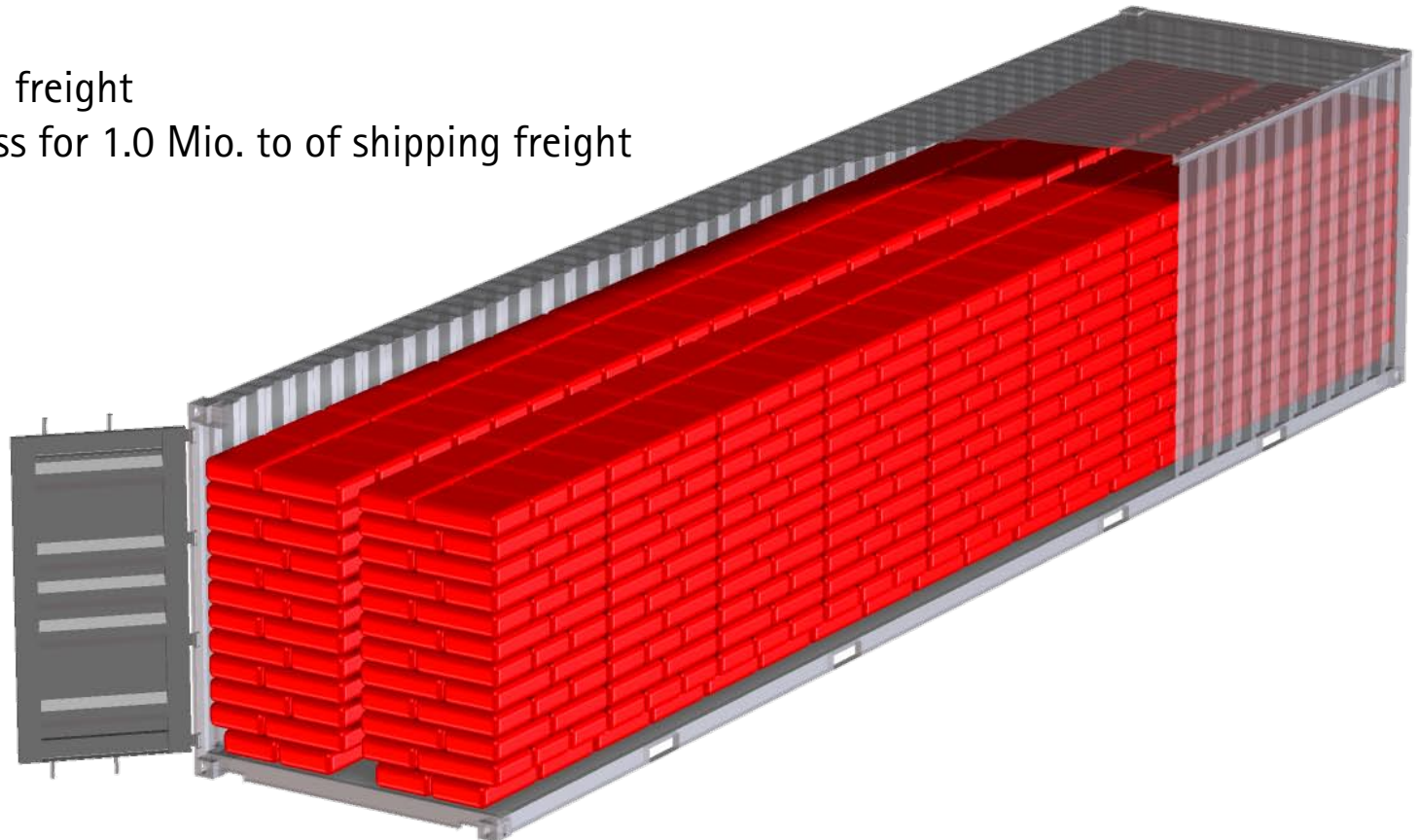
# The Comparison

	with pallet	palletless
load configuration	11 layers 5 bags / layer 55 bags each 25 kg total weight 1,375 kg	11 + 1 layers total 59 bags each 25 kg / package total weight 1,475 kg <small>(other configurations possible)</small>
cost load carrier	pallet: 12.00 Euro	base sheets: 1.25 Euro (0.49 kg)
cost stretch film	film thickness 140 µm 1.20 kg 2.58 Euro	film thickness 140 µm 2.50 kg 5.37 Euro
cost summary	14.58 Euro / pallet 10.60 Euro / t of product	6.62 Euro / package 4.48 Euro / t of product
<b>possible saving</b>		<b>6.12 Euro / t of product</b>

612,000 Euro saving per 100,000 tpa

# 100% use of payload

- 7.2% more shipping freight
- 2,740 Containers less for 1.0 Mio. to of shipping freight

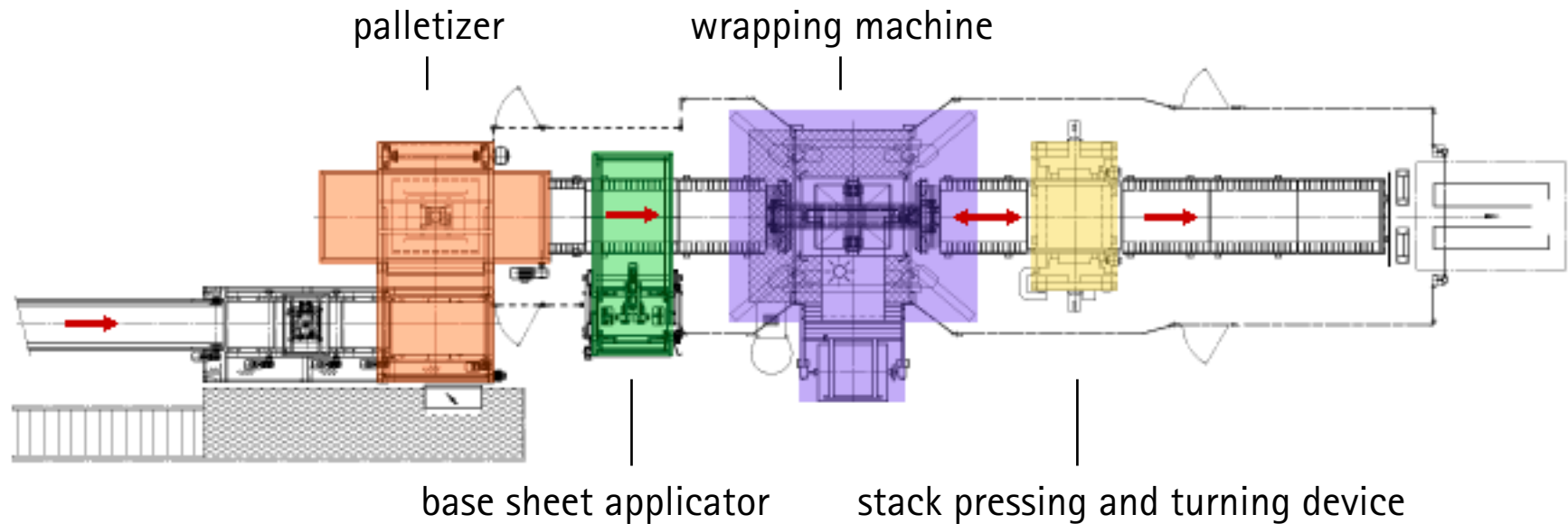


FEU with 18 (2x9) packages each 1,475 kg



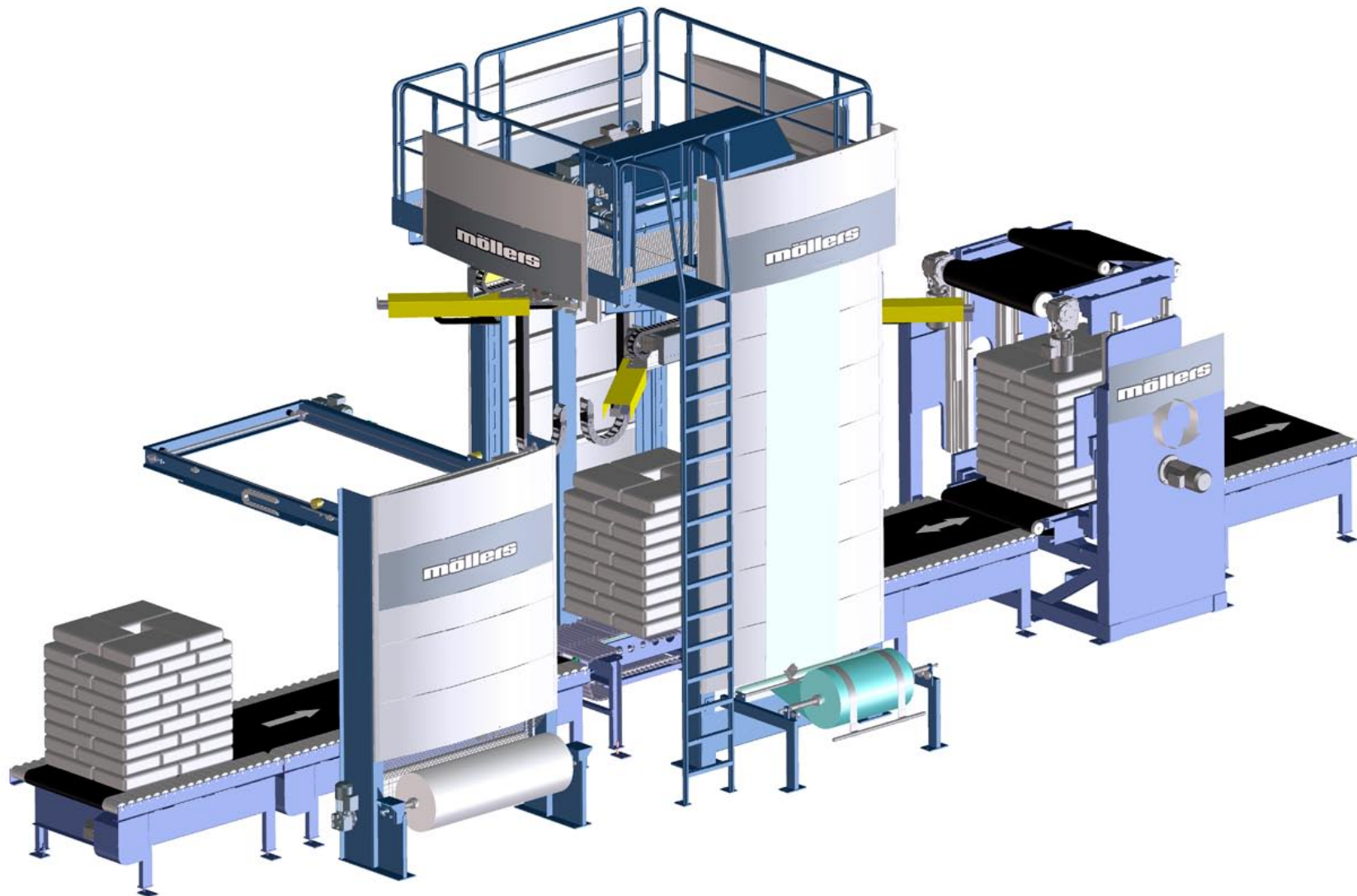
# Palletless Line PSH-1

Capacity: 40 packages / h



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# Warehousing



Open-air storage for reverse hooded loads is variable in size, pattern and position, and rapidly available as required

# Shipping even without sea containers



Palletless packages can be handled by crane using C hooks, double C hooks and shackle harnesses, and also in belt slings.



With its excellent handling properties, the reverse hood package satisfies all the requirements for rapid loading and unloading of containers.

[www.moellers.com](http://www.moellers.com)

[info@moellers.de](mailto:info@moellers.de)