Thermal Systems: an essential system into the vehicle

Air conditioning
Thermal Systems: an essential system into the vehicle

Powertrain cooling
Thermal Systems: a strong global player

- Thermal Climate Control Systems
- Thermal Compressors
Thermal Systems: a strong global player

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- Thermal Compressors
- Thermal Powertrain Systems
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- Thermal Climate Control Systems
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- Thermal Powertrain Systems
- Thermal Front End Modules
Thermal Systems: a strong global player

- Thermal Climate Control Systems
- Thermal Compressors
- Thermal Powertrain Systems
- Thermal Front End Modules

#2 ex-aequo Worldwide

Thermal Systems well positioned to catch all market opportunities
Thermal Systems: 2014 key figures

Total sales
3.6 Bn €

Growth +8% compared to 2013*

* OEM sales growth on a like-for-like basis
Thermal Systems: 2014 key figures

- Total sales: 3.6 Bn €
  - Growth: +8% compared to 2013*
- EBITDA: 11.1% of sales

* OEM sales growth on a like-for-like basis
Thermal Systems: 2014 key figures

- Total sales: 3.6 Bn €
  - Growth: +8% compared to 2013*
- EBITDA: 11.1% of sales
- Employees: 19,200
- Countries: 21
- Production sites: 45
- Research & Development centers: 11

* OEM sales growth on a like-for-like basis
Thermal Systems: Worldwide Presence

- **North America**
  - 30% Turnover
  - 19% Headcount

- **Europe**
  - 40% Turnover
  - 45% Headcount

- **China**
  - 12% Turnover
  - 14% Headcount

- **South America**
  - 3% Turnover
  - 3% Headcount

- **Asia excl. China**
  - 15% Turnover
  - 19% Headcount
Thermal Systems: Footprint

Extending presence in China
THS well positioned to catch geographic growth
Thermal Systems: Footprint
And extending presence in whole Asia
THS well positioned to catch geographic growth
Thermal systems can bring up to 15% CO2 reduction.
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Combustion Engine Thermal Systems need advanced technologies
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*vs. 100 price of a standard thermal system
Combustion Engine Thermal Systems need advanced technologies

Increase of car power → High performance radiator

Turbo charging → Charge Air Cooling

*vs. 100 price of a standard thermal system
Combustion Engine Thermal Systems need advanced technologies

- Increase of car power → High performance radiator
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- Exhaust recirculation → Recirculation - Gas Cooler

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Combustion Engine Thermal Systems need advanced technologies

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- Aerodynamics & Cold start emissions → Air Grille Shutters

*vs. 100 price of a standard thermal system
Combustion Engine Thermal Systems need advanced technologies

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*vs. 100 price of a standard thermal system

Value

Combustion engine → Hybrid / Electric → Fuel cell
Hybrid / Electric vehicles require specific Thermal Products
Hybrid / Electric vehicle require specific Thermal Products

Battery temperature monitoring → Battery cooling

Valeo Value

100 Standard
120 High perf. ICE

Combustion engine → Hybrid / Electric → Fuel cell
Hybrid / Electric vehicles require specific Thermal Products

- Battery temperature monitoring → Battery cooling
- Cabin comfort → Low-energy HVAC

Valeo Value

100 120
Standard High perf. ICE

Combustion engine Hybrid / Electric Fuel cell
Hybrid / Electric vehicle require specific Thermal Products

- Battery temperature monitoring
- Cabin comfort
- Electric driving

- Battery cooling
- Low-energy HVAC
- Electric Compressor

Valeo Value

Combustion engine

Hybrid / Electric

Fuel cell
Hybrid / Electric vehicle require specific Thermal Products

- Battery temperature monitoring → Battery cooling
- Cabin comfort → Low-energy HVAC
- Electric driving → Electric Compressor

*vs. 100 price of a standard thermal system

100 120 150
Standard High perf. ICE HEV / EV

Combustion engine  Hybrid / Electric  Fuel cell
Fuel Cell Electric vehicles need tailored Thermal Innovations
Fuel Cell Electric vehicles need tailored Thermal Innovations

- Air filtration
- High efficiency filters

Valeo Value

Combustion engine

Hybrid / Electric

Fuel cell

- Standard
- High perf. ICE
- HEV / EV
Fuel Cell Electric vehicles need tailored Thermal Innovations

- Air filtration
- High efficiency filters
- Charge air systems
- Charge Air Cooler

Valeo

Value

100
120
150

Standard
High perf. ICE
HEV / EV

Combustion engine
Hybrid / Electric
Fuel cell
Fuel Cell Electric vehicles need tailored Thermal Innovations

- Air filtration
- Charge air systems
- High power cooling

- High efficiency filters
- Charge Air Cooler
- High efficiency Cooling High power blowers

Valeo Value

Combustion engine Hybrid / Electric Fuel cell
Fuel Cell Electric vehicles need tailored Thermal Innovations

- Air filtration: High efficiency filters
- Charge air systems: Charge Air Cooler
- High power cooling: High efficiency Cooling High power blowers
- High power density: Electric Supercharger
Fuel Cell Electric vehicles need tailored Thermal Innovations

- Air filtration: High efficiency filters
- Charge air systems: Charge Air Cooler
- High power cooling: High efficiency Cooling High power blowers
- High power density: Electric Supercharger

*vs. 100 price of a standard thermal system

(Valeo Value)

Combustion engine  Hybrid / Electric  Fuel cell
Growth engines to outperform the market

Thermal market growth 4.5% CAGR*

* Valeo estimates

CAGR 4.5%
Growth engines to outperform the market
Sales 2014
3.6 Bn €

+~6% CAGR
>5.0 Bn €

2020

Thermal Systems: Financial perspectives 2020
Sales 2014: 3.6 Bn €
EBITDA 2014: 11.1 % of sales

+~6% CAGR >5.0 Bn € 2020
~12.5% of sales

Thermal Systems: Financial perspectives 2020