Vakuum Apparate Technik
(engl.: vacuum device technology)

BUY RECOMMENDATION
YOU

SAMSUNG

Original Equipment Manufacturers (OEMs)

Machinery

Vacuum valves
Geographical markets

- Americas: 33%
- EMEA: 14%
- Asia: 53%
- Other countries: 25%

End markets
- Asia: 75%

Source: VAT
GLOBAL VACUUM VALVE PURE-PLAYER

Market segments

- Semiconductors (60%)
- Displays (13%)
- Solar (3%)
- Industry & Research (24%)

Source: VAT
BUY
Recommendation

CHF 158 Closing price
April 13th, 2018

End market growth
Strong competitive position
High cashflow generation
Upside potential & limited risk

Target price
CHF 181
15 % Upside
Mega trends drive end market growth

Industry
- Semiconductors
- Displays
- Solar
- Industry & Research

Outlook
- Digitalization
- Internet of Things
- Big Data

5Y CAGR
- +8.8%
- +4.1%
- +4.4%
- +2.1%

New end-markets
- Healthcare
- Automotive
- Aerospace

End market growth
- Strong competitive position
- High cashflow generation
- Upside potential & limited risk

Source: Team Assessment, VLSI
Vacuum processing becomes more essential

Production steps per node size

- 20nm
- 14nm
- 10nm
- 7nm
- 5nm

Need for cleanliness

- Node size: 5 nm
- Dust Particle: 35 nm

Sales percentage of vacuum equipment

- 2010: 20%
- 2011: 25%
- 2012: 30%
- 2013: 35%
- 2014: 40%
- 2015: 40%
- 2016: 40%
- 2017: 40%
- 2018E: 40%
- 2019E: 40%
- 2020E: 40%

Source: VLSI, Team Assessment

- End market growth
- Strong competitive position
- High cashflow generation
- Upside potential & limited risk
Chinese R&D expansion benefits VAT

% of total world **supply** in semiconductor components

- Other countries: 14%
- China: Supply Today

% of total world **demand** in semiconductor components

- Other countries: 62%
- China: Demand 2019

Chinese R&D spending in the technological sector (USD Bn)

- 2007: 100
- 2012: 200
- 2015: 300
- 2020E: 500

End market growth

Strong competitive position

High cashflow generation

Upside potential & limited risk

Source: PWC, McKinsey
End clients buy from 3 key equipment manufacturers

Global capex in the semiconductor industry (USD Bn)

Semiconductor equipment supplier market concentration

3 OEMs = 75% of market

End market growth | Strong competitive position | High cashflow generation | Upside potential & limited risk

Source: VLSI, Statista
End market growth
New end market trends
Rising need for vacuum
Chinese R&D expansion

Strong competitive position

High cashflow generation

Upside potential & limited risk

VAT
Solidified place in the value chain

3 key customers VS >100 suppliers VS Low rivalry

- Lam Research
- TEL
- Applied Materials
- CKD
- mks
- V-TEX

- 50% of VAT’s net sales
- 22% of material expenses
- 16% combined market share

Source: VLSI, VAT

End market growth
Strong competitive position
High cashflow generation
Upside potential & limited risk
Market leader with growing market share

2017 Global vacuum valves market (1.2 Bn USD)
- VAT 45%
- Other 39%
- V-TEX 5%
- mks 5%
- CKD 6%

2022 Global vacuum valves market
- VAT 53%
- Other 47%

Market share gains in growing main semiconductor market

End market growth
Strong competitive position
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Global reach
Focus
Relative size
Innovation

Source: VLSI, VAT, Team Assessment
InnoVATion

- **R&D / Sales**
  - FY17: 7% (VAT Group AG), 3.5% (Average)
  - FY18E: 8% (VAT Group AG), 4.6% (Competitor Average)
  - FY19E: 8% (VAT Group AG), 4.5% (Competitor Average)
  - FY20E: 7.5% (VAT Group AG), 4.6% (Competitor Average)

- **Development Cycle**
  - 20% of workforce engaged in R&D
  - 2-3 years average development cycle

- **End Market Growth**
  - High barriers to entry
  - Strong patent portfolio
    - ~170 granted patents
    - ~170 pending patents
  - ~25% of sales generated from products developed in the past 3 years

- **Strong Competitive Position**
  - High cashflow generation
  - Upside potential & limited risk

Source: Thomson Reuters, VAT, Team Assessment
End market growth

Strong competitive position
- Strong value chain
- Market leadership
- Innovation

High cashflow generation

Upside potential & limited risk
High revenue growth through increasing volumes

Revenue growth forecast

Growth drivers

Volume effect
- Growing end-markets
- Opportunities in new markets
- Market share gains

Pricing liberty
- Complexity in the product
- Reliance on VAT
- Ability to pass on FX and raw material price fluctuations

Source: VLSI, Team Assessment

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Outsourcing affects COGS negatively: Suppliers increase their prices to take into account the depreciation of machinery.

Outsourcing affects personnel expenses positively: Provides flexibility to adjust capacity.

VATmotion program: Global sourcing and material planning.

Source: Team Assessment, VAT
High FCF generation via strong operating performance

- **High FCF margin & conversion**
  - FCF/EBITDA conversion:
    - FY15: 39%
    - FY16: 50%
    - FY17: 54%
    - FY18E: 67%
    - FY19E: 67%
    - FY20E: 73%
    - FY21E: 75%
  - FCF margin:
    - FY15: 11%
    - FY16: 15%
    - FY17: 17%
    - FY18E: 22%
    - FY19E: 22%
    - FY20E: 24%
    - FY21E: 25%

- **Not capital-intensive (low capex / sales)**
  - FY15: 3%
  - FY16: 4%
  - FY17: 7%
  - FY18E: 7%
  - FY19E: 5%
  - FY20E: 4%
  - FY21E: 4%
  - FY22E: 4%

- **More efficient (decreasing operating cycle)**
  - FY15: 140 days
  - FY16: 113 days
  - FY17: 112 days
  - FY18E: 106 days
  - FY19E: 100 days
  - FY20E: 94 days
  - FY21E: 87 days
  - FY22E: 79 days

**Source:** Thomson Reuters, VAT, Team Assessment

- **End market growth**
- **Strong competitive position**
- **High cashflow generation**
- **Upside potential & limited risk**
VAT above peers

Sales growth

- FY17: 36%
- FY18: 17%
- FY19E: 6%

EBITDA margin

- FY17: 31%
- FY18E: 31%
- FY19E: 32%

EPS growth

- FY17: 60%
- FY18E: 33%
- FY19E: 17%

ROIC

- FY17: 20%
- FY18E: 22%
- FY19E: 22%

Peers

- End market growth
- Strong competitive position
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Source: Thomson Reuters, Team Assessment
End market growth

Strong competitive position

High cashflow generation
- Revenue growth
- Efficiency gains
- Shareholder value

Upside potential & limited risk
VAT is a good investment

Discounted free cash flow to firm + Multiple valuation = Blended target price

75% + 25% = CHF 181

Upside potential 15%

End market growth
Strong competitive position
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Source: Team Assessment
DCF yields positive upside

*DCF Target: CHF 182*

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Source: Team Assessment

- **End market growth**
- **Strong competitive position**
- **High cashflow generation**
- **Upside potential & limited risk**
VAT trades at a discount to peers

**PEG - Ratio**

- **VAT:** 0.84 (Peer: 0.95)
- 12% discount
- **Target:** CHF 177

**Comparability**
- Highly
- Likely
- Somewhat
- Not likely
- Not at all

**Source:** Thomson Reuters, Team Assessment
No high-probability, high-impact risk

- **Product quality**
- **Employee risks**
- **Customer concentration**
- **Technology**
- **M&A**
- **Failing guidance**
- **Increasing competition**
- **ESG compliance**
- **Natural**
- **End market growth**
- **Strong competitive position**
- **High cashflow generation**
- **Upside potential & limited risk**

Source: Team Assessment
Effect on Swiss manufacturing companies:

- **47%** Significant negative effects
- **34%** Moderate negative effects

Main concern: Lower profit margins (in 90% of cases)

Effect on Swiss manufacturing companies:

- **47%** Significant negative effects
- **34%** Moderate negative effects

End market growth | Strong competitive position | High cashflow generation | Upside potential & limited risk

Source: Datastream, IMF
Sensitivity analysis shows limited downside

End markets grow faster

Rapid gain of market share

Loss of 1 out of 3 biggest customers

Failure to gain market share

End markets grow slower than expected

Blue/Grey sky scenario

- Blue sky: CHF 236 (+49%)
- Target price: CHF 181 (+15%)
- Current price: CHF 158
- Grey sky: CHF 100 (-37%)

Source: Team Assessment

End market growth
Strong competitive position
High cashflow generation
Upside potential & limited risk
BUY

End market growth
- New end market trends
- Rising need for vacuum
- Chinese R&D expansion

Strong competitive position
- Strong value chain
- Market leadership
- Innovation

High cashflow generation
- Revenue growth
- Efficiency gains
- Shareholder value

Upside potential & limited risk
- Blended approach
- Attractive upside
- Limited downside

Target price CHF 181 (+15%)