



Vacuum Units vs. Ejector

Comparison of different vacuum producers

Superior Clamping and Gripping



Technical details – Vacuum generation

SVAGG – Schunk vacuum unit

Water separator

For long service life of the pump

Fill level indication and automatic audible warning

Visual fill level indication of the reservoir and automatic audible warning

Vacuum hose connection

With ball valve for activating the vacuum

Vacuum pressure gauge

For monitoring the operating vacuum

Manual drain valve

For manual deflation of the liquid tank

Vacuum pump

With automatic shutdown – up to 80% energy saving

Vacuum boost

For increasing the vacuum level and maintaining the pump oil

Interface to machine

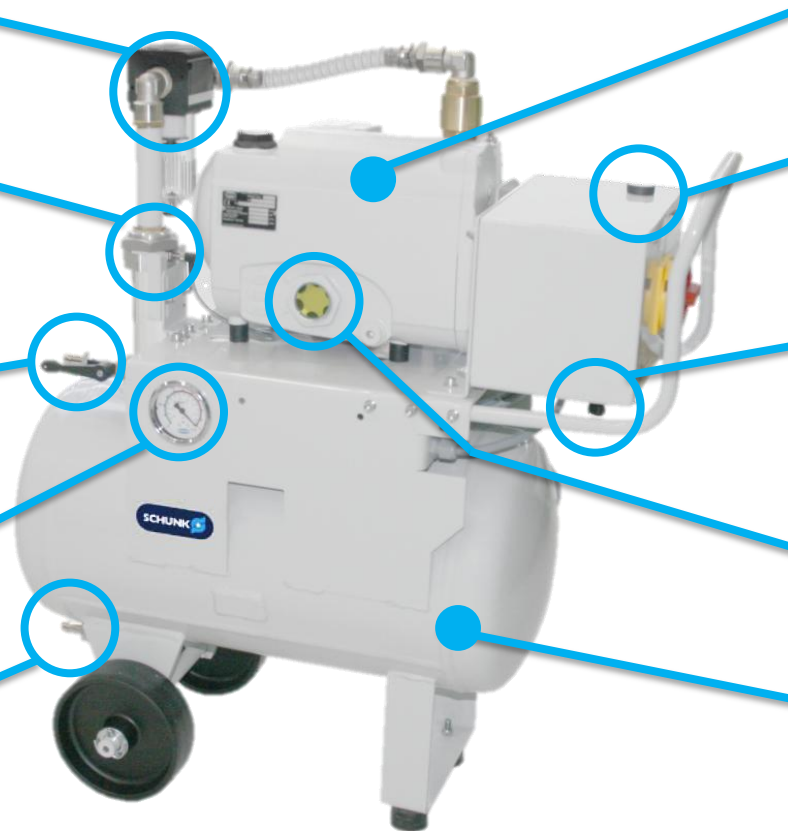
Interface for coupling with EMERGENCY-OFF of the machine (if vacuum level or fill level is in the critical range)

Oil sight glass

For visual control of pump oil

Liquid tank

For absorption of lubricating coolant



Technical details – Vacuum generation

One way-Ejector

Silencer

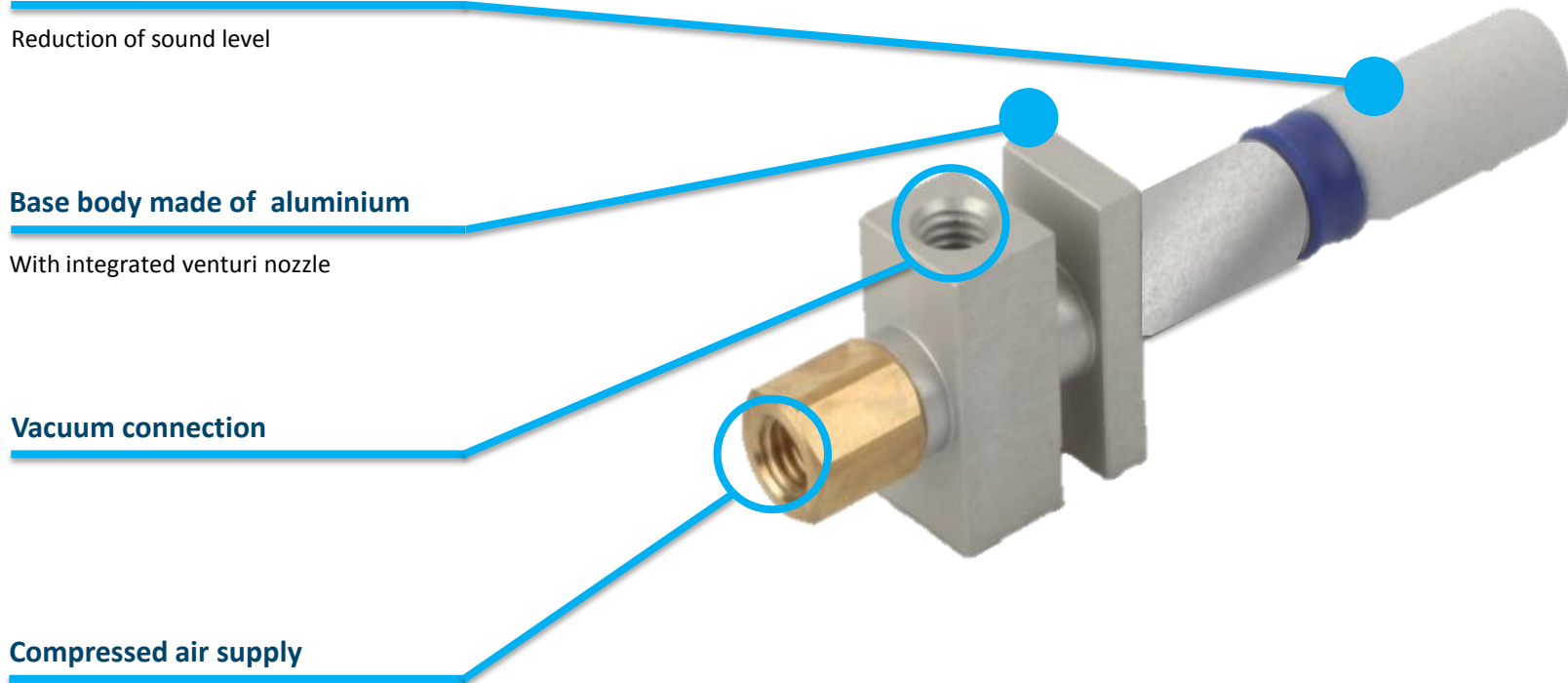
Reduction of sound level

Base body made of aluminium

With integrated venturi nozzle

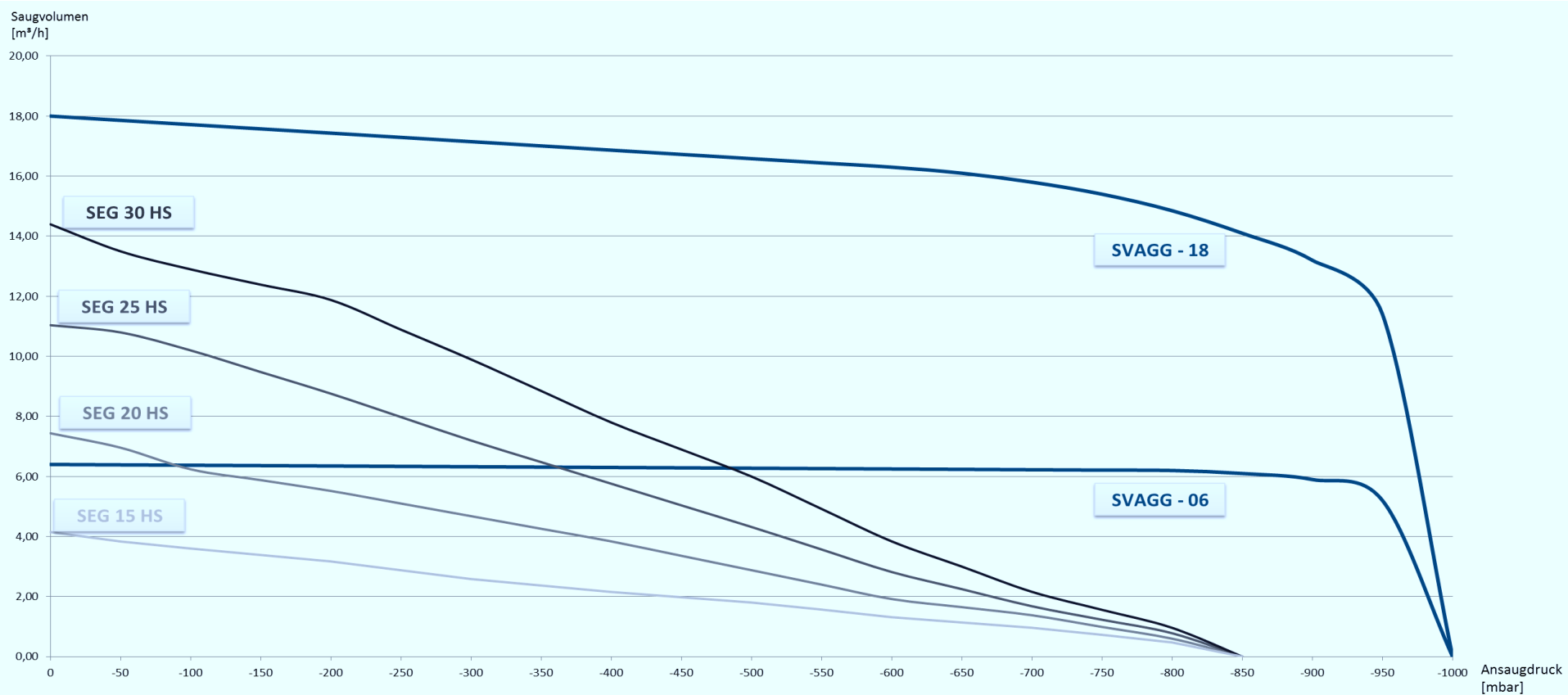
Vacuum connection

Compressed air supply



Technical details – Vacuum generation

Comparison of performance data– SVAGG vs. SEG (One way-Ejector)



Technical details – Vacuum generation

Comparison of performance data– SVAGG vs. SEG (One way-Ejector)

- From -500mbar suction pressure the smallest SVAGG has even a higher suction volume as the most powerful ejector

Technical details – Vacuum generation

Comparison of performance data– SVAGG vs. SEG (One way-Ejector)

- Required time for evacuation of an average clamping system (2.5 L) to 800 mbar:



- Thanks to the **10l vacuum store** the **SVAGG-06** evacuates average clamping systems faster than any ejector!

Technical details – Vacuum generation

Schunk vacuum unit	One way-Ejector
<ul style="list-style-type: none"> ✓ Economical operation – energy saving device in automatic mode ✓ Pressure gauge, vacuum switches and alarm enable monitoring of the vacuum including a digital signal to the machine ✓ High suction (even with low suction pressure) an high vacuum value enable high holding forces and compensation of leakage ✓ Boiler serves as a liquid tank and vacuum storage <ul style="list-style-type: none"> ➤ Resistance against coolant and chips ➤ Very fast build-up of vacuum ✓ Lower noise levels (due to lower sound pressure level and automatic shutdown) ✓ Liquid stays in the liquid tank (won't be discharged into the ambient air) 	<ul style="list-style-type: none"> ✓ Less investment costs ✓ Less maintenance costs



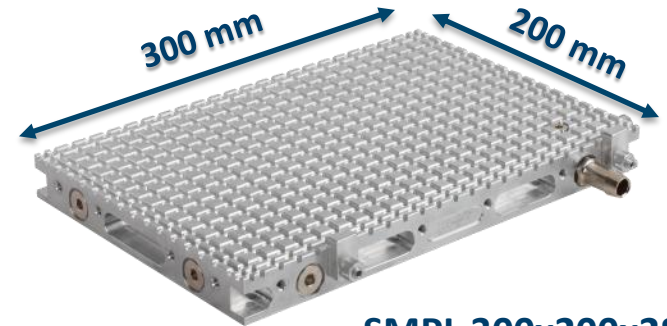
The **SCHUNK VACUUM UNIT** is ideally suited for clamping with vacuum when cutting metal or plastics

Example 1 – three-shift operation

Workday per year	250
Operating hour per day	18
Costs compressed air [ct/m³]	2
Costs power [ct/kWh]	12,5
Operating life ejector [years]	5
Operating life SVAGG [years]	10
Ejector in operation [in %]	80
SVAGG in operation [in %]	10

Example 1 – three-shift operation

Economic efficiency | SVAGG-06 vs. SEG 20 HS



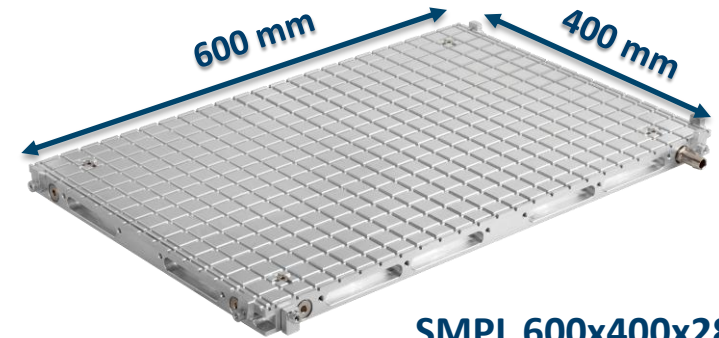
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Final costs per year and linear amortisation



Example 1 – three-shift operation

Economic efficiency | SVAGG-18 vs. SEG 30 HS



Final costs per year and linear amortisation



Example 1 – three-shift operation

Result | SVAGG-06 vs. SEG 20 HS

- **68 % lower total costs** per year
- **15 % higher holding forces**
- **10 times more suction volume** at -800 mbar suction pressure (better leakage compensation)

Result | SVAGG-18 vs. SEG 30 HS

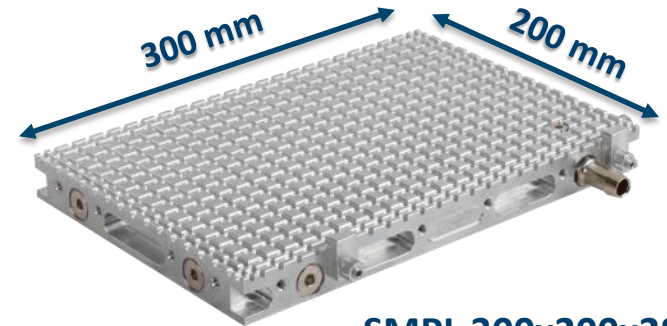
- **80 % lower total costs** per year
- **15 % higher holding forces**
- **15 times more suction volume** at -800 mbar suction pressure (better leakage compensation)

Example 2 – two-shift operation

Workday per year	250
Operating hour per day	12
Costs compressed air [ct/m³]	2
Costs power [ct/kWh]	12,5
Operating life ejector [years]	5
Operating life SVAGG [years]	10
Ejector in operation [in %]	80
SVAGG in operation [in %]	10

Example 2 – two-shift operation

Economic efficiency | SVAGG-06 vs. SEG 20 HS



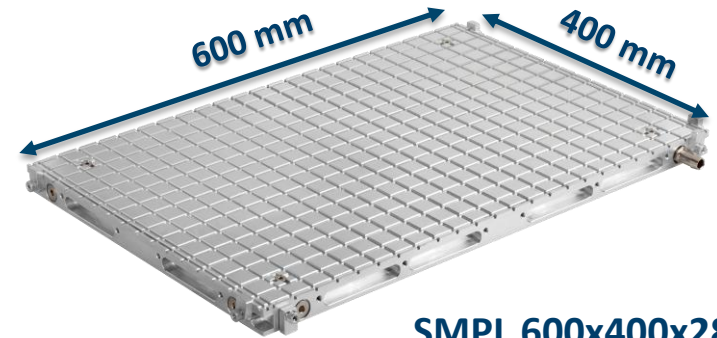
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Final costs per year and linear amortisation



Example 2 – two-shift operation

Economic efficiency | SVAGG-18 vs. SEG 30 HS



Final costs per year and linear amortisation



Example 2 – two-shift operation

Result | SVAGG-06 vs. SEG 20 HS

- **53 % lower total costs** per year
- **15 % higher holding forces**
- **10 times more suction volume** at -800 mbar suction pressure (better leakage compensation)

Result | SVAGG-18 vs. SEG 30 HS

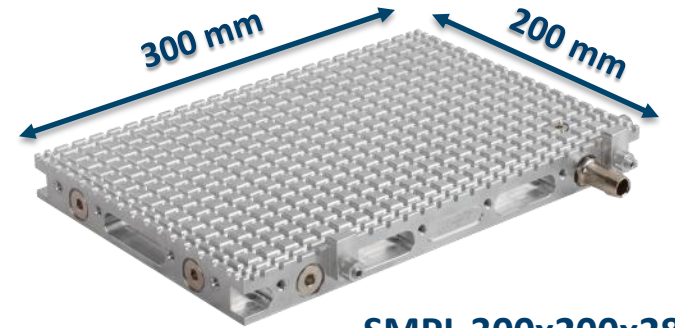
- **72 % lower total costs** per year
- **15 % higher holding forces**
- **15 times more suction volume** at -800 mbar suction pressure (better leakage compensation)

Example 3 – three-shift operation

Workday per year	250
Operating hour per day	6
Costs compressed air [ct/m³]	2
Costs power [ct/kWh]	12,5
Operating life ejector [years]	5
Operating life SVAGG [years]	10
Ejector in operation [in %]	80
SVAGG in operation [in %]	10

Example 3 – three-shift operation

Economic efficiency | SVAGG-06 vs. SEG 20 HS



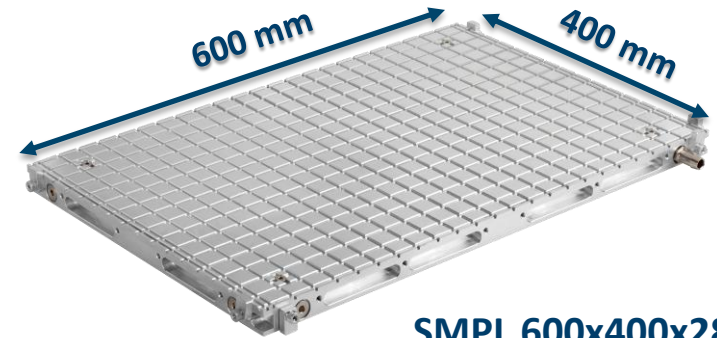
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Final costs per year and linear amortisation



Example 3 – three-shift operation

Economic efficiency | SVAGG-18 vs. SEG 30 HS



Final costs per year and linear amortisation

SVAGG-18



321,31 €

SEG 30 HS



609,61 €

Example 3 – three-shift operation

Result | SVAGG-06 vs. SEG 20 HS

- **12 % lower total costs** per year
- **15 % higher holding forces**
- **10 times more suction volume** at -800 mbar suction pressure (better leakage compensation)

Result | SVAGG-18 vs. SEG 30 HS

- **47 % lower total costs** per year
- **15 % higher holding forces**
- **15 times more suction volume** at -800 mbar suction pressure (better leakage compensation)

➤ Individual calculation

Result - SVAGG

- Up to **80 % lower total costs**
- Up to **15 times more suction volume** at a high suction pressure
- Effective compensation of leakages
- **15 % higher holding forces** due to higher vacuum level
- Due to numerous integrated functions **SVAGG is perfect for use in metal cutting**

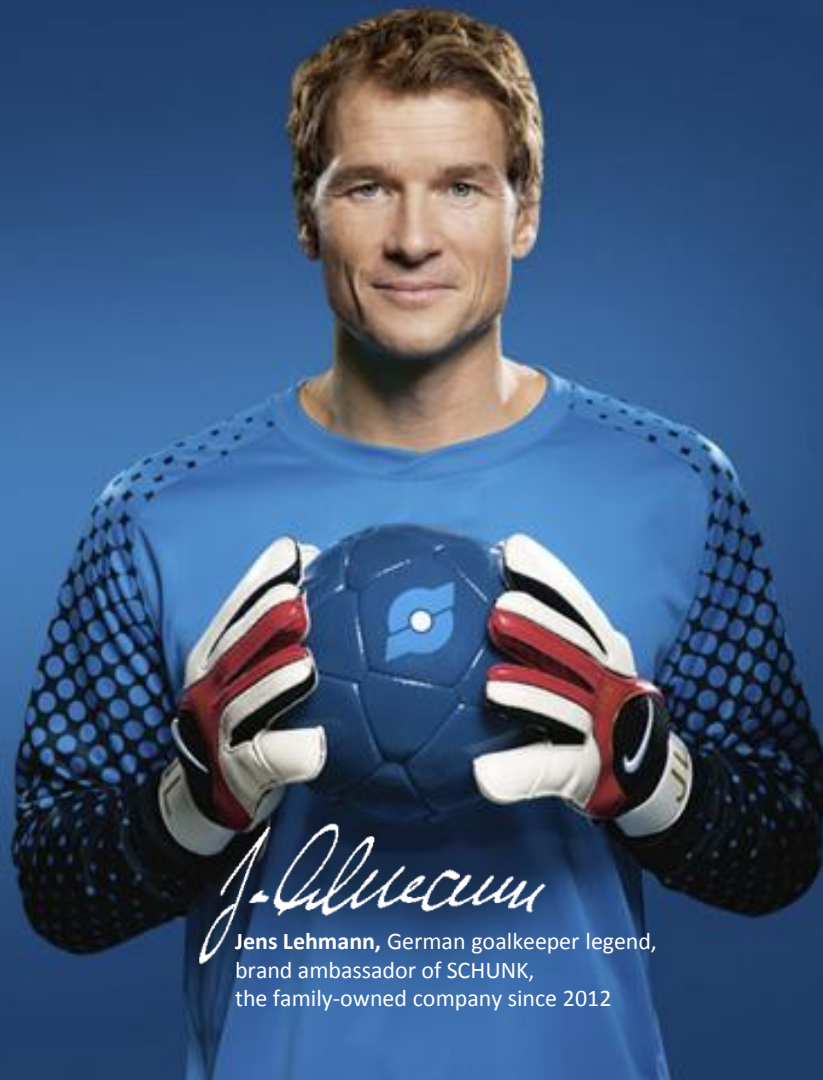
➤ **More power**

➤ **Higher functionality**

➤ **Lower costs**

... therefore SVAGG

Superior Clamping and Gripping



J. Lehmann

Jens Lehmann, German goalkeeper legend,
brand ambassador of SCHUNK,
the family-owned company since 2012



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