

# Flexible Cleaning Machines The Benchmark

EcoCflex® 3M/3L & EcoCdry



**ECOCLEAN**  
*technology that inspires*



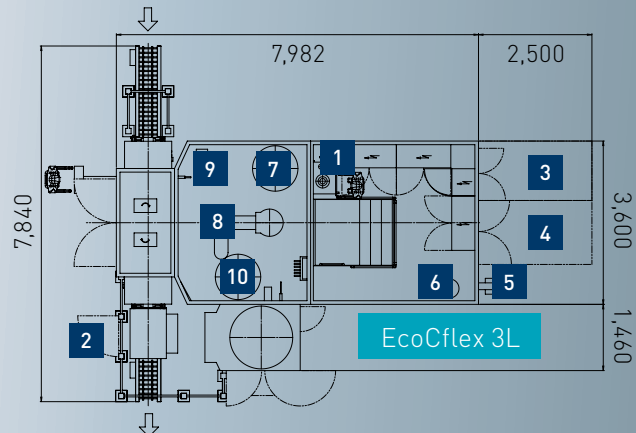
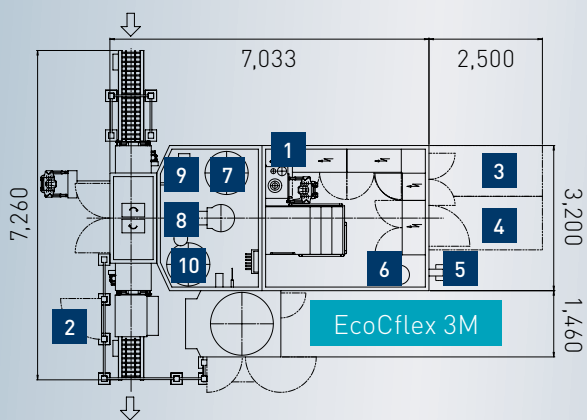
# EcoCflex 3M/3L & EcoCdry

## The process

The EcoCflex 3M/3L can either be equipped for use as a pre-cleaner with a single-bath-technique or with a two-stage cleaning process for final cleaning. High-pressure deburring with up to 600 bar (75 kW) is optional for both variants. The basic configuration of low-pressure systems and the power injection flood washing are already included in the multifunctional container.

Power injection flood washing with the patented thin-flow nozzle provides optimal results in the basic configuration in the first process stage, while maintaining low energy usage. Next to many optionally available high-pressure tools, the patented hybrid nozzle provides great results, especially with complex cavities. This tool is used afloat submerged and stands out due to, for example, its ability to reliably eliminate jammed chips.

Technical data			
SYSTEM SPECIFICATIONS	EcoCflex 3M	EcoCflex 3L	EcoCdry
<b>Length</b>	7,000 mm	7,900 mm	3,115 mm
<b>Width</b>	3,200 mm	3,600 mm	1,460 mm
<b>Height</b>	3,800 mm	3,800 mm	3,650 mm
<b>Weight</b>	16,000 kg	18,000 kg	3,000 kg
WORKPIECE SPECIFICATIONS			
<b>Length</b>	500 mm		
<b>Width</b>	400 mm		
<b>Height</b>	300 mm		
<b>Workpiece weight</b>	45 kg		



- |  |   |  |
|--|---|--|
| <b>1</b> Power connection                        | <b>4</b> Maintenance area for robot           | <b>8</b> Ecoclean-Scara-Manipulator          |
| <b>2</b> Process modul                           | <b>5</b> Swarf container (on site)            | <b>9</b> HP linear unit                      |
| <b>3</b> Maintenance area for high-pressure pump | <b>6</b> Automatic filters                    | <b>10</b> Process container with water knife |
|  | <b>7</b> Process container with hybrid nozzle |  |

The EcoCflex 3M/3L is ideally supplemented with the highly efficient vacuum-drier (EcoCdry). Pre-drying in the cleaning system can be omitted to save valuable cycle time for the cleaning of workpieces. The suction of liquids in the vacuum-drier, which is performed within seconds, and thereby providing a much more efficient vacuum-drying process, saving more than 65% of energy compared to conventional compressed air blow-off.

#### Fields of application for pre-, intermediate- and final cleaning:

- Crankcases and cylinder heads
- Transmission and clutch housings
- Crankshafts
- Hydraulic parts
- Pump housings

#### The system

- Functional and transparent system design for maximum flexibility in layout planning
- The modular load concept optionally allows for loading and unloading via robots, portal, belt conveyor as well as manually

- The Ecoclean-Scara-Manipulator was developed using high-strength aluminum, stainless steel and Viton-seals, to meet the specific requirements of a cleaning system
- The control via a Siemens CNC-control simplifies the operation of the system
- State-of-the-art and patented process technology for the achievement of the best cleaning quality with minimal operating costs
- An energy monitoring system facilitates real time detection of total energy consumption and by entering user charges a direct display of the customer's specific unit costs is provided
- The noise level is even for high pressure applications below 75 dB(A)
- Optimal maintenance accessibility despite compact 2 level design The system is able to achieve cycle times of 30 seconds, depending on the chosen process.

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The energy consumption of the system, for a reference process to clean and deburr cylinder heads with a cycle time of 60 seconds, is below 30 kWh.

## Our Locations Worldwide



**SBS ECOCLEAN GROUP**