

# Function & Effect of the Mozzi-Piston



	<p>In the center of the piston head there is a special-titanium-insert implemented with an exact defined geometry. The special titanium-material and also the geometry lead to the result, that the heat will not be transmitted to the outer border of the piston (so-called bi-thermally-effect).</p>
	<p>This bi-thermally-effect causes - due to the difference of the temperature - an extremely strong rotation of the gasoline-air-mixture in the burning chamber. The mixture is transferred into a homogeneous gas condition (the gasoline drops are so fine, that nearly a gaseous condition arises).</p>
	<p>Due to the created optimized mixture, this mixture will inflame essentially faster, this leads into a faster gas exchange: The efficiency increases, the thermally stress on the piston is considerably shorter.</p>

Single Pistons can be reworked - after technical evaluation for feasibility - to the Mozzi-System. For this purpose please send us your used, but still functional piston or a new piston. We will make then an individual offer .

## Application of the Mozzi-Piston:

Mofas, Scooter / Roller, Mokicks / Kleinkrafträder, Motor-Cycles, Cars (Trabant, Wartburg, Barkas, DKW etc.), Kart, Motor Saws, Lawn Movers, Emergency Power Aggregates, Model-cars, Ultra-Light Aircrafts, Jet-Ski, Boat Engines

## Advantages / customers benefit

- Increased turbulences in the combustion chamber
- "Homogeneous" gas condition
- "Catalytic" piston
- Increased rpm, increased stability
- Increased performance
- Reduced fuel consumption
- Smooth engine running
- Reduced exhaust / emissions
- Changed temperature related deformation-behavior
- Reduction of the "non-wished" detonations in the border area
- Less costs in fuel
- Less costs in oil
- More Fun

## For more information please contact us:

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# Customers Benefit > PURE Two-Stroke-FUN



## Exhaust values - Pollution > Reduction // Increase of Efficiency

Exhaust Value	1:30 Standard-Piston	1:30 Mozzi-Piston	1:100 Mozzi-Piston	1:200 Mozzi-Piston	Result
CO <sub>2</sub>	100%	101,7%	90,4%	93,7%	- 10%
CO	100%	90,9%	73,4%	72,9%	- 26%
NO <sub>x</sub>	100%	112,7%	114,2%	121,6%	+ 14%
HC	100%	94,9%	88,3%	78,0%	- 12%

## Power > Increase

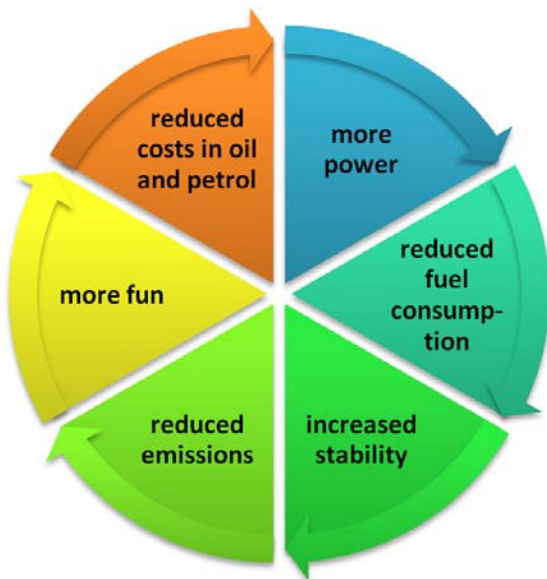
Mixture Ratio	%-Value	Result
1:30 Standard-Piston	100%	
1:30 Mozzi-Piston	113,1%	+ 13%
1:100 Mozzi-Piston	126,3%	+ 26%
1:200 Mozzi-Piston	116,0%	+ 16%

## Fuel Consumption > Reduction

Mixture Ratio	Value Fuel consumption (dm <sup>3</sup> /100 km)	Result
1:30 Standard-Piston	4,06	
1:30 Mozzi-Piston	3,92	- 3,5%
1:100 Mozzi-Piston	3,45	- 17,6%
1:200 Mozzi-Piston	3,37	- 20,5%



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## Abstract of the scientific investigation of the Polytechnical University of Poznan, Poland with 50 ccm Ferro-Scooters of the company Almot, Poland

... The measurements revealed a **reduced fuel consumption**, with higher share of petrol related to the oil, thereby the fuel consumption will be reduced

--- From the data obtained, it can be concluded that the overall efficiency was improved by the replacement of the Pistons. With a mixture ratio of 1: 100 the best results have been achieved, taking the generated power and the fuel consumption into account. The **performance is higher by about 25%** compared to the standard motor with serial piston.

... The higher proportion of fuel continues ensures **still adequate lubrication**, there was **no increase in friction losses**.

... **The environmental indicators are much improved**, there was a maximum reduction in average CO<sub>2</sub> emissions by 10%. The HC values were reduced by 22%, the CO levels by 27%. The increase in NO<sub>x</sub> emissions by max. 21% over the standard engine with Series Piston shows the **higher thermal efficiency**, which is very useful in terms of reduction in consumption, which in turn reduces CO<sub>2</sub> emissions.

... So the process of combustion in the cylinder is improved in the most **efficient manner**. The Mozzi-Piston is an innovative product, which was not previously available on the market.