

Case Study No. 1:

## From One Pro to Another – MatriCS® Cylinder Block Gaskets for Professional Chainsaws




### THE CHALLENGE

For professional chainsaws, daily life can be a real grind: switch on, run at full throttle, idle, and switch off in rapid succession. Day in and day out. To put up with this torture, the cylinder block gasket must be able to reliably handle very high dynamic loads and frequent temperature changes. Narrow sealing-face bridges and divided sealing surfaces make the job even harder.

### THE SOLUTION FROM VICTOR REINZ

MatriCS® – an embossed metal gasket with a highly functional fiber-reinforced elastomer coating. The special configuration of the embossment enables it to adapt individually to the surrounding parts and provide totally secure macro sealing under the most severe day-to-day conditions – even with narrow sealing-face bridges and divided sealing surfaces. The compressible coating also provides for outstanding micro sealing. Our contribution to greater performance: Thanks to the high pressure resistance of MatriCS®, performance-lowering cylinder clearance can be eliminated in the design right from the start.

**What kind of challenge do you face?  
Give us a call!**

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**VICTOR REINZ®**

Technical Data <sup>1)</sup>		MatriCS® (plus) <sup>2)</sup>
<b>Weight per unit of surface area</b>		
MatriCS®		~ 2.20 kg/m <sup>2</sup>
MatriCS® plus		~ 1.80 kg/m <sup>2</sup>
<b>Residual stress</b>	DIN 52913	
16 h, 300 °C		≥ 45 N/mm <sup>2</sup>
<b>Compressibility and recovery</b>	ASTM F36 J	
Compressibility		4 - 10 %
Recovery		≥ 40 %
<b>Swelling</b>	ASTM F146	
- in oil IRM 903 (replaces ASTM oil No. 3); 5 h, 150 °C		
Increase in thickness		≤ 5 %
- in ASTM fuel B; 5 h, RT		
Increase in thickness		≤ 5 %
- in water/antifreeze (50:50); 5 h, 100 °C		
Increase in thickness		≤ 5 %
<b>Peak temperature</b> (short-term)		300 °C
<b>Continuous temperature</b>		-40 bis +220 °C
<b>Surface pressure</b>		
maximum at 220 °C		100 N/mm <sup>2</sup>

Form of delivery	MatriCS® (plus)
<b>Gaskets</b> according to drawing, dimensional specifications, or other agreements	max. width of 500 mm
<b>Nominal thickness</b>	0.50 mm
<b>Tolerances</b>	±0.05 mm

**Note:** Refer to data sheet No. 128 or visit our website at [www.reinz.com/datasheet](http://www.reinz.com/datasheet) for more detailed information.

<sup>1)</sup> The preceding technical data applies to the material in its delivery condition without additional treatment or handling.

<sup>2)</sup> The technical data applies to MatriCS® with steel-sheet core and MatriCS® plus with stainless steel core.

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