



**Fusion Pure-Cut® enables “impossible”
cutting speeds and sustainability –
reducing the costs of manufacturing.**

The \$90B+ machining sector is productivity limited due to heat generation in cutting.

Ripping atoms apart with tools creates heat and friction, ultimately breaking down the tools.

Fusion provides a next-generation coolant and lubricant that permits ludicrous speeds without increasing tool wear

It is not theoretical, Fusion has global Blue-Chip customer installations, a rapidly growing pipeline, and 150 units in the field.

Fusion's broad patent coverage out to 2039, leveraging reclaimed CO2 to create massive value for customers

A strong investor base led by Michigan Capital Advisors (Bloomfield Hills, MI) and Material Impact (Boston, MA).

Fusion World
Headquarters: Canton,
Michigan

Fusion European
office: Lyon, France



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Pure-Cut®: Speed, Tool Life, Quality, Sustainability... and Patented to 2039

- **Compelling ROI: Example of Drilling**
 - Payback in 0-12 months
 - Productivity improvements 200-500%
 - Tool Life improvements 200-400%
 - Reduces downtime, easier inspection, easier automation
- **Better Parts:**
 - Superior surface finish
 - Superior microstructure
 - Ultra-clean parts
 - Improved part-to-part consistency
- **Drives Sustainability:**
 - Healthier work environment for employees
 - Factory-wide clean
 - Significant decrease in water usage
 - Carbon footprint reduction

Pure-Cut® is a patented coolant/lubricant based on recycled carbon dioxide

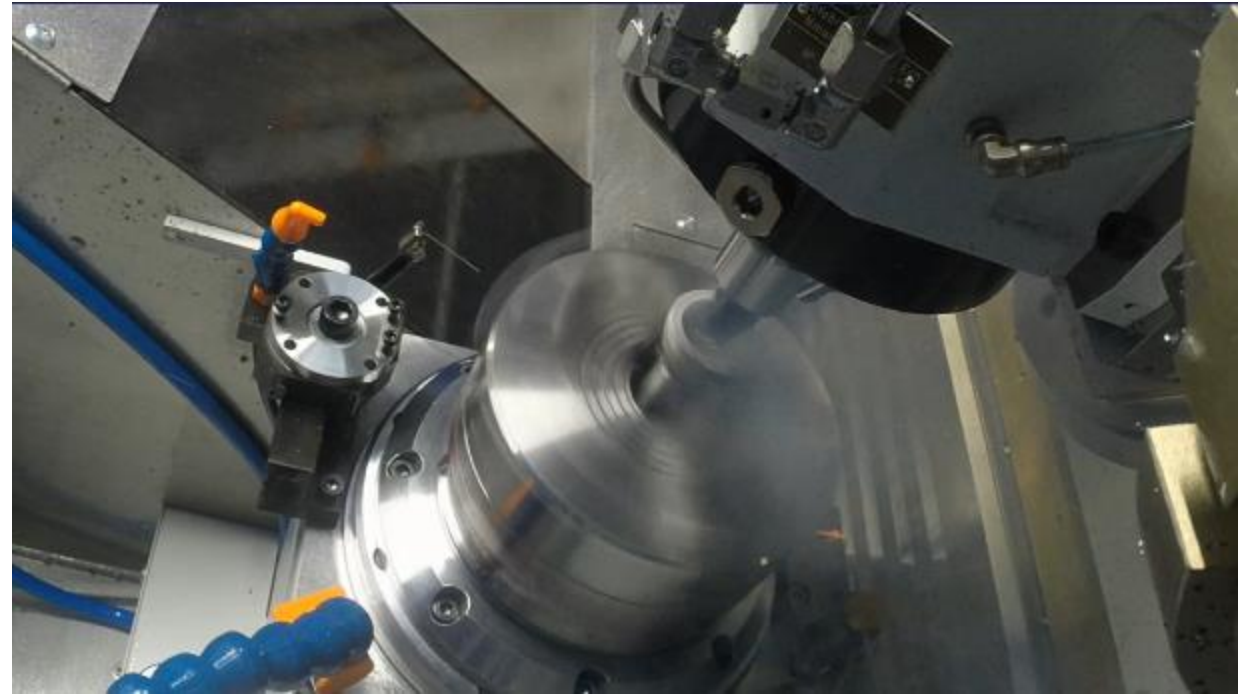


Emulsion



Oil-Based. Dirty. Harmful. Inefficient.

Pure-Cut®



No oil! Cleaner. Cheaper. Faster. Better.

30+ Machining Systems

Titanium-64

Pure-Cut (no oil)

Challenge: High volume 3D-printed high porosity part. Required efficient machining post-printing without oil to meet medical implant cleanliness standards.

Results Compared with Emulsion

- Cycle time: >20% improvement
- Tool life: > 20% savings
- Cleanliness: 100% acceptance rate—4X improvement
- Finish: Improved surfaces
- Negligible net capex cost



Global Hip Cup at Major Medical Customer

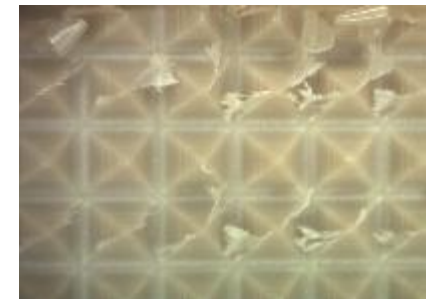
Femoral screw and cap

Ultra-High Molecular Weight Polyethylene
Pure-Cut® (no oil)

Challenge: Clean process to both decrease cycle time and avoid labor-intensive deburring operation.

Results

- Cycle time: 30% reduction
- Deburring: Virtually burr-free
- Savings: First year savings \$1.1M with reduced needs for machine tools and personnel.



PEEK Machining Conventional



PEEK Machining Pure-Cut®

Transmission Housing

EV Truck

Bi-metal (aluminum + iron)

Pure-Cut Plus

Challenge: Component for high volume EV truck. Required machining system to effectively machine multiple metals simultaneously in a factory that restricts use of water and oil, shifting from outsource to in-source.

Results

- Cycle time: reduced 4X
- Cleanliness: achieved/exceeded oil/water restriction standards
- Savings: >\$1M in capital avoidance and \$5M annual savings
- Instant payback.
- Safety: UAW endorsed Fusion system for employee health



Intraocular Lens

Proprietary polymer

Pure-Cut® +

Challenge: Customer needed machining method that could scale to production levels, work with proprietary polymer, and maintain bondage surfaces. Medical implant cleanliness required.

Results

- Cycle time: Reduced >4X
- Scrap rate: Reduced >6X
- Cleanliness: Medical implant-level cleanliness
- Machine tool requirements: Reduced by 4X to 13 machines for this part alone (~\$18M equivalent cap-ex savings)



Spirit Aerosystems Case Study: 5x Speed and 3x Tool Life Gain Simultaneously



Aerospace Pylon

Passenger Plane

Titanium 64

Pure-Cut Plus

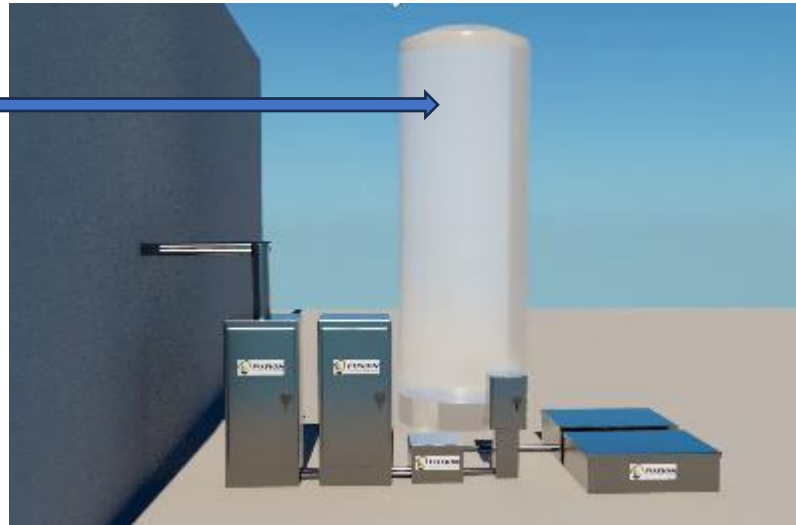


Challenge: Component for high volume passenger plane. Required machining system to drill quickly and efficiently through titanium while also reducing capital expenditures on new machine tools.

Results

- Cycle time: reduced >5X, Tool life increased >3x
- Cleanliness: achieved/exceeded oil/water restriction standards
- Savings: >\$2M in capital avoidance and >\$1M annual savings
- Instant payback.
- CEO of multi-billion dollar company has noted success of this project and has encouraged follow-on projects

Feedback from Tom Gentile, CEO of Spirit, April 2019



Capture of Waste Industrial CO₂ from the Production Of Ethanol, Fertilizer, etc.



Fusion Converts Industrial Gas Supply to Supercritical CO₂



Supercritical CO₂ Introduced to Machine Tool



Supercritical CO₂ Adds Speed and Sustainability to Metal Cutting

Customer Case Study – Drilling Titanium



Pure Cut⁺ vs Emulsion **Annual Performance Results** :
Cycle time : - 53%
Tool life : x 4



Drill : Ø 12,7mm, Length 124mm




TOOL

	Emulsion	Pure-Cut ⁺	
# of Machine	10	5	
# of tool	4 000	500	
 Kg CO ₂ eq (US tool + Chinese blank)	68 703	8 588	-87%
 (L)	500 597	62 575	-87%

200 days/yr, 3 shifts/day, Duty cycle 46%





MACHINE TOOL

	Emulsion	Pure-Cut ⁺	
# of Machine	10	5	
Average Consumption (kWh)	9,45	4,54	
 Kg CO ₂ eq	165 952	46 776	-72%

METAL WORKING FLUID



	Emulsion	Pure-Cut ⁺	
# of Machine	10	5	
 Kg CO ₂ eq	52 273	18 543	-65%
 (L)	59 999	-	-100%

OVERALL ANNUAL SAVING



213 t CO₂ eq



498 021 L of Water

Phase I (2017–2020): *Complete.*

- Completed research and development (R&D) and prototyping of the Pure-Cut technology.
- Analyzed data and made the design changes needed to support and address customer feedback, real-time monitoring system performance results and field service, warranty, and quality control turn-backs.

Phase II (2020–2023): *Complete.*

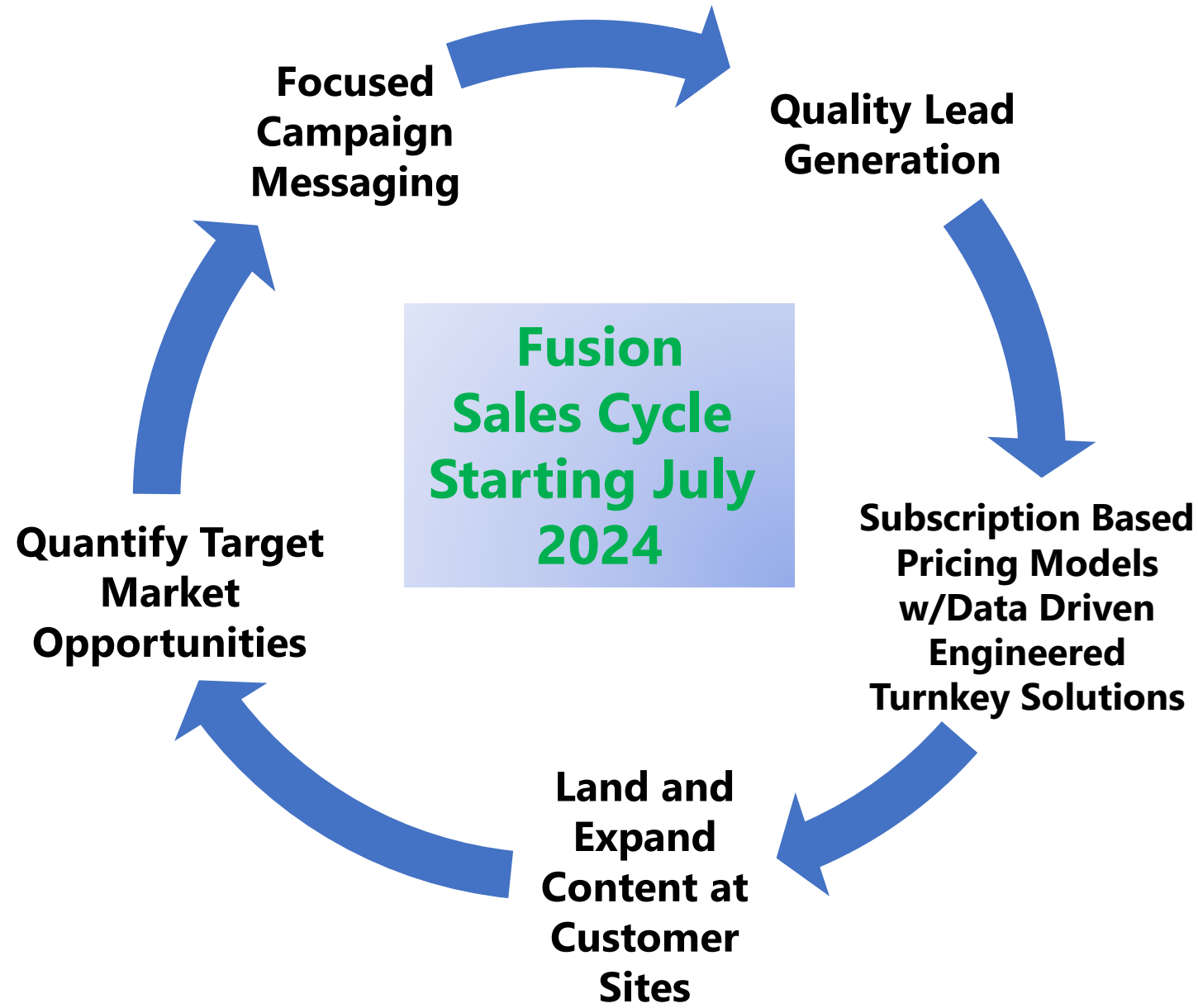
- Successfully navigated through the Phase I research and development (R&D) and beta site testing process, and strategically entered a wide range of market sectors to determine and establish a baseline of higher-volume system performance requirements/results, established Return on Investment (ROI) requirements needed to meet or exceed, and achieve market acceptance across the medical, aerospace, and automotive segments.
- Achieved “Generation 3” system design allowing Fusion to serve major Original Equipment Manufacturer (OEM) and Tier 1 customers with over 130+ active units installed with >97% operational uptime and cost of quality defects <2%.
- Achieved stable industrialization and reduced the internal manufacturing lead time, stabilized the Bill of Materials cost, secured the supply chain partners coming out of the COVID-19 pandemic, and eliminated all single points of failures.

Note: Both Phase I and II operated during the COVID-19 pandemic and the global industrial shutdown.

Phase III (2024 – 2027): *Active – July 2024.*

- We are strategically entering the market with Generation 4 system product that includes all the performance and operating stability data gained from the Phase I and II testing activities in the beta and low-rate installed sites.
- Phase III is focused on revenue traction across 3 stages of customer outreach campaigns.
 - 1. Medical**
 - 2. Aerospace**
 - 3. Automotive**
- We have selected this 3-stage approach starting with MEDICAL markets based on the positive and proven success Fusion Coolant Systems established in Phases I and II.
- We have built effective messaging to communicate to the MEDICAL target markets the FCS value add contribution.
- Our value includes dispatching our application engineers to work side by side with the customer base to demonstrate and prove the full impact of the Pure-Cut technology and to compliment the FCS performance with robust system warranty and service programs.

Increasing Sales Velocity and Value Creation



Strategy Elements:

- Eliminate time consuming budget, cap ex negotiations and overall procurement delays that are common with the CAP EX procurement processes.
- Provide value engineered turnkey system solutions driving FCS higher margin content opportunities documented with proprietary ROI analysis tools.
- Establish “land and expand” opportunities with each customer having multiple sites.

Pipeline:

- We have Identified (8) Medical Ortho Implant subscription turnkey solution targets that have demonstrated high level of interest and are in the negotiation stage for Purchase Order release:

<u>INDUSTRY</u>	<u>COMPANY</u>	<u>LOCATION</u>	<u>Annual Revenue</u>	<u>PIPELINE Status</u>
Medical	AVALIGN	Fort Wayne, IN	\$450m	Negotiating - Active Subscription
Medical	ORCHID Ortho Solutions	Chelsea, MI	\$376m	Negotiating - Active Subscription
Medical	Globus Medical Inc.	Audobon, PA	\$600m	Negotiating - Active Subscription
Medical	ALCON	Forth Worth, TX	\$9.5b	Negotiating - Active Subscription
Medical	AngioDynamics	Quensburry, NY	\$335m	in RFQ stage.
Medical	AutoCam	Grand Rapids, MI	\$350m	Negotiating - Active Subscription
Medical	The Gund Company	St, Louis, MO	\$93m	in RFQ stage.
Medical	Zimmer Biomet	Warsaw, IN	\$7.4b	in RFQ stage.



Sample System Pricing Matrix w/ Service Options

<u>Fusion Coolant Systems, Inc. Pricing Matrix</u>				
<u>Options</u>	<u>Premium HaaS</u>	<u>Standard HaaS</u>	<u>CapEx Model</u>	<u>Mobile Flex Pack</u>
PC-400 (model x or i)	☑	☑	☑	☑
Infrastructure	☑	☑		
Co2 Gas Management	☑			
Project Based Cutting Tool Supply	☑			
ROBOFLOW - Remote scCo2 Delivery	☑	☑		☑
Co2 Post Mfg. Cleaning Station	☑			
Mfg. Performance Guarantee	☑	☑		
Service & Support Plan	☑			
Remote Monitoring & Diagnostics	☑			
5-year Warranty on Parts & Labor	☑			
Std. 1-year FCS Limited Warranty		☑	☑	
<u>4-Cell Pricing:</u>	\$	\$		
60-Month Pricing per Machine	\$6k	\$4.5k		
<u>10-Cell Pricing:</u>				
60-Month Pricing Per Machine	\$4k	\$3.5k		
<u>20-Cell Pricing:</u>				
60-Month Pricing per Machine	\$3.5k	\$3k		

WHY PARTNER WITH FUSION?

Extraordinary Market Access

Our technology opens doors to Blue Chip Customers in Medical, Aerospace, Automotive and other markets, enabling market capture and expansion, spurring rapid growth.

Recognized Thought Leadership

We are considered the experts in our field, backed by our broad patent coverage, deep know-how and strong ecosystem (and academic) relationships.

Superior Product Offering

Our differentiating products offer an attractive business model, enabling clean productivity enhancements and overall cost reductions while commanding a price premium.

Sustainability Boost

Pure-Cut can help with ESG metrics: lowers carbon footprint, decreases water usage, impacts factory cleanliness and health of workers. Good for shareholders, the company, and employees.

Strong Catalyst for your Business

Market growth combined with attractive gross margins serve as a financial multiplier to your business.



Thank you for hosting Fusion



STEVE SKERLOS, PhD

Founder, CTO

Inventor of Pure-Cut®,
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