



*Meeting the Challenges of the
HVAC&R Compressor Industry*





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Manufacturing compressors and parts for the HVAC&R industry is a competitive, global enterprise. Competition is brutal, specs are tight and margins are even tighter. That is where TRIM[®], Master STAGES[™], and XYBEX[®] products – from the leaders in the invention and innovation of metalworking fluids – come in. We offer you the problem-solving solutions you need to produce reliable compressors and dependable parts – more profitably.

Your Business Is our Business

Whether you manufacture small or large rotary, scroll, helical-rotary positive-displacement, or digital inverter compressors or parts, centrifugal units, or equipment for the highest power, pressure, and flow, we have coolants and cleaners developed specifically for your needs. Our nonchlorinated coolants offer the lubricity and cleanliness needed for the manufacture of household to commercial semihermetic refrigerator compressors, room and commercial air conditioners, ATW heat pumps, RAC, PAC, and VRF units, and industrial refrigeration systems and chillers.

Our highly-skilled technicians will analyze your needs, troubleshoot your production issues, and provide valuable recommendations on how you can increase sump and tool life, reduce costly downtime, improve part quality, lower or eliminate disposal costs, and pump up profitability.

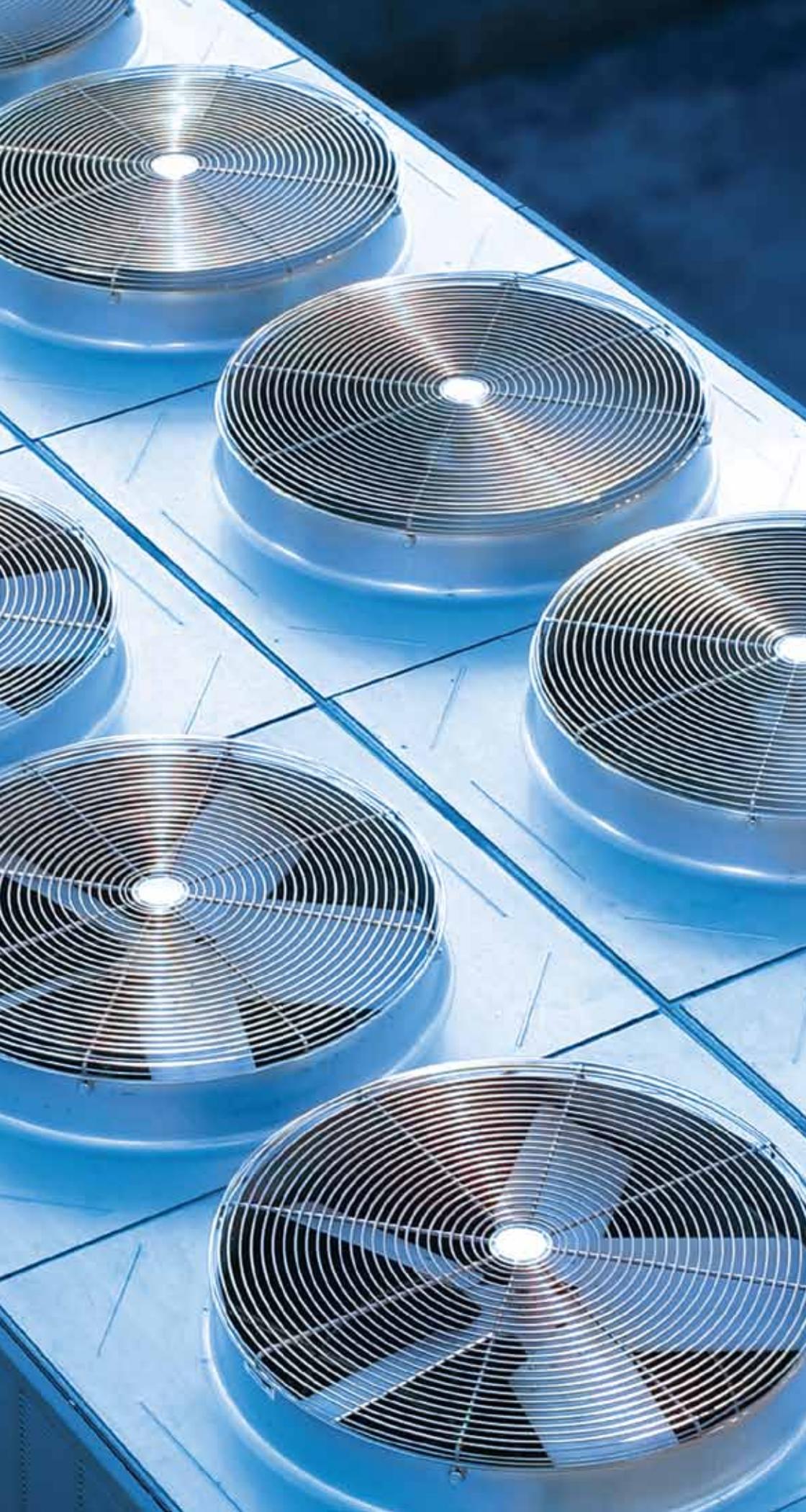
Of course, all our fluids have passed the ASHRAE 97 standard sealed-tube tests and we run any additional individualized manufacturer tests as needed.

The bottom line is – we can improve yours!.

An Asian plant was producing bearings and rollers for rotary compressors for a Japanese worldwide manufacturer. They were grinding cast iron and steel parts with another brand of synthetic coolant. Thinking there may be some savings and improved production with another brand of coolant, they contacted a Master Chemical distributor.

A trial was put in place and usage, fungus, concentration, and bacteria tests were run and analyzed; representatives presented the data analysis to both the local subsidiary and the Japanese headquarters with the recommendation to switch to TRIM[®]. With the changeover and the subsequent follow-up tests and results, the TRIM synthetic proved to be stable, gave good parts finishing, improved pH, and the plant enjoyed a 50% reduction in coolant consumption and less top-offs and a 30% cost savings!





A large-scale compressor manufacturer located in Malaysia was replacing their coolant every three months yet still experiencing dirty, unstable coolant and subsequent problems with inconsistent parts finishing, costly reworking of parts, issues with foam, and less than desired rust prevention.

They changed their system over to TRIM[®] synthetic with dramatic results! After the first eight months, they were still running strong on the first charge of TRIM, the coolant remained stable, rejected tramp oil to keep the coolant clear and clean. The highly-stable TRIM synthetic has been ensuring consistent parts quality, eliminated costly reworks, reduced downtime. Foam settles within 5 seconds (while it had taken 3 minutes), there's no corrosion problem on parts, and there's been no costly machine downtime for system cleanout. Coolant costs alone have been reduced by a whopping 40%!



Metalworking fluids that lead the industry

Master Chemical has been recognized for more than 60 years for its TRIM family of metalworking fluids for all types of cutting and grinding operations. Known worldwide for superior performance, TRIM meets the rigid demands of the HVAC&R compressor industry for reliable, repeatable, quality parts.

For the full range of cutting and grinding applications for synthetics, semisynthetics, soluble oils, and straight oils, TRIM offers customers longer tool and sump life, better finished parts, and a better bottom line.

TRIM coolants help customers realize

- > significantly reduced fluid costs
- > lower machine tool costs
- > reduced downtime and labor
- > lower disposal costs
- > assured code compliance
- > a safer work environment for employees
- > immediate savings to the bottom line



To clean, coat, and protect

Master STAGES parts washing cleaners, corrosion inhibitors, and maintenance cleaners keep customers environmentally compliant, running at peak performance, and more profitable. Whatever the challenge, there's a Master STAGES product sure to be the right solution for the job at the right price.



To maximize productivity and minimize waste

Master Chemical invented XYBEX fluid recycling systems for recycling coolants and cleaners. As properly maintained coolant can last indefinitely, a fluid management program using XYBEX equipment literally pays for itself. Ask your Master Chemical representative which XYBEX options will give you the best return on your investment.

For prices or additional information, contact your Master Chemical Corporation Distributor.

For more information on how you can troubleshoot your manufacturing problems, improve your production, and increase your profitability, contact your Master Chemical representative or distributor or visit us at

www.masterchemical.com