



HAZPAK: Aerosol Can Recycling and Hazardous Waste Disposal

INTRODUCTION TO HAZPAK

The MacLean HazPak aerosol recycling equipment has been developed over the last **20 years** with **customer driven improvement** and thousands of hours dedicated to its current design. Originally designed to **process aerosol cans**, HazPak has proven its ability to process a variety of waste material including propane cylinders, pharmaceutical inhalers and solvent.

Each HazPak is built with operator safety and recycling efficiency in mind. The **3000 model is the industry favorite** because of its **proven uptime, simple operation and built-in safety assurance**. HazPak is ideal for organizations already managing aerosol cans—and for those looking to unlock new revenue through aerosol recycling.



HazPak is a complete, turn-key system for the safe and proper disposal of aerosol cans and hazardous waste and is considered the best available technology in the industry. The HazPak processes batches of aerosol cans into three recyclable forms: densified metal bricks (the cans), compressed gas (the propellant), and liquid waste (the product).



KEY FACTS

- Throughput = 3 cubic meters/hour (3000 cans/hour)
- Batch process, 15 minute cycles
- Indoor & Outdoor installations
- Standard & custom layouts



UNRIVALED PERFORMANCE

HazPak processes batches of aerosols quickly, up to three cubic meters an hour, and safely using an inerting process that optimizes Nitrogen consumption.



SCALABILITY

Do you have smaller or larger throughput requirements? Ask us about our custom built HazPak machines.

HazPak is designed around the compaction unit. Base models come in defined layouts and configurations while customized versions can be engineered to meet customer requirements.

9+

Installations in operation

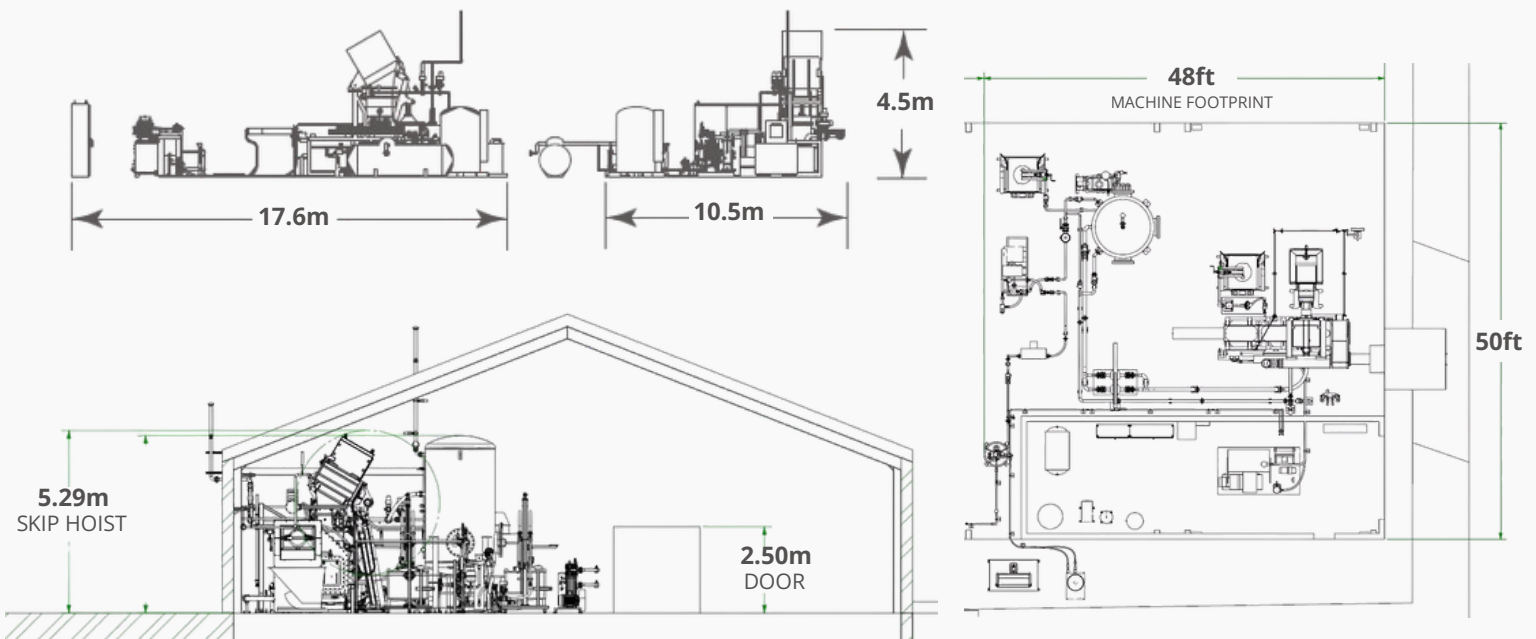
100,000+

Operating Hours

96%

part orders shipped same-day

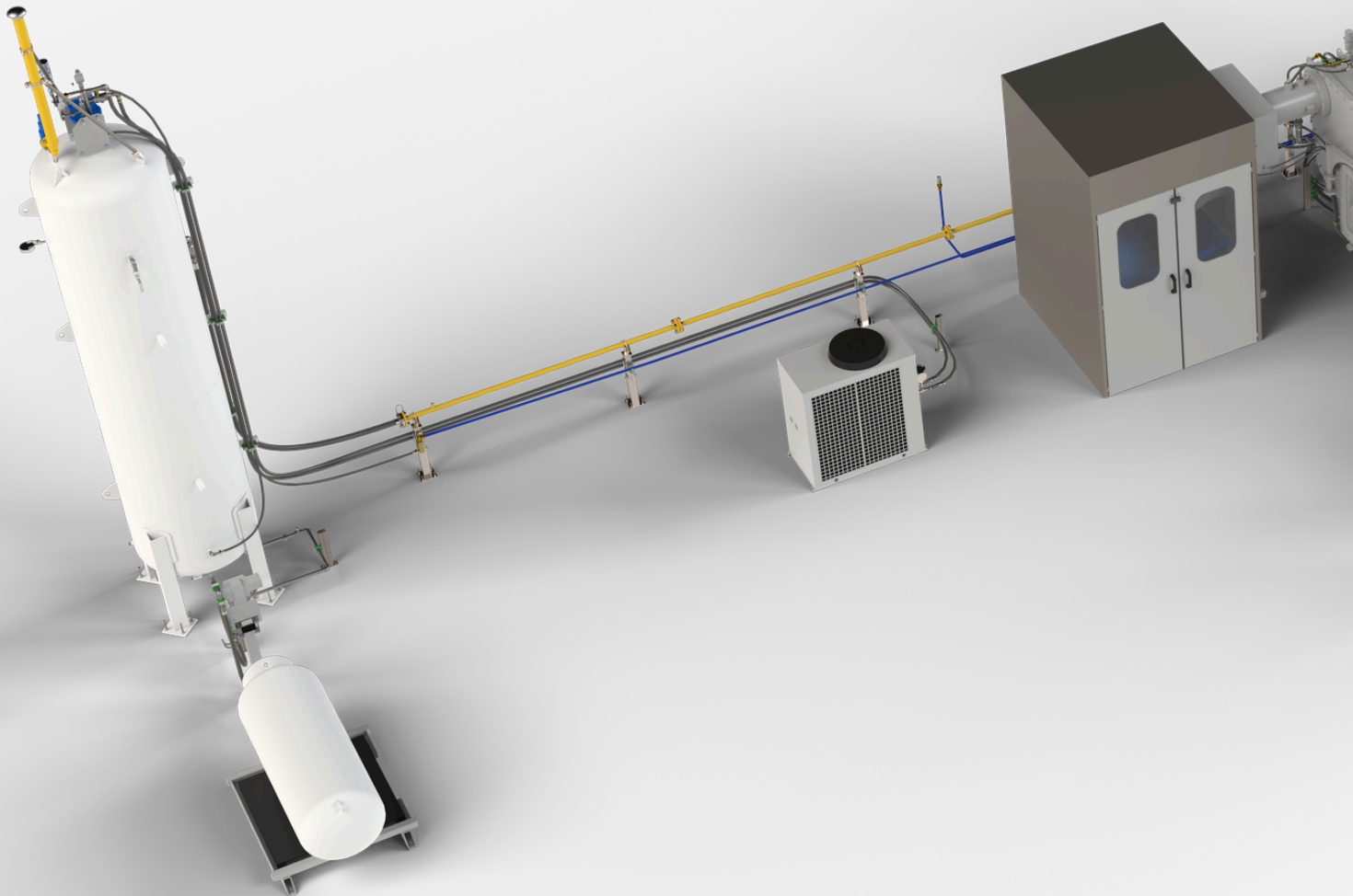
DIMENSIONS



HAZPAK 3000

Complete with:

- Skip Hoist Delivery System
- CPU (Central Processing Unit)
- Liquid Handling System
- Gas Recovery System
- Hydraulic System
- Electrical Controls



Order of Operations

1

Bin of aerosols is loaded into skip hoist.

2

Operator pushes start button to initiate the processing cycle.

3

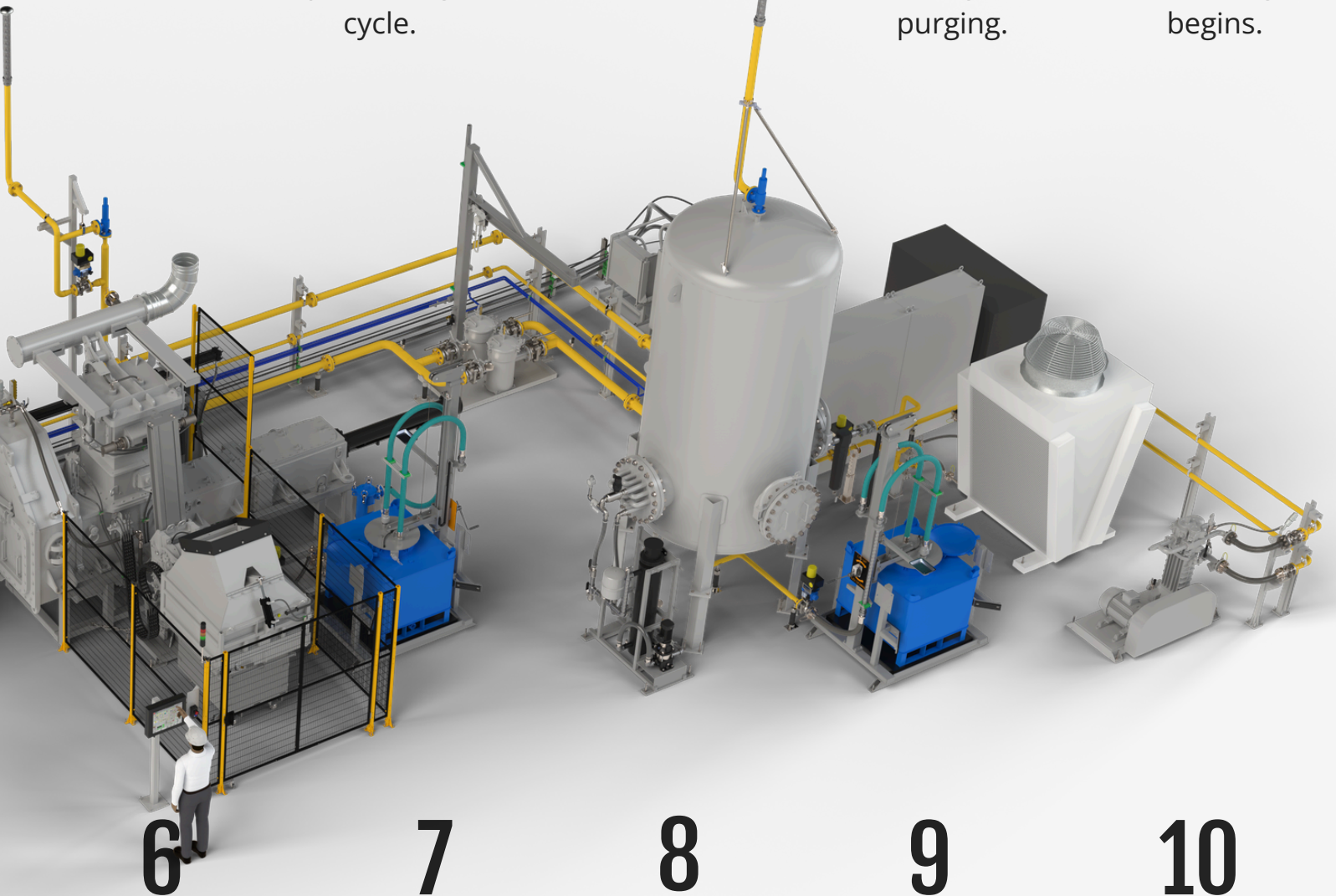
Skip hoist dumps bin materials into HazPak hopper.

4

The machine closes automatically and initiates Nitrogen purging.

5

Once purge conditions/safety checks are met, crushing begins.



6

Cans are fed into a chamber where the liquids (product) and gases (propellant) are liberated and separated from the container under extreme pressure.

7

Product and propellant are separated in a distilling operation.

8

Liquids are transferred to storage tank.

9

Gases are liquefied and transferred into a stationary storage tank.

10

The aerosol cans are compacted into dense circular bricks and ejected into a storage container.

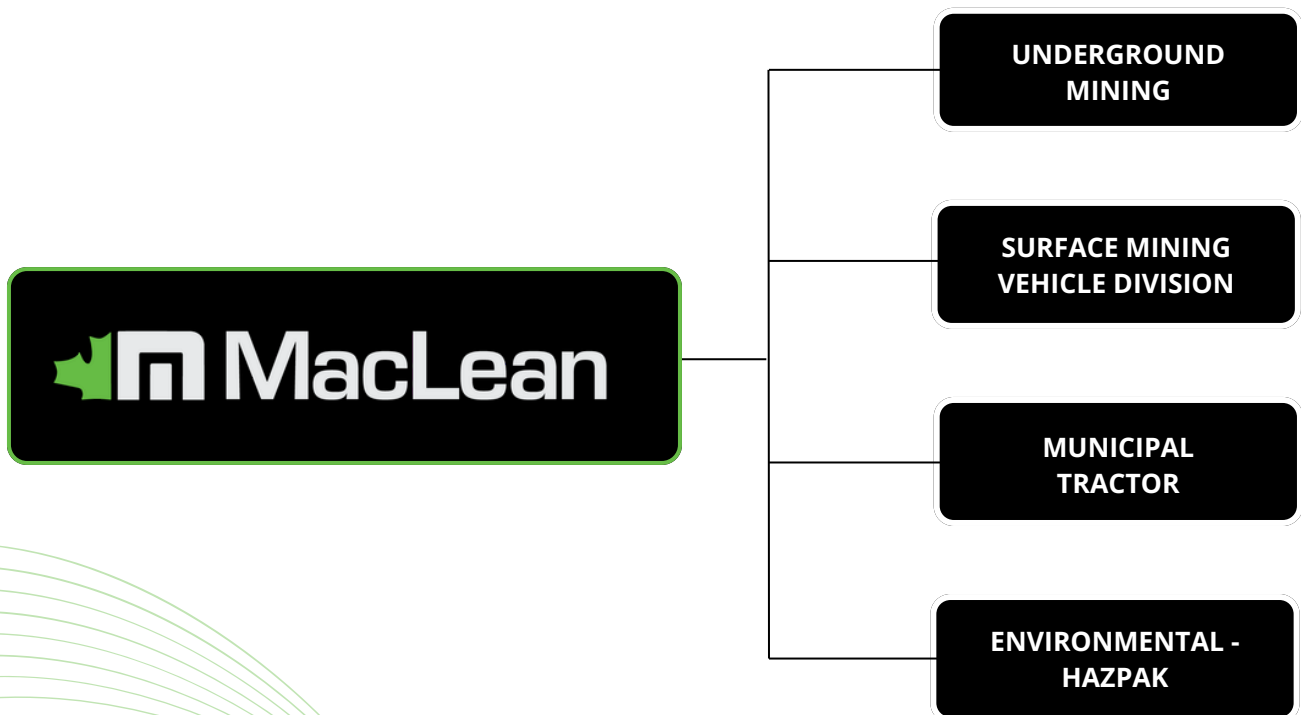
MACLEAN AS A COMPANY

Founded in **1973 in Ontario, Canada**, **MacLean Engineering** is the world's largest Canadian-based manufacturer of underground mining equipment. With **50+** years of experience, MacLean delivers mobile equipment solutions for underground and surface mining, supported by a global network across **Canada, the United States, Mexico, Peru, Africa, and Australia**.

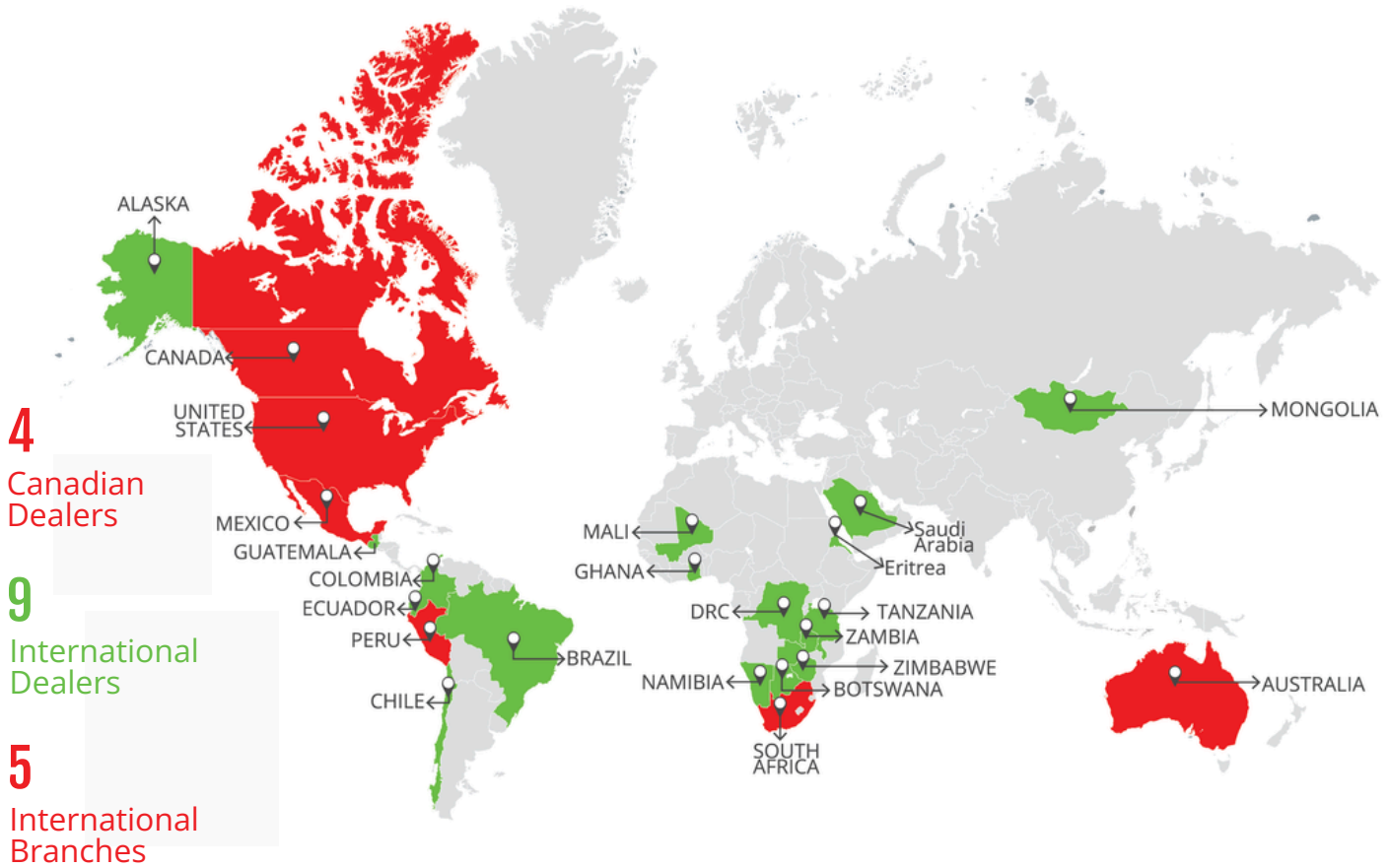
From its beginnings retrofitting farm tractors to a multinational company with approximately 1,300 employees, MacLean focuses on engineered solutions that improve safety and productivity, advancing the **industry through electrification, automation, and digitalization**.

This same engineering expertise extends to **MacLean's Environmental Division**, where **HazPak** provides a solution for aerosol can recycling and hazardous waste disposal. Designed to process flammable products such as aerosol cans, pharmaceutical inhalers, and small gas cylinders, HazPak captures liquids and gases in their entirety for waste-to-energy applications in a near-zero emissions environment, while safely converting remaining materials into non-hazardous, recyclable outputs. MacLean HazPak has installations operating in **Canada, USA and Europe**.

MACLEAN DIVISIONS



GLOBAL FOOTPRINT



*HazPak machines are currently operating in the **United States, Canada, England, Denmark, and Germany**, along with in-person technicians based in **Canada, USA, and England**.*

◆ We Take Pride In Our Numbers:

52+ Years of Manufacturing Experience	1300+ Employees	4 Continental Branch Footprint	100+ BEVs Commissioned	500K sq. ft. Manufacturing Footprint
2600+ Units Shipped	150+ Engineer Staff	90+ Field Service Technician	\$100 million In Stocked Parts	1 Underground Research & Demonstration facility

GLOBAL SERVICE AND SUPPORT



LEAD THE WAY IN A GREEN ECONOMY

HazPak enables you to be a market leader in the Green Economy of landfill diversion with a well proven return on investment model and equips you to meet newly implemented or pending landfill diversion legislation.



**Door to door
delivery**



**Long lead items
kept in inventory**



**Unrivaled
performance**



**Remote monitoring
from Canada**



**Certified technicians in
Canada and England**



**Over \$100,000,000
spare parts inventory**


CONTACT US TO VISIT OUR ACTIVE INSTALLATIONS!





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United States


SCAN HERE!



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 **MacLean**
CANADA | USA | MEXICO | PERU | AFRICA | AUSTRALIA | EUROPE