



High Performance. Since 1967!

TRCM

Trash Rack Cleaning Machines



MILESTONES: 50 Years Kuenz Trash Rack Cleaning Machines

1967

Raggal

Austria



First TRCM

Kuenz installs the first trash rack cleaning machine.

2000

Faulbach

Germany



TRCM-H

Multi-functional hydraulic machine is added to Kuenz portfolio.

1975

Altenwörth

Austria



Danube River

Kuenz commissions first TRCM on Danube River for major run of river plant Verbund AG.

2001

Ottmarsheim

Marolcksheim

Fessenheim

Vogelgrün

Kembs

France

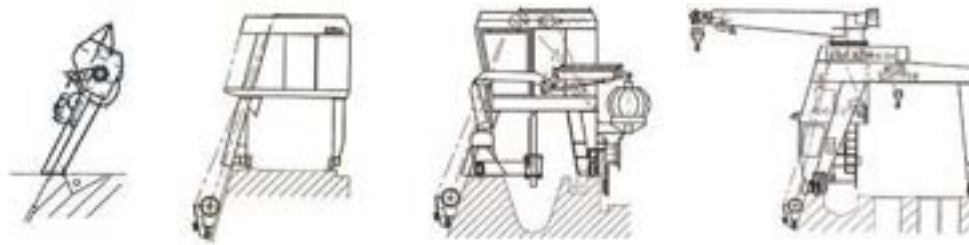


TRCM Major Order

Five TRCM-G are delivered to France for EDF.

1984

Introducing
Rope Type System



2001

Introducing
Hydraulic Machine Series



1986

Atakpamé
Nangbeto Dam

Togo, Africa



Worldwide Expansion

First Kuenz TRCM starts operation outside of Europe.

2004

Wilbur D. Mills

United States



TRCM-H4000

Largest TRCM to date starts operation in the United States.

1992

Ryburg Schwörstadt

Switzerland



TRCM-G

First heavy-duty TRCM-G type machine

2013

Rüchlig

Switzerland



TRCM-T

Kuenz delivers first cleaning machine for horizontal trash racks.

1992

Langweid

Germany



TRCM-M

Launch of first fully automatic Kuenz TRCM.

2016

Huntington Falls

United States



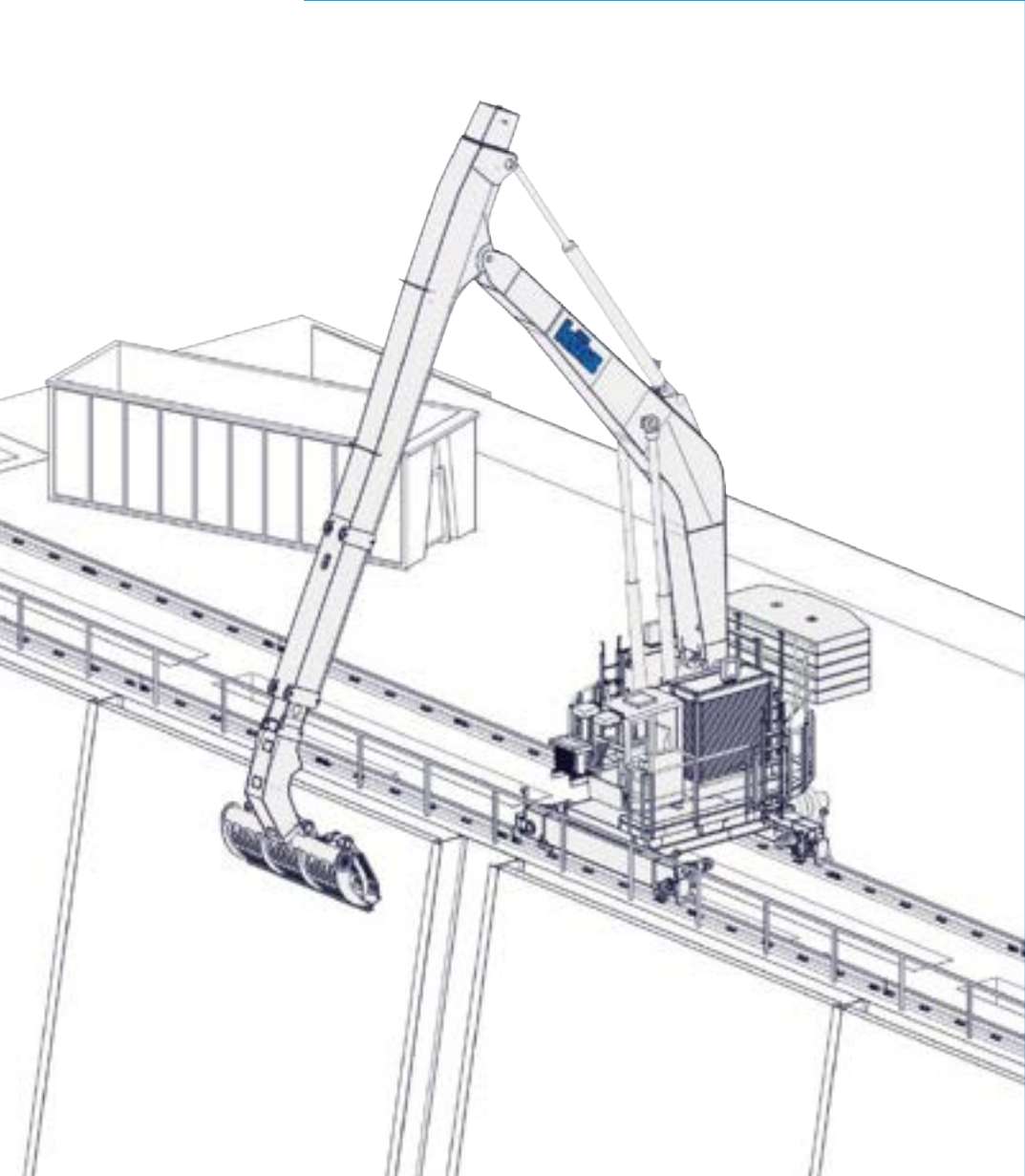
TRCM-H200

Introduction of first modular system for hydraulic cleaning machines.

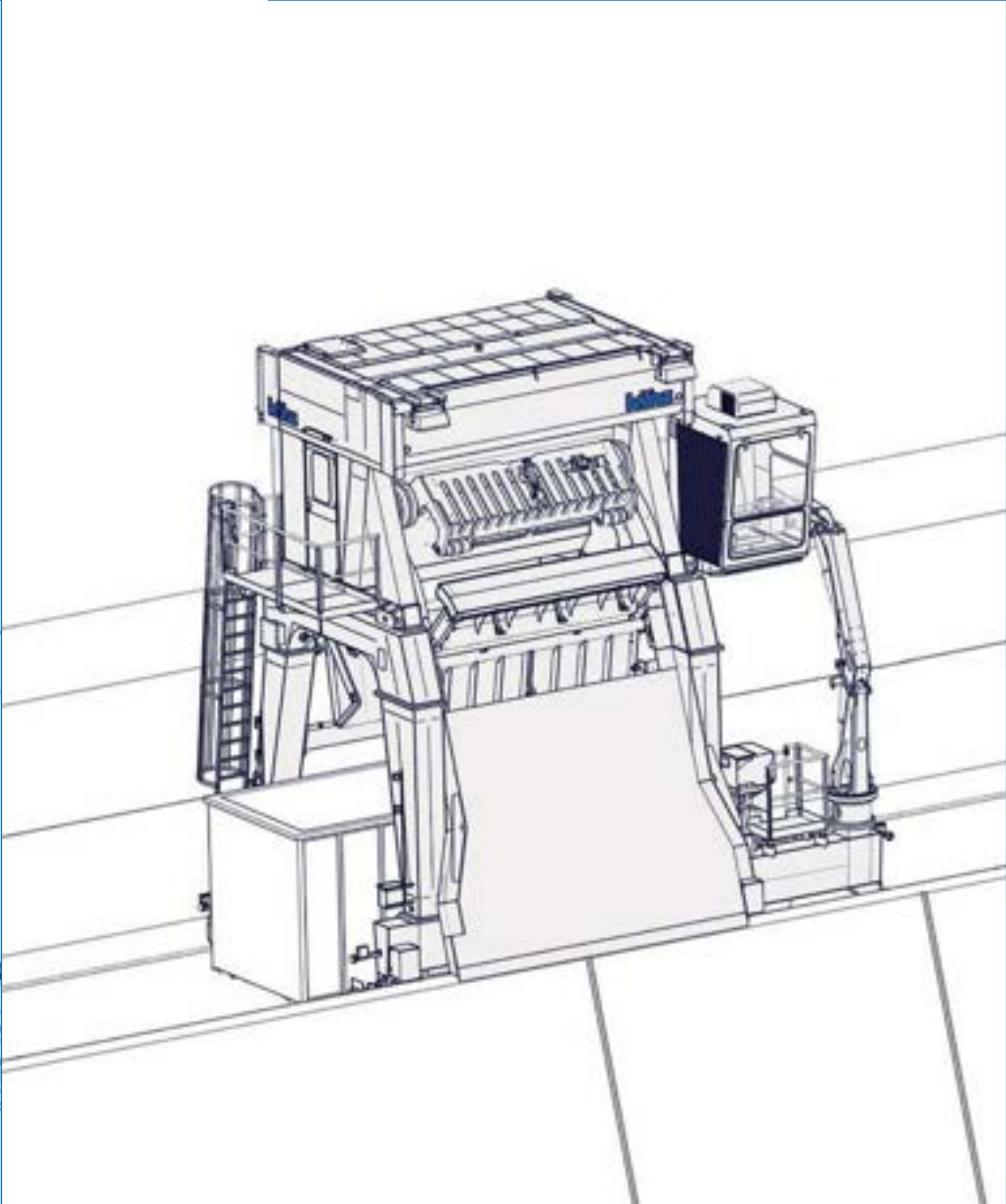
Kuenz Provides Customized Cleaning Solutions...

At intakes of hydroelectric stations accumulated debris can disturb operations and decrease plant efficiency. With more than 50 years of experience Kuenz provides customized debris handling solutions for efficient plant operation.

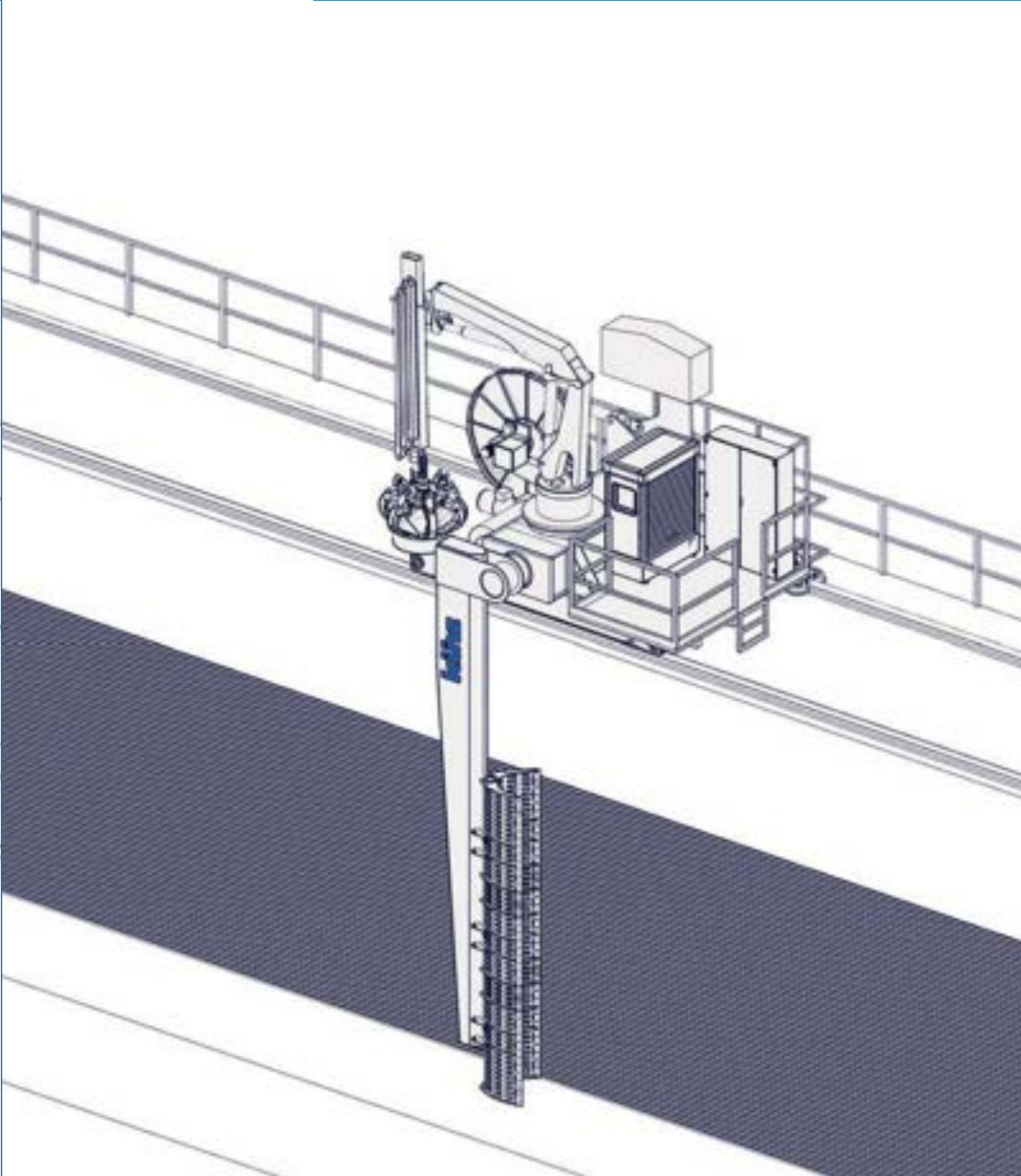
Hydraulic Trash Rack Cleaning Machine



Rope Type Trash Rack Cleaning Machine



Horizontal Trash Rack Cleaning Machine





TRCM-H500 Lavey, Switzerland



TRCM-G85 Verbois, Switzerland

Hydraulic Trash Rack Cleaning Machine

Designed to Handle Various Debris

Rope Type Trash Rack Cleaning Machine

of all Shapes and Sizes



Aquatic plants and grass



Leaves and small branches



Sediment



Swivel rake



Gripper rake



Large branches and logs



Three-part cleaning rake



Optional orange peel grapple



Hydraulic jib crane



Debris push rake

Hydraulic Trash Rack Cleaning


Efficient and Versatile

Heavy duty design, high removal capacity and versatility characterize hydraulic trash rack cleaning machines.


- Cleaning depth up to 110 feet | 33 meters
- Lifting capacity up to six tons
- Highest flexibility in operation
- Versatility in debris and sediment removal
- Manual or fully automatic operation
- Automated surface debris removal
- Constant pressure on trash racks ensures best cleaning results
- Direct handling and removal of oversized debris
- Handling of stop log or trash rack panels optional
- For intakes with depths greater than 110 feet | 33 meters customized solutions can be offered




TRCM-H200



TRCM-H500



TRCM-H1000



TRCM-H4000

TRCM-H200



Huntington Falls, VT, United States

TRCM-H500



Hadley Falls, MA, United States

TRCM-H1000



Box Canyon Dam, WA, United States

TRCM-H1000



Swan Falls, ID, United States

TRCM-H4000



Wilbur D. Mills, AR, United States

Rope Type Trash Rack Cleaning

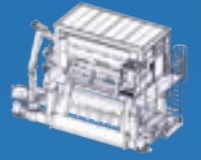
Fast and Reliable

The concept of cable operated trash rack cleaning machines has been utilized for decades in the hydro industry. Kuenz continuously developed this technology and offers a state of the art cable trash rack cleaning machine series.

- For intake depths up to 330 feet | 100 meters
- Lifting capacity up to 8.5 tons
- Proven cleaning rake design for best cleaning results
- Suitable for narrow deck spaces and to replace existing equipment
- Decades of operation experience
- Reliable and durable design
- Low maintenance cable technology
- High cleaning speed
- Manual or fully automatic operation
- Removal of surface or oversized debris with hydraulic jib crane
- Customized solutions based on a modular approach



TRCM-K



TRCM-EK



TRCM-GE



TRCM-G



TRCM-K3



Cliff, Ireland

TRCM-EK45



Pernegg, Austria

TRCM-GE85



Dos Amigos, CA, United States

TRCM-G85



Altenwoerth, Austria

TRCM-G85



Vaugris, France

Additional Functionality
Useful Options

Site-specific add-on equipment for lifting or debris disposal complete the Kuenz trash rack cleaning system approach.

Lifting Systems



Stop log handling - Hydraulic Type



Stop log handling - Rope Type



Auxiliary crane

Debris disposal



Intermediate storage and container



Integrated intermediate storage



Push out container



Attached container



Debris sluice way



Debris trolley



TRCM-T: Fish Friendly Technology

Horizontal Trash Rack Cleaning

Fish and environmental protection are vital issues at hydroelectric facilities. Kuenz added the horizontal trash rack cleaning machine to its portfolio to meet these requirements.

- Horizontal trash rack and cleaning systems are designed to facilitate compliance with fish protection requirements
- For intake depths from 12 feet | 3.5 meters to 26 feet | 8 meters
- Lateral cleaning force up to 3 tons
- Fully automatic debris disposal by sluice systems located at the end of the trash racks
- Integrated hydraulic jib crane for removal of large branches and logs

Integrated System Provider

In addition to multi-functional trash rack cleaning machines Kuenz also furnishes hydro-mechanical equipment such as trash racks, stop logs and gates. Integrated systems of trash racks and trash rack cleaning allow optimization of the interface for best cleaning results and cost efficient solutions.



Gamp, Austria



Halsey Afterbay, CA, United States

TRCM-S Machines

Custom Solutions

Challenging site conditions or special applications ask for custom solutions. Kuenz TRCM-S systems are site-specific designed to ensure efficient debris removal at any intake.



Omkareshwar, India



Narragansett, RI, United States



Forrest Kerr II, B.C., Canada



Wells Dam, CA, United States

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Facts

- Established in 1932
- In-house design and fabrication
- Market leader for Intermodal Container Cranes in Europe and North America
- Global market leader for automated Tankhouse Cranes
- Expert for Hydro-Mechanical Equipment and Trash Rack Cleaning Systems
- ISO 9001-2008 certified





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