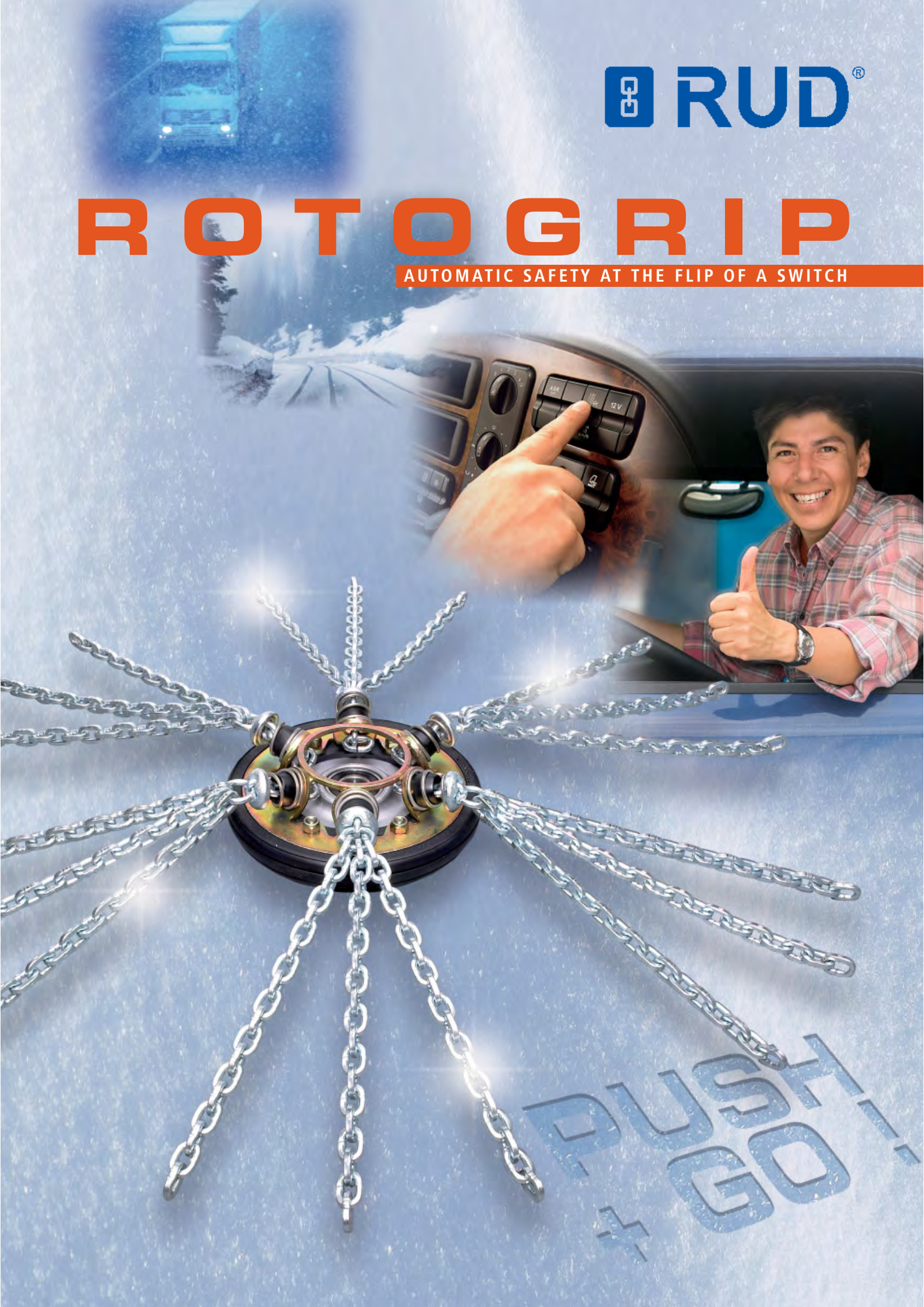




RUD®

ROTOGRIP

AUTOMATIC SAFETY AT THE FLIP OF A SWITCH



ROTOGRIP

AUTOMATIC SAFETY AT THE FLIP OF A SWITCH

ROTOGRIP from RUD:
The versatile automatic
chain - quickly and
easily brought into
operation from the
driver's cab when
winter road conditions
turn hazardous.

■ The ROTOGRIP chains can be switched on quickly when roads become slippery with ice or packed snow

■ Can be quickly brought into operation at any time during travel

■ Greater safety and protection for driver, load and environment at the flip of a switch

■ Effective anti-skid device – takes effect even at slow speeds

Fields of application:

■ Over the road trucks
■ Supply and distribution vehicles

■ Snow removal equipment
■ Fire services
■ Rescue vehicles

■ Vehicles carrying hazardous materials
■ Buses
■ Public transport vehicles

PUSH THE GO!



- RUD has a more extensive range than any other manufacturer – the right system for almost every vehicle

- Decreased cost and increased safety

- Simply switch off when the road is clear of snow and ice

- Reduces downtime



RUD's traction measurements prove that Traction provided by ROTOG RIP is up to 50% greater than conventional winter tires.

ROTOGRIP COMPACT SOLUTION CS - Compact

AUTOMATIC SAFETY AT THE FLIP OF A SWITCH

Systematic improvements further help the development of the compact solution

ROTOGRIP Compact Solution – developed for vehicles with limited mounting space due to pneumatic suspension, or low profile tires.

A specially developed rigid chain directly connected to the piston of the dual-action cylinder activates the swing arm.

Activated by a solenoid unit, the pneumatic system returns the swivel arm and chain wheel to their disengaged position when switched off.

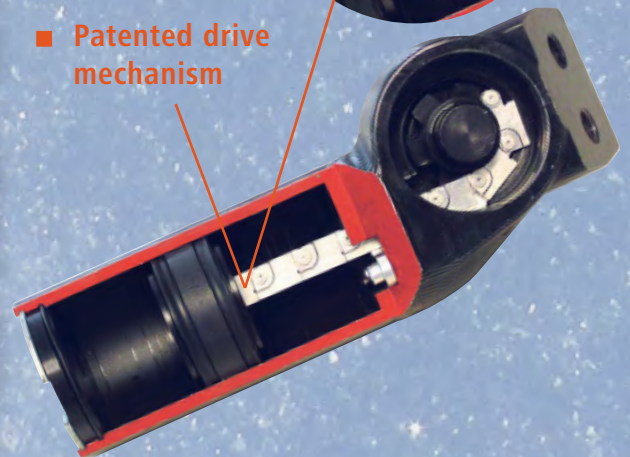
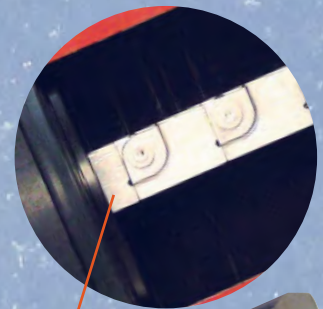
The disengaged position is maintained by the constant application of air pressure.

If the air pressure is lost, an elastic stop holds the swing arm in place.



- Simple, time-saving fittings
- Low-maintenance

■ Patented drive mechanism



Solution

Development of existing systems.



- Compact, forged-steel swivel housing, with patented drive mechanism
- Elastic stop
- Pneumatically driven double-action cylinder
- Extended swivel range (up to 270°) to maximize fitting options
- Low-profile systems with vehicle-specific adapters
- Traction is provided by a range of chain wheels



ROTOGRIP Classic Version

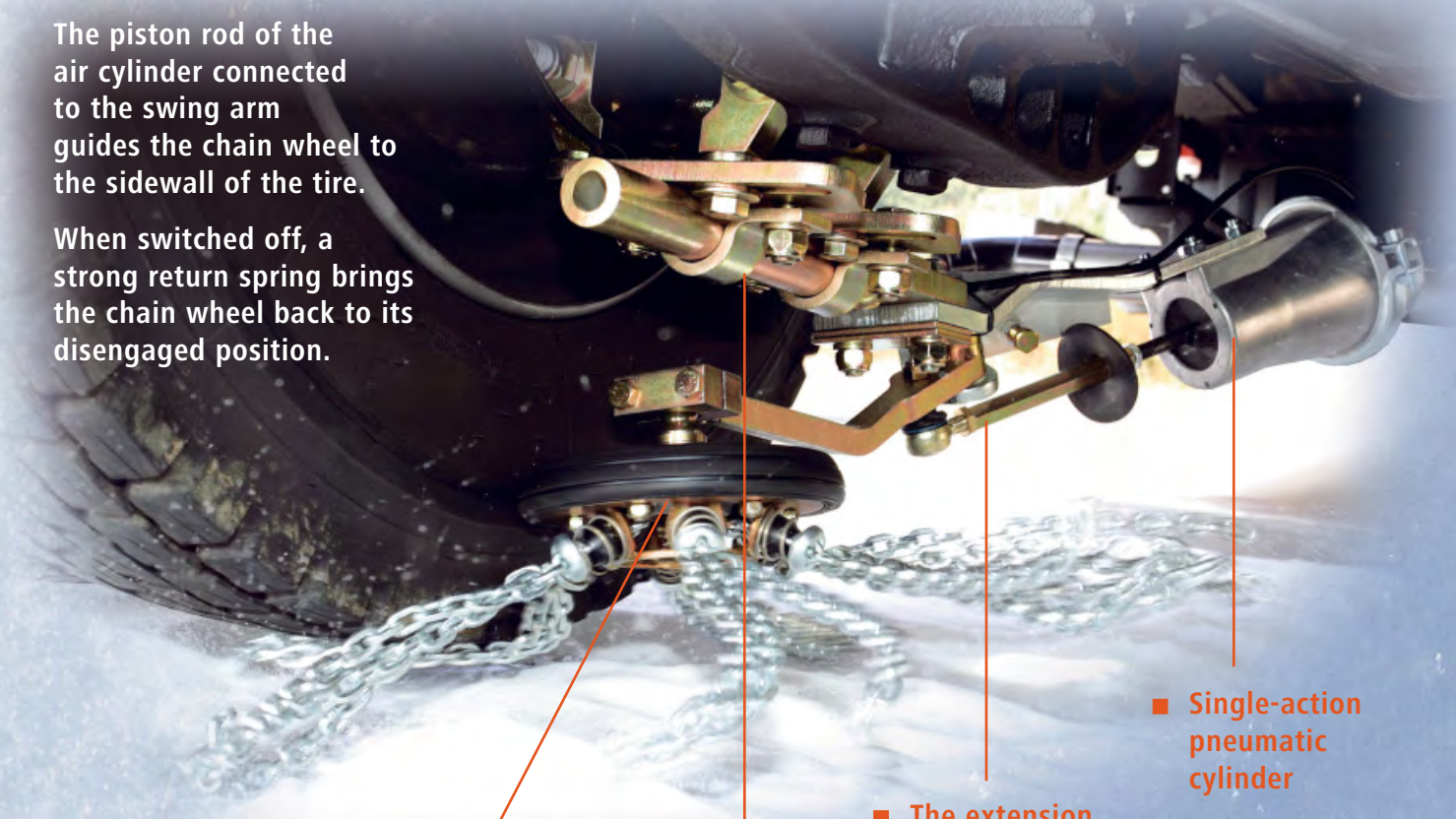
AUTOMATIC SAFETY AT THE FLIP OF A SWITCH – THE CLASSIC ROTOGRIP SYSTEM

ROTOGRIP Classic Version – has been in use for decades and has proven itself thousands of times over. For light to heavy commercial vehicles



The piston rod of the air cylinder connected to the swing arm guides the chain wheel to the sidewall of the tire.

When switched off, a strong return spring brings the chain wheel back to its disengaged position.



■ Traction is provided by chain wheels of various types

■ Modular system of universal adapters

■ The extension of the piston rod is connected to the swivel arm

■ Single-action pneumatic cylinder

ALBERT



ROTOGRIP Light Truck

AUTOMATIC SAFETY AT THE FLIP OF A SWITCH

Specially developed for light commercial vehicles without an on-board air supply



The swing arm is activated by pulling on the bowden cables connected to each swivel unit.

A powerful electrical linear drive pulls simultaneously on both sides of the wheel.

A pneumatic cylinder performs this task if air supply is available.

When switched off, a return spring brings the arm and chain wheel back into their disengaged position.

- Electric linear drive
- The swing-arm assembly unit has a compact, weight-saving design, and can swivel through an angle well over 180°.

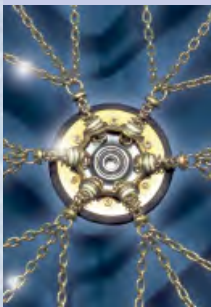


- Low-profile chain wheel with 8 single strands
- The chain wheel's flexible spreader ring gives low speed performance, and a more even distribution of the chain strands
- Adapter with universal mounting hardware



COMPARISON OF THE ROTOGRIP SYSTEMS

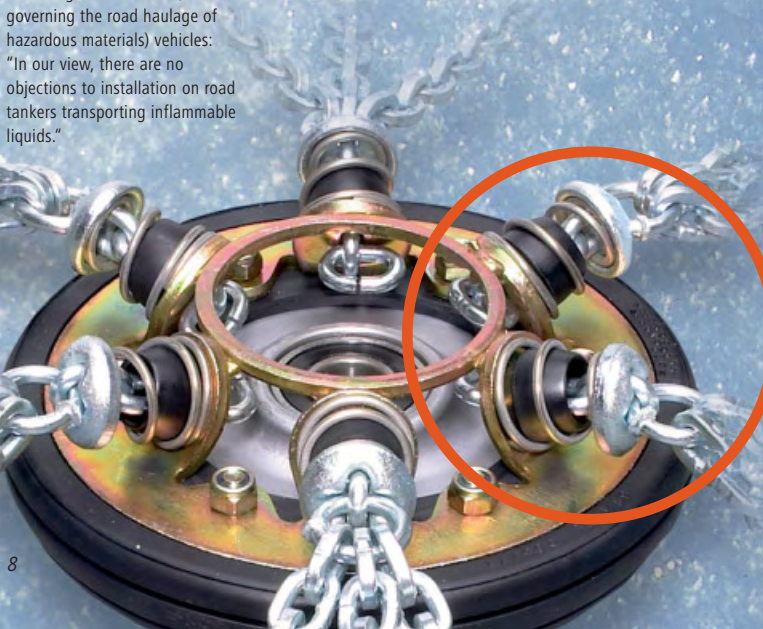
| Features | ROTOGRIP Compact Solution | ROTOGRIP Classic Version | ROTOGRIP Light Truck |
|---------------------|--|--|--|
| Application | Light, medium and heavy commercial vehicles, buses | Light, medium and heavy commercial vehicles. | Light trucks, e.g. ambulances, and delivery vehicles |
| Swivel angle | Up to 270° | approx. 170° | over 180° |
| Function | Dual-action cylinder | Single-action cylinder | Electric linear drive or pneumatic cylinder |
| Adaptation | Plate adapter (vehicle-specific) | Universal adapter/plate adapter (optional) | Universal adapter/plate adapter (vehicle-specific) |
| Modules | Swivel unit, adaptation and drive | Swivel unit, adaptation, vehicle-specific parts, and drive | Swivel unit, adaptation, pneumatic cylinder or electric linear drive |
| Drive | Electropneumatic (solenoid valve) | Electropneumatic | Electric or pneumatic |
| Chain wheels | 6-, 10-, 12-strand chain wheels; 15-, 18-strand chain wheels, spring-mounted | 6-, 10-, 12-strand chain wheels; 15-, 18-strand chain wheels, spring-mounted | 8-strand chain wheel |



The German Federal Motor Vehicle Registration Agency has issued ROTOGRIP® with a general type homologation – L 171 – which covers each system. Anti-skid device with pneumatic swivelling unit on GGVS (act governing the road haulage of hazardous materials) vehicles: "In our view, there are no objections to installation on road tankers transporting inflammable liquids."



Major components of RUD chains are subject to German and European patents. RUD was the first chain manufacturer to gain the TÜV-CERT certificate under DIN EN ISO 9001 for its company management system.



Advantages:

- The action of the springs spreads the chains out efficiently, even at a slow speed
- The chain strands pass under the tires like a "chain carpet"
- Vibration-free operation, which ensures smooth action, and lengthens the service life of both chain wheel and system
- Superior grip, even on icy roads

CHAIN WHEELS

The fitting of chain wheels to particular vehicles may be different from that stated here - depending on the tires.

ROTOGRIP chain wheels are known for the excellent quality of their materials and construction.

All chain strands are made of case-hardened alloy steel.

A wide variety of chain wheels can be used according to the type of vehicle and its use.

6-strand chain wheel, diameter 195mm (7.5 inches)

Robust construction. Each chain strand is made of 6.5mm square bar steel, and is connected to a bracket welded to the chain disk. Superior traction on snow and ice.



ROTOGRIP chain wheels are easy to mount.

The individual parts have an exceptionally long service life, and are easy to replace.

The special profile on the friction ring reduces icing up.

8-strand chain wheel, diameter 150mm (6 inches)

Eight individually mounted chain strands made of 5mm round steel. Very low profile for light commercial vehicles, they are also fitted on vehicles with very limited space for fitting. Smooth running. Good traction on snow and ice.



18-strand chain wheel, diameter 195mm (7.5 inches)

Preferred for use on tires with a diameter greater than 40 inches (305/70 R 22.5)

Or 15-strand chain wheel, diameter 160mm (6.5 inches)

Intended for use on tires with a diameter less than 40 inches

The most frequently used type of chain wheel. Exceptionally smooth running. Chain strands made of 4.5mm square bar stock are attached in groups of three to rings which are, in turn, connected to the chain disk by springs.



12-strand chain wheel, diameter 195mm (7.5 inches)

10-strand chain wheel, diameter 160mm (6.3 inches) (where space is limited for fitting)

The chain strands are made of 5.5mm square bar stock, and are connected in pairs and welded to the chain disk. Stable design, high abrasion factor. Superior traction on snow and ice.



ROTOGRIP - SERVICE -

RUD offers a comprehensive range of services and support. You can get instructions and information directly from RUD

We'll be glad to advise you on the selection of your ROTOGRIP system.



- Individual advice ensures that you get the optimal system for your field of application



- Simply switch it on when the weather conditions require it – Safety at the flip of a switch



- ROTOGRIP – The effective anti-skid device



- Just a few hours are required to ensure greater safety on snow and ice



FAST AND RELIABLE

- RUD keeps ROTOGRIP systems in stock for most conventional vehicles

- Each complete ROTOGRIP system is shipped in a single carton – compact and complete

- Orders are delivered by transportation company on your requested dispatch date

- The warranty and guarantee are enclosed with every ROTOGRIP system

- Clear fitting instructions and well designed components save time and money

- Quick and easy to fit – RUD ROTOGRIP systems

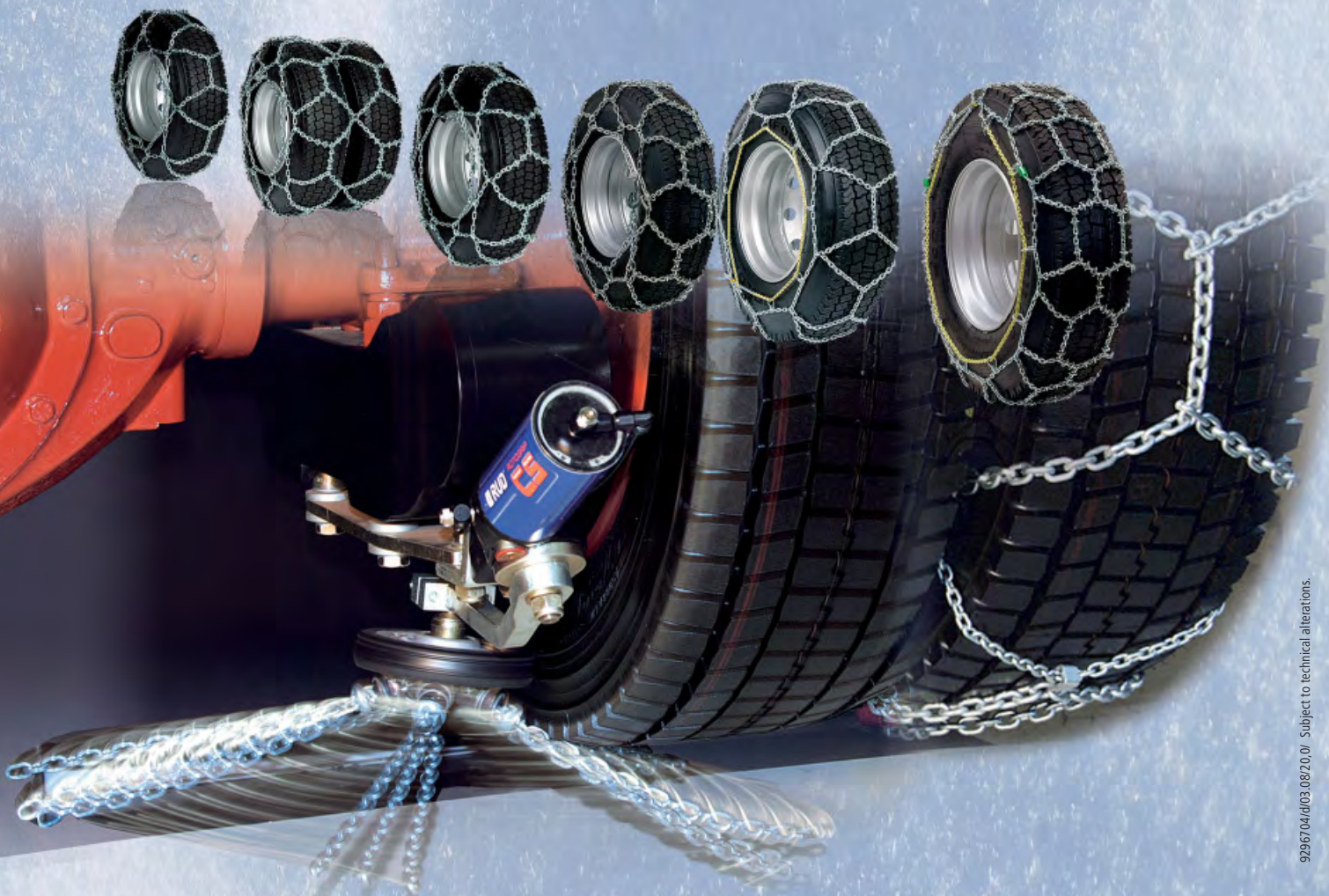


RUD Ketten
Rieger & Dietz GmbH u. Co. KG
Friedensinsel
73432 Aalen/Germany
Tel. +49 7361 504-1505
Fax +49 7361 504-1449
gli@rud.com
www.rud.com

ROTOGRIP + SNOW CHAIN

= OPTIMAL PROTECTION

- ✓ **ROTOGRIP is a highly effective, time-saving and user-friendly antiskid device that can be switched on and off at the flip of a switch when needed on wintry roads.**
- ✓ **Because of its design, ROTOGRIP does not always fulfill the legal requirements when snow chains have to be fitted.**
- ✓ **RUD is the only manufacturer in the world that can – on request - provide a package of ROTOGRIP automatic chains and snow chains from one source.**





Tradition in Leadership

RUD Chain Inc.
PO Box 367
Hiawatha, IA 52233
Tel. +1 319 294 0001
Fax +1 319 294 0003
sales@rudchain.com
www.rudchain.com

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