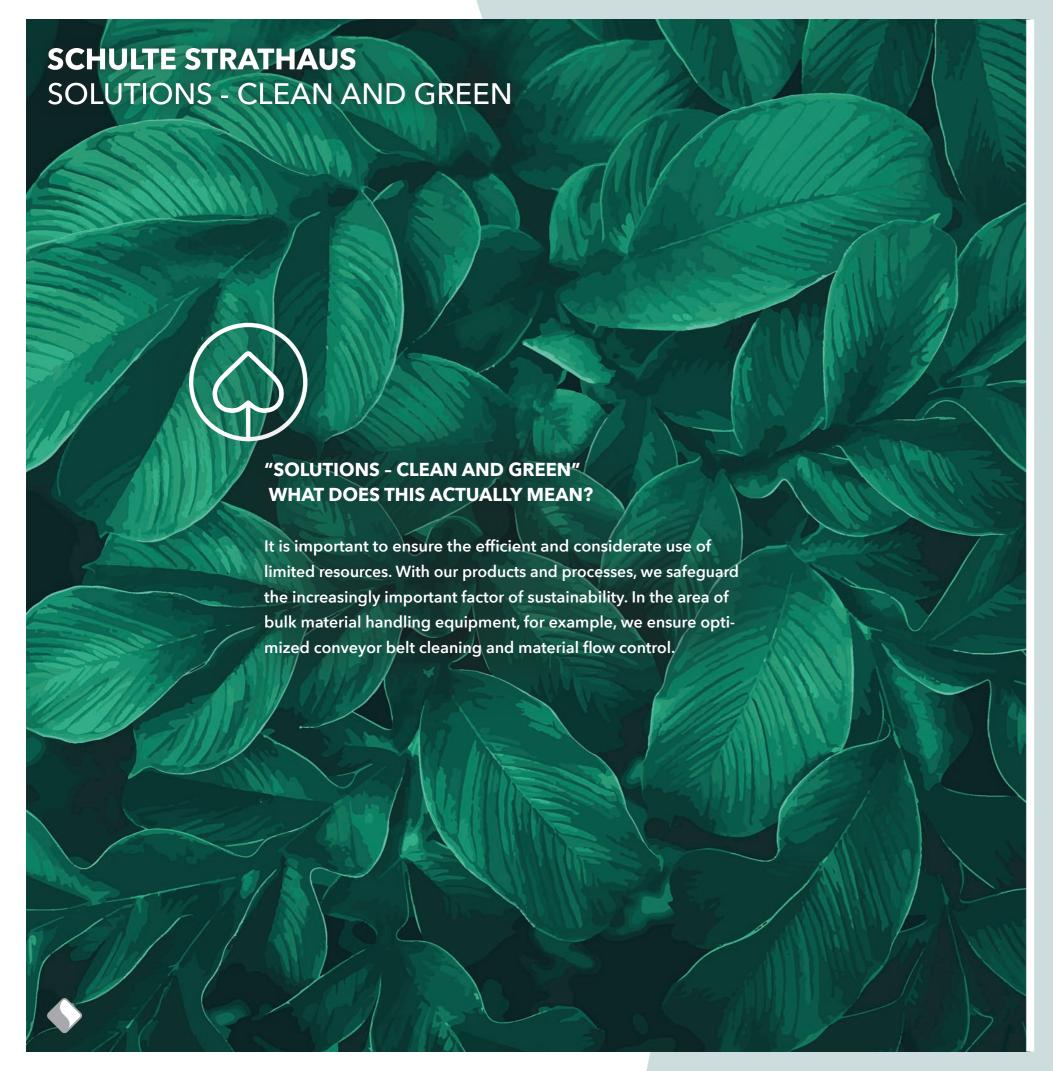


SUSTAINABILITY BY INNOVATION



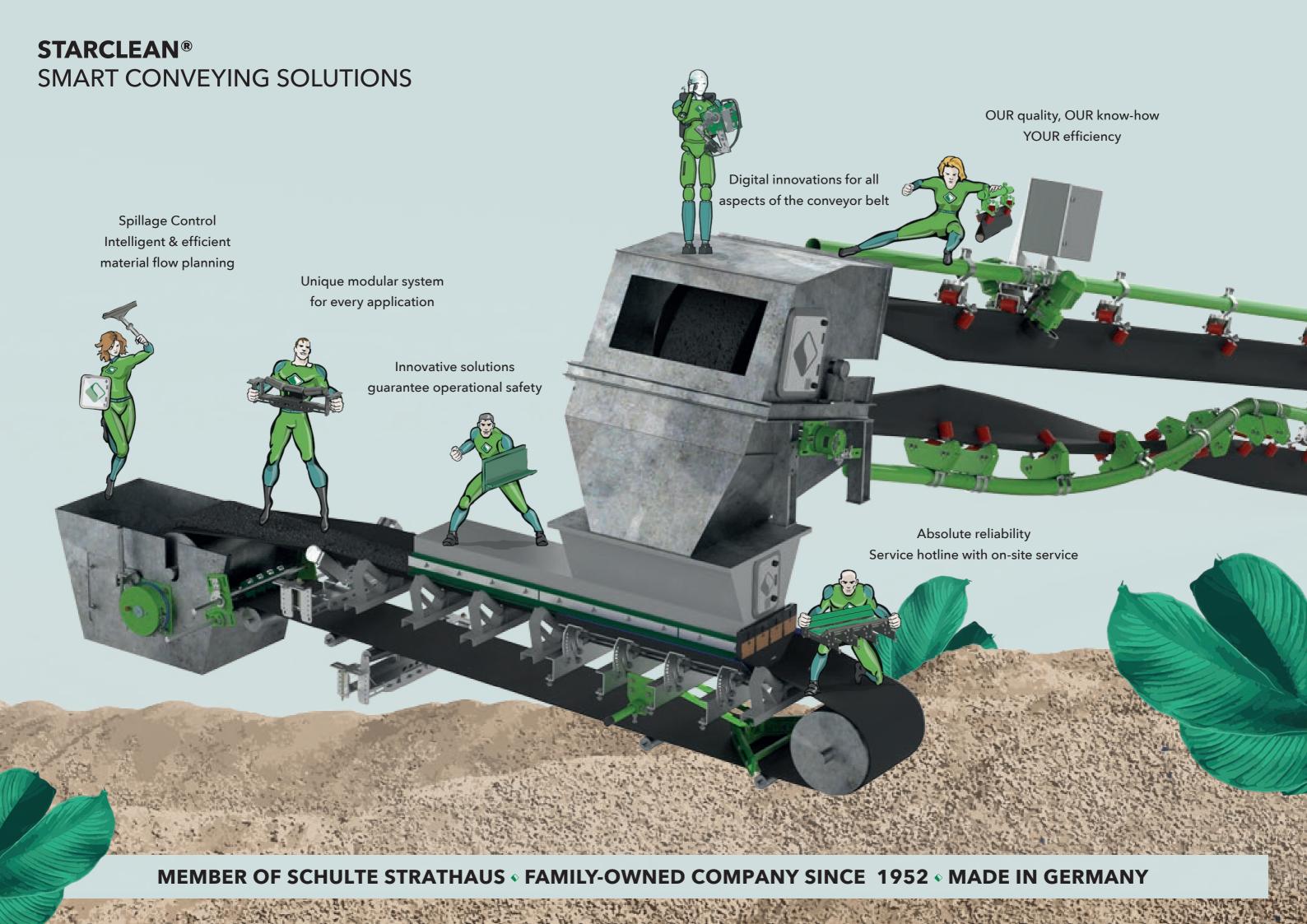
CONSERVINGRAW MATERIALS



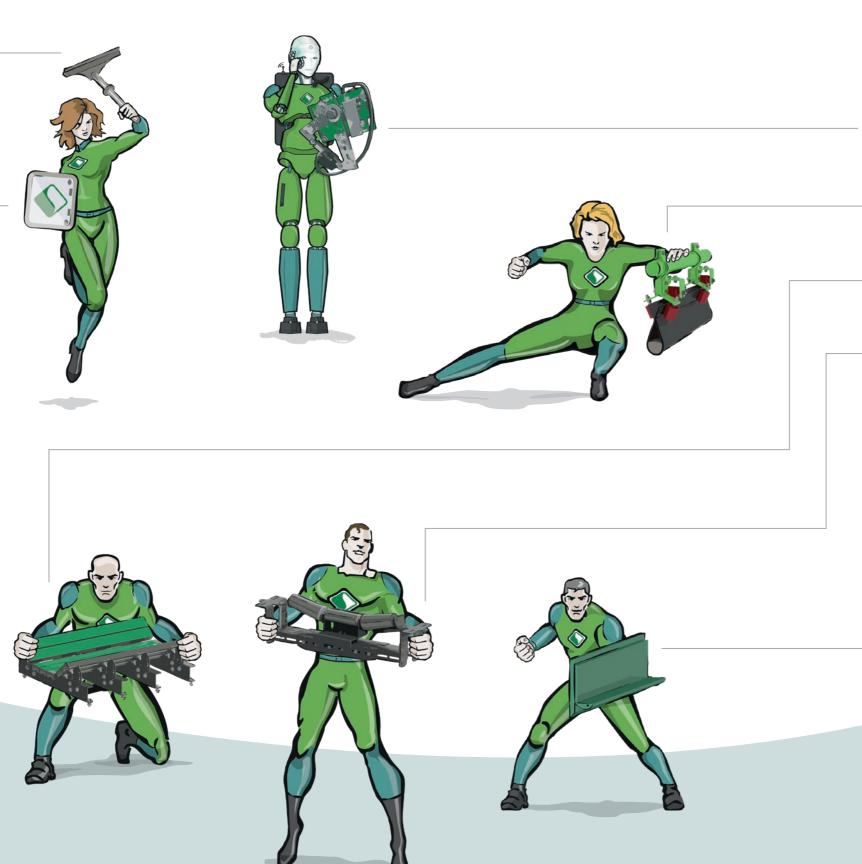
WE STAND FOR:

- Optimum material flow planning for raw materials
- Modular set-up of machine and system components
- High operational safety
- Intelligent material flow planning
- Efficient use of materials

THIS IS MADE POSSIBLE BY
HEROES OF SPILLAGE CONTROL



CONTENTSSTARCLEAN® PRODUCTS



- P.08 CONVEYOR BELT CLEANER
- NEW P.20 MODULAR PLOW SCRAPER
- NEW P.22 STARCLEAN SMART SCRAPER
 - P. 26 CLOSED BELT CONVEYOR (SAFEBELT®)
 - P.30 IMPACT BARS (FRIFLO)
 - P.32 BELT TRACKERS (CENTRAX)
 - P.34 TRANSFER POINT SEALS (SEAL / SPILL-EX / SEAL-TEK)
 - P.36 INSPECTION DOOR (ID)

STARCLEAN®CONVEYOR BELT CLEANER

ADVANTAGES AT A GLANCE

- Perfect, belt-saving cleaning
- $oldsymbol{\circ}$ Extremely long lifespan thanks to low wear
- ◆ Tool-less scraper blade replacement
- Quick and easy mounting and maintenance
- Optimum adjustment to the conveyor belt thanks to TWIST-SWING®
- ◆ Unique, modular system
- Top-quality materials: high-performance polyurethane or polyurethane base with special tungsten carbide blades

PRIMARY SCRAPER



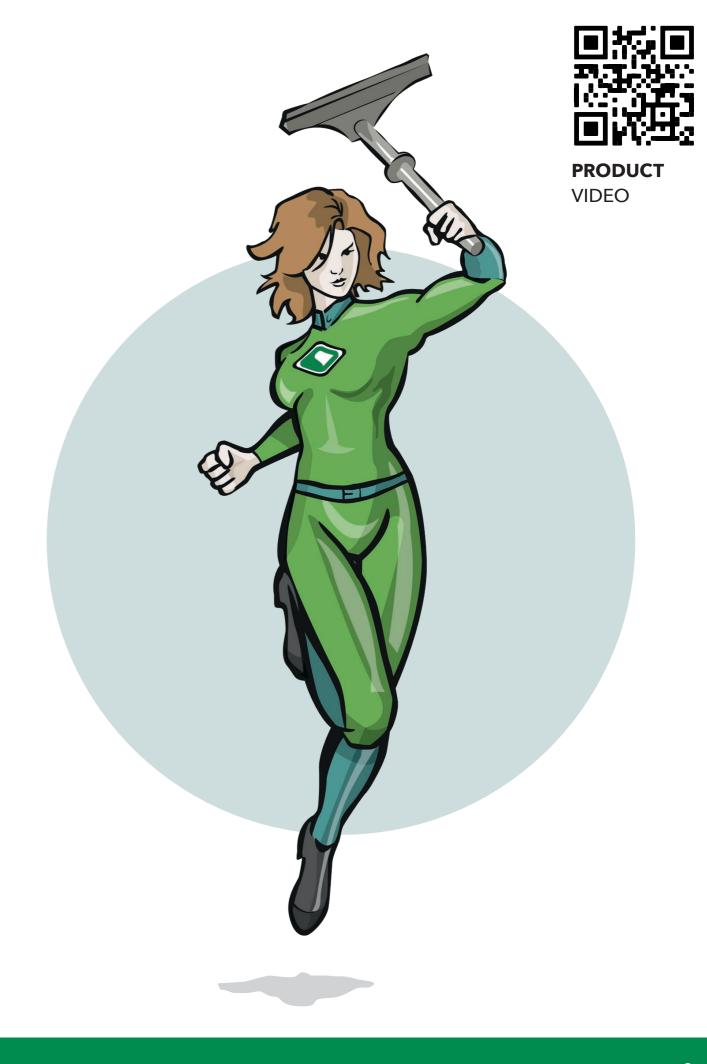


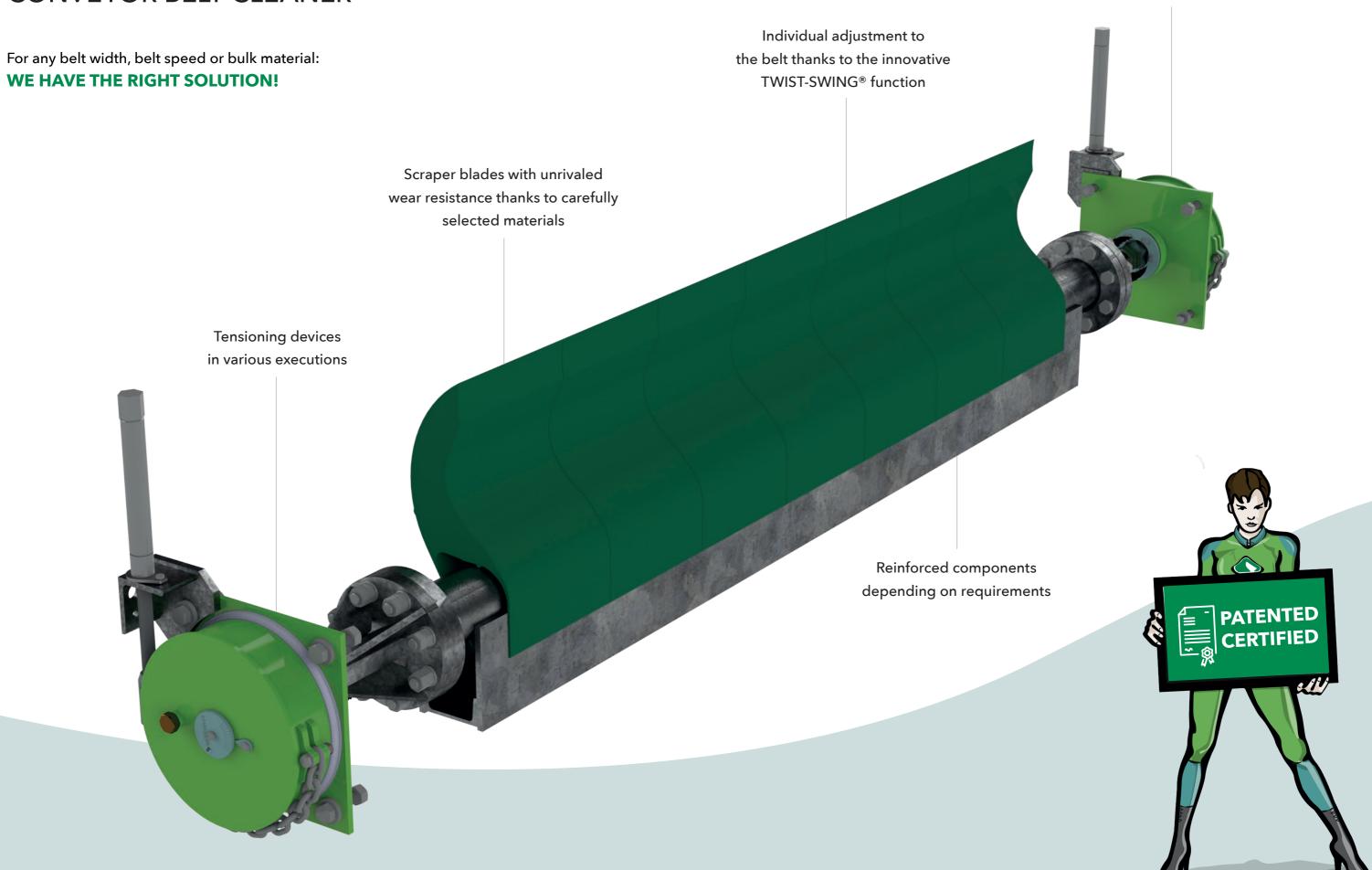


TWIST-SWING®

- Optimum adjustment of each scraper blade to the belt surface
- Ability to evade obstacles
- Flawless cleaning results







STARCLEAN®

THE MODULAR SYSTEM

AVAILABLE IN: STANDARD QUALITY - ATEX QUALITY - SUITABLE FOR FOOD - HEAT-RESISTANT - HYDROLYSIS STABILIZED

PRIMARY SCRAPER BLADES FOR USE AT THE PULLEY

ALLSSAAAAA

Type 18n Type 81n Type 82n Type 281n Type 282n Type 283n Type 85n Type 86n Type 285n Type 285n (lang) Type 286n

PRIMARY SCRAPER BLADES FOR HEAVY-DUTY BELT CONVEYORS

Type 581n



Type 481n









Type 781n Type 385n

SECONDARY SCRAPER BLADES FOR USE BELOW THE BELT





Type 681n



Type 830

Type 860



Type 620-HD

Type 980

Type 630



Type 83E-300



12 13

Type 83E

PRIMARY

SCRAPERS

SERIES 700

WITH TORSION-TENSIONING DEVICE

WITH TUNGSTEN CARBIDE SCRAPER BLADES

Available types:

85, 285, 86 and 286

Suitable for reversible operation

WITH POLYURETHANE SCRAPER BLADES

Available types:

18, 81, 82, 281, 282 and 283

 Suitable for reversible operation and mechanical belt joints

SERIES 800

WITH RASTER-TENSIONING DEVICE

WITH TUNGSTEN CARBIDE SCRAPER BLADES

Available types: 85, 285, 86 and 286

- Suitable for reversible operation
- Overlapping cleaning with types 85 and 285









SERIES 700 FOR HEAVY-DUTY BELT CONVEYORS

WITH TORSION-TENSIONING DEVICE

WITH TUNGSTEN CARBIDE SCRAPER BLADES

Available types: 385

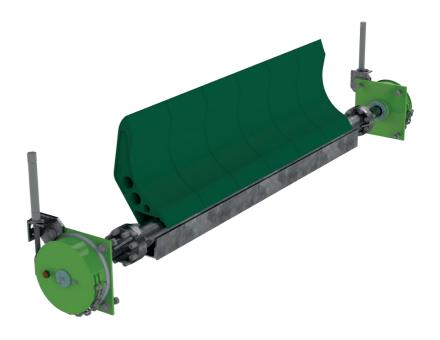
Suitable for reversible operation

WITH POLYURETHANE SCRAPER BLADES

Available types:

481, 481-HD, 581, 681 and 781

 Suitable for reversible operation and mechanical belt joints



SERIES 600 FOR HEAVY-DUTY BELT CONVEYORS

WITH LEVER-TYPE TENSIONING DEVICE

WITH TUNGSTEN CARBIDE SCRAPER BLADES

Available types: 385

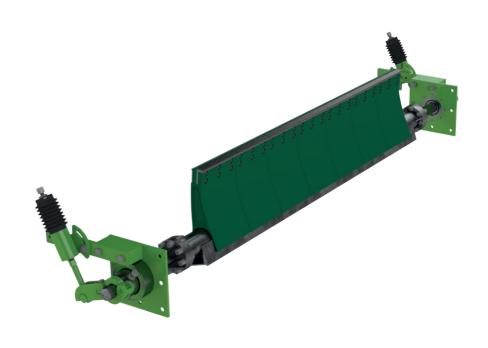
• Fable for reversible operation

WITH POLYURETHANE SCRAPER BLADES

Available types:

481, 481-HD, 581, 681 and 781

 Suitable for reversible operation and mechanical belt joints



SECONDARY

SCRAPERS

SERIES 800

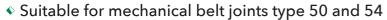
WITH RASTER-TENSIONING DEVICE

WITH TUNGSTEN CARBIDE **SCRAPER BLADES**

Available types: 08, 09, 50, 53, 54, 56 and 256

• Overlapping cleaning with types 50, 53, 56 and 256







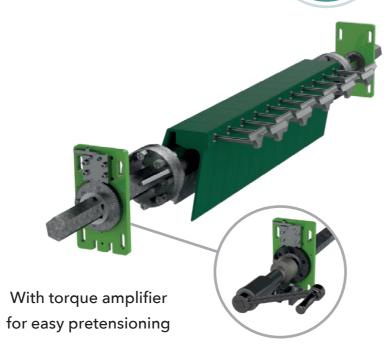
SERIES 800 FOR HEAVY-DUTY BELT CONVEYORS

WITH RASTER-TENSIONING DEVICE

WITH TUNGSTEN CARBIDE **SCRAPER BLADES**

Available types: 66 and 266

Overlapping cleaning



SERIES 500

WITH SEGMENTED PRESSURE ROLLER SYSTEM

WITH TUNGSTEN CARBIDE BLADE

Available types: 08 and 09

- Suitable for reversible operations
- For particularly abrasive, sticky materials
- ♦ With single-piece or two-piece tensioning device
- Belt-saving operation due to deflecting segmented rollers
- Optimum pressure of the belt against the carbide blade
- Version for heavy-duty belt conveyors also available









SCRAPER

NEXT-GENERATION SCRAPERS

SERIES 830-E

WITH AUTOMATIC TENSIONING DEVICE



- Suitable for reversible operation
- ◆ Interval-based or load-based cleaning possible
- Electric linear drive unit (retrofitting possible)

WITH POLYURETHANE **SCRAPER BLADES**

Available types: 18, 81, 82, 281, 282 and 283

For primary scrapers

WITH TUNGSTEN CARBIDE SCRAPER BLADES

Available types: 50, 53, 54, 56, 256, 08 and 09

For secondary scrapers



SERIES 860-RS

WITH RASTER-TENSIONING DEVICE

- Easy and quick maintenance outside of the transfer chute
- Convenient removal of each scraper blade from the side
- Reliable and safe scraper blade replacement without reaching into the system

WITH TUNGSTEN CARBIDE **SCRAPER BLADES**

Available types: 85, 285, 86 and 286

For primary scrapers

WITH TUNGSTEN **CARBIDE SCRAPER BLADES**

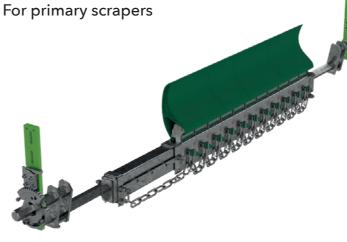
Available types: 50, 53, 54, 56 and 256

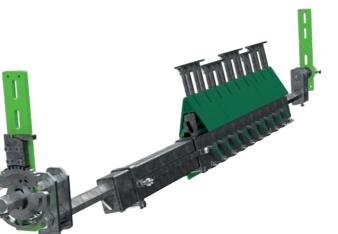
For secondary scrapers

WITH POLYURETHANE **SCRAPER BLADES**

Available types: 18, 81, 82, 281, 282 and 283

For primary scrapers









INNER BELT SCRAPERS

SERIES 200

FOR INNER BELT CLEANING



MODULAR PLOW SCRAPER

- Individual polyurethane blades
- Adjustable to every belt width thanks to the modular system
- Long lifespans
- Simplified mounting of the elements



WEAR LIMITER

Prevents further lowering of the plow when the segments are completely worn out



WITH POLYURETHANE BLADE

Available types: 240 and 273

- Available as diagonal and plow scraper
- Prevents dirt and damage between pulley and belt

SPECIAL SOLUTIONS

SERIES 400

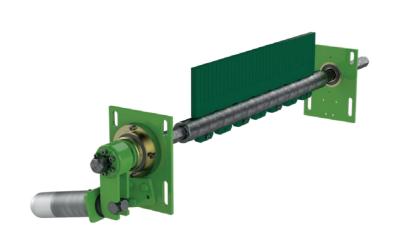
FOR CHEVRON CONVEYORS

WITH POLYURETHANE BLADE

Available types: 04 and 07

- ◆ Slotted or continuous
- For use on the return side of the belt





BRUSH CLEANER

WITH BEATING DRUM

WITH FIXED BRUSH

- Poly bristles
- For use on the return side of the belt
- Alternatively with polyurethane blade









THE NEW DIGITAL STARCLEAN®S³

Our unique smart scraper with an electric drive, combined with our smart cloud dashboard, enables predictive maintenance of wear elements through preventive damage detection on the conveyor belt. This digital innovation gives the scraper the ability to self-regulate wear and tear while also ensuring a constant pretensioning force - completely automatically.

Designed according to the principle of "detect - react - protect", our innovation enables continuous contact-based inspection of the conveyor belt, thus enabling predictive maintenance.

ADVANTAGES AT A GLANCE

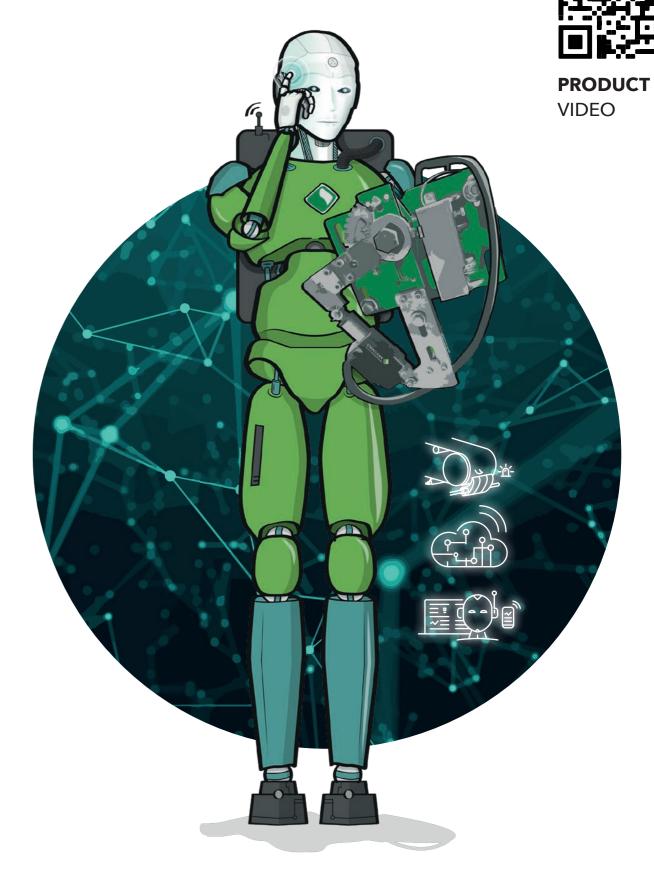
- Continuous inspection
- Damage limitation
- Efficient use of resources
- Improved operating reliability

- Prevention of costly, unscheduled conveyor
- belt downtimes
- Transparency

THE MODULES

- Scraper
- Motorization set
- Scraper Intelligence Module (SIM)
- Measuring roller with sensor system
- Belt damage detection
- ◆ LTE Edge Controller/Cloud

BELT DAMAGEDETECTION



THE MODULES









Scraper Intelligence Module (SIM)

Motorization set with S³ sensor system
Drive on one side and

on both sides

ScraperPrimary or secondary

Measuring roller with sensor system

TECHNICAL APPLICATIONS

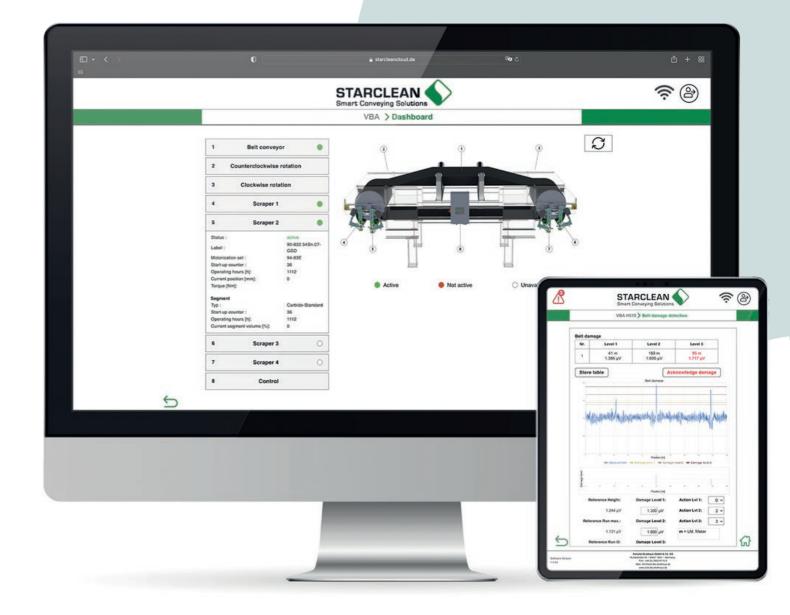
- Automatic or manual engagement and disengagement of conveyor belt cleaner
- Automatic readjustment of the pretension
- Wear indicator and warning for polyurethane scrapers
- Constant belt damage detection by the secondary scraper
- Operating hours display for belt conveyor, scraper, and wear parts
- Switch-on, engagement and disengagement counter
- Indicator of conveying speed and running direction
- Control for up to four scrapers
- RFID access with rights allocation to protect against unauthorized access
- Information about the belt conveyor, the scrapers, and the control system
- Error messages and faults







STARCLEAN®S³ DASHBOARD/CLOUD



WHAT THE CLOUD CAN DO

- Monitor the conveyor belt
- Classify the damage
- Define the internal damage level
- Initiate action if belt is damaged
 (disengagement, send information, alarm, you determine the function)
- Detect the position of belt damage
- Record belt characteristics
- Smart, cloud-based dashboard

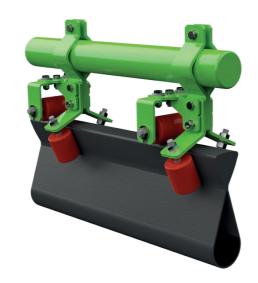
SAFEBELT®CLOSED BELT CONVEYOR

ADVANTAGES AT A GLANCE

- Weatherproof and dust-free transport of bulk material
- Easy circumvention of obstacles
- Avoidance of several transfer points
- Small footprint thanks to tight curve radii
- Simplified installation planning
- ♦ Simple (subsequent) relocation of the complete system

AVAILABLE IN

- ♦ 800 mm belt width
- ♦ 1400 mm belt width









PRODUCT VIDEO



SAFEBELT®CLOSED BELT CONVEYOR

DATA AND FACTS

♦ Maximum filling level: 60%

♦ Maximum material weight: 40 kg/m

Maximum belt speed: 3 m/s

♦ Horizontal radii: > 8m

◆ Gradients: < 30°</p>

♦ Heat-resistant up to 80°C

Durability: friction, ozone, UV (optional: oil and grease)

SUITABLE FOR A WIDE VARIETY OF BULK MATERIALS ACROSS MANY DIFFERENT INDUSTRIES:

Construction industry: gypsum, lime, clay, sand, stone, cement

Energy industry: ash, turf, wood shavings, coal, recycling **Cellulose industry:** wood shavings, waste paper, kaolin

Metal industry: foundry sand, ore, coal, slag

Mining/quarrying: ore, grinding balls, minerals, sand **Food industry:** raw materials, fishmeal/food, cereals

Processing industry: chemicals, finished products, minerals, granulates, fertilizers

SEE WHAT MAKES SAFEBELT® SO SPECIAL:

IT CUTS COSTS

Eliminates expensive enclosures and cleaning work

ECO-FRIENDLY

Little or no ingress or emissions of dust or liquids

LOW-ODOR

Odors are largely contained in the conveyor belt

SPACE-SAVING

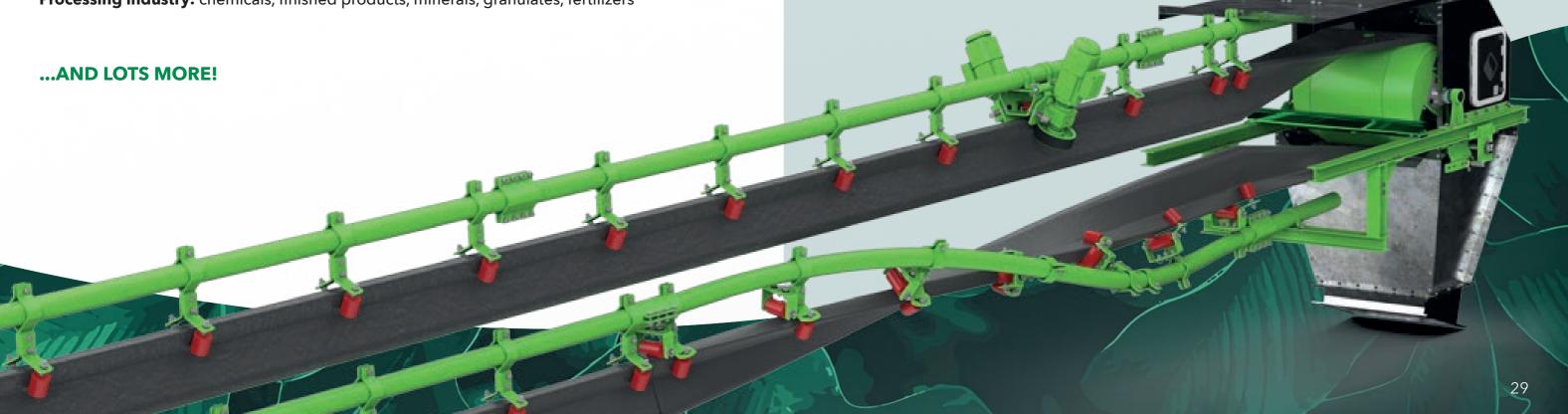
Can overcome steep uphill and downhill gradients as well as tight horizontal and vertical curve radii

LOW-MAINTENANCE

No deposits of material residues thanks to enclosed return flow

FLEXIBLE BELT GUIDANCE

Can also be used for additional conveyed material thanks to enclosed return flow



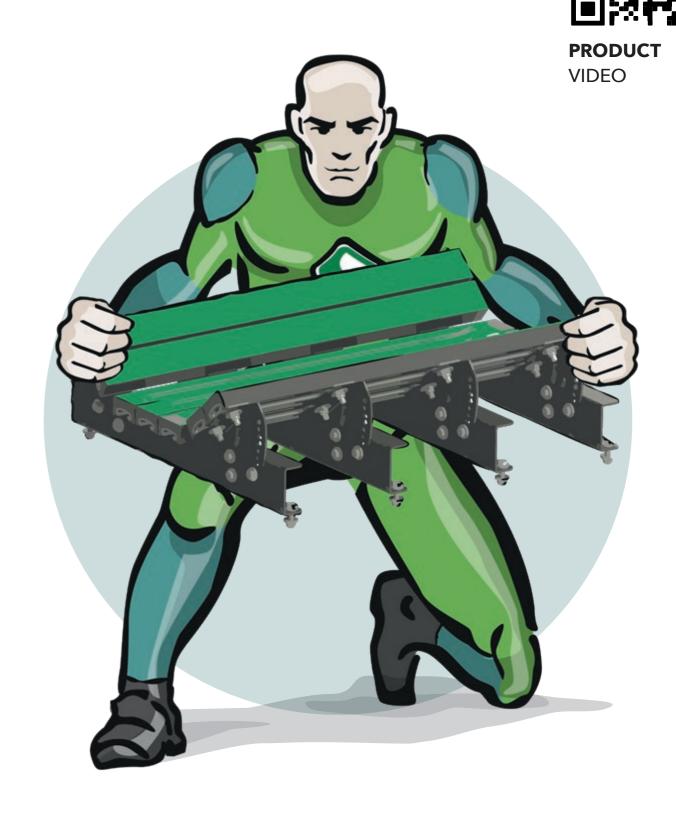
STARCLEAN® IMPACT BARS

ADVANTAGES AT A GLANCE

- Optimum protection of the conveyor belt
- Easy and quick to install
- Eco-friendly sealing
- Minimum friction forces
- Supports the belt instead of idler rollers
- Heat-resistant up to 75°C
- Also available in ATEX quality
- Absorbs the impact force of the bulk material

Also available with removable blades





STARCLEAN® CENTRAX BELT TRACKING SYSTEM

ADVANTAGES AT A GLANCE

- Low space requirement
- Universal installation options
- Reliable alignment of the conveyor belt
- Rollers coated with diamond-pattern special rubber or with optional extremely wearresistant polyurethane
- Optional: tracking rollers also available in ATEX quality
- Robust and flexible design



TYPE SO AND SKO

- Used on the returning belt (return part of belt)
- Suitable for reversible operations
- Beam fixed to the framework of the conveyor
- Heavy-duty turning bearings
- One cylindrical central roller and two conical side rollers



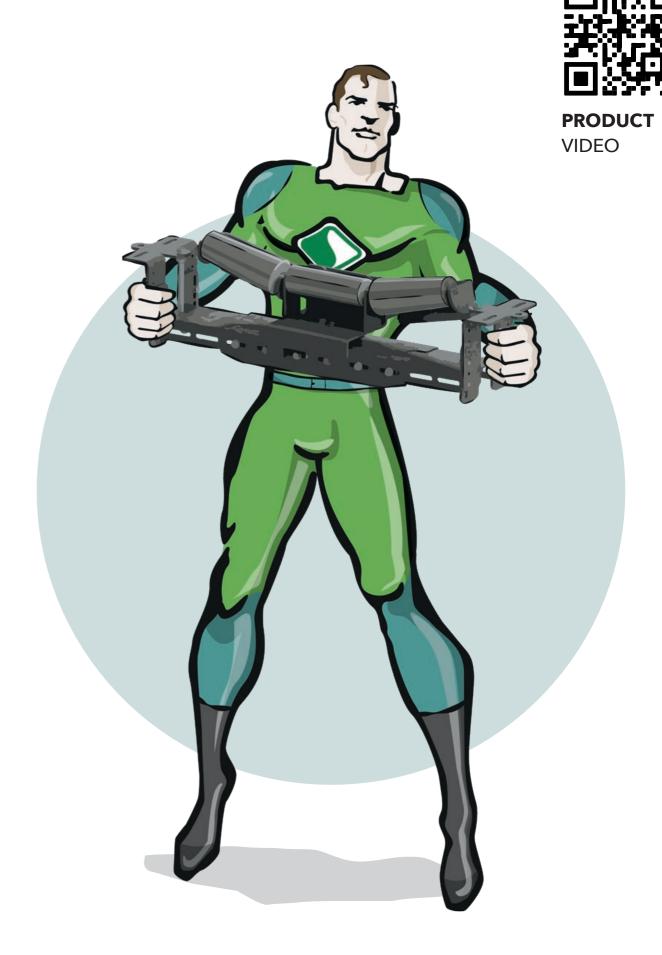
TYPE S AND SK

- Use on a troughed belt (carrying part of belt)
- Suitable for reversible operations
- Beam fixed to the framework of the conveyor
- Continuously variable angle adjustment of the side rollers for optimum adaption to the conveyor belt
- Heavy-duty turning bearings
- Simple fine adjustment ensures perfect alignment of the conveyor belt
- One cylindrical central roller and two conical side rollers



TYPE SR AND SRG

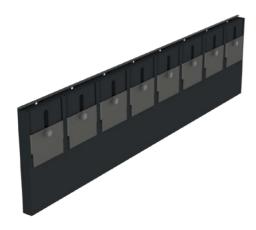
- Used on the returning belt (return part of belt)
- Heavy-duty turning bearings



STARCLEAN® SEAL / SPILL-EX / SEALTEK TRANSFER POINT SEALS

ADVANTAGES AT A GLANCE

- Optimum reduction of dust emissions and contamination
- Efficient material guidance
- ♦ Wear-resistant dust seal



SPILL-EX

- For the reverse side of the transfer point
- Four different versions available
- ♦ Also available as a side seal



SEAL-TEK R

- Modular design suitable for any rear wall
- Individual segments for individual Adjustment to the trough
- Mounting plate made of highly wearresistant steel

- Simple installation
- Optimum belt protection
- Optimized lifespans



SEAL

- Dust seal adjusts to the belt troughing
- Combination of special material available in different hardness degrees
- Optional: 2 attachment variants: bolted or with quick-release lever



SEAL-TEK S

- 1-meter-long mounting plate made of highly wear-resistant steel
- ◆ 5 overlapping sealing blocks



STARCLEAN® IDINSPECTION DOOR

ADVANTAGES AT A GLANCE

- Dust-proof
- ♦ Simplified maintenance and inspection of the conveyor belt cleaner
- Robust, impact-resistant material
- Secured against unauthorized access
- Suitable for every transfer point
- Easy and quick to install
- Protection against reaching into the chute
- Permits inspection even during operation
- Captive screws and cable to secure the grid





Size S: 380 x 280 mm



Size M: 405 x 375 mm



Size L: 520 x 465 mm





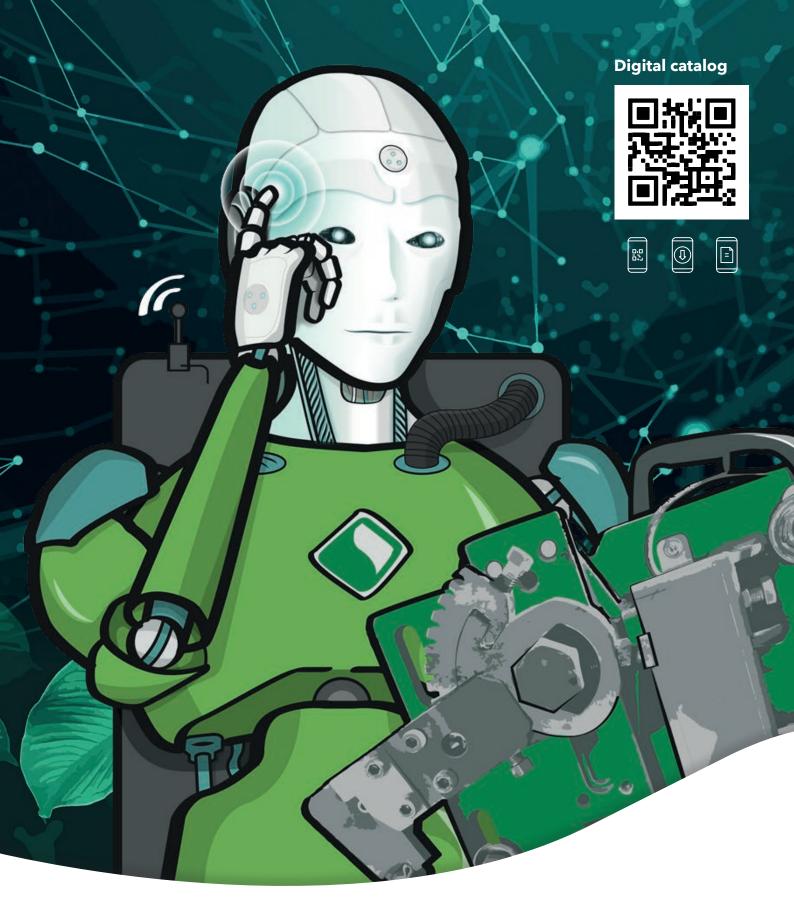
STARCLEAN® "SPILLAGE CONTROL"



ADVANTAGES AT A GLANCE

- Optimization of the entire plant system
- Increase of plant profitability
- Prevention of dust emissions that are harmful to the environment and to health
- Loss-free material transport
- Dramatically extends the lifespan of the conveyor belt

www.starclean-solutions.com





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