



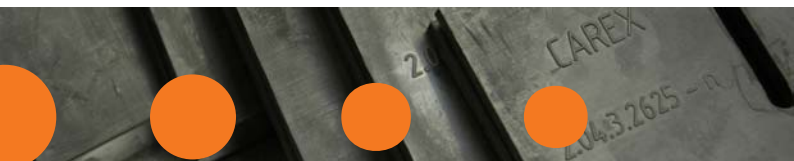
VSR BLASTER®
Air cannons and air injectors



DUSTEX®
Dust suppression systems



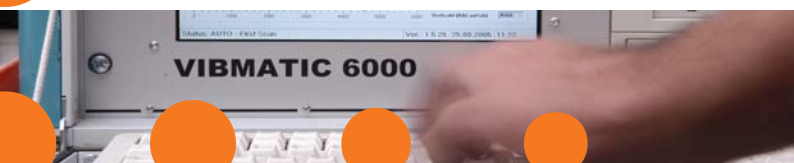
VIBREX®
Conveyor belt cleaners



CAREX®
for sealing of transfer chutes



LINEX®
Conveyor belt centralizing idlers



VIBMATIC®
the procedure for stress reduction
on welding and cast constructions

Product program



The company founded in 1975 under the name of VSR Engineering GmbH in Mülheim an der Ruhr and has been taken over by the enterprise group Lemetco GmbH in 1999. The VSR Industrietechnik GmbH is now selling since 2002 its approved components for the bulk solid industry from the new company's seat in Duisburg-Homberg with more than 30 collaborators.

VSR BLASTER® air cannons and air injectors

pneumatically remove cloggings and cakings.

Air cannons and the smaller air injectors simply blow material cloggings away. The fields of application are: ratholing and bridging in hoppers, funnels, silos, bunkers and stock piles with a capacity of well in excess of 10.000 m³.

As well, cakings and deposits in pipes, heat exchangers and cyclones can be cleared, even in the high temperature areas of power stations and cement works with far more than 1000°C medium temperature.

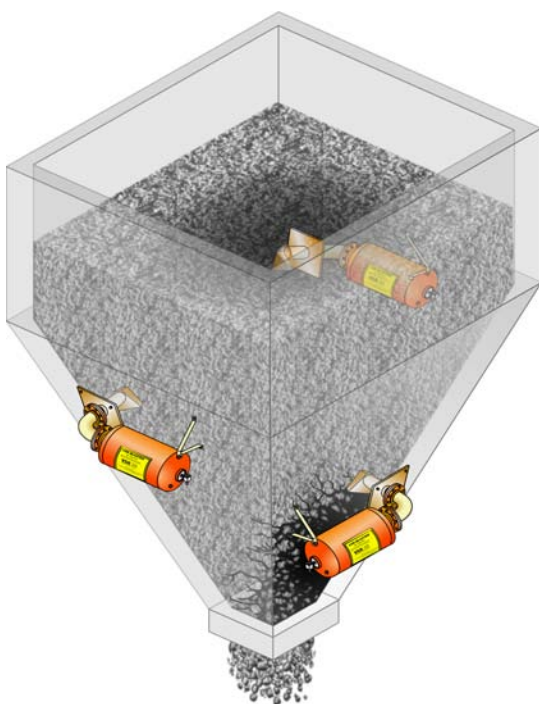
Air cannons are installed on the exterior of the silos. They blow the compressed air stored at 4 to 10 bar explosively through large-area discharge cross sections of 50 - 150 mm diameter in milliseconds into the critical inner material zones.

Often special nozzles are used such as the patented isobaric sword nozzle for large area activation.

Far more than 25.000 VSR BLASTER® air cannons daily prove their famous absolute operational safety and easy maintenance. And all that with a simple design and problem-free control functions.

Air cannons can be a part of a cost effective equipment for new plants or an effective retrofit for existing plants. VSR BLASTER air cannons can be supplied with all mounting and control accessories and can be mounted on request.

VSR BLASTER® air cannons are available in sizes of 12 to 500 ltr, VSR BLASTER® air injectors with 2, 5 and 8 ltr. content.



DUSTEX® Water Dispersion Systems and Water Spraying Systems for binding of industrial dust.

Dust is being released during production, treatment and transport of bulk goods. It can be troublesome, disturbing and damaging for human beings and plants.

- **DUSTEX® Water Dispersion Systems** work with two material nozzles at low pressures with the media water and compressed air. Water is split up in micro-fine drops by air pressure in an ultrasonic field. Thus, a maximum drop quantity and drop surface is gained out of each litre of water.

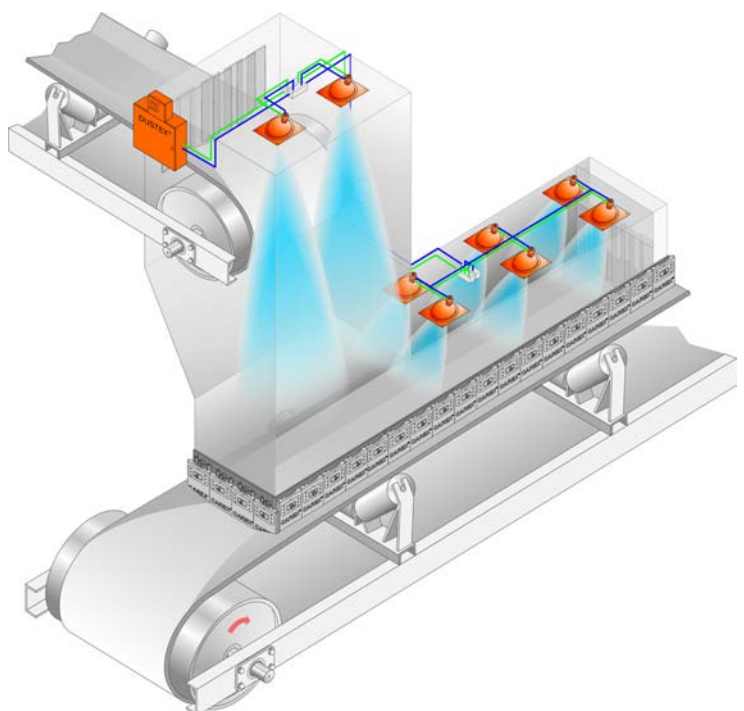
They are particularly suitable when:

- very low emission values have to be observed
- the water consumption should remain low
- the humidity addition is not allowed to exceed the thousands limit
- the product is thermally treated later on.

- **DUSTEX® Water Spraying Systems** work with one material nozzles, only with the medium water. They produce fine up to micro-fine drops with pressures of 4 to 10 bar.

They are particularly suitable when:

- low emission values have to be realized
- a slightly higher water consumption is no problem
- a higher humidity in the product is no problem, or even requested
- the plant cannot or hardly be encapsulated
- the product has to be loaded and unloaded several times.





CAREX® Segmentblock-System for lateral sealing of transfer chutes.

This easy- to- handle sealing system provides a continuous seal along the sides and the rear of the transfer chute.

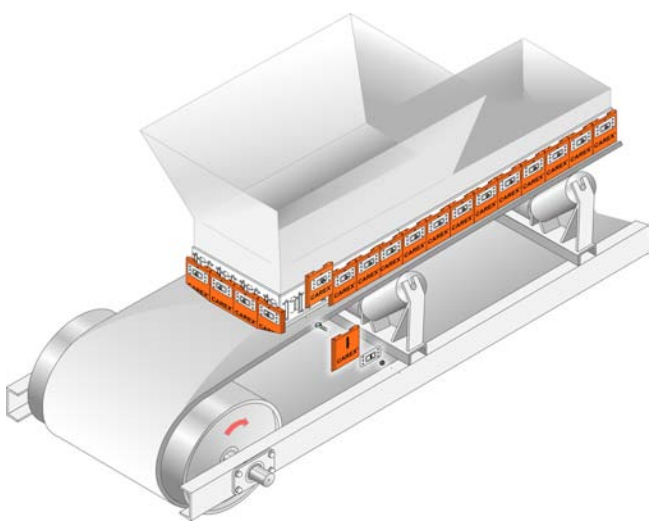
Backing plates are welded or screwed in line to the bottom edge of the chute.

Individual segmentblocks manufactured out of rubber or plastic sit side by side on vertical guides of the plates. They are adjustable to the belt contour and clamped by a counterplate with adjustable holding force so that leaking and dust emission as with the standard rubber strip sealing are prevented.

When worn, the segmentblocks can be readjusted individually with the slap of a hammer even during operation if allowed.

CAREX® backing plates have standard sizes:

Backing plates: length = 1000 mm, height = 150 mm
Blocks: width = 200 mm, height = 200 mm
thickness = 18 mm



VIBREX® Conveyor Belt Scrapers for keeping conveyor belt installations clean.

They are the most ideal elements for belt cleaning. Individual spring-mounted, wear-resistant blades are pressed elastically against the conveyor belt. They constantly adapt themselves to the belt surface and to wear. This results in very long lifetimes and a high, permanent cleaning effect. Nevertheless the conveyor belts are treated with extreme care as conveyor belts mostly wear due to badly operating cleaning devices.

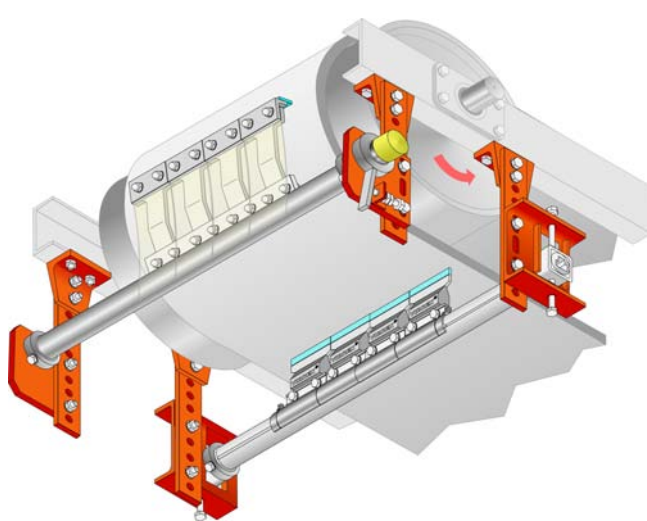
With extremely dirty belts and high belt performances, the VIBREX® DUAL-Scraping System, which is a combination of front and main scrapers produce the best cleaning results. Spring blade and head scrapers are used for reversing belts, at severe material caking or areas with little available construction space.

The range offers mounting and tensioning devices of simple clamping attachments for axles made of aluminium, steel or stainless steel up to pneumatically controlled vertical or torsional tensioning systems that allow quick mounting, good adjustability and effective maintenance.

Polyurethane brushes, plough scrapers and many scraper blade variations complete the approved VIBREX® programme that is protected by numerous patents.

VIBREX® scrapers are reasonably priced and effective. They are important equipment elements for the OEMs as well as for plant operators.

There are VIBREX® Conveyor Belt Scrapers available for belt widths up to 2 m.



VSR Industrietechnik GmbH offers on request

- complete engineering
- turnkey mounting
- regular maintenance

- reliable spare part service
 - pressure vessel inspection according to DGRL 97/23 EG...
- Please ask for detailed information



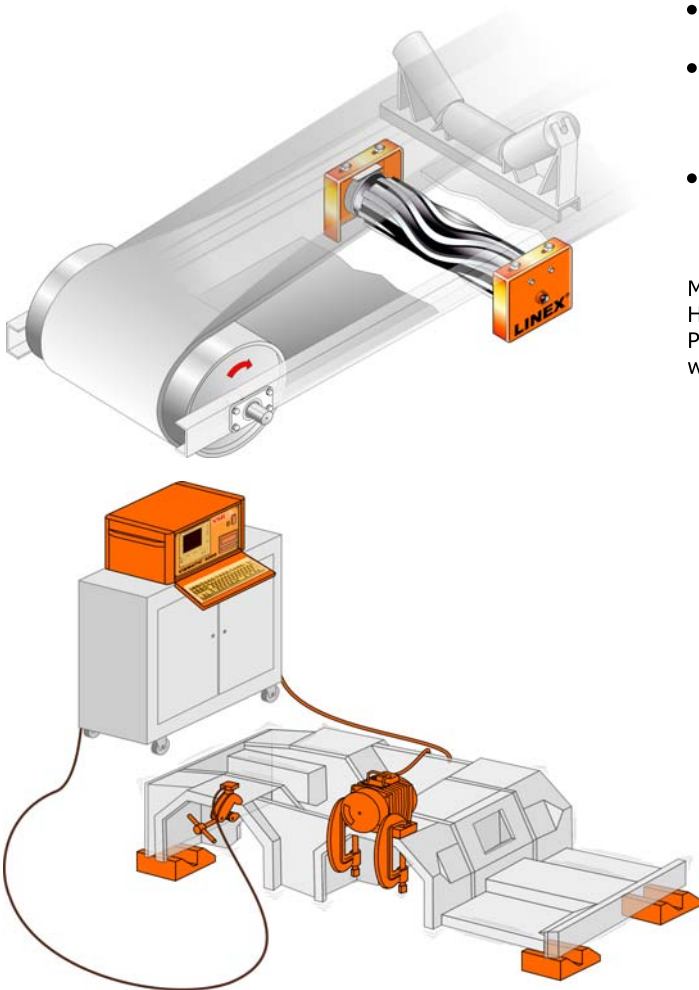
LINEX® Conveyor Belt Centralizing Idlers for the straight run of conveyor belts.

An absolute must for each conveyor belt. As these universally applicable support rolls (Ø 190 mm) ensure that conveyor belts run straight.

Instead of a return idler, they are installed directly before the tail pulley. Even at the slightest misalignment the centrally pivoted roller tilts and turns and thus guides the belt back to the centre by means of the friction effect of the heavy-duty chevron rubber ribs.

Uneven loading of the belt, lateral overflow or damage to the belt edges or to the lateral sealing are effectively prevented.

LINEX® Centralizing Idlers are available for belt widths from 400 to 2000 mm.



The VSR process

Vibration for stress reduction.

This procedure is the quickest and lowest price alternative to stress-free annealing at welded, forged and cast constructions. After a programme-controlled workpiece analysis, and an automatically executed stress relieving treatment with the vibration stress reduction unit VIBMATIC® 6000, the workpieces are stress-relieved and thus, dimensionally stabilized. The following evaluation shows the final state of the workpiece.

The mechanical treatment can be carried out without causing any distortions and therefore, providing exact dimensional tolerances.

Advantages:

- The treatment of internal stresses can be done at the finished site of the workpiece. There are no transport costs.
- High energy consumption, as well as, de-scaling after annealing do not apply.
- The duration of the vibration treatment, for workpieces of up to 3 tons, is only 45 min. With larger workpieces several treatment points are required (e.g. 20 tons will last about 5 hrs).
- Workpieces from 50 kg to more than 200 tons can be treated. Suited for all welded, forged, and cast pieces, made out of steel and ferrous materials.

Make the most of Cost and Time Advantages.

Hundreds of such VSR Vibration Units are in use worldwide. Please ask for references in your vicinity, or let us impress you with a VSR treatment on your workpiece.



KNEZ INTEH d.o.o.
Ivanićgradska 36
HR-10000 Zagreb

e : info@knez-inteh.hr
m : +385 (0)98 180 1416
t/f : +385 (0)1 2067 819

VSR



VSR Industrietechnik GmbH
Am Alten Schacht 6
D- 47198 Duisburg
Tel. +49 (0) 20 66 / 99 66-30
Fax +49 (0) 20 66 / 99 66-62

Internet: www.vsr-industrietechnik.de

E-mail: info@vsr-industrietechnik.de