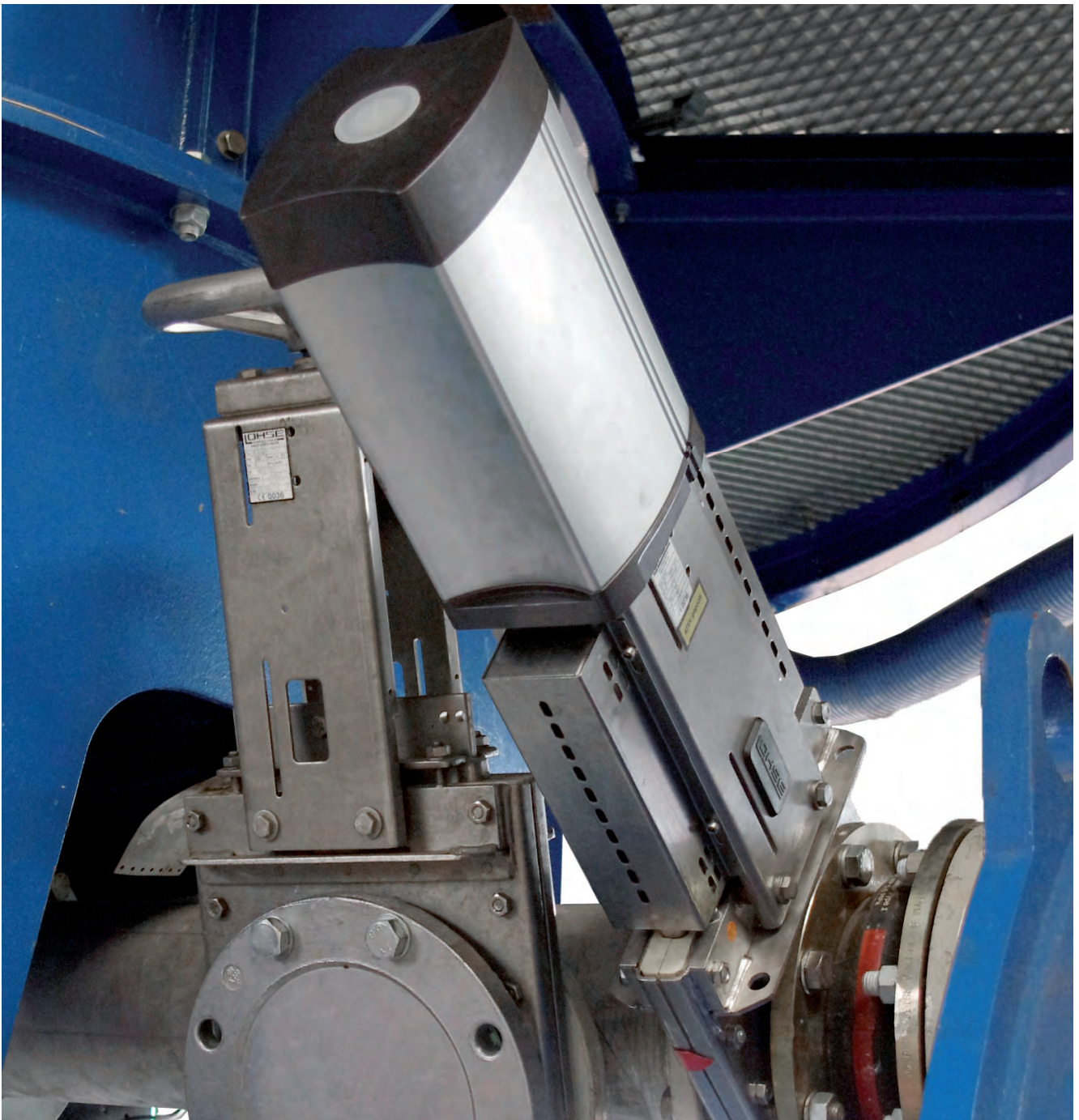


Our product range

MARTIN LOHSE GmbH Maschinenbau Lohse GmbH



MARTIN LOHSE GmbH

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Valves **MADE IN GERMANY!**



Valves for different kind of industries as pulp- and paper, chemical and food industry, for waste and sewage treatment, for water treatment.

MARTIN LOHSE GmbH is one of Germany's most well-known manufacturers of knife gate valves. From the production of pulp vats, tanks and machine components it was a logical consequence in the early 1960s for Lohse to work on the problems involved with flow control technology for pulp stock. The evolution of the LOHSE knife gate valve, which took place in close cooperation with experts from the paper industry, began with cast valves, then progressed to stainless steel clad valves and culminated in state-of-the-art valves made of non-corrosive and acid-resistant stainless steel. The parallel development of reject valves designed especially for problematic areas in the recycling of paper have meanwhile become a standard product in paper recycling facilities. Today MARTIN LOHSE GmbH produces not only gate valves, regulating and reject valves, but also dirt traps.

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Machines for the paper and chemical industry and for waste and air flow technology.

Maschinenbau Lohse GmbH is well-known for its machines and systems in the paper, chemical, waste and air flow technology industries. Based on the manufacture of products for the paper industry in the 1950s Lohse, as a long-established manufacturer, has adapted its product line to meet the requirements of a diversity of sectors. The extensive product mix includes pulper disposal systems, as well as maintenance and repair services for the paper industry, as well as design and production by customer order, such as fans and wind tunnels for the automotive industry. In the area of renewable energies, for example in waste technology, the Lohse name stands for systems for the breakdown of biodegradable waste as a pre-stage for biogas production. These systems meanwhile are in use not only in Germany, but around the world.

Valves

50 years of experience and success

Genuine Made in Germany Quality - all the components of our COMPACT and reject valves are produced in Germany. This enables us to react quickly and flexibly to our customer requirements.

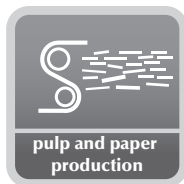
Our maintenance friendly two piece housing of the COMPACT and reject valves enables wearing parts to be changed simply resulting in reduced life-time cycle costs.

A thought-out system to fit accessories and drives on our modular valves rounds off the Lohse concept.

Engineering, flexibility, high quality standards, expertise and service

– all from a single source!

Our customers are from the following industries:



Paper industry



Waste technology



Chemical industry



Water treatment



Food industry



Sewage treatment technology



Mining
Mineral Processing



Biogas industry

Shut off valves type CNA



single-sided sealing with time-proven free-flushing effect

ensures unobstructed closing with media consistencies $\leq 5\%$
available in various seal types

areas of application: general gate valve for industrial use

nominal diameters: DN 50 - 1400 (2 - 56")

material: stainless steel (1.4404 / 1.4571)

flanges: DIN EN 1092-1, ANSI B 16.5 class 150

Additional data is available on request.



Shut off valves types CDS, CDSV, CDSR

double-sided sealing with continuous valve plate and smooth dead zone-free flow

ensures unobstructed closing with media consistencies $> 5\%$ and media containing solids

also available with various seal types and surface treating of the wearing parts - see type CDSV and CDSR

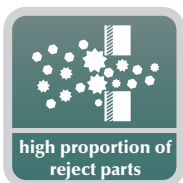
areas of application: media with a high consistency, a high level of stickies and rejects

nominal diameters: DN 50 – 1400 (2 – 56")

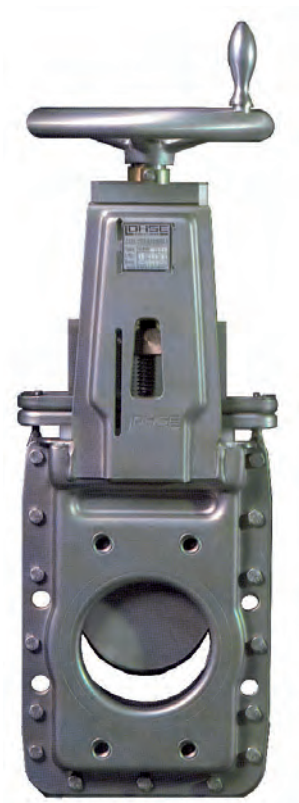
material: stainless steel (1.4404 / 1.4571)

flanges: DIN EN 1092-1, ANSI B 16.5 class 150

Additional data is available on request.



Shut off valves type CAW



double-sided sealing in groove-free/dead zone-free version

ensures unobstructed closing without material accumulations in the valve seat (smooth valve gate)
available in various seal types

areas of application: water and effluent

nominal diameters: DN 50 – 1000 (2 – 40")

material: stainless steel (1.4404 / 1.4571)

flanges: DIN EN 1092-1, ANSI B 16.5 class 150

Additional data is available on request.



Regulating valves type CBS



available with either triangular or pentagonal orifice and a specially adapted slide plate

these allow a flow control to a high degree of regulation including regulation with high flow level or pressure drop in the system
available in various seal types

areas of application: flow control, pressure reduction

nominal diameters: DN 50 – 600 (2 – 24")

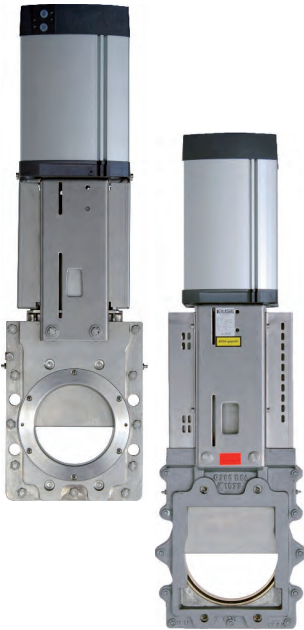
material: stainless steel (1.4404 / 1.4571)

flanges: DIN EN 1092-1, ANSI B 16.5 class 150

Additional data is available on request.



Reject valves type RQS/NAQ



with round inlet and square outlet

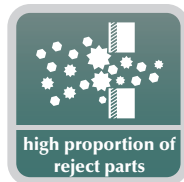
ensures reliable shut-off in reject area due to the smaller inlet (round) and larger outlet (square) and protected guides
available in various seal types and surface treating of the wearing parts

areas of application: cleaner plants, heavy weight rejects/ sandtraps/ heavy weight rejects discharge in general, recycling

nominal diameters: DN 100 – 500 (4 – 20")
material: type RQS: stainless steel (1.4571 / 1.4571), type NAQ: cast iron (En-GJL-250 / 1.4571)
flanges: DIN EN 1092-1, ANSI B 16.5 class 150, LOHSE-standard

accessories: intermediate piece (square to round)

Additional data is available on request.



Reject valve type AEQ

with rectangular inlet and outlet

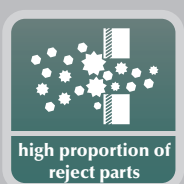
enables a consistent shut off in the rejects areas of a plant by means of a recess free design (rectangular), built in guides and a specially designed sealing system surface treatment of wearing parts

areas of application: cleaner plants, heavy weight rejects/ sandtraps/ heavy weight rejects discharge in general, recycling companies, silos

nominal diameters: DN 100 – 600 (4 – 24")
material: stainless steel (1.4571 / 1.4571), cast iron (EN-GJL-250 / 1.4571)
flanges: DIN EN 1092-1, ANSI B 16.5 class 150, LOHSE-standard

accessories: inlet flange, intermediate piece (square to round)

Additional data is available on request.



Reject valves type TA



with round inlet and outlet,
double-sided metallic sealing with 2 valve plates

ensures reliable and very fast shut-off in reject area due to two valve plates that close to the middle
surface treatment of wearing parts

areas of application: heavy weight rejects dirt traps, light and heavy weight reject discharge in general, pulpers

nominal diameters: DN 100 – 800 (4 – 32")
material: stainless steel (1.4541 / 1.4571), iron (S355J2 / 1.4571)
flanges: DIN EN 1092-1, ANSI B 16.5 class 150

Additional data is available on request.



Reject valves type TAQ

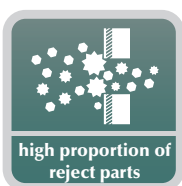
with rectangular inlet and outlet,
metallic sealing with 2 valve plates

ensures reliable and very fast shut-off in reject area due to two valve plates that close to the middle
no guiding or dead corner in the valve bore area
wear resistant surface treatment

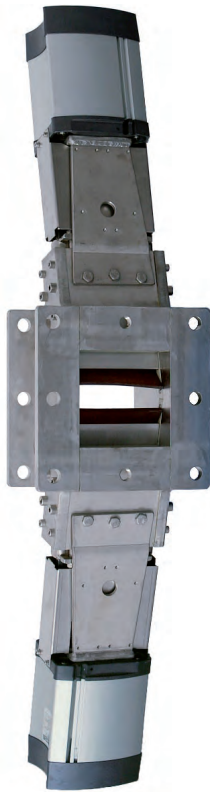
areas of application: light and heavy weight reject discharge in general

nominal diameters: DN 150 – 700 (6 – 28")
material: stainless steel (1.4541 / 1.4571)
flanges: LOHSE-standard

Additional data is available on request.



Reject valves type TRE



with rectangular inlet and outlet,
metallic sealing with 2 valve plates inclined less than 15°

ensures reliable and very fast shut-off in reject area due to two inclined valve plates that close to the middle
no guiding or dead corner in the valve bore area
wear resistant surface treatment

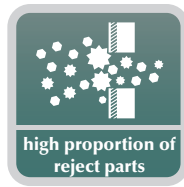
areas of application: heavy weight rejects discharge

nominal diameters: DN 150 – 700 (6 – 28")

material: stainless steel (1.4541 / 1.4571)

flanges: LOHSE-standard

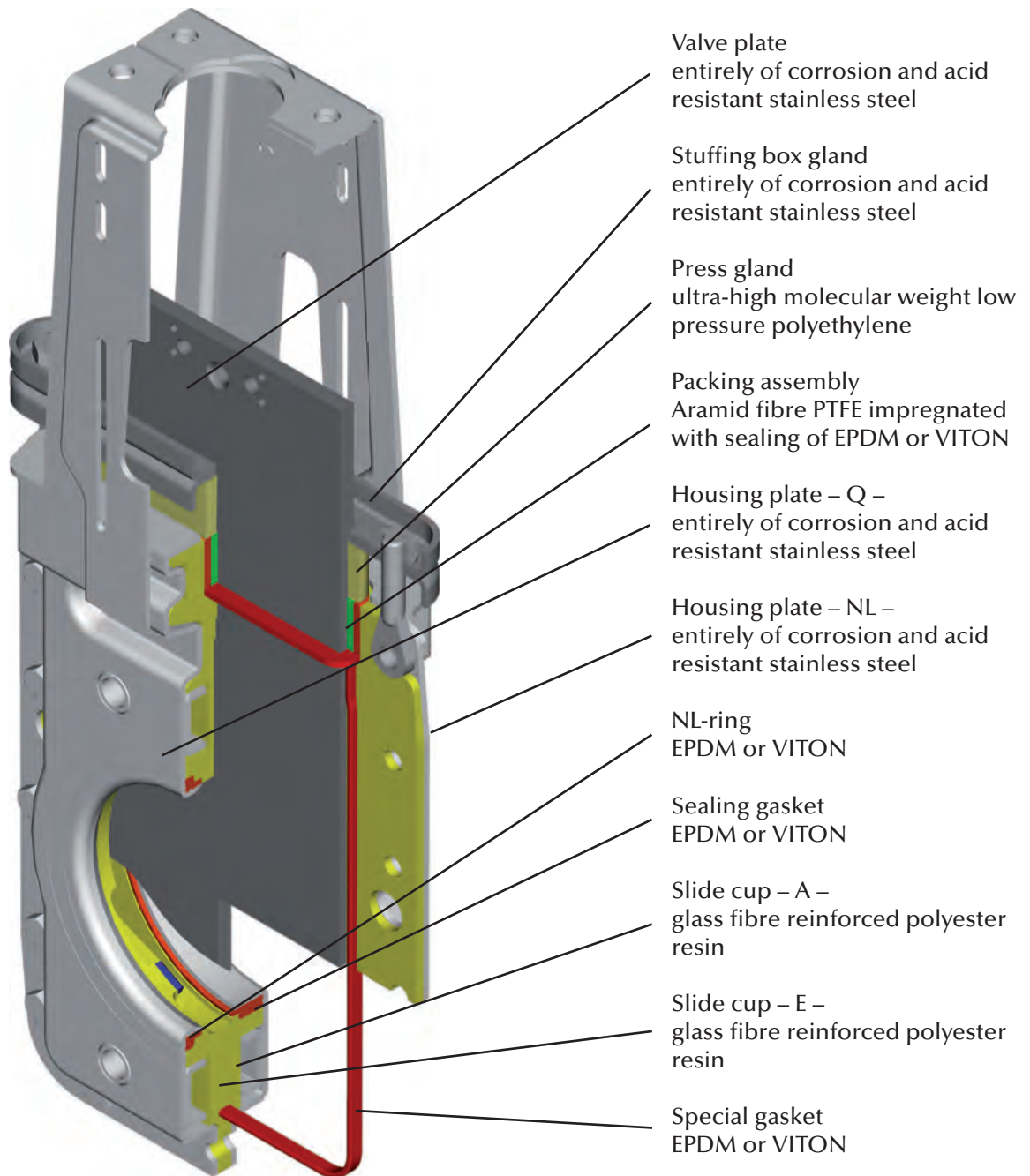
Additional data is available on request.



SERVICE is one of our top priorities!

We will be glad to install and remove valves at your location as well as recondition and repair our valves in our facilities.

A CNA valve as an example of the design of our service-friendly two-part valve body



Our maintenance friendly two piece housing enables wearing parts to be changed simply resulting in reduced life-time cycle costs.

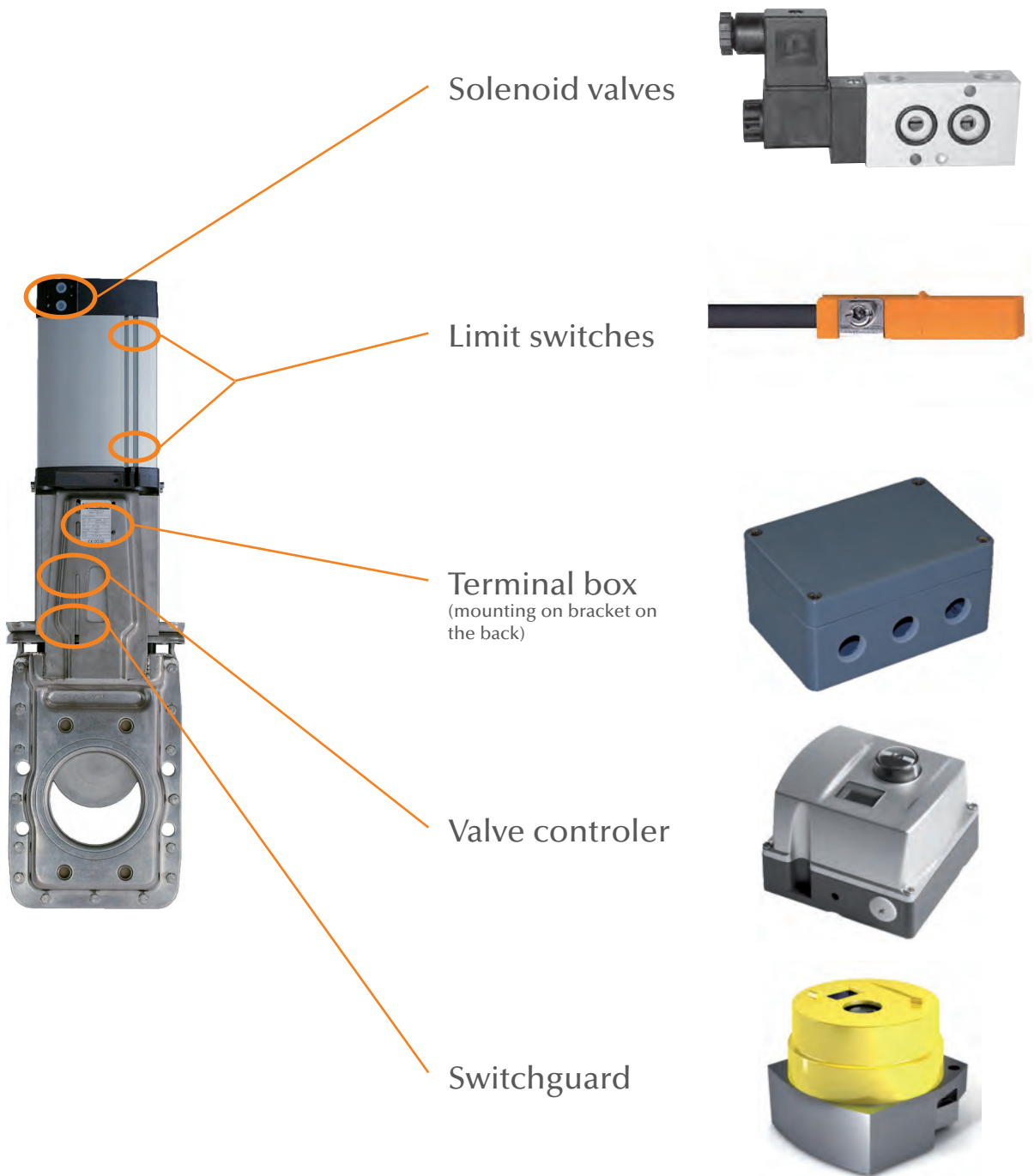
The tightest of tolerances between the slide plate and easy glide plastic slide cups in the case of Lohse valves prevent a build up and de-watering of fibres. The clearing of the valve guide area is enabled by a specially designed rigid valve plate.

The discharge of foreign materials places special requirements on the valves. High wear on account of abrasive media and a rapid blockage through rejected materials pose a great challenge. Here we are able to offer a universal approach to reject valves. By means of geometrical changes and through the use of high wear resistant materials our valves have been made to suit abrasive media and cleaning processes.

It goes without saying that our valves can be equipped with all accessories.

Mounting position on the valve:

Accessories:



The important factors for you are:

- That your system runs safely and without interruption.
- To be able to reduce down times.
- That your valves have a long service life.

You have already taken a step in the right direction by using LOHSE valves!

Examples of possible damage



Water hammer



Rotational wear



Trapped particles

We offer:

- Repairs and overhauls using **genuine parts**
- **Manufacturer's technical expertise**

The benefits to you:

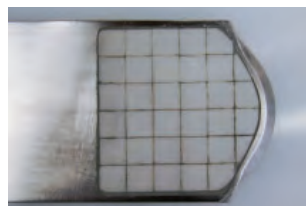
- Damage analysis and valve optimisation in close collaboration with our customers.
- Older slide valves are brought right up to date.
- Genuine parts are only available from us as the manufacturer.
- Your one-stop shop for valves, servicing and repairs.
- Functionality and **warranty as for a new valve.**
- Our qualified experts repair valves quickly and reliably.

Possible optimisation steps in response to wear caused by high rotation conditions

Wear of the slide plate



Wear minimised by ceramic panel



Wear of the flange ring



Wear minimised by conical ring with turbulence interrupter ribs



We now provide exactly the same warranty for your repaired valves as for a new valve!

Contact us!

Operating elements – the LOHSE modular system

All LOHSE COMPACT-valves comprise the following **main groups**:

- valve body
- operating elements type Hns, H, P, E, K, GK or X

The drive elements are matched to the size of valve and can be exchanged for another drive type even if the valve is fitted in line. No disruption of operation when exchanging drive element of valve in line.

This facility is called the **LOHSE modular system** which offers the following advantages:

- simplified and less expensive holding of spare parts.
- in case of damage, actuating elements can be replaced inexpensively.
- easy conversion to other valve actuator elements in case of a change in the material transport system
- if any valve drives have to be altered, replacement is easy and quick (notice safety rules – pipes must be pressureless).

Handwheel Drive type Hns

Handwheel with non-rising stem, left-hand trapezoidal thread.
A grip is attached in the handwheel of valve type CNAHns, CBSHns and CAWHns up to DN 250.

Recommendation: for valves DN 50 – 300



Handwheel Drive type H



Handwheel with rising stem, left-hand trapezoidal thread, with stop sleeve.
Turn clockwise: valve „CLOSED“.
Turn anticlockwise: valve „OPEN“.

Recommendation: for valves from DN 350

Pneumatic Cylinder type P, PF and PV

Type P:

pneumatic double-acting

Type PF:

pneumatic single-acting (spring-closing or spring-opening)

Type PV:

pneumatic double-acting with adjustable stroke in either direction of opening or closing



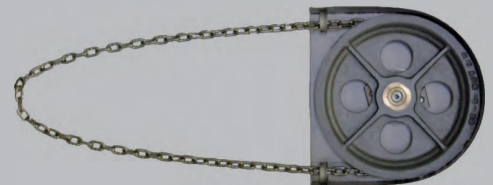
Electrical Actuator type E



In principle, the valves can be operated with all conventional electrical actuators. We recommend AUMA actuators.

Chain Wheel Drive type K

for manual actuation of high installed valves
sprocket wheel for DIN 766 A round steel chains
chain length can be customised
rising stem



Bevel Gear Actuator type GK



single-speed gear mechanisms
speed reduction ratio $i = 2:1$
operated manually

Recommendation: for valves from DN 350

Square Head Actuator type X

Square head actuator for below ground valves
Square head with non-rising stem for hydrant wrench DIN 3223 „C“



Dirt traps type RSL



with round inlet and rectangular outlet

Enables a consistent discharge of rejects for sticky, thin or thick consistency media and its unique geometrical design reduces turbulence and maximises protection against wear. The combining of the dirt trap body with the CDSV and AEQ valves guarantees a very effective discharge action of abrasive materials. Wear resistant surface treatment of the valves and the relevant internals of the dirt trap. Different sizes (volumes) allow a optimal relation to the size of plant.

areas of application: discharge of rejects, high consistency cleaner

nominal diameters: inlet DN 50 – 250 (6 – 10”), outlet DN 150 – 350 (6 – 14”)

material: stainless steel 1.4541

flanges: DIN EN 1092-1, ANSI B 16.5 class 150, LOHSE-standard

Additional combinations of valves and inlet protection of the dirt trap also available on request.

Shut off butterfly valves type BVKI / BLKI

soft seating butterfly valves

Type BVKI: wafer between flanges

Type BLKI: lugged

available with different seals and material specifications for the housings

areas of application: water, fluids with low fibre content

nominal diameters: DN 40 – 800 (2 – 32”)

material: stainless steel (1.4408 / 1.4408), cast iron (EN GJS 400-15 / 1.4408)

flanges: DIN EN 1092-1, ANSI B 16.5 class 150

Additional data is available on request.



Ball valves



compact flange ball valves or 1-, 2- or 3-piece ball valves

of stainless steel

socket welded, threaded, flanged or „compact“ connection

with hand lever or with DIN ISO top flange and part turn actuator double- or single-acting

Additional data is available on request.

Sampling valves type PHB / PHG



for welding

nominal diameters: DN 25 and 50 (1" and 2")
material: stainless steel (1.4408)

Type PHG:

with weld-on nipple for welding, curved or straight design available

areas of application: sample taking in general



Type PHB:

block flange design for welding and reseating, flow polished, available in curved or straight version

areas of application: taking samples where no interfering edges and hollow spaces are allowed, i.e. no spinning of the fibres

Additional data is available on request.

Check valves type 915 / ZRK

intermediate flange version

for preventing backflow
available in different seal and body materials

areas of application: water, liquids with low fibre content

flanges: DIN EN 1092-1

Type 915: double-wing design

nominal diameters: DN 50 – 600 (2 – 32")
material: stainless steel (1.4408 / 1.4571)

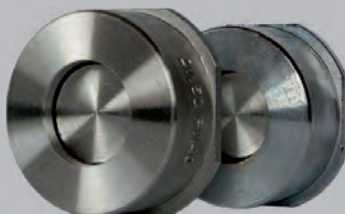
Type ZRK: single-wing

nominal diameters: DN 32 – 600 (1 ¼ – 24")
material: stainless steel (1.4408 / 1.4408)

Additional data is available on request.



Non-return valves type 930 / 932



intermediate flange version

for preventing backflow
available in different seal and body materials

suitable for industrial use in pipeline systems for transport of liquid and gaseous substances, as well as in systems with especially stringent material requirements

areas of application: water

nominal diameters: DN 15 – 300 (½ – 12")
material: stainless steel (1.4408 / 1.4436), brass, alu bronze, cast steel or duplex
flanges: DIN EN 1092-1

Additional data is available on request.



Mechanical Engineering

Production variety and depth of production

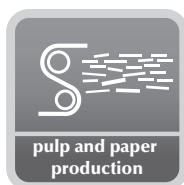
Maschinenbau Lohse GmbH stands out as a partner of the paper industry offering high production quality and customised solutions.

Innovation, a high level of technical expertise and the many years of experience of our committed workforce in equipment and fan construction are combined behind the walls of our clean and modern machine shops on a production area of around 10,000 square metres.

Our daily challenges

- New designs
- Production designs by customer order
- Fans
- Repair of third-party products
- Wage labour

Our customers are from the following industries:



Papier industry



Waste technology



Chemical industry



Air flow technology

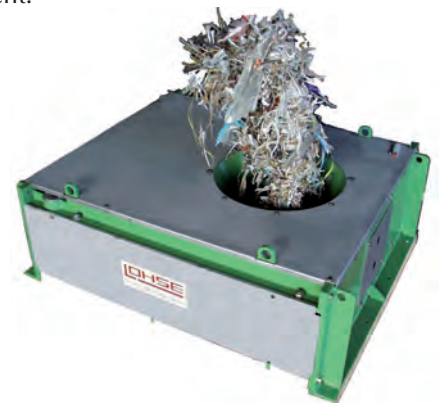
Raking Systems for Waste Paper Pulpers

The suspension that rotates in the pulping process in the waste paper pulper spins the contrary material that came in with the waste paper, such as, e.g. wires, films, plastic and insoluble paper, into a rope. If only smaller disconnected ropes are formed, so that raking using a rope winch is very complicated, we recommend using Lohse raking systems, which can be adapted to the respective operations (periodic or continuous). Available types: R (rake), H (hook) and K (combination of R and H).



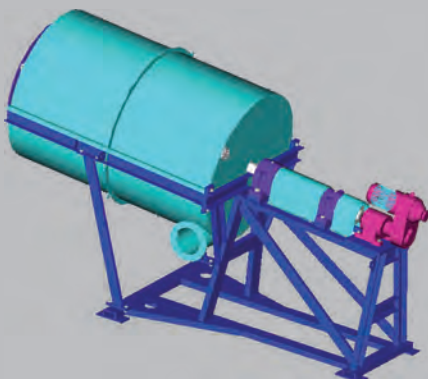
Rope Cutters

The rope cutter consists of two cutting beams with four built-in reverseable knives, which move to the cutting centre and back again via two hydraulic cylinders. The rope is cut through without interrupting production and without an increased risk of accident. For a rope diameter up to 500 mm.



Reject Drums

The reject drums remove medium and coarse dirt of all kinds from pumping suspension. They are available in different sizes and with different sizes of holes, depending on throughput and application.



Vibration Screens

Due to the selective use of perforated and slotted screen plates vibration screens are suitable for any screening tasks encountered in the paper industry, both in the low and high-density range.

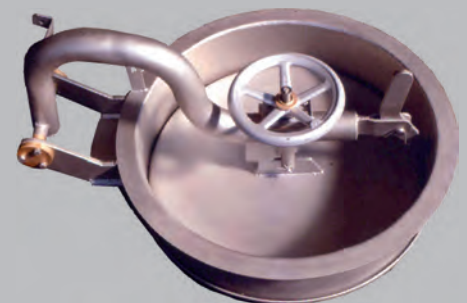


Safety Access Doors

The Lohse Safety Access Door (manhole cover) seals reliably and has been inspected by the mutual indemnity association (Berufsgenossenschaft).

Type B4:
for concrete vats

Type S4:
for steel vats



Roller Boards

For easier replacement of rolls on the paper machine

for roll length up to 6 m
for roll diameter 150 – 630 mm
designed for rollers up to a max. of 2 t

customisation on request



Wet Treatment Plants for biowaste

By the Lohse wet treatment technology with the help of „pulper-systems“ and sieving, a pumpable and well fermentable suspension is obtained with very low content of impurities.

First, in the waste pulper, the organic waste is dissolved by strong agitation while the heavy materials are separated.

In the downstream sieving device is the careful separation of another impurities from suspension. The suspension thus obtained can be used in a following digesting system.



Waste Pulpers

Waste pulper serve to separate a pumpable medium from organic waste and water. The waste is pulped and dissolved in the waste pulper. By means of a heavy materials dirt trap the rejected materials are separated from the accepted medium.



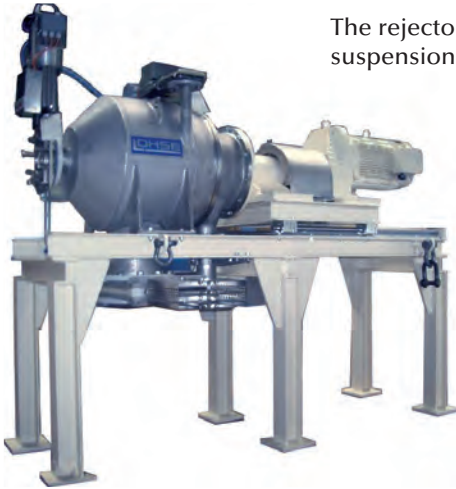
Multisorters

Multisorters are used to separate lightweight foreign materials from a suspension consisting of recycled paper or organic waste in water.

In the multisorter the suspension is filtered by means of a vertical screen; the foreign materials are discharged separately. In addition, the foreign materials can be rinsed very effectively.



Rejectors

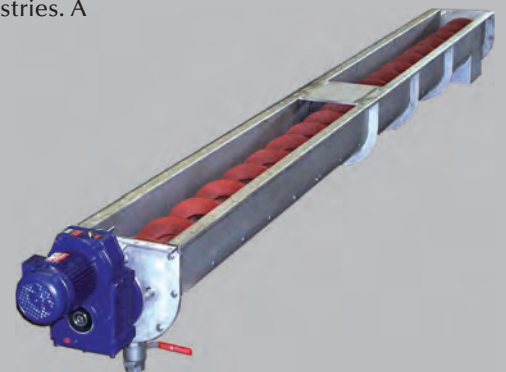


The rejector is used as a sieving machine and serves to purify and disintegrate the raw suspension from waste pulping units or storage containers.

Spiral Conveyors

Spiral conveyors are suitable for transporting various materials. The shaftless design allows dry and wet, coarse and fine-particle, homogenous and inhomogeneous materials to be conveyed.

Individual application of spiral conveyors for transport is feasible in some industries. A spiral conveyor must therefore be designed for its application.



Sand Separators



Sand separators are used for heavy contaminant separation from suspensions. Wire and pieces of metal sheet, in particular small, grainsize particles, such as glass and grit, will be separated.

Dirt traps type RSL



with round inlet and rectangular outlet

Enables a consistent discharge of rejects for sticky, thin or thick consistency media and its unique geometrical design reduces turbulence and maximises protection against wear. The combining of the dirt trap body with the CDSV and AEQ valves guarantees a very effective discharge action of abrasive materials. Wear resistant surface treatment of the valves and the relevant internals of the dirt trap. Different sizes (volumes) allow a optimal relation to the size of plant.

areas of application: discharge of rejects, high consistency cleaner

nominal diameters: inlet DN 50 – 250 (6 – 10”), outlet DN 150 – 350 (6 – 14”)

material: stainless steel 1.4541

flanges: DIN EN 1092-1, ANSI B 16.5 class 150, LOHSE-standard

Additional combinations of valves and inlet protection of the dirt trap also available on request.

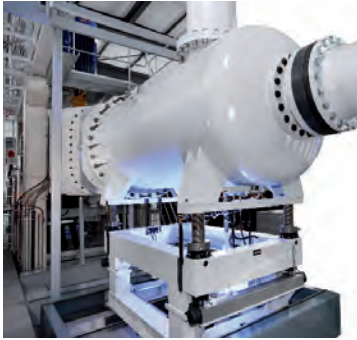
Dewatering Presses



Dewatering press for dewatering reject from the waste paper pulpers. Plastic or metal wires are cut at the same time when dewatering process takes place. The pressed waste will be set out by a valve.

Its simple structure allows uninterrupted operation. Low follow-on costs due to few and simple replaceable wear parts.

Pressure Tanks for the industrial sector



In the field of „custom-made products“, we regard ourselves as problem solvers. We produce custom-made pressure tanks and compressed-air tanks for your individual requirements.

- pressure tanks for air, nitrogen, water and argon up to PN 60 / 50°C
- category III and IV tanks
- heatable pressure tanks with double jacket
- pressure tanks with driven quick-acting closures
- pressure-loaded equipment, e.g. pipe sections
- custom-made special tanks
- accessories, e.g. fitting

Fans

Fans of stainless steel



High efficiency because of optimized profile of the wings
Low noise because of reduced amount of impeller wings
Max. stability because of thick materials and effective weld seams
Max. flexibility because of finish according to usage site / customer request

Installation and repairs for the waste industry



As the result of many years of cooperation with our customers we specialise in treatment technology for various types of organic waste for wet fermentation. This expertise allows us to offer the optimal and therefore most economical solution for diverse problems involving wear.

We perform repairs and maintenance for the following waste technology:

waste dissolver • multisorter • sieving drums • conveyor systems • sand separators • discharge systems • reject presses • subsurface waste bins

for biowaste treatment plants / biomass power plants: reconditioning of screw conveyors • repair of conveyor units • hard surfacing • motor replacement • general maintenance

Repairs and maintenance for the paper industry

Our own design department and modern mechanical treatment department with an extensive machine park guarantee fast, flexible and reliable implementation.

We perform the following repairs and maintenance for the paper industry:

any type of pulper • vibration screens • screen plates with and without support-frames • breaker rotors • helical breakers • any sorting machines and sizes including basalt re-lining • screening and soaking drums • high consistency cleaners • junk-traps on pulpers • components for belt thickeners • steel and stainless steel structures • fans • screw presses • hard surfacing in different qualities • wear-resistant coatings (stainless steel, ceramic, basalt, hartox, etc.)



Mounting and service for fans

Experienced staff is made available for assembly of our products on site and after commissioning as consultants and for physical support by providing constructive solutions for any problems that may arise.

For repairs required during maintenance or reinstatement, we are the right contact for completing work of that nature to the customer's full satisfaction.

We also perform maintenance on diffuser fans in tunnels.



From raw material...

Our Scope of Service



Plate cutting

Plate is cut using the latest technology at our works using the machinery:

- **Plasma cutting plant** up to 13000 x 3050 x 150 mm thickness
- **Water jet cutting plant**
- **Impact cutter** up to 3000 mm long and 4 mm thickness

We have a multitude of plate and bar material in stock, **steel** in qualities S235 and S355 and **stainless steel** in qualities 1.4307, 1.4571, 1.4539 and 1.4462.



Bending

Re-shaping of plate and bar material is straightforward due to:

- **Folding press** up to 6000 mm length and 320 t press force
- **Plate roller** up to 3000 mm length and 16 mm thickness
- **Ring roller** up to 120 x 40 mm high edge
- **Plate roller** up to 2000 mm length and 4 mm thickness



Welding, repair and re-conditioning

Do you require large sized components? We can manufacture these for you in our large workshops:

- **Workshop 1:** 80 x 20 m with two 16 T cranes
- **Workshop 2:** 60 x 15 m with two 10 T cranes
- **Welding turn table:** up to 15 T



Milling – Turning – Chamfering – Balancing

This work is carried out with the most up-to-date plant including:

- **CNC Turning machines** up to 1680 mm dia and 3500 mm long
- **Conventional turning machines** up to 2100 mm dia and 2000 mm long
- **CNC Milling machines** up to 6000 mm long
- **Balancing** up to 300 kg
- **5 axis CNC machining** up to 60 mm dia and 3000 mm long
- **Thread tapping** from M10 up to Tr 30x6



Surface treatment

It goes without saying that all surfaces receive the most appropriate finish:

- **Sand blasting** - cabin 8 x 5 x 4 m, component weight up to 12 T
- **Pickling Plant** - 15 x 6 x 4.5 m, component weight up to 10 T
- **Surface grinding plant** - up to 1800 x 600 x 600 mm
- **Coating**

...to the finished article



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