



Manure robots
Manure scrapers
Feed pushers
Royal Mat



INNOVATIVE SYSTEMS AND ROBOTS FOR EVERY BARN

Home of the clean stable

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Preface

JOZ is the founder of modern barn cleaning. Almost 70 years ago, Jan Oostwouder devised the very first slurry scraper in a place called 't Zand in West Friesland. Over the years, the product range has expanded to include slurry scrapers for every type of floor and even mobile robots. It has placed JOZ at the forefront on a global scale in the field of barn cleaning. Hence the slogan: JOZ, "Home of the clean stable".

"Farmer and animal are of paramount importance to JOZ."

JOZ changes the world of the farmer.

JOZ, SPECIALIST IN BARN CLEANING, IS ON THE BRINK OF AN IMPORTANT PERIOD OF INNOVATION AND IMPROVEMENT ALMOST 70 YEARS AFTER THE COMPANY FROM WESTWOUDE MADE HISTORY WITH THE INTRODUCTION OF THE VERY FIRST MANURE DISPOSAL SYSTEM. 'JOZ IS TRANSFORMING IN THE COMING PERIOD FROM A PRODUCTION-ORIENTED BUSINESS TO A KNOWLEDGE-ORIENTED BUSINESS. WE ARE WORKING ON ACHIEVING HIGHER INTELLIGENCE FROM OUR PRODUCTS, PROCESSES AND ORGANISATION', SAYS RICK ELLING, GENERAL MANGER. AND THAT WILL HAVE SUBSTANTIAL CONSEQUENCES FOR THE MODERN FARMER.



JOZ will present a new portfolio with smart, mobile robots to be used in barns. In addition, our service will include coaching and unburdening. Both the farmer and the dealer will benefit from the new JOZ Coach & Care programme. Within this programme, the focus will primarily be on prevention. 'A failure is an absolute disaster for a farmer', says Elling. 'All processes in the barn have to run smoothly, day and night. It is therefore of great value that our modern technology is able to detect a failure before it has arisen.'

Not only the farmer but also the dealer will benefit from the new JOZ Coach & Care programme. Elling: 'Suppose a dealer replaces parts on one of our mobile robots, the system will ensure that the dealer automatically receives these parts again for future use. He does not have to monitor that himself.'

Service will therefore become a matter of unburdening. Moreover, JOZ undertakes the important task of fully supporting the farmer and the dealer when using our products.

Elling: 'Our mobile robots will communicate with each other, so that they can work together as a team. It will produce much better results for the farmer. The dealers can also rely on support with their planning and implementation of maintenance.'

JOZ wants to be a learning organisation in which innovation is a continuous process. To achieve this, JOZ makes grateful use of the knowledge and experience of both farmers and dealers as well as our own employees. If the introduction and implementation of ideas for innovations and improvements becomes a continuous process, the products and services of JOZ will always operate in accordance with the latest technology.

'Farmer and animal are of paramount importance to us', says Elling. 'Our solutions and services for the barn help us to maintain the natural surroundings of the animal and improve the efficiency of the farmer. Customer satisfaction is embedded in our minds. To keep our customers satisfied, our products and services must provide important and transparent added value. Quality and sustainability are paramount. Only when we continue to lead the market can we make life as easy as possible for the farmers and our dealers.'

A clean barn provides a better living environment for you and your animals.

Moov
FEED PUSHER



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Moov

THE MOOV FEED PUSHING ROBOT IS A FULLY AUTOMATIC ROBOT FOR DAIRY CATTLE STABLES. WITH THE MOOV YOUR CATTLE STOCK WILL HAVE 24/7 ACCESS TO FRESH FEED.

The Moov scrapes the feed passage clean at times selected by you. The robot follows transponders; this allows the robot to know where it is in the stable at all times. The robot has two maintenance-free AGM batteries. Charging occurs automatically on the J-Load that can be placed in the stable.

Safety

This robust robot is equipped with motor overcurrent safety and JOZ's unique collision security system. The robot also has an adjustable sound signal and an emergency stop button.

Several routes

You can program an unlimited number of routes. This makes it possible to push feed for more than one feed group individually.

Programming is simple and only needs to take place once. The combination of transponders and the gyroscope ensure that the robot always drives perfectly through the feed passage.

Operation of the robot

The two (24V) batteries ensure a high driving capacity and the power-driven drum ensures an optimal feed pushing result. There are no wallstrips needed on the floor to make the Moov operational.

JOZ unburdens the customer

The robot communicates with the J-Link on the J-Load



charging station wirelessly. The J-link is connected to the Internet. By means of the JOZ Management System (JMS) a user can check and set his Moov on a computer, tablet or smartphone. With this, service engineers always have access to the Moov. The JOZ Management System provides the user to check and control his robots on a computer, tablet or smartphone. With this service the engineers will also have access to their customers robots. JMS provides you with the right information 24/7. All this is to unburden the client.

New controls

The J-Touch offers the client unique ease of use. The new manual control has both push buttons and a touchscreen.



J-Touch

20.100.000 J-Touch



J-Load

08.110.010 J-Load

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Moov (feed pusher)

Technical data

Moov

| | |
|--------------------|-------------------------------------|
| Dimensions Moov: | W: 1273 x H:1000 mm |
| Dimensions drum: | W: 1149 x H: 705 mm |
| Weight: | 645 kg |
| Normal driving: | 6 m/min |
| Slow driving: | 3 m/min |
| Electric motor: | 2 x 130 Watt without carbon brushes |
| Batteries: | 2x 12 volts (24 volt), 110 Ah, AGM |
| Driving capacity: | max. 19 hours a day |
| IP class: | IP65 splash waterproof |
| Detection: | Glass transponders and gyroscope |
| Drum: | Stainless Steel |
| Rubber of the drum | Wear-resistant and flexible |

J-Touch

| | |
|---------------|----------------------------|
| Dimensions: | W: 250 x H: 170 x D: 40 mm |
| Weight: | 340 gr |
| Material: | Plastic (ABS) |
| IP class: | IP65 splash waterproof |
| Cable length: | 2 m |

J-Load

| | |
|-------------------|---------------------------------------|
| Size: | W: 400 x H:1039 x D: 217 mm |
| Weight: | 17,5 kg |
| Power supply: | 2x 230 volts |
| Charging voltage: | 24 volts DC |
| Internet: | Yes (fixed connection) |
| Material: | Plastic (LDPE) |
| IP class: | IP65 splash waterproof |
| Communication: | Wireless Zigbee connection with robot |



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Advantages of the Moov:

- Increases feed intake
- Labour-saving
- Contributes to higher milk production
- Feed available 24/7 for all cows
- Better performance by low ranked cows
- Calmer cattle stock
- Clean feed passage
- Simple & user-friendly
- Better efficiency of milking robots
- less residual feed
- Easy monitoring with JMS

Article No. Description

| | |
|------------|--|
| 08.100.001 | Moov counterclockwise rotation and left side charging |
| 08.100.002 | Moov counterclockwise rotation and right side charging |
| 08.100.003 | Moov clockwise rotation and right side charging |
| 08.100.004 | Moov clockwise rotation and left side charging |

JOZ develops both mobile robots and mechanical products.

Manure robots

JOZ-TECH JT200 EVO



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JOZ-Tech JT200 Evo

THE JOZ-TECH MANURE ROBOT IS A FULLY-AUTOMATIC ROBOT FOR CLEANING DAIRY CATTLE STABLES. DUE TO ITS EXTREMELY HIGH CAPACITY THE FLOORS ARE ALWAYS CLEAN AND THE COWS AND RESTING BOXES WILL STAY VERY CLEAN.

At times selected by you the animal-friendly Tech will scrape the dung channels very clean. The robot follows transponders, as a result of which the robot always knows where it is in the stable. The renewed position measuring module has as much as 35% more transponder detection reach. The robot has two maintenance-free AGM batteries. Charging and taking on water takes place automatically on a charging station that can be placed in the stable, out of reach of the cows.

Suitable for practically all stables

The JOZ-Tech is suitable for practically all resting box stables. Large surfaces like waiting areas and very wide dung channels are no problem. The JOZ-Tech has a maximum driving capacity of approx. 18 hours. The JOZ-Tech can rotate on its own axis and due to this manoevrability it is possible to even clean the narrowest of dung channels and transverse corridors well.

Several cleaning routes

You can programme an infinite number of cleaning routes. This makes it possible to clean each part of the stable at specific times. You can clean the waiting areas after milking for example, and after feeding the JOZ-Tech does not clean near the feeding rack.

Programming is simple and only has to take place once per route. Transponders in the floor ensure that the robot always drives perfectly through the stable. Of course the JOZ-Tech can navigate without following a wall guidance or beam (free driving).

Spraying device

Ideal for optimal cleaning of dry areas in the stable. This spraying device with water tanks has a 100-litre capacity. The spraying device will automatically be filled on the special filling station and it will spray with front and/or rear sprayers, where necessary.

Lifting device

Uniquely programmed lifting system of the scraper, for example for crossing the passage or for driving up or down a steep incline.

JMS unburdens the customer

The robot communicates with the J-Link on the J-Load charging station wirelessly. The J-link is connected to the Internet. By means of the JOZ Management System (JMS) a user can check and set his JOZ-Tech on a computer, tablet or smartphone. With this, service engineers always have access to the JOZ-Tech. The JMS gives you access to the machines and the data 24/7. All this is to unburden the client.



Animal-friendly

Due to the silent drive the JOZ-Tech is an extremely animal-friendly system that the cows are quickly used to. Moreover this robust robot is equipped with JOZ's unique cow safety system.

New controls

The J-Touch offers the client unique ease of use. The new manual control has both push buttons and a touchscreen.



J-Touch

20.100.000 J-Touch



J-Load

03.907.200 J-Load

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JOZ Tech JT200 EVO

Technical data

JOZ-Tech JT200 Evo

| | |
|----------|------------------------|
| Width : | 730 mm (excl. scraper) |
| Length: | 1430 mm |
| Height: | 640 mm |
| Weight : | 520 kg |

JOZ-Tech JT200 Evo spray

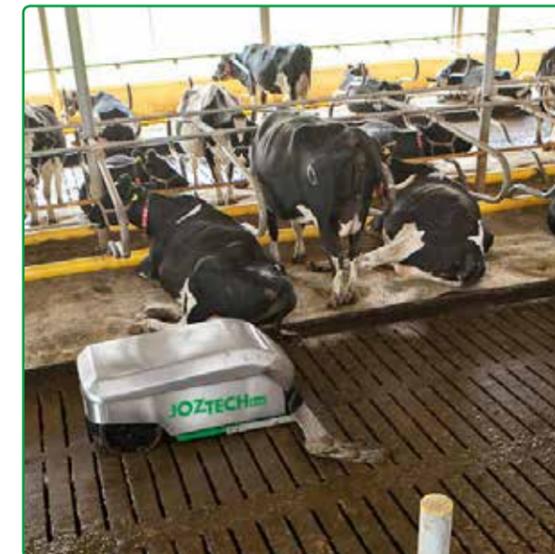
| | |
|--------------------|------------------------|
| Width: | 966 mm (excl. scraper) |
| Length: | 1469 mm |
| Height: | 660 mm |
| Capacity: | 2 x 50 litres |
| Weight: | 550 kg (excl. Water) |
| Spraying capacity: | 2 nozzles: |
| | 286 linear metres |
| | 4 nozzles: |
| | 143 linear metres |

General

| | |
|----------------------|--|
| Scraper width : | Variable (100 to 210 cm) |
| Scraper width spray: | variable (125 to 210 cm) |
| Power: | Electric motor 165 W steering motor |
| Batteries : | 110 Ah |
| Capacity: | 2 x 12V |
| Scraping capacity : | Standard JOZ-Tech Max. 10.800 m ² /day |

The advantages of the JOZ-Tech:

- Clean and dry claws
- Cleaner freestalls and better hygiene
- Cleaner udders
- Labour-saving
- Cleans the entire floor surface, also along the front wall, waiting area and crossings
- Highest capacity
- Animal-friendly finish and featuring cow protection
- The perfect solution for your specific wishes:
Ask your dealer about the JOZ sales configurator



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JOZ-Tech + options

JOZ-Tech JT200 Evo standard



Article number: 03.9001000 up to and including 03.9002100

Scraper widths are possible per 5 cm between 100-210 cm. Stable-specific and custom-made.

- Including J-touch, J-load, 60 transponders, convenient dolly and JMS account.
- Adjustable scraper pressure.
- Conversion to watersprayer is possible.
- A lifting device is possible as an additional option.

Tip: Use the JOZ sales configurator to determine the ideal scraper width for your situation.

Spraying device



Article number: 03.9331300 up to and including 03.9332100

JOZ-Tech JT200 Evo including spraying device. Scraper width possible per 5 cm between 130-210 cm.

Spray technique:

- 100 liter water tanks.
- Spray nozzles at the front and back.
- Which zones are to be sprayed, and at what time, may be entered as desired.
- A lifting device is possible as an additional option.

Tip: Use the JOZ sales configurator to determine whether a spraying device is necessary for your situation.



Lifting device



Article number: 03.900.001

- Lifting height of max. 7 cm.
- Suitable for a clean crossing of the feeding passage or for driving up or down an incline of max. 10%.

Tip: Use the JOZ sales configurator to determine whether a lifting device is necessary for your situation.

Drive units

ROPE | CABLE | CHAIN



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Drive unit rope scraper systems

JOZ ROPE SCRAPERS CAN BE APPLIED ON SLATTED FLOORS, CONCRETE FLOORS, RUBBER FLOORS OR SPECIALLY DEVELOPED EMISSION REDUCTION FLOORS.



The rope scraper installations always contain 2 drive units. When one of the drive units is winding the rope, the other one will release the rope at the same time. Therefore it is not necessary to tension the system. Rope scraper systems are animal friendly and require little maintenance and service.

Drive units are available with mounting sets for concrete floors or slats. In addition, the drive units are available with floor mounted drive unit and drive units on a console.

The JOZ rope scrapers are controlled, using a 380V electrical controlbox with timer and optional can contain frost sensing. Corner rollers and scrapers are identical to the rollers being used on chain- and cablesystems.

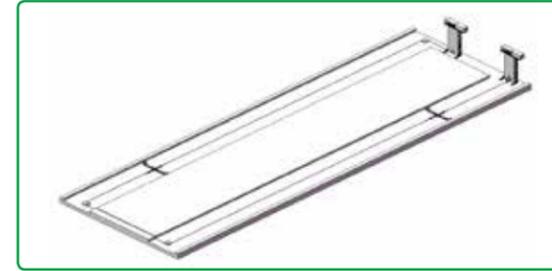


The advantages of a JOZ rope scraper:

- Rope is animal friendly.
- Little maintenance; installation does not need to be tensioned.
- To be applied for 1 or more manure alleys.
- Drive unit is fully galvanised
- Casing guarantees safe operation.
- Easy programmable switchboard.
- Frost protection guarantees trouble free operation in winter conditions (optional).
- Easy to set cow safety features.
- 0,75 kW motors with powerful gearbox, directly connected to the motor.
- Drum can be disconnected from the motor to ensure easy mounting of the rope.
- Strong bearings for long lifetime.
- All types of JOZ scrapers can be applied on the JOZ rope system.
- Rope scrapers do not need a switch at the end of manure alleys. It reduces the chances on malfunctions.
- Available in 16mm rope and very strong 10mm Dyneema® rope. With use of 16mm rope the maximum length for 1 alley is 70 meters, with use of the 10mm Dyneema® rope it can be a lot more.

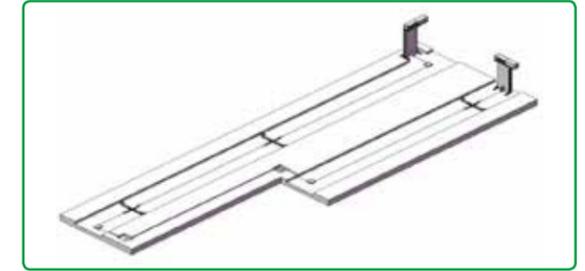
Drive units

Possible situations



Drive unit in manure alley or cross alley

- 2x Drive unit
- 5x Corner roller
- 1x Control panel
- 2x Scrapers
- Rope



Unequal alley

- 2x Drive unit
- 7x Corner roller
- 1x Control panel
- 3x Scrapers
- Rope

Notes:

- One system always includes two driving units
- 1 Control panel needed per system (2 driving units)
- High drive unit always needs strengthening

Article numbers



Article No. Description

| Article No. | Description |
|-------------|--|
| 07.T73.000 | High drive unit rope complete for concrete floor, excluding corner rollers |
| 07.T73.100 | High drive unit rope complete for slatted floor, excluding corner rollers |
| 07.T73.200 | Low drive unit rope complete for concrete floor, excluding corner rollers |
| 07.T73.300 | Low drive unit rope complete for slatted floor, excluding corner rollers |
| 0J.000.050 | Dyneema rope 10mm |
| 0J.100.001 | Polytex rope 16mm |
| 03.019.100 | Compression spring 'stand alone' |
| 07.010.100 | Control panel rope system |

Drive unit cable scraper systems

JOZ SUPPLIES MANURE SCRAPER SYSTEMS PROPELLED BY COATED STEEL CABLE. THE JOZ CABLE SCRAPER SYSTEMS CAN BE USED ON SLATTED FLOOR, CLOSED CONCRETE, RUBBER OR SPECIAL LOW-EMISSION FLOORS. A CABLE SCRAPER SYSTEM IS EQUIPPED WITH 1 DRIVE UNIT PER SYSTEM WHICH IS USED TO PULL THE CABLE BACK AND FORTH. THE CABLE IS DRIVEN ON THE DRIVE UNIT BY MEANS OF A DRIVE ROLLER OR PENTA SYSTEM.

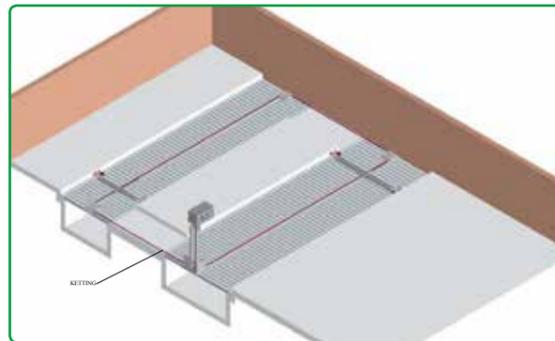
Options

The drive units are available with mounting materials for a closed floor or a slatted floor. The drive can be conducted with 1 drive roller or with a Penta roller system (2 rolls).

The JOZ scrapers are operated by a 230 Volt electronic switch box with a timer, and can optionally be equipped with a frost protection. The corner roller boxes are the same as those used in rope or chain installations.

The advantages of a cable scraper installation:

- 1 drive unit per installation
- The cable must be able to make a rotary motion
- The cable is tensioned at the drive unit
- Suitable for concrete floors, slatted floors as well as low-emission floors
- Up to 4 manure alleys (depending on the length)
- Controlled by a JOZ electronic control panel
- Perfect cow protection
- Max. cable length 160 metres (max. alley length 70 metres)
- Gear boxes are installed on a vertical console, which can be mounted between the cows
- Unequal alley lengths are no problem whatsoever
- The system with the lowest investment!



| Drive motor | Max. cable length |
|---------------|-------------------|
| 0,55 kW | 100 m |
| 0,75 kW | 120 m |
| 0,55 kW Penta | 120 m |
| 0,75 kW Penta | 160 m |

Article numbers:



Article No. Description

| Assembly slatted floor | |
|------------------------|--|
| 03.V73.110 | JOZ drive unit cable / 0.55 kW/ for slatted floor, including tensioner |
| 03.P73.110 | JOZ drive unit cable / 0.55 kW/ for slatted floor, including tensioner (Penta) |
| 03.V73Z110 | JOZ drive unit cable / 0.75 kW/ for slatted floor, including tensioner |
| 03.P73Z110 | JOZ drive unit cable / 0.75 kW/ for slatted floor, including tensioner (Penta) |

Assembly concrete floor

| | |
|------------|--|
| 03.V73.310 | JOZ drive unit cable / 0.55 kW / for concrete floor, including tensioner |
| 03.P73.310 | JOZ drive unit cable / 0.55 kW / for concrete floor, including tensioner (Penta) |
| 03.V73Z310 | JOZ drive unit cable / 0.75 kW / for concrete floor, including tensioner |
| 03.P73Z310 | JOZ drive unit cable / 0.75 kW / for concrete floor, including tensioner (Penta) |

Cable

| | |
|------------|---|
| 0J.000.031 | Steel cable 6 mm core + 2 mm plastic, per metre |
| 0J.000.003 | Steel cable 8 mm core + 2 mm plastic, per metre |

Options

| | |
|------------|--|
| 03.075.000 | Fully automatic hydraulic tensioning device. Applicable to: - new drive units - conversion of existing drive units Note: Not suitable for 1.5 kW drive units |
| 03.075.005 | Filling pump automatic tensioner |

Penta drive



| | |
|------------|---|
| 03.073.050 | Penta drive conversion kit for existing drive units (without motor) |
|------------|---|

Note: For Penta drive units only 6+2 mm cable is possible. (0J.000.031).

Drive unit chain scraper systems

JOZ SUPPLIES MANURE SCRAPER SYSTEMS PROPELLED BY EXTRA HARDENED STEEL CHAIN. THE JOZ CHAIN SCRAPER INSTALLATIONS CAN BE APPLIED TO SLATTED FLOOR, CLOSED CONCRETE, RUBBER OR SPECIAL LOW-EMISSION FLOORS. A CHAIN SCRAPER INSTALLATION IS EQUIPPED WITH 1 DRIVE UNIT PER SYSTEM WITH WHICH THE CHAIN IS PULLED BACK AND FORTH. THE CHAIN IS DRIVEN ON THE DRIVE UNITS BY MEANS OF A GYPSY WHEEL.

Options:

The drive units are available with mounting materials for a closed floor or a slatted floor. The strength of the drive is determined by the length of the stable, with the possibility of a 0.55 kW, 0.75 kW or a 1.5 kW motor.

The JOZ scrapers are operated by a 230 volt electronic switch box with a timer and can optionally be equipped with a frost protection. The corner roller boxes are the same as those used for cable or rope installations.

The advantages of a Chain Installation:

- Always 1 drive unit per installation.
- Up to 4 manure alleys (depending on the alley length)
- Suitable for concrete floors, slatted floor floors as well as low-emission floors
- Controlled by a JOZ electronic control panel
- Perfect cow protection, both with an empty and with a full scraper
- Max. chain length 350 metres (max. alley length 160 metres)*
- Gear boxes are installed on a vertical console, to be mounted between the cows or outside
- Unequal alley lengths are no problem whatsoever
- It is possible to combine a chain over the drive and a cable on the rear (not for unequal alleys)



- 4 sizes of drive sprockets for maximum life span of the chain
- The rear of the chain has twice the life span compared to the front

| Drive motor | Max. cable length |
|-------------|-------------------|
| 0,55 kW | 120 m |
| 0,75 kW | 240 m |
| 1,5 kW | 350 m |

*For longer chain lengths, please contact JOZ.

Article numbers



Article No. Description

| Assembly slatted floor floor | |
|------------------------------|---|
| 03.V73Z210 | JOZ drive unit with chain / 0.75 kW / for slatted floor, including tensioner |
| 03.V73.210 | JOZ drive unit with chain / 0.55 kW / for slatted floor, including tensioner |
| Assembly concrete floor | |
| 03.V73.010 | JOZ drive unit with chain / 0.55 kW / for concrete floor, including tensioner |
| 03.V73Z010 | JOZ drive unit with chain / 0.75 kW / for concrete floor, including tensioner |
| 03.V735010 | JOZ drive unit with chain / 1.5 kW / for concrete floor, including tensioner |

Chain

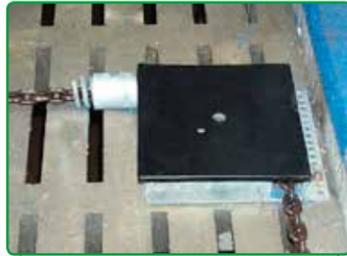
| | |
|------------|------------------------|
| 0H.110.000 | Chain 10 mm, per metre |
| 0H.130.000 | Chain 13 mm, per metre |
| 0H.160.000 | Chain 16 mm, per metre |

* At →50 metres in 1 piece, extra charge EUR 40.00 per welded connection or connecting link

Options

| | |
|------------|--|
| 03.075.000 | Fully automatic hydraulic tensioning device. Applicable to: - New drive units - Conversion of existing drive units Note: Not suitable for 1.5 kW drive units |
| 03.075.005 | Filling pump automatic tensioner |

Attachments scraper systems



03.006.000 Corner roller on concrete floor
03.006.100 Corner roller on slatted floor, excl. rubber cover



0J.000.025 Liftsocket complete for 6-8mm cable



0J.000.125 Liftsocket special for 6-8mm cable / chain



03.001.000 Tensioner



03.075.005 Hydraulic tensioner



0H.130.030 3 chain links

Article No. Description

| | |
|------------|---|
| 0J.000.025 | Liftsocket 6-8mm cable |
| 0J.110.025 | Liftsocket 8-10mm cable |
| 0J.000.125 | Liftsocket special for 6-8mm cable / chain |
| 0J.110.125 | Liftsocket special 8/10mm cable / chain |
| 03.001.000 | Tensioner for chain length of 200 meter or less |
| 0H.130.030 | 3 Chain links 13mm |

Slatted floor

| | |
|------------|---|
| 03.006.100 | Set pressure rollers for slatted floor |
| 03.006.100 | Corner roller complete for slatted floor |
| 03.006.400 | Corner roller complete against the edge of cubicle, slatted floor |
| 03.047.100 | Corner roller for single alley, slatted floor |

Concrete floor

| | |
|-------------|--|
| 03.006.1000 | Set pressure rollers for concrete floor |
| 03.006.000 | Corner roller complete for concrete floor |
| 03.006.200 | Corner roller complete against the edge of cubicle, concrete floor |
| 03.047.000 | Corner roller for single alley, concrete floor |

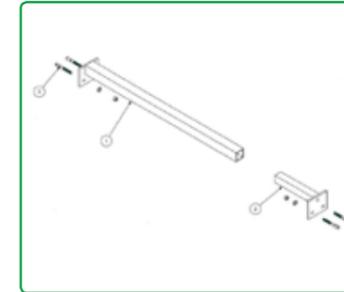
Article numbers



03.990.021 Short guide irons for pit complete



03.990.020 Set guide rails for short pit (middle)



03.990.001 Set guide rails for long pit



03.075.000 Console

Article No. Description

| | |
|------------|--|
| 03.990.001 | Set guide rails for long pit |
| 03.990.020 | Set guide rails for short pit (middle) |
| 03.990.021 | Short guide irons for pit complete |
| 03.075.000 | Console incl. hydraulic tensioner |

Both animal and farmer are central to us.



Electronic control panel



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Electronic control panel with microprocessor

THE UNIQUE JOZ SWITCH BOX DISTINGUISHES ITSELF BY COMMUNICATING WITH A PRECISION SENSOR ON THE DRIVE MOTOR. AS A RESULT, THE SWITCH BOX ALWAYS KNOWS THE POSITION OF THE SCRAPER IN THE MANURE ALLEY AND MANY SETTINGS ARE POSSIBLE THAT ALLOW THE JOZ MANURE SCRAPER TO BE ADAPTED PERFECTLY TO YOUR WISHES. ADDITIONALLY THIS SYSTEM PROVIDES UNIQUE COW PROTECTION.

THE JOZ COW PROTECTION EXISTS ESPECIALLY FOR YOUR COWS. THE JOZ COW PROTECTION IS ALWAYS TAILORED OPTIMALLY. WHETHER THE SCRAPER IS EMPTY OR FILLED WITH MANURE. THE SENSITIVITY OF THE COW PROTECTION CAN BE ADJUSTED BY MEANS OF THE SWITCH BOX.

Moreover, the electronic switch box is equipped as standard with an automatic restart function and a parking position determination of the scrapers; a frost protection option is also available, so it will never freeze stuck!

This offers among other things the following advantages:

- More security in the barn for both humans and animals
- One switch box is suitable for operating 2 installations
- Power supply is 230 V.
- Adjustable as desired:
 - Parking position manure scraper
 - Special position of the manure scraper at adjustable times (for example during milking)
 - Phased discharge movements of the manure scraper
- Start position of the herding fence is adjustable
- User-friendly menu
- Alarm function



Article numbers



| Article No. | Description |
|-------------|--|
| 03.320.210 | Manure scraper control panel for 1 complete drive (0.55 kW + 0.75 kW) |
| 03.320.211 | Manure scraper control panel for 2 complete drives (0.55 kW + 0.75 kW) |
| 03.320.217 | Manure scraper control panel for 1 complete drive 1.5 kW (including power control unit) |
| 03.320.218 | Manure scraper control panel for 2 complete drives 1.5 kW (including power control unit) |

Note: Power control unit (0.55 / 0.75 / 1.5 kW) three phases 380-400 V + Earth. (no zero required)

| Options | |
|------------|--|
| 02.0521001 | Manure scraper combination control panel for 1x turning chain (1.5 - 2.2 kW) with electrical connection to control panel combi scrapers |
| 02.0521010 | Manure scraper combination control box for 1x turning chain (1.5 - 2.2 kW) + 1x swivelling conveyor, and electrical connection to control panel combi scrapers |
| 03.073.030 | Mounting bracket frequency regulator 0.55 kW / 0.75 kW |
| 03.320.212 | Intermediate box for coupling 2 switch boxes. This is applied when multiple switch boxes work together |
| 03.320.220 | Frost protection including temperature sensor |
| 03.320.260 | Power control unit: applied in geographic regions where the power supply can be bad. |

Rope scraper installation

Rope scraper installations are controlled by a specific switch box. This switch box supplied with 230 V is simple to operate just like the electronic switch box and equipped with a convenient timer. The cow protection system provides a safe environment for your cattle. Contrary to a traditional scraper installation, the rope scraper installation only needs 1 switch box for 2 drive units. It too can optionally be equipped with frost protection.

| | |
|------------|--------------------------------------|
| 07.010.100 | Switch box rope scraper installation |
|------------|--------------------------------------|

JOZ develops and supplies technologically high quality products for every barn.



Manure scrapers



Home of the clean stable

www.joz.nl/en

Manure scrapers

JOZ HAS OPTIMALLY WORKING MANURE SCRAPERS FOR EVERY TYPE OF FLOOR AND FOR ALL ANIMALS, WHETHER IT IS FOR BARN FOR DAIRY COWS, BEEF CATTLE, PIGS, DUCKS, CHICKENS OR FOR HORSES.

Cow comfort affects your results

Cow comfort is an important economic parameter in your business and can partly determine whether your business results are positive or negative. The walking conditions of the floor affect animal comfort. On a slippery floor no animal will move quickly and smoothly. A JOZ manure scraper will improve this situation significantly. As a result: comfortable and hygienic surroundings for you and your animals.

Different types of floors

Of course the type of floor also affects the walking conditions and so animal comfort. Under the influence of stricter environmental requirements and amended legislation, the choice for a certain type of floor is not always a free choice. In every case JOZ has a suitable manure removal system for every type of floor.

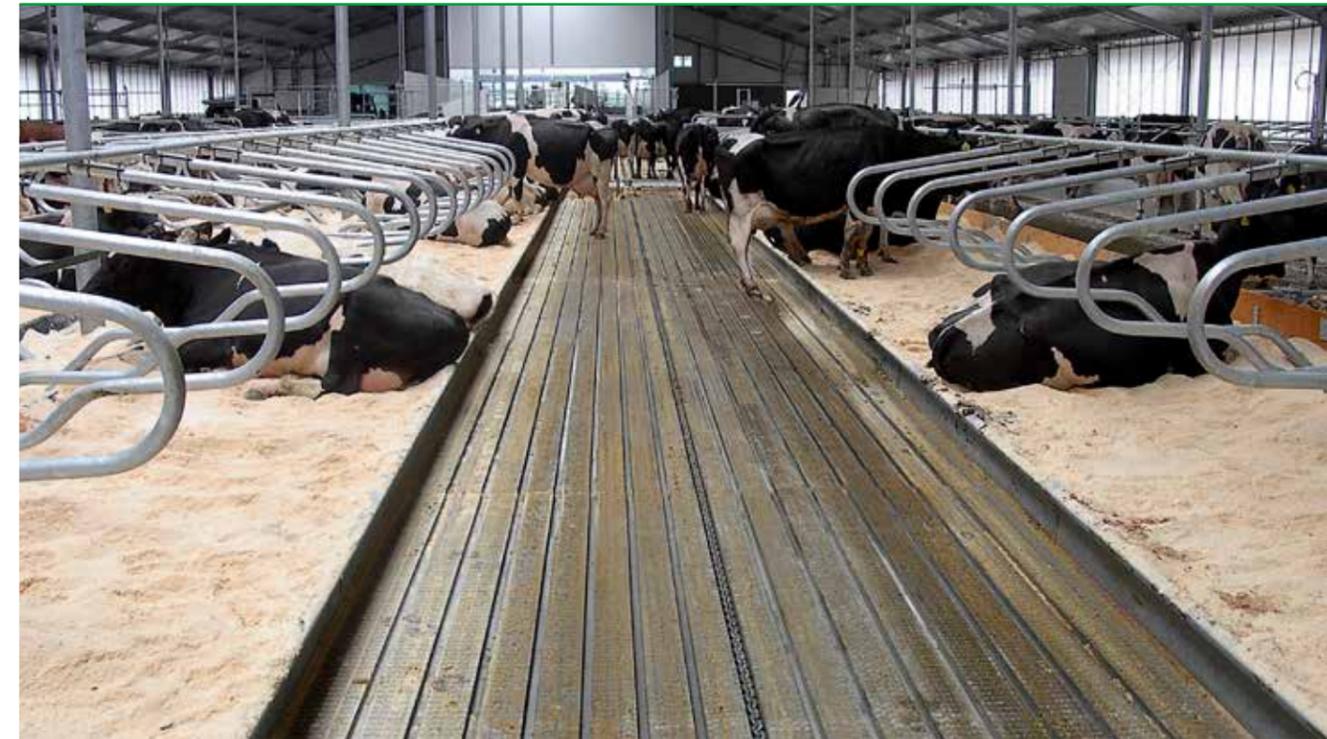
Parts and maintenance

Those who have a JOZ manure removal system in use, don't need to be afraid of malfunctions. JOZ only uses the very best materials, which guarantee long-lasting, trouble-free operation.

Should a malfunction nevertheless occur, the JOZ service department will ensure that it is resolved as quickly as possible. Regular maintenance of the systems extends the life span considerably. Therefore, at JOZ you can conclude a service contract free of charge, which guarantees problem-free operation.

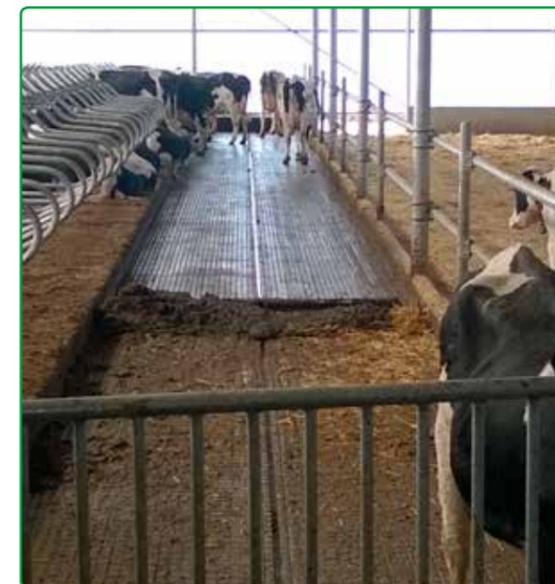


Combi scrapers



Combi scraper for nearly all type of floors

The JOZ Combi scraper is especially for barns with (semi-) closed floors. These may be flat floors with a discharge at fixed distances, but also sloped floors, where the manure floats to the middle or to the outside ends, scrapers which are suitable for slatted floor floors, and the combi scraper can be produced foldable so it is overdriveable with a vehicle.



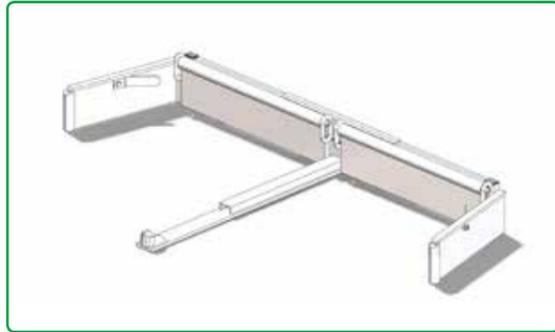
The advantages of a Combi scraper:

- Cleaner work so the claws remain dry and clean
- Compact parking position and it cleans the whole alley width immediately from the beginning
- The combi scraper is produced with heavy-duty high quality materials that guarantee reliability and a long life span.
- Tail strip and finish ensure perfect animal-friendliness

Counselling the construction process

On request, JOZ will supply drawings for the structural adjustments for all scraper installations. The many years of experience of JOZ, and attention to hygiene and animal well-being ensure optimal results during construction and many years after that.

Combi scraper, single acting



- Minimal space required for parking the scraper.
- Scraper opens very fast at the beginning of the alley.
- Flat floor or UNP profile.
- Equal alley length or unequal alley length.
- Tail protector.
- Animal-friendly strip on the side wing.
- Optionally with rubber on main and side wings.

Application:

- Closed concrete floor / element floors / slatted floor floors (with optional guiding feet for main wing).
- Rubber floor → no wearing crosses!
- Normal quantities of box litter, little or no straw.
- Chain, cable (rear only) or rope (this applies for all combi scrapers).



| Article No. | Description |
|-------------|--|
| 03.125.??? | Combi scraper flat floor |
| 03.126.??? | Combi scraper with pipe for unequal alley flat floor |
| 03.127.??? | Combi scraper with U profile (UNP 40) ** |
| 03.128.??? | Combi scraper with U profile (UNP 40) ** unequal alley |
| 03.125C??? | Combi scraper standard version with rubber |
| 03.126P??? | Combi scraper with pipe for unequal alley |
| 03.127U??? | Combi scraper with U profile (UNP 40) with rubber ** |
| 03.128U??? | Combi scraper with U profile (UNP 40) unequal alley with rubber ** |
| 03.295.??? | Combi scraper flat floor for rubber floor |
| 03.296.??? | Combi scraper flat floor with pipe for rubber floor unequal alley |
| 03.297.??? | Combi scraper U profile 40 x 20mm for rubber floor *** |
| 03.298.??? | Combi scraper U profile 40 x 20mm for rubber floor unequal alley *** |

Remarks:

- The last 3 positions of the article number represent the minimum alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.
- **For concrete groove (width x depth) 50 x 40mm.
- ***For (plastic) slide groove (width x depth) 50mm x 20mm.
- Minimal height of a scraper passage through a wall is 30cm.

Combi scraper, single acting & overdriveable



- Minimal space required for parking the scraper.
- Scraper opens immediately at the beginning of the alley.
- Flat floor or UNP profile 50 x 40mm.
- Equal alley length or unequal alley length.
- Tail protector.
- Animal-friendly strip on the side wing.
- Optionally with rubber on main and side wings.
- By means of a supplied hook the scraper can be folded without getting dirty hands.

Application:

- Manually foldable to pass over it with a vehicle.
- Closed concrete floor / element floors / slatted floor floors (with optional guiding feet for main wing).
- Rubber floor → no wearing crosses!
- Normal quantities of box litter, little or no straw.
- Chain, cable or rope.

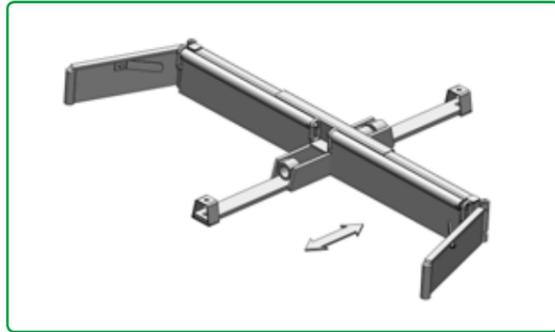


| Article No. | Description |
|-------------|--|
| 03.142.??? | Folding Combi scraper flat floor |
| 03.143.??? | Folding Combi scraper flat floor unequal alley |
| 03.144.??? | Folding Combi scraper U profile (UNP 40) ** |
| 03.145.??? | Folding Combi scraper unequal alley, U profile (UNP 40) ** |

Remarks:

- The last 3 positions of the article number represent the minimum alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.
- **For concrete groove (width x depth) 50 x 40mm.
- Minimal height wall passage is 30cm.

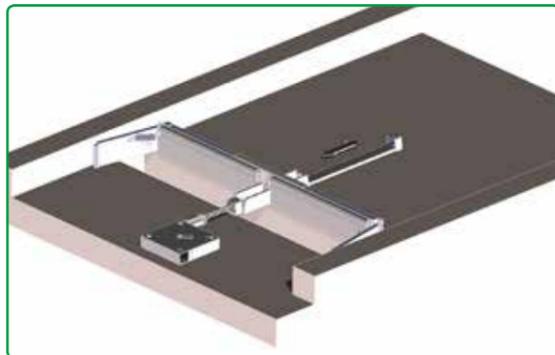
Combi scraper, single acting with sliding pulling bar



- Minimal space required for parking the scraper.
- When there's little room, this scraper still cleans the entire alley.
- Flat floor or UNP profile 50x 40 mm.
- Equal alleys or unequal alley length.
- Tail protector.
- Animal-friendly strip on the side wing.
- Optionally with rubber on the wings.

Application:

- When there's little space at the discharge.
- UNIQUE: manual deactivation of the scraper.
- Closed concrete floor / element floors / slatted floor floors (with optional guiding feet for main wing).
- Rubber floor → no wearing crosses!
- Normal quantities of box litter, little or no straw.
- Chain, cable or rope.



| Article No. | Description |
|-------------|--|
| 03.190.??? | Combi scraper sliding pulling bar standard version |
| 03.191.??? | Combi scraper sliding pulling bar with pipe for unequal alley |
| 03.192.??? | Combi scraper sliding pulling bar with U profile (UNP 40) ** |
| 03.193.??? | Combi scraper sliding pulling bar with U profile (UNP 40) for unequal alley ** |

Remarks:

- The last 3 positions of the article number represent the minimum alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.
- **For concrete groove (width x depth) 50 x 40mm.
- Minimal height wall passage is 30cm.

Comb scraper, single acting



- Always UNP profile (50*40 or 50*30).
- Standard with rubber on the wings.
- Minimal space required for parking the scraper.
- Scrapes the full alley width in a short distance.
- Equal or unequal alley length.
- Tail protector.
- Animal-friendly strip on the side wing.

Application:

- Grooved floor.
- Normal quantities of box litter, straw in only one alley.
- Note distance 1st groove – box wall regarding type of side wing.
- Chain, cable or rope.



| Article No. | Description |
|---------------------------|--|
| Zeus grooved floor | |
| 03.321.??? | Comb scraper for Zeus grooved floor with U profile ** type Agri Floor with 125 mm spacing |
| 03.322.??? | Comb scraper for Zeus grooved floor for unequal alley with U-profile. ** Type Agri Floor with 125 mm spacing |

| Swaans grooved floor | |
|-----------------------------|--|
| 03.323.??? | Comb scraper for Swaans grooved floor with U profile ** Type G4/G5 floor with 175 mm spacing |
| 03.324.??? | Comb scraper for Swaans grooved floor unequal alley with U profile. Type G4/G5 floor with 175 mm spacing |

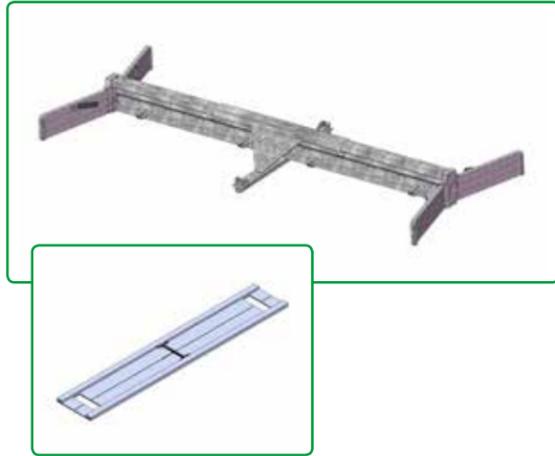
| Holcim grooved floor | |
|-----------------------------|---|
| 03.325.??? | Comb scraper for Holcim grooved floor with U profile and 160 mm spacing |
| 03.326.??? | Comb scraper for Holcim grooved floor unequal alley with U profile and 160 mm spacing |

| Den Boer grooved floor | |
|-------------------------------|---|
| 03.329.??? | Comb scraper for Den Boer grooved floor with U profile and 160 mm spacing |
| 03.330.??? | Comb scraper for Den Boer grooved floor unequal alley with U profile and 160 mm spacing |

Remarks:

- Last 3 positions of the article number represent the minimal alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.
- ** Concrete grooves only via drawing (groove spacing).
- Only in U profile design.
- Special side wings.
- 2 weeks longer delivery time than standard combi-scrapers.

Combi scraper, double acting with discharge in the end



- Minimal space required for parking the scraper.
- Scrapes the full alley width in short distance.
- Flat floor or UNP profile.
- Equal or unequal alley length.
- Animal-friendly strip on the side wing.
- Wearing crosses welded underneath frame.
- Optionally with rubber on the wings.

Application:

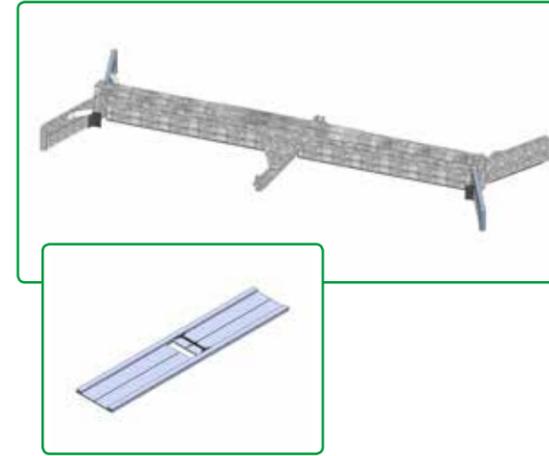
- Closed concrete floor, discharge at each end of the alley.
- Rubber floor → no wearing crosses!
- Normal quantities of box litter, little straw.
- Chain, cable or rope.

| Article No. | Description |
|-------------|---|
| 03.156.??? | Combi scraper double acting flat floor |
| 03.157.??? | Combi scraper double acting with pipe unequal alley flat floor |
| 03.158.??? | Combi scraper double acting U profile (UNP 40) ** |
| 03.159.??? | Combi scraper double acting with pipe unequal alley U profile (UNP 40) ** |
| 03.152.??? | Combi scraper double acting with rubber flat floor |
| 03.153.??? | Combi scraper double acting with pipe unequal alley flat floor |
| 03.154.??? | Combi scraper double acting with rubber, U profile (UNP 40) ** |
| 03.155.??? | Combi scraper, double acting with rubber, pipe unequal alley, U profile (UNP 40) ** |

Remarks:

- Last 3 positions of the article number represent the minimal alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.
- ** Concrete grooves only via drawing (groove spacing).
- Minimal height of a scraper passage through a wall is 30cm.
- Including side wing limiter.

Combi scraper, double acting with discharge in the middle



- Minimal space required for parking the scraper.
- Scrapes the full alley width in short distance.
- Only UNP profile.
- Equal or unequal alley length.
- Tail protector.
- Animal-friendly strip on the side wing.
- Wearing crosses welded underneath frame.
- Optionally with rubber on the wings.
- Discharge opening at least 50 cm. Note: open discharge!

Application:

- Closed concrete floor, discharge in the middle of the alley.
- Rubber floor.
- Normal amount of box litter, no straw.
- Chain, cable or rope.

| Article No. | Description |
|-------------|---|
| 03.133.??? | Combi scraper double acting U profile (UNP 40) ** |
| 03.134.??? | Combi scraper double acting with pipe unequal alley U profile (UNP 40) ** |
| 03.133U??? | Combi scraper double acting with rubber, U profile (UNP 40) ** |
| 03.134U??? | Combi scraper, double acting with rubber, pipe unequal alley, U profile (UNP 40) ** |

Remarks:

- Last 3 positions of the article number represent the minimal alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.
- ** Concrete grooves only via drawing (groove spacing).
- Minimal height of a scraper passage through a wall is 30cm.
- Including side wing limiter.
- Folding scraper deliverable on request.
- Note: not suitable for long straw.



Combi scraper for HCI W5 floor



| Article No. | Description |
|-------------|--|
| 03.331.??? | Combi scraper for HCI W5 floor equal alley |
| 03.332.??? | Combi scraper for HCI W5 floor for unequal alley |

Remarks:

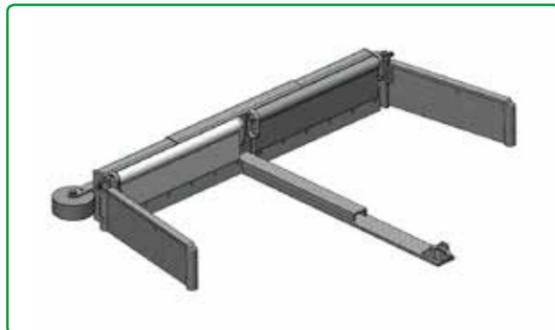
- Last 3 positions of the article number represent the minimal alley width. Example: 03.331.300 is a manure scraper for an alley width of 300 cm.
- Minimal height of a scraper passage through a wall is 30cm.

- Minimal space required for parking the scraper.
- Tail protector.
- Animal friendly strip on the side wing.
- Side wing limiter.
- Rubber on main- and side wings.
- Hinged arms that follow the slope.
- Main frame that is slightly bent forward.
- Suitable for JOZ lifting hatch.

Application:

- HCI W5 element floor.
- Normal quantities of box litter, little or no straw.
- Chain, cable (rear only) or rope.

JOZ chicken scraper



| Article No. | Description |
|-------------|---|
| 03.225.??? | Combi scraper flat floor for chicken stable |
| 03.226.??? | Combi scraper flat floor for chicken stable unequal alley |

Remarks:

- Last 3 positions of the article number represent the minimal alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.
- Minimal height of a scraper passage through a wall is 30cm.

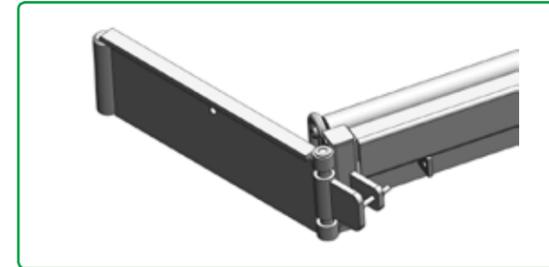
- Extra heavy main wings.
- Manganese steel scrapers on the wings.
- Side wing limiter.
- Guided rollers next to the main frame.
- Very heavy frame.
- Chain secured to the pulling bar by means of a bolt.
- Flat floor only.

Application:

- Chickens, ducks, fur animals.
- Chain, cable or rope.

Options combi scrapers

Adjustable side wing limiter combi scraper



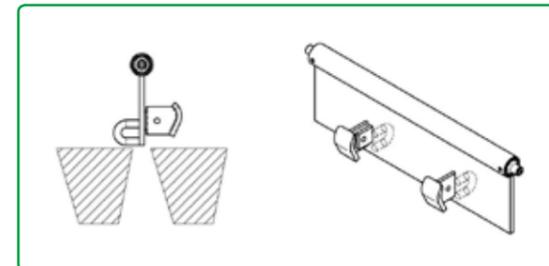
- The opening of the side wing can be limited by means of a bolt adjustment.

Application:

- When side guidance is not everywhere.
- For combi scraper flat floor.

Article number: 03.017.011

Guiding feet for main wing of combi scraper



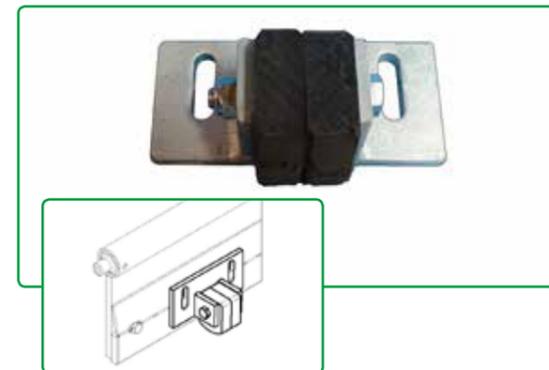
- To prevent blocking of the combi scraper in slatted floors.
- For combi scrapers without rubber.

Application:

- For discharge over slatted floors.

Article number: 03.025.016

Guiding feet for main wing of combi scraper with rubber



- To prevent blocking of the combi scraper in slatted floors.
- For combi scrapers with rubber.

Application:

- For discharge on slatted floors.

Article number: 03.025.015

Extended side wings



- Suitable for single acting combi scrapers.
- Standard 750mm and 1000mm. Other lengths available on request.
- Available with rubber on the side wing.
- Article numbers on request.

Application:

- For flat floor (better guidance along walls).
- When used with straw in combination with a narrow frame.

Herding fence on scraper



- Max. width 350 cm. If wider use 2 pieces.
- Including control in milking parlour.
- To be placed on the scraper, both slatted floor and combi scrapers.
- When the herding fence is not used, it can be hung on the wall by means of a bracket that is included.

Article number: 03.220.100

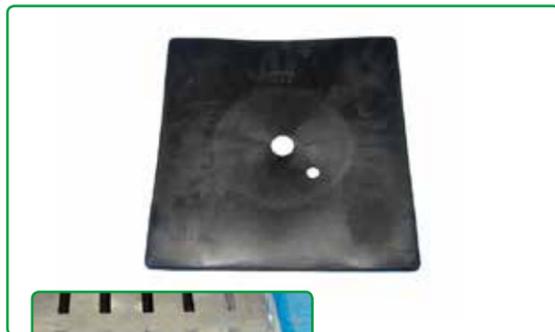
Connection of chain / cable underneath on pulling bar in U-profile



- For corner roller boxes recessed in concrete.
- Chain / cable does not come up from the recess in the floor.
- Front and / or rear pulling bar.
- Level -30mm, - 40mm or -100 mm.
- In unequal alleys no connection in U-profile is possible.

Article number: 03.009.020

Rubber covering on corner roller box



- Cow-friendly.
- Can be (dis)assembled using clips.
- Recess for grease nipple.

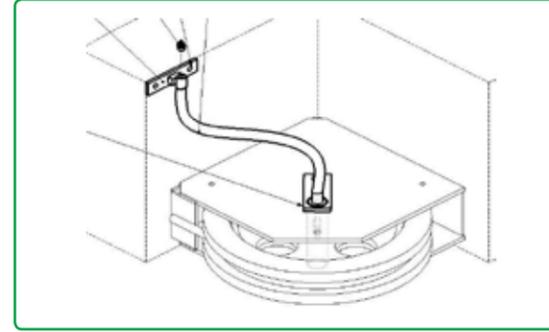
Application:

- When cows are allowed to walk over the corner roller box.

Article number: 03.006.030



Hose for lubrication of the corner roller box



- Hose length 50 cm.
- Also linkable extension hoses available of 50 cm.

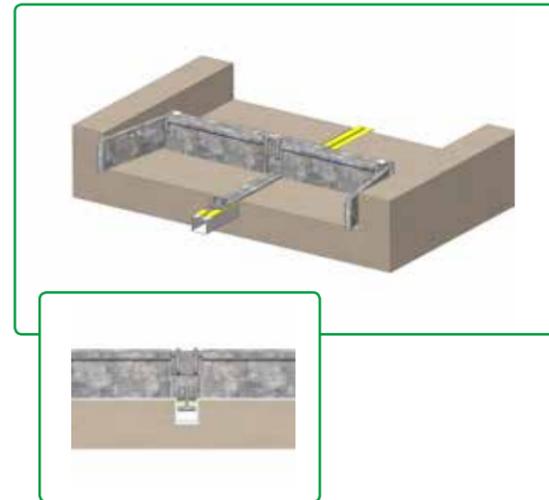
Application:

- If corner roller box is poorly accessible.

Article numbers:

02.053.000 Grease nipple hose + attachment (50cm)
0T.016.125 Extension set 50 cm extra.

JOZ liquid manure disposal profile



- Hard plastic wear strips.
- Removable.
- Available per metre, maximum strips of 6 metres.

Application:

- Provides primary separation of urine and solid manure.
- Dry claws.
- In combination with a slope toward the middle of the floor.
- Scraper with cleaner spoon that cleans the liquid manure disposal profile.

Article number: 03.095.001

Delta scraper

IN CASE OF A BARN WITH FREESTALLS OR A SLOPING STABLE WITH LONG STRAW, THE DELTA SCRAPER IS THE MOST SUITABLE. THE GUIDING PROFILE IN THE MIDDLE OF THE FLOOR PROVIDES SCRAPER STABILITY.

The Delta scraper pulls the solid manure to the end of the manure alley, from where the manure is transported further to the manure pit with, for example, a turning chain system. Using the electronic switch box makes the phased disposal possible. Large amounts of straw, deposited on a scraper rod or turning chain system with little pass-through or insufficient removal rate, can cause blockage. By having the discharge occur in phases, this is avoided.

Delta scraper for alley of varying width

When the stable alley changes in width at a particular location, the Delta scraper is the solution. The scraper adapts effortlessly without any manure remaining behind.

Manure scraper for pig farming

In this system, the pigs stand on a slatted floor. The manure is trampled through the slots by the pigs and ends up on a second floor underneath the slatted floors. To limit the ammonia emission to a minimum, the manure is discharged directly to a manure tank with a manure scraper. From there, the manure can be transported to a storage facility. Closed floors with strawmanure are also becoming more prominent in pig farming; of course, JOZ has the solution for this too.

Application:

- Ideal for straw and possibly sand-bedded stables.
- Closed concrete floor.
- Chain or rope.
- Optional limitation of the arms with 10 or 13 mm chain.

Deltascraper in stable with lots of straw



The advantages of a Delta scraper:

- Very-cow friendly
- Low maintenance
- Standard reinforced with steel arms
- Overdriveable



| Article No. | Description |
|-------------|---|
| 03.138.??? | Delta scraper with U profile UNP 40 |
| 03.1384??? | Delta scraper with U profile UNP 40 and rubber |
| 03.139.??? | Delta scraper with U profile UNP 40 unequal alley ** |
| 03.1394??? | Delta scraper with U profile UNP 40 unequal alley and rubber ** |
| 03.136.050 | Delta scraper single arm |
| 03.138.050 | Delta scraper single arm UNP |

Remarks:

- Last 3 positions of the article number represent the minimal alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.
- ** Concrete grooves only via drawing (groove spacing).
- Minimal height of a scraper passage through a wall is 30cm.
- Space required for unfolding (1.5x alley width)
- Flat floor implementation available on request.
- For narrower manurealley widths (up to max. 100cm), it is possible to use a single-arm Delta scraper. Prices and versions on request.

Flex scraper

THE FLEX SCRAPER HAS THICK RUBBER ALONG ITS ENTIRE UNDERSIDE WHICH MAKES THIS SCRAPER VERY EASY TO MAINTAIN. THE NARROW MAIN FRAME ALLOWS THE SCRAPER TO OPEN QUICKLY AND IT IS ALSO OVERDRIVEABLE.

Application:

- Ideal for sand and straw stables.
- Closed concrete floor.
- Rubber floor, ask JOZ for the conditions.
- Chain or rope.

The advantages of a Flex scraper:

- Very cow-friendly as the cows can walk around the scraper on its return.
- Wings open faster than a Delta scraper
- Entire underside 40mm rubber
- Heavy frame on top
- Maintenance-friendly
- Flat floor and UNP profile
- Overdriveable
- Note: the folded width depends on the alley width



Passability by tractor

| Alley width in cm | 000 | 200 | 240 | 260 | 280 | 300 | 320 | 340 | 360 | 380 |
|---|-----|-----|------|------|------|------|------|------|------|------|
| Minimum width in return run in relation to passability (mm) | 942 | 992 | 1042 | 1092 | 1142 | 1192 | 1242 | 1292 | 1342 | 1392 |

Article No. Description

| | |
|------------|--|
| 03.170.??? | Flex scraper flat floor |
| 03.171.??? | Flex scraper with pipe unequal alley flat floor |
| 03.172.??? | Flex scraper U profile (UNP 40) ** |
| 03.173.??? | Flex scraper U profile (UNP 40) with pipe unequal alley ** |

Remarks:

- Last 3 positions of the article number represent the minimal alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.
- Minimal height of a scraper passage through a wall is 30cm.
- ** For concrete groove (width x depth) 50 x 40mm



Slatted floor scraper

THE SLATTED FLOOR SCRAPER IS MAINLY USED ON SLATTED FLOOR FLOORS AND ON SOME LOW-EMISSION FLOORS. THERE ARE SEVERAL SLATTED FLOOR SCRAPERS, SUCH AS WITH OR WITHOUT A RUBBER ROTOR, GALVANIZED AND / OR REINFORCED VERSIONS. THE SLATTED FLOOR SCRAPERS ARE SUITABLE FOR BOTH CABLE, ROPE AND CHAIN INSTALLATIONS.

No side guidance

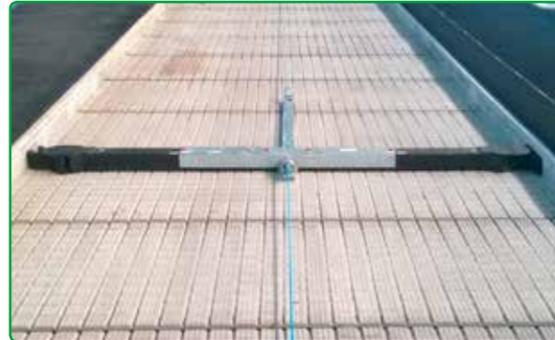
An important advantage of the JOZ Slatted floor scraper is that no side guidance is needed. Special rotors on the sides of the scraper ensure that for example the standpipes of the feeding fence, water mains and tails can be circumvented without problems. Even when the manure alleys are of uneven lengths, a JOZ Slatted floor scraper can be used trouble-free with chain, cable or rope.

Automatically adjustable

The scraper is pulled over the floor with a chain, cable or rope, powered by a silent electric motor. The speed is 4 m/min. With the latest JOZ switch box the progress of the scraper can be controlled fully automatically.

The advantages of a Slatted floor scraper:

- Animal-friendly finish
- More hygienic milking, allowing delivery of better milk quality
- Less manure on the slatted floors, so fewer claw problems and cleaner cubicles
- Less manure behind the boxes, so cows remain cleaner
- Less washing of the udders, so quicker milking
- Less sawdust or straw in the resting boxes.



Rubberized slatted floor scraper without rotor



- Cow-friendly.
- Price-wise interesting.
- Rubber cable lug, steel also possible.
- Short delivery time.
- Equal or unequal alley length.
- 2 rubbers (front + rear) cleans very thoroughly.
- Optionally reinforced

Application:

- Slatted floor.
- Normal amount of cubicle litter.
- Note: use guidance in cross passage.
- Cable, rope or chain.

Rubberized slatted floor scraper with rotor

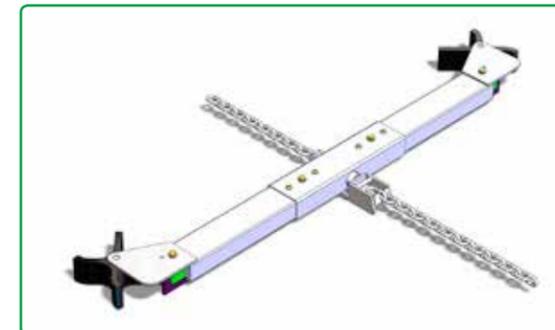


- Especially for wide alleys and a generous amount of box litter, this is available in a heavy-duty version.
- Rotors guarantee clean box walls and make guidance unnecessary in cross passages.
- Very cow-friendly finish.
- 2 rubber strips under the scraper guarantee a very thorough cleaning.
- Equal or unequal alley length.
- Optionally reinforced

Application:

- Slatted floor.
- Normal amount of cubicle litter.
- Cable, rope or chain.

Galvanized slatted floor scraper with rotor



- Especially for wide alleys and a generous amount of box litter, this is as standard already reinforced.
- Rotors guarantee clean box walls and make guidance unnecessary in cross passages.
- Height of the scraper rubber is adjustable on both sides.
- Cow-friendly finish.
- Equal or unequal alley length

Application:

- Slatted floor floor
- Semi-slatted floor floor.
- Wide alleys.
- A lot of cubicle litter.
- Cable, rope or chain.

Article numbers



| Article No. | Description |
|---|---|
| Rubberized slatted floor scraper without rotor | |
| 03.360.??? | Rubberized slatted floor scraper without rotor standard Chain |
| 03.361.??? | Rubberized slatted floor scraper without rotor unequal alley Chain |
| 03.362.??? | Rubberized slatted floor scraper without rotor standard Cable / Rope |
| 03.363.??? | Rubberized slatted floor scraper without rotor unequal alley Cable / Rope |

Remarks:

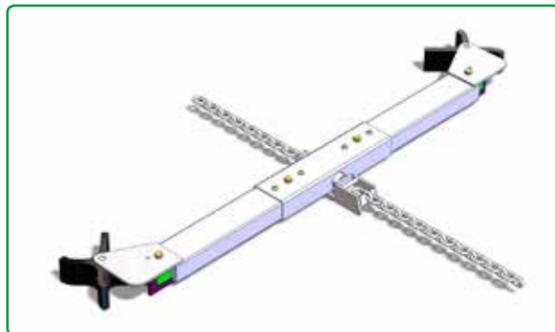
- Last 3 positions of the article number represent the minimal alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.



| Article No. | Description |
|--|--|
| Rubberized Slatted floor scraper with rotor | |
| 03.260.??? | Slatted floor scraper with rotor standard Chain |
| 03.261.??? | Slatted floor scraper with rotor unequal alley Chain |
| 03.262.??? | Slatted floor scraper with rotor standard Cable / Rope |
| 03.263.??? | Slatted floor scraper with rotor unequal alley Chain |

Remarks:

- Last 3 positions of the article number represent the minimal alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.



| Article No. | Description |
|--|--|
| Slatted floor scraper galvanized with rotor | |
| 03.160.??? | Slatted floor scraper with rotor standard Chain |
| 03.161.??? | Slatted floor scraper with rotor unequal alley Chain |
| 03.162.??? | Slatted floor scraper with rotor standard Cable |
| 03.163.??? | Slatted floor scraper with rotor unequal alley Cable |

Remarks:

- Last 3 positions of the article number represent the minimal alley width. Example: 03.125.300 is a manure scraper for an alley width of min. 301 cm and max. 320 cm.

Discharge systems



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Discharge systems

TO REMOVE THE MANURE FROM THE FLOOR, SEVERAL DISCHARGE POSSIBILITIES EXIST. IN SLATTED FLOORS, MANURE IS PUSHED THROUGH THE SLOTS BY THE SCRAPER. IN CONCRETE FLOORS WE SEE POSSIBILITIES FOR AN OPEN DISCHARGE, GUIDED BY DISCHARGE IRONS, DIAGONAL STEEL GRATES AND BY THE JOZ LIFTING HATCHES.

Letterbox discharge

The letterbox discharge is the solution for a safe discharge of manure to the manure cellar. JOZ has a suitable solution for this.



JOZ lifting hatches

The lifting hatch has been developed to safely cover manure discharging for humans, animals and traffic. The lifting hatches are automatically opened and closed by the manure scraper and controlled by the unique settings with the JOZ control panel technology. Lifting hatches are produced customer-specific, and can be covered with animal-friendly rubber.



The advantages of lifting hatches:

- Walkable and overdriveable discharge
- No manure residues
- Very animal-friendly in combination with rubber



| Article No. | Description |
|-------------|---|
| 03.650.250 | JOZ lifting hatch 650 up to alley width 250 cm |
| 03.650.300 | JOZ lifting hatch 650 up to alley width 300 cm |
| 03.650.350 | JOZ lifting hatch 650 up to alley width 350 cm |
| 03.650.400 | JOZ lifting hatch 650 up to alley width 400 cm |
| 03.1000250 | JOZ lifting hatch 1000 up to alley width 250 cm |
| 03.1000300 | JOZ lifting hatch 1000 up to alley width 300 cm |
| 03.1000350 | JOZ lifting hatch 1000 up to alley width 350 cm |
| 03.1000400 | JOZ lifting hatch 1000 up to alley width 400 cm |

If walkable rubber is desired, an 'M' should be added to the article number. Example: 03.650.250M

Discharge systems

Grid discharge

The steel grids discharge are ideal for the disposal of thin manure. The grids are suitable for discharge both at the end and in the middle. The maximum length is 120cm. The grid discharge is produced customer-specific. Manure that is too thick will not pass through the grids.



The advantages of a grid discharge:

- Walkable discharge for both animal, humans and work traffic
- Available straight or diagonal
- More manure pass-through than a concrete grid floor
- Suitable for primary separation of liquid and solid fractions

JOZ steel grids



- Produced custom made customer-specific.
- Maximum length is 120 cm, larger dimensions on request.
- Ideal for both end and middle discharge.

Article No. Description

| | |
|------------|---|
| 03.100.V90 | Grid with 3 cm split and T-steel straight |
| 03.100.V45 | Grid, diagonal T-steel with 3 cm split |



Our solutions and services improve the farmer's efficiency.



Turning chain system

BECAUSE OF ITS PROVEN SERVICE, THE TURNING CHAIN SYSTEM HAS BEEN A WELL-KNOWN CONCEPT FOR MORE THAN 70 YEARS AND IT IS STILL USED TODAY.

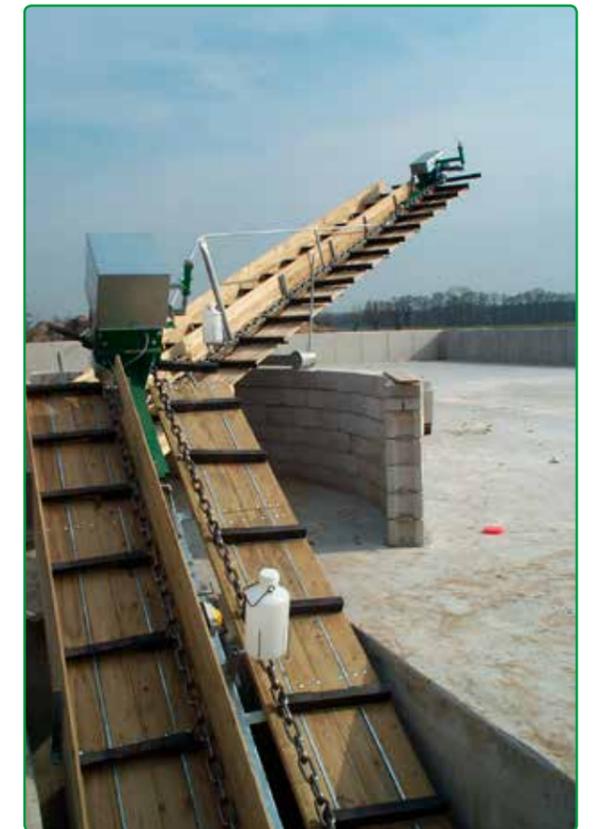
The turning chain system

JOZ has been supplying the turning chain system for years, and today it is still widely used. That a large portion of these systems is used to replace existing systems shows that this JOZ stable cleaning system has proven its value. Precisely because of its simplicity and reliability, this system is still in great demand.

The turning chain stable cleaning system is also used in combination with the JOZ manure scrapers. The solid manure is transported with the manure scraper from the cubicles or via the sloping stable to the end of the manure alley and discharged on the turning chain system. The turning chain system carries the manure quickly and reliably down to the manure storage.

The advantages of the turning chain system:

- Solid construction and therefore reliable
- Attractive in price
- Long life span by use of high-quality materials
- Variable tractive force safety



Turning chain system



02.016.000 Corner roller



Passagechain



Conveyor

| Article No. | Description |
|-------------|---|
| 0H.16R.064 | Chain 16 mm, with swivels c.t.c. 64 cm, clockwise running, per metre |
| 0H.16L.064 | Idem, but counter-clockwise running |
| 0H.16R.048 | Chain 16 mm, with swivels c.t.c. 48 cm, clockwise running, per metre |
| 0H.16L.048 | Idem, but counter-clockwise running |
| 02.099.R00 | Parts set comprising: head anchor, pressure roller + holder + grease nipple bolt + pressure lug + strawboard, clockwise running |
| 02.017.000 | Flat anchorplate, complete |
| 02.099.L00 | Idem, but counter-clockwise running |
| 02.022.000 | Endurance box 45° complete with roller 280 |
| 02.016.000 | Corner roller ø 330 mm, complete with hot dip galvanised housing |
| 02.012.000 | Return elbow R = 85 cm |
| 02.036.000 | Manure-processing elbow R = 125 cm |
| 02.038L1.5 | Drive unit - 1.5 kW. Left (up to 120 m. chain) |
| 02.038R1.5 | Drive unit - 1.5 kW. Right (up to 120 m. chain) |
| 02.069L2.2 | Drive unit - 2,2 kW, Left model (120 mtr. - max. 150 mtr. chain) |
| 02.069R2.2 | Drive unit - 2,2 kW, Right model (120 mtr. - max. 150 mtr. chain) |
| 02.138L300 | Drive unit - 2.2 kW, Left model, extra heavy for →200m chain (max. length situation dependant and on request) |
| 02.138R300 | Drive unit - 2.2 kW, Left model, extra heavy for →200m chain (max. length situation dependant and on request) |
| 02.018.001 | Liquid manure grid in passage floor (standard 61x47x3 cm) |
| 02.019.000 | End roller ø 280 mm, complete with steel housing, including concrete anchor |

| | |
|------------|--|
| 02.029.05R | Fixed conveyor 5 metre long, for clockwise running chain, electric cable from motor bracket 1,5 mtr from bottom, incl. waterproof operating switch and support brace |
| 02.029.06R | As above, but 6 m long |
| 02.029.07R | As above, but 7 m long |
| 02.029.08R | As above, but 8 m long |
| 02.029.09R | As above, but 9 m long |
| 02.029.10R | As above, but 10 m long |
| 02.029.11R | As above, but 11 m long |
| 02.029.12R | As above, but 12 m long |

Turning chain system



02.900.000 Automatic greasing system for turning chain incl. oil 5 litres

| Article No. | Description |
|-------------|--|
| 02.029.05L | Fixed conveyor 5 m long, for counter-clockwise running chain with electric cable from motor bracket 1.5 m from bottom, including waterproof operating switch and support brace |
| 02.029.06L | As above, but 6 m long |
| 02.029.07L | As above, but 7 m long |
| 02.029.08L | As above, but 8 m long |
| 02.029.09L | As above, but 9 m long |
| 02.029.10L | As above, but 10 m long |
| 02.029.11L | As above, but 11 m long |
| 02.029.12L | As above, but 12 m long |
| 02.029.000 | Surcharge trap door in one of the above mentioned conveyors |
| 02.900.000 | Automatic greasing system for turning chain incl. oil 5 litres |
| 80.BVMK005 | Bio degradable chain oil, 5 litres |

Pivoting conveyer



| Article No. | Description |
|-------------|---|
| 02.Z29.06R | Pivoting conveyor complete with full oil bath drive unit and an indestructible heavy chain ø 16 mm link thickness (Corten-A-Steel) swivels c.t.c. 48 cm and electric cable from motor up to 1.5 m of the bottom side of the feed trough + special waterproof operating switch with lock. Length 6 meters, clockwise running |
| 02.Z29.08R | As above, length 8 metre, clockwise running |
| 02.Z29.10R | As above, length 10 metre, clockwise running |
| 02.Z29.12R | As above, length 12 metre, clockwise running |
| 02.Z29.06L | As above, length 6 metre, counter-clockwise running |
| 02.Z29.08L | As above, length 8 metre, counter-clockwise running |
| 02.Z29.10L | As above, length 10 metre, counter-clockwise running |
| 02.Z29.12L | As above, length 12 metre, counter-clockwise running |
| 02.029.02L | Fixed conveyor 1.6 mtr long, counter-clockwise running |
| 02.029.02R | Fixed conveyor 1.6 mtr long, clockwise running |
| 02.0521000 | Control panel for 1x turning chain system (1,5 - 2,2 kW) |
| 02.0521001 | Control panel for 1x turning chain system (1,5 - 2,2 kW) and an elektronic coupling to controller of a combi-scraper |
| 02.0521010 | Control panel for 1x turning chain system (1,5 - 2,2kW), swivelling pivoting chain elevator and an elektronic coupling to controller of a combi-scraper |
| 0D.100.010 | Push-button switch for pivoting elevator |

Scraper rod

A RECIPROCATING MOTION THROUGH THE MANURE PASSAGE. THIS MOVEMENT CREATES A MANURE TRANSPORTATION TO THE EXIT / DROPPIT OF THE MANURE PASSAGE. TO CREATE THIS LINEAR MOVEMENT JOZ CAN OFFER YOU TWO SYSTEMS: THE JOZ MECHANICAL SCRAPER ROD, A MECHANICAL SCRAPER WITH AN ELEKTRIC ENGINE AND CHAIN DRIVEN SCRAPER SYSTEM AND THE JOZ HYDRAULIC SCRAPER ROD: A MECHANICAL SCRAPER WITH A HYDRAULIC CYLINDER WICH DRIVES THE SCRAPER SYSTEM. MAXIMUM LENGTH OF THE SCRAPER SYSTEM IS 35 METERS.

The scraper rod system is a simple, versatile system that has amply proved its value in use. The scraper rod comprises a heavy-duty steel beam, which is fitted with hinged swivels. The beam's back and forth movement transports the dung outside, where a pivoting elevator or compression-chamber pump conveys it to the dung heap. The conveyor has an independent drive unit and is available in lengths from 6 to 15 metres. The compression-chamber pump/dung press is suitable for situations where the dung heap is a considerable distance away.

Solid construction

The beam runs over guide bars that are cast in place in the dung channel. The hinges have special plastic bearings. The swivels are easy to remove. A strip is welded to the top of the individual swivels to prevent them damaging the cows' legs and hooves.

Hydraulic or mechanical drive unit

The scraper rod system has a heavy-duty drive unit. The unit can be either mechanically driven (full oil bath with gear wheel transmission) or hydraulically driven. In either case, a control panel regulates the stroke of the rod and can be supplied with a timer, if required. The scraper rod system can also be combined with a compression-chamber pump system.

The advantages of a scraper rod:

- Solid construction
- Reliable
- Attractive in price
- Enhanced durability by using high quality materials
- Fully secured
- Highly suitable for discharge at the side of the stable



Counterclockwise



Technical data

| | |
|-----------------------|--|
| Mechanical drive unit | 0,75 KW; 220 V / 380 V |
| Hydraulic drive unit | 3-11 KW, 4 cc of 2x 4 cc |
| Drive unit | full oil bath, gear wheel transmission, output 5.5 rpm |
| Scraper travel speed | 4 m/min (13 ft/minute) |
| Control panel | 380 V, maximum current protection |
| Dung channel width | depending on the situation - standard minimum width 0.45 m, standard maximum width 0.70 m (wider available on request) |
| Rod stroke | 1,80 m |
| Swivel distance | 0.9 m for muck with straw; 0.6 m for manure |

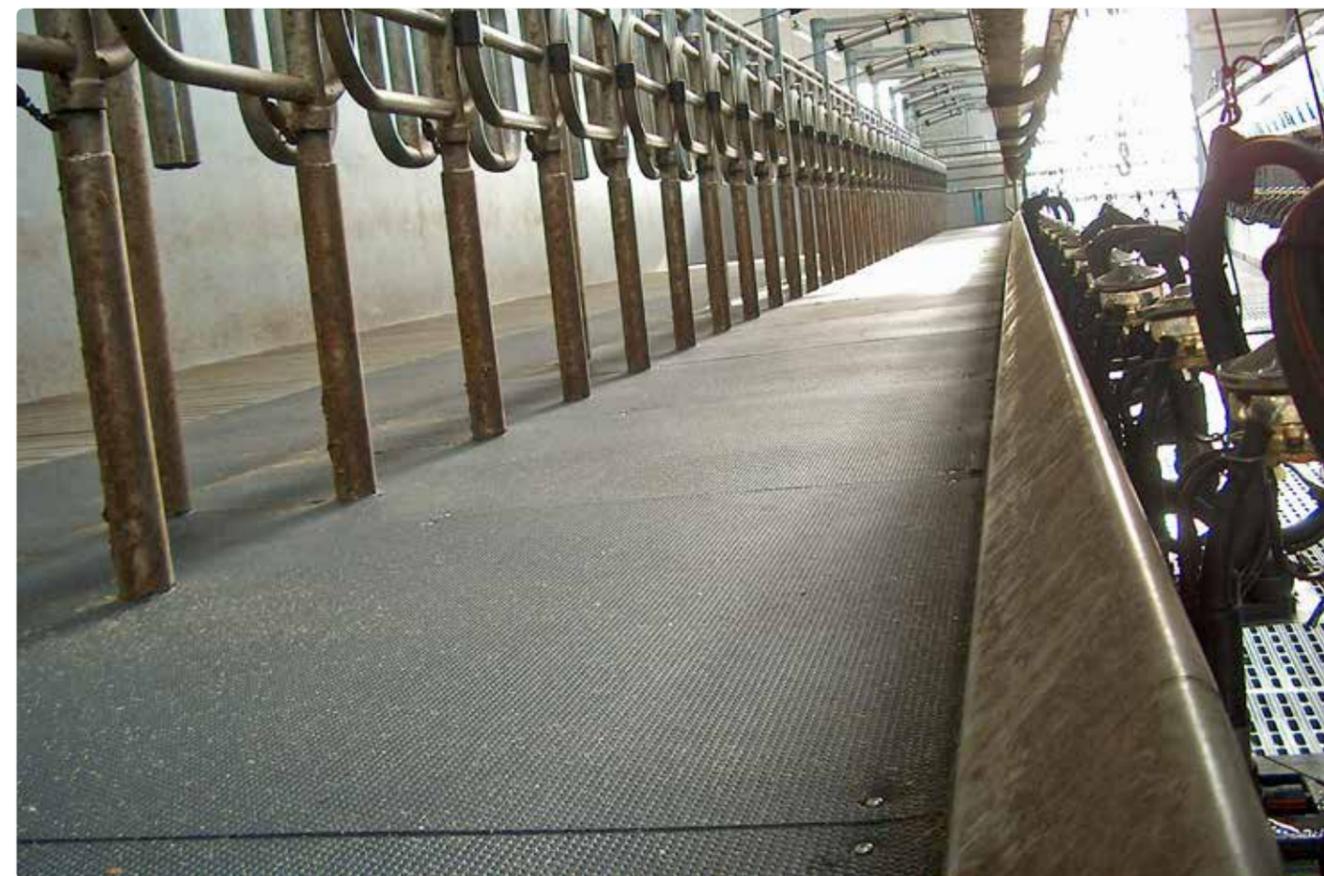
Article numbers

| Article No. | Description |
|-------------|---|
| 04.136.90R | Scraper rod, complete, with scrapers (swivels c.t.c. 90 cm), per 540 cm length, clockwise system |
| 04.036190R | Scraper rod, complete with scraper (swivel c.t.c 90 cm), clockwise system |
| 04.136.90L | Scraper rod, complete, with scrapers (swivels c.t.c. 90 cm), per 540 cm length, counter-clockwise system |
| 04.036190L | Scraper rod, complete with scraper (swivel c.t.c. 90 cm), counterclockwise system |
| 04.138.60R | Scraper rod, complete, with scrapers (swivels c.t.c. 60 cm), per 540 cm length, clockwise system |
| 04.038160R | Scraper rod, complete with scraper (swivel c.t.c. 60 cm), clockwise system |
| 04.138.60L | Scraper rod, complete, with scrapers (swivels c.t.c. 60 cm), per 540 cm length, counterclockwise system |
| 04.038160L | Scraper rod, complete with scraper (swivel per 60 cm), counterclockwise system |
| 04.100.000 | Canal corner 90gr. (not for scraper rod with scraper with swivel both sides.) |
| 04.136.200 | Scraper rod reinforcement. (360 cm or part there of) |
| 04.138.200 | Scraper rod reinforcement (360 cm or part there of) |
| 03.320.210 | Universal electronic control panel, incl. timer, for 1 system |
| 03.320.211 | Universal electronic control panel, incl. timer, for 2 systems |
| 04.030.000 | Manure discharge grid |
| 04.047.000 | Complete drive unit, type "Buffel" |
| 86.7800274 | Hydraulic generator, 3 kW, suitable for max. 1 cylinder. Generator capacity 40 liters (oil not included) |
| 86.7800272 | Hydraulic generator, 5.5 kW, suitable for max. 2 cylinders. Generator capacity 80 liters (oil not included) |
| 03.005.000 | Protection cover for generator |
| 80.BVHY000 | Hydraulic oil per litre. Per 20 liter |
| 04.032.000 | Hydraulic cylinder incl. fixation materials. (counterclockwise system) |
| 04.032.002 | Hydraulic cylinder incl. fixation materials. (clockwise system) |
| 04.021.001 | Cover for hydraulic cylinder. (only when there is cow traffic). Optional |
| 0D.400.210 | 7,5 kW Manual star-delta switch For motorprotection other types on request |
| 09.078.001 | Automatic star-delta switch in combination with Electronic control unit / timer Only on project base |

Our solutions and services for the stable maintain a natural environment for the animal.



Royal Mat



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Royal Mat

A COMFORTABLE ENVIRONMENT WITH ROYAL MAT OF JOZ

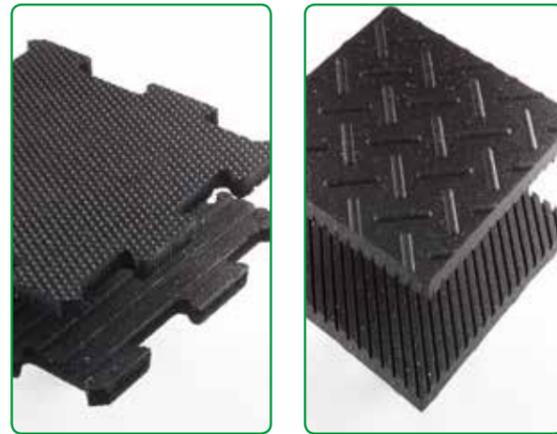
COWS ON THE ROYAL MAT RUBBER FLOOR MATS FEEL AND BEHAVE JUST AS IF THEY WERE IN THE MEADOW. THESE FLOOR MATS FROM JOZ ENSURE THAT THE COWS ALSO MOVE AROUND MORE AND BETTER IN THE COW HOUSING. THAT LEADS TO LESS FOOT PROBLEMS. DUE TO THE INCREASED ACTIVITY MOREOVER, THE FEED INTAKE IS BETTER. THIS OPTIMAL COMFORT FOR THE COWS TRANSLATES DIRECTLY INTO HIGHER MILK PRODUCTION.

Practical in use

JOZ supplies the Royal Mat floor mats with a slight profile on the upper side and a corrugated underside. The floor mats are easy to keep clean with the JOZ manure scrapers systems and they are firmly attached to the underlying surface. The manufacturer of Royal Mat products makes them from recycled rubber. This rubber is more stable than new rubber and is consequently minimally susceptible to shrinkage or stretching.

Easy to lay

Laying the mats is easy. Fixing is by means of fixing adhesive and plug nails. The most prevalent mats for cow housings are the standard rectangular mats. However, interlocking mats are available as an option.



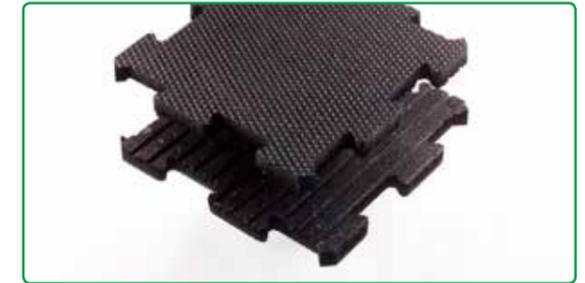
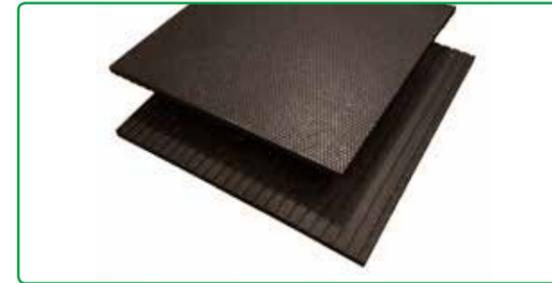
The advantages of Royal Mat:

- more comfort in free stalls
- cows move around more and better
- less sliding
- less foot problems
- better feed intake
- higher milk production
- excellent in combination with the JOZ manure scrapers
- easy to lay
- 5 year warranty*

*Depending on installation and use according JOZ directives as described in our manuals.



Royal Mat for walking



| Description | Article no. | Length * [mm] | Width * [mm] | Thicknes * [mm] | Area * [m2] |
|--|-------------|---------------|--------------|-----------------|-------------|
| Rubber mat for walking alleys with puzzle-mat jig saw connection "Beehive" | 19.134.551 | 1750 | 1170 | 19 | 2.04 |
| Straight-cutted rubber mat for walking alleys "Beehive" | 19.134.601 | 1850 | 1230 | 19 | 2.23 |

*Dimensions may vary

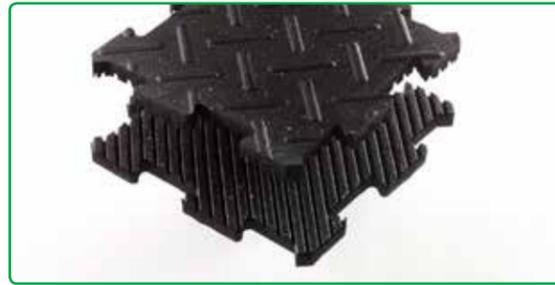
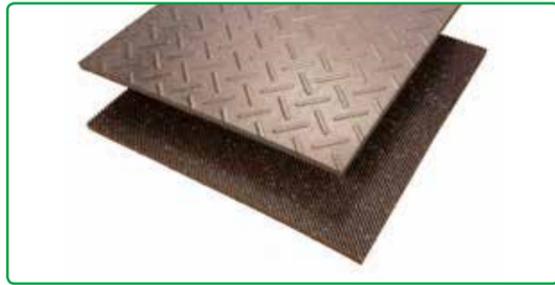
Requirements

| Article No. | Description |
|-------------|---|
| 19.000.001 | Silicone glue |
| 19.000.006 | Anchor nails 60x 60 mm for strips |
| 19.000.013 | Anchor nails 60 x 70 mm for mats |
| 19.000.004 | Wear resistant plastic strip (50x20) to create u profile for scrapers installation (strip is 3 meter) |

Discount gradation
Special price for a full loaded container (ca. 1285m2)

| Determine requirements (for 100m2) | | |
|--|--------------------|----------------|
| Silicone glue | 25 | pieces |
| Anchor nails 6 x 70 mm | 672 | pieces |
| Wear resistant plastic strip (50X20) to create u profile | passage-length x 2 | meter |
| Anchor nails 6 x 60mm | 7 | per wear strip |

Royal Mat for beds



| Description | Article no. | Length* [mm] | Width* [mm] | Thicknes* [mm] | Area* [m2] |
|---|-------------|--------------|-------------|----------------|------------|
| Straight-cutted rubber mat for beds "Ergo-bridge" | 19.134.702 | 1830 | 1220 | 19 | 2.23 |
| Rubber mat for beds with puzzlemat jig saw connection | 19.134.502 | 1750 | 1170 | 19 | 2.04 |

*Dimensions may vary

Requirements

| Article No. | Description |
|-------------|---|
| 19.000.001 | Silicone glue |
| 19.000.006 | Anchor nails 60x 60 mm for strips |
| 19.000.013 | Anchor nails 60 x 70 mm for mats |
| 19.000.004 | Wear resistant plastic strip (50x20) to create u profile for scrapers installation (strip is 3 meter) |

Discount gradation
Special price for a full loaded container (ca. 1285m2)

| Determine requirements (for 100m2) | | |
|------------------------------------|-----------------------|--------------------|
| Silicone glue (for straight mats) | 25 | stuks |
| Anchor nails 60 mm | 675 | stuks (15 per mat) |
| Plastic wearing strips | Dung alley length x 2 | meter |

Special projects



Special projects

WE FEEL VERY STRONGLY ABOUT INNOVATION. OUR SOLUTIONS ARE ALWAYS SPECIFIC AND REQUIRE SPECIAL ATTENTION WHERE NECESSARY. THROUGH OUR IN-HOUSE KNOWLEDGE, EXPERIENCE AND SPECIALISATION, JOZ HAS A SOLUTION FOR EVERY BARN. BECAUSE OF THE HIGH DEMANDS IN TERMS OF ANIMAL WELFARE, EMISSION STANDARDS AND LABOUR SAVINGS, THE NETHERLANDS ARE A PIONEER IN THE AGRICULTURAL SECTOR. JOZ UNBURDENS THE DAIRY FARMER, EVEN WHEN THE STABLE HAS SPECIFIC REQUIREMENTS. THIS CAN BE SEEN IN THE PROJECTS BELOW.

JOZ is involved as a specialist in new developments in both existing and new construction projects. The Kwatrijn project is a good example of this. Here different disciplines have been brought together to create joint solutions / improvements. Even the government supports this special project to further develop the stable of the future.

The advantages of having your own Research & Development + Engineering department:

- In-house knowledge
- Close to the market
- Focussed on solutions
- Development of new products



At JOZ, we love challenges. Do you have a specific request? Do not hesitate to contact your JOZ dealer at www.joz.nl/en.

Special projects



For all our dealers, products and services go to: www.joz.nl



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For videos of our products, check out our YouTube channel: JOZ Home of the clean stable



Manure robots
Manure scrapers
Feed pushers
Royal Mat

Mission:

Both cattle farmer and animal are central to us. Our solutions and services for the stable maintain a natural environment for the animal and improve the cattle farmer's efficiency.

Vision:

JOZ develops and supplies high quality technological products for every stable. With our mobile stable robots and mechanical products we want to belong to the Top 3 of the leading market suppliers. We know the stable perfectly. We are constantly innovating. Our smart solutions can be applied worldwide and because they are capable of communicating with everything and everyone the care is taken over from the user.

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