



**SIWA** Silage wagons

**FORAGE**

**Schuitemaker**





Schuitemaker Machines BV was established in 1919 as a manufacturer of machines for the agricultural and industrial sectors. Thanks to many years of experience, Schuitemaker has obtained a prominent position in both sectors. Over the years Schuitemaker has managed to maintain its position by listening to the needs of its customers and by carefully following the latest technological developments. The strength of the machines and other products is their simplicity in particular. Comfort, service, safety and durability for the user are the main pillars of the Company's success.

For the agricultural sector, Schuitemaker specialised in the following market segments:

- Forage production
- Feeding
- Manure (solid and liquid manure processing)

For the industrial sector Schuitemaker is specialised, among other things, in coldrolled sections, transport and tipping trailers, sand dumpers, volume dumpers and compost spreaders. In addition, Schuitemaker is the importer and distributor of Epoke winter machines for the Netherlands.



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# SIWA

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## **More efficient chopping, greater loading and faster unloading capacity**

### **The Siwa silage wagon is an indispensable link in the forage harvesting chain**

The Schuitemaker Siwa silage wagons are a familiar icon on national and international grassland and maize fields. The Siwa wagon has a capacity range from 26 m<sup>3</sup> to 57.5 m. The wagons all have a tandem chassis, except for the two largest models 780 and 840, which both have a tridem chassis. All models can be fitted with two beaters. Developed for tough jobs, comfortable on the road, strong and rapid discharge. Those are just a few of the specific features of the Siwa. This brochure explains the most important information of the Siwa silage wagons.

## SIWA 10-SERIES



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## MODELS

| Type:                                   |      | SIWA 10-SERIES    |                   |                   |                   |
|---|------|-------------------|-------------------|-------------------|-------------------|
|   |      | 56S               | 56W               | 64S               | 64W               |
| Capacity DIN, Standard                  | m3   | 26                | 26                | 33                | 33                |
| Capacity DIN max                        | m3   | 31                | 31                | 38                | 38                |
| Capacity DIN max with extended backdoor | m3   | nvt               | nvt               | nvt               | nvt               |
| Loading capacity                        | kg   | 14.000            | 14.000            | 18.000            | 18.000            |
| Dimensions (lxwxh)                      | cm   | 806x252x337       | 806x252x337       | 886x252x367       | 886x252x367       |
| Dimensions incl. uppersteel             | cm   | 806x252x367       | 806x252x367       | 886x252x397       | 886x252x397       |
| Box dimensions (lxwxh)                  | cm   | 635x220x180       | 635x220x180       | 715x220x200       | 715x220x200       |
| Drive scraper floor                     |      | hydraulic         | mechanic          | hydraulic         | mechanic          |
| Number of silage beaters                |      | -                 | 2                 | -                 | 2                 |
| Track width                             | cm   | 190               | 190               | 190               | 190               |
| Tandem                                  | tons | 18                | 18                | 24                | 24                |
| Tridem                                  | tons | -                 | -                 | -                 | -                 |
| Tyres standard                          |      | Mitas 560/60R22.5 | Mitas 560/60R22.5 | Mitas 600/55R26.5 | Mitas 600/55R26.5 |
| Tyres heigth (max)                      | cm   | 1244              | 1244              | 1388              | 1388              |
| Number of wheels hydr. braked           |      | 4                 | 4                 | 4                 | 4                 |
| Brakes                                  |      | 412E              | 412E              | 412E              | 412E              |
| Hydraulic operated frontpanel           |      | -                 | -                 | -                 | -                 |
| Airbrakes                               |      | optional          | optional          | optional          | optional          |
| Schärmüller ball coupling K80           |      | optional          | optional          | optional          | optional          |
| Twistlock                               |      | -                 | -                 | -                 | -                 |
| Weighing system                         |      | optional          | optional          | optional          | optional          |
| Mechanical drive                        |      | -                 | -                 | -                 | -                 |
| Tipping Model                           |      | -                 | -                 | -                 | -                 |



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## SIWA 100-SERIES



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| SIWA 100-SERIES       |                                 |                       |                       |  |
|-----------------------|---------------------------------|-----------------------|-----------------------|--|
| 660S/W                | 720S/W                          | 780S/W                | 840S/W                |  |
| 38                    | 42                              | 45                    | 48                    |  |
| 44                    | 48                              | 51                    | 54                    |  |
| 47,5                  | 51,5                            | 54,5                  | 57,5                  |  |
| 20.000                | 24.000                          | 30.000                | 30.000                |  |
| 913x287x370           | 973x281x370 (uitz. mech. aandr) | 1033x288x370          | 1093x288x370          |  |
| 913x287x400           | 973x281x400                     | 1033x288x400          | 1093x288x400          |  |
| 737x240x210           | 797x240x210                     | 857x240x210           | 917x240x210           |  |
| mechanic              | mechanic                        | mechanic              | mechanic              |  |
| 0 (S) or 2 (W)        | 0 (S) or 2 (W)                  | 0 (S) or 2 (W)        | 0 (S) or 2 (W)        |  |
| 210                   | 215                             | 223                   | 223                   |  |
| 24                    | 30                              | -                     | -                     |  |
| -                     | -                               | 40                    | 40                    |  |
| Alliance 650/55 R26.5 | Alliance 650/55 R26.5           | Alliance 650/55 R26.5 | Alliance 650/55 R26.5 |  |
| 1500                  | 1500                            | 1405                  | 1405                  |  |
| 4                     | 4                               | 6                     | 6                     |  |
| 412E                  | FL4118                          | FL4118                | FL4118                |  |
| optional              | optional                        | optional              | optional              |  |
| optional              | optional                        | optional              | optional              |  |
| optional              | optional                        | optional              | optional              |  |
| standard              | standard                        | standard              | standard              |  |
| optional              | optional                        | optional              | optional              |  |
| -                     | optional                        | -                     | -                     |  |
| -                     | optional                        | -                     | -                     |  |



# SIWA FEATURES

## **Compact size, body structure, deck chain and speedy unloading**

Because of its compact construction and ideal weight distribution the Siwa can be used for both grass and maize harvesting. The reinforced side panels and heavy-duty cage structure make it possible for the Siwa to carry a range of products, such as beet pulp, wood chips, compost, etc. All the Siwa silage wagons are constructed exclusively with Schuitemaker's unique profiled steel panels. These panels have been galvanised as well as powder-coated, which gives them double protection. The use of stanchions around the body creates an extremely robust and durable cage structure. The panel construction meets the EU standard of 2.55 m total width.

The front panel is angled to ensure an optimal load is taken on during the mowing of the maize fields. A hydraulic slide can be mounted in the front panel as an option. As with the Schuitemaker dual-purpose wagons, the tailgate of the silage wagon opens up very wide, up to as much as 90°. That gives the crops plenty of space during discharge. The side panels extend 60 cm beyond the deck chain, which helps keep the crops together in free fall. The Siwa unloads more evenly, even without beaters. The double self-cleaning deck chain runs all the way to the sides of the wagon, something that ensures the wagon is emptied out neatly. In the case of the 100-series it has a discharging speed of 21 m per minute. The chains have a high tensile strength, which allows all types of crops to be unloaded easily and quickly.





*Twistlock fitting*



*Drawbar suspension*



### **Twistlock fastening; solid and flexibel**

Well-known throughout the world of transport, the exceedingly reliable Twistlock fitting connects the body to the undercarriage of all Siwa silage wagons. This connection guarantees that the body is well secured but also provides flexibility. It means that the body can be replaced with other Schuitemaker equipment, such as a slurry tank or a muck spreader.

### **Drawbar suspension: Optimum comfort**

For better road holding ability, especially with a full load, all silage wagons have been fitted with drawbar suspension. When there are speed bumps on the road or the terrain is uneven, the drawbar immediately absorbs many of the jolts for both the tractor and the driver. The drawbar has rubber springs as a standard feature but a hydraulic version is also available as an option. The hydraulic version is standard for the Siwa 780 and 840.





## **Chassis**

Schuitemaker's chassis are noted for being robust, indestructible and always stable. The standard for tandems is the pendulum tandem. The pendulum tandem has a low centre of gravity, is lighter and more stable to tow and is more stable around the silage clamp. As far as tridem is concerned, we use the 40-ton BPW tridem with hydraulic suspension.

## **Distribution beaters**

A standard feature of the Siwa W models is that they are fitted with two silage beaters in the back of the wagon. These open and powerful beaters distribute the product lightly over the silage clamp. The beaters are driven mechanically.





|   | 10-serie  |           | 100-serie  |            |            |            |
|---|-----------|-----------|------------|------------|------------|------------|
|   | 56<br>s/w | 64<br>s/w | 660<br>s/w | 720<br>s/w | 780<br>s/w | 840<br>s/w |
| 18-tons non-steerable pendulum tandem       | S         |           |            |            |            |            |
| 18-tons following steered pendulum tandem   | 0         |           |            |            |            |            |
| 18-tons forced steered pendulum tandem      | 0         |           |            |            |            |            |
| 24-tons non steerable pendulum tandem       |           | S         |            |            |            |            |
| 24-tons following steered pendulum tandem   |           | O         | S          |            |            |            |
| 24-tons forced steered pendulum tandem      |           | O         | O          |            |            |            |
| 30-tons following steered pendulum tandem   |           |           | O          | S          |            |            |
| 30-tons forced steered pendulum tandem      |           |           | O          | O          |            |            |
| 30-tons hydr. suspended, following steered  |           |           | O          | O          |            |            |
| 30-tons hydr.suspended, forced steered      |           |           | O          | O          |            |            |
| 40 tons hydr.suspended , 1st axle lift axle |           |           |            |            | S          | S          |

S= standard O= optional





# SIWA 10-SERIES

## Standard equipment

- Silagewagon without (S model) or with (W model) detachable silage beaters
- Compact drawbar with rubber block suspension at the drawbar and swivelling towing eye
- Hydraulic operated parking support jack by tractor valve
- Single side wide angle PTO-shaft
- Heavy duty one-side driven (Siwa 56); both side driven (Siwa 64) double scraper floor with 4 floor chains
- Box construction with galvanised and powder painted side panels
- Robust chassis from hot-rolled steel
- Slanted fixed front panel
- Backdoor hydraulically operated
- Integrated bumper with LED road-lights
- 18-tons non-steerable pendulum tandem (Siwa 56), hydraulic brakes on 4 wheels
- 24-tons non-steerable pendulum tandem (Siwa 64), hydraulic brakes on 4 wheels
- Tyres MITAS 560/60 R22.5 Agriterra 02 (Siwa 56)
- Tyres MITAS 600/55 R26.5 Agriterra 02 (Siwa 64)

## Options

- 30 cm steel construction on side panels and backdoor
- Higher drawbar
- Hydraulic operated parking shuffle
- Handpump for hydraulic parking shuffle/support jack
- Set of 3 LED working lights
- Set of 5 LED working lights (also on bumper)
- Scharmüller ballcoupling K80
- Air Brakes
- Electric airbrake control
- Various tyres ( sizes / makes)





*Axle*



*Bumper with LED road-lights*



*Slanted fixed front panel*







# SIWA 100-SERIES 660/720 (TANDEM)

## Standard equipment

- Silagewagon without (S Model) or with (W Model) detachable silage beaters
- Compact drawbar with rubber block suspension at the drawbar and swivelling towing eye
- Hydraulic operated parking support jack by tractor valve
- Heavy duty mechanic both side driven double scraperfloor with single-side wide angle PTO shaft
- Mechanical driven silage beaters (W model)
- Reinforced box construction with galvanized and powderpainted side panels, and cage construction
- Slanted front panel
- Total width of body 2.55 m
- Backdoor hydraulically operated
- Following steered 24-ton pendulum tandem (Siwa 660) or 30 ton (Siwa 720), with hydraulic 4 wheel brakes
- Tyres Alliance 650/55 R26,5 I-380
- Integrated bumper with LED roadlights
- LED side lights, reflection striping on the backdoor
- Mudguards

## Options

- 30 cm steel extension side panels and backdoor
- Extended backdoor (+ 3.5 m<sup>3</sup>)
- Hydraulic suspended drawbar
- Airbrakes
- Automatic airbrake control
- Electric airbrake control
- Electric forced steering
- Hydraulic parking shuffle
- Handpump for parking shuffle/support jack
- Set of 3 LED working lights
- Set of 5 LED working lights (also on bumper)
- Scharmüller ball coupling K80
- Scharmüller ball coupling K50
- Various tyres (sizes / makes)





*Bumper with LED roadlights and mudguards*



*LED side lights*



*Hydraulic operated frontpanel*







# SIWA 100-SERIE 780/840 (TRIDEM)

## Standard equipment

- Silage wagon with removable silage beaters (W model) or without (S model)
- Compact drawbar with hydraulic suspension, low-hitch, and swivel towing eye
- Hydraulic operated parking shuffle jack by tractor valve
- Mechanically driven double deck chain (2 sides) with single-sided wide-angle coupling shaft
- Mechanical drive for silage beaters (W model)
- Reinforced body structure with galvanized, powder-coated side panels, placed in a cage structure
- Slanted front panel
- Total width of base structure 2.55 meters
- Tailgate opens hydraulically
- 40-ton hydraulic suspended 3-axle chassis, forced steered on two axles and 6 wheels with hydraulic brakes
- The front axle can be raised (for extra downward pressure)
- Tyres Alliance 650/55 R26.5 I-380
- Integrated bumper with LED lights
- LED side lights, reflective stripes on the tailgate
- Mudguards

## Options

- 30 cm steel extension side panels and backdoor
- Extended backdoor (+ 3.5 m<sup>3</sup>)
- Air Brakes
- Automatic airbrake control
- Electric airbrake control
- Electric forced steering
- Handpump for parking shuffle
- Set of 3 LED working lights
- Set of 5 LED working lights (also on bumper)
- Schürmüller ball coupling K80
- Schürmüller ball coupling K50
- Various tyre sizes / makes





### Siwa silage construction

The Siwa silage construction can be found not only on the Schuitemaker undercarriages, but also on trucks and other undercarriages. It is the simple but sturdy Twistlock connectors that make this possible.





### The mechanically driven Siwa

The 'mechanically driven' four-wheeled Schuitemaker Siwa silage wagon was developed specially for extremely wet and difficult conditions. This type of drive is particularly useful when driving or backing onto the silage clamp.



# SIWA 720 WITH MECHANICAL WHEEL DRIVE

## What makes it work?

The Siwa is powered by a PTO (choice of 540 or 1000 RPM) via a gearbox in the bottom frame. It offers you a choice of two speed options, as well as the ahead or backing options. Depending on what the field conditions require, the speed can be set at different levels. This is done by means of the PTO's number of revolutions and the high or low setting of the reduction gear unit. The range of speeds is between 2 and 11 km/h.

If the speed reached in the field is greater than can be generated through the PTO, the free-wheel facility will inactivate the PTO. Once the wagon has slowed enough to be back within the set speed range, the PTO will begin to drive again. The transmission has a heavy-duty clutch on it which by electro-hydraulic means ensures that there is a good connection between the transmission and the wheel axles. A heavy-duty drive shaft runs from the clutch to the front wheel axle. A second drive shaft runs from the back of the first wheel axle to the second wheel axle. The mechanically driven Siwa wagons are always equipped with a tandem with hydraulic suspension as a standard feature.

## Changing gear via final gear reduction

Schuitemaker has opted for a gear changing system via the wheel hubs as its basic system. The great advantage of this is that when not engaged the drive shafts do not continue to rotate and therefore do not cause unnecessary loss of power.

### There are various options as far as the gears are concerned:

1. The standard drive arrangement is that both wheels on the front axle (fixed axle) are driven. When the wagon goes round a bend, the angle sensor on the steering axle automatically deactivates one of the wheels which then automatically starts again when the wagon has straightened again.
2. As additional help for the steering axle (rear axle) both wheels can be powered. The wheels are linked to each other by means of a differential. When the Siwa is required to give power, it will drive the front wheel axle. In extreme conditions the steering axle will also be activated.





01



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03



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^ 01 Hydraulic coupling

^ 03 Front view with sensors

^ 02 Drive arrangement front axle

^ 04 Drive arrangement rear axle

## Operation

To enable the user to operate all the functions on a mechanically driven Siwa the silage wagon has been fitted out with a (specially designed) electro-hydraulic system. The wagon is operated from the tractor cab with its familiar control box and touchscreen. This is exactly the same as the Rapide 100- and 1000-serie loader wagons. The control box features a number of useful switches allowing the driver to activate the wheel drive of the silage wagon with just a press of the button. It also lets you choose the direction of travel in advance and the activated diff-lock you want to use. The control box is protected against incorrect operations, e.g. changing gear while it is running. In an emergency which necessitates putting on the tractor brake, the silage wagon drive will cut out. Similarly, when the driving speed exceeds 12 km/h, the drive automatically switches off. The deck chain, tailgate, hydraulic slide in the front panel and the skid shoe are all operated from the control box. The hydraulic system works both on the Load Sensing or Open Center system. If the wagon is fitted with beaters, an additional gear will be installed to switch on the beaters.

## Requirements

The power required for a 4-wheeled mechanically driven silage wagon is 150 hp. The best option is a tractor with CVT transmission. The optimal hydraulic specification is 200 Bar/80L.

For the best result in the field we recommend a driven silage wagon with wheels with 30.5" rims and a diameter of up to 150 cm.





# SIWA 720 TIPPING

## Siwa 720 tipping version

Due to the increased demand from the market, the Siwa 720 is available as a 'tipping version'. That goes for both the S model (without beaters) and the W model (with beaters). In wet areas with a lower load-bearing capacity, the fields are often narrower because of the numerous ditches for the purpose of drainage. Operators often find themselves unable or reluctant to make turns on the headland to minimize wheel marks. When getting stuck while reversing, the operator will often be able to get unstuck by driving forwards. The tipping Siwa is the perfect solution under such circumstances.

## Advantages of the tipping Siwa

The tipping Siwa combines the advantages of a tipping trailer with those of a silage wagon:

- When the silage wagon body is tipped, the driver can see the harvester by looking through the space created by the tipped silage body.
- Hardly any silage is spilt since the silage wagon follows close behind the harvester and is positioned under an angle.
- A silage wagon has a large loading capacity, is stable and can unload accurately.
- In situations where the Siwa is backed onto the silage clamp, the tipping model can unload more quickly because the body is in a more level position during the unloading.





### Tipping Siwa option

When selecting the tipping Siwa, the silage wagon is fitted with two tipping cylinders at the front of the wagon. These cylinders are telescopic (to maintain sufficient ground clearance) with a stroke of 110 cm. This option is only available for the Siwa 720 models. The tipping Siwa 720 models can be fitted with a mechanically or hydraulically driven deck chain.





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Schuitemaker Machines B.V. | Morsweg 18 - 7461 AG Rijssen - Holland  
Tel.: +31 (0)548 - 51 41 25 | [sales@sr-schuitemaker.nl](mailto:sales@sr-schuitemaker.nl) | [www.sr-schuitemaker.nl](http://www.sr-schuitemaker.nl)