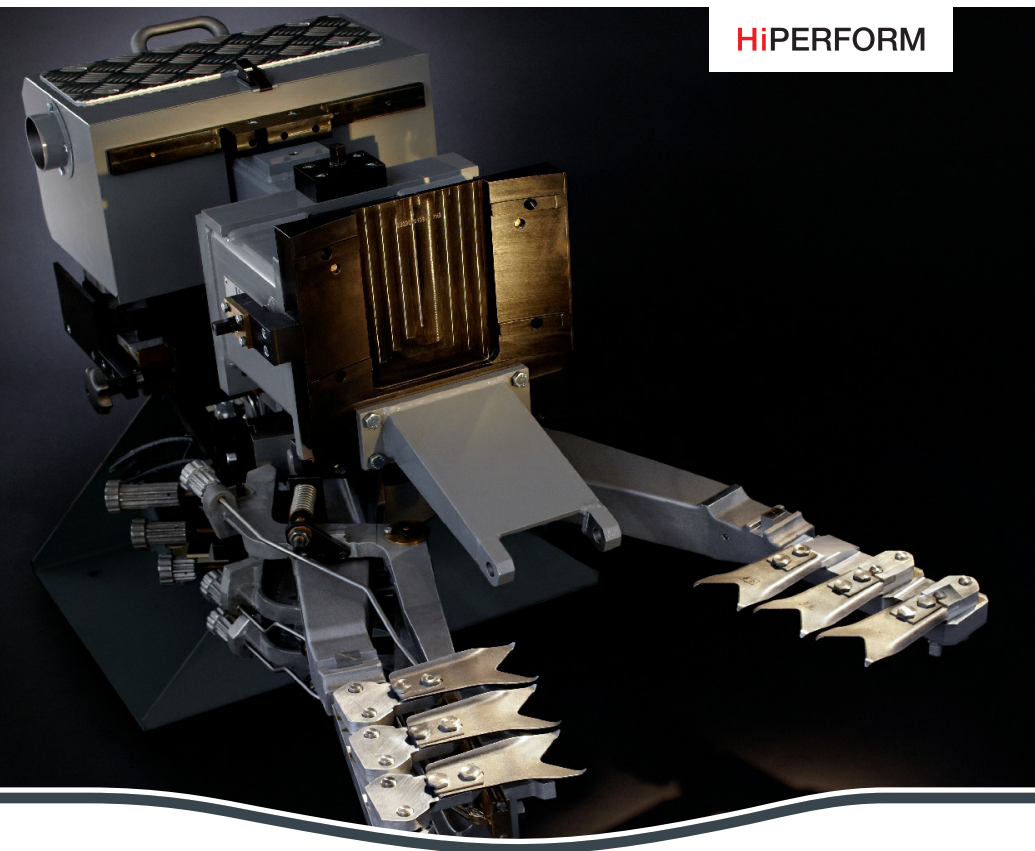


WE ARE GLASS PEOPLE

HEYE

DUAL MOTOR SHEARS

Type 2323



HiPERFORM

h heye
international

THE DUAL MOTOR SHEARS

This shear mechanism for gob feeders is a compact unit which can be adapted to different feeder types and their arrangements. The shear blades move on a circular arc. Thus, a nearly wear- and backlash-free suspension of the shear arms – using tapered roller bearings – is possible.

Nearly parallel cut

As a special feature the centres of rotation of both shear arms are located on a common axis, so that the motion of the shear blades is rectangular to the centre line in the moment of the cut.

Minimum orifice distance

These shears can cut very close (1/2") to the orifice ring.

No reverse rotation

Each of the shear arms is driven by a separate three-phase servo motor. Both motors are performing one complete revolution per cut. Thus it is not necessary to reverse the motor's rotation at the cutting point. A common control provides a phase-locked synchronisation of both shear arm motions.

Low wear

The force transmitting joints of moving parts are equipped with spherical roller bearings. Consequently, they are nearly wear- and backlash-free.

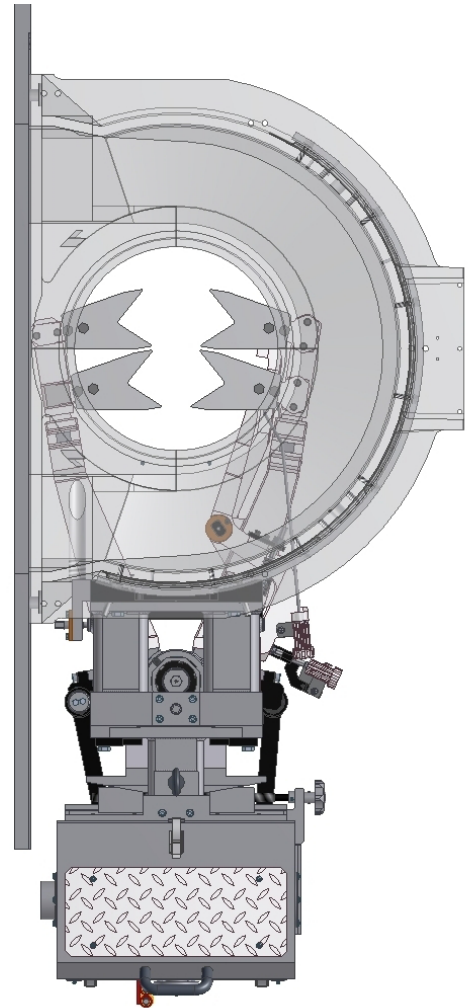
FUNCTION

The shears is mounted at the feeder head by means of 4 T-bolt screws in the usual way.

For driving the shears, two three-phase servo motors with modulated speed are used.

On the basis of a start signal, they perform one revolution per cut in opposite directions. Each motor drives one of the shear arms on opening and closing direction via crank drive. The speed profile and the motion time are selectable. In practice, a minimum motion time of 230 ms has proven advantageous, so that a dwell time of 10 ms is still available in case of 250 cuts per minute.

The movement of the shear arms during operation is 13° (standard) per arm (shear blade). Optionally, 17° or 19° are possible. The motors are mounted on a carriage which can be retracted by means of a pneumatic cylinder during standstill of the shears. By this, a larger opening angle of 2 x 26° - which is required for changing the orifice ring – is achieved. Also the carriage runs automatically into this position in case of a system failure, a voltage drop or after actuation of the EMERGENCY-STOP button.



Mechanical adjustment via spindles:

- Overlap
- Shear blade pre-tensioning
- Height of shears
- Drop guide assembly

The drop guide assembly is mounted on the right shears arm. It moves with the arms. The adjustment of the unit in direction of the centre line is carried out laterally.

CONTROL UNIT

To control the servo motor the Heye Simotion® Servodrive is used. Also please see product description

“Heye Simotion® Servodrive”

Heye Simotion® Servodrive

This highly-flexible control is based on the future-proof multi axis drive System Simotion® of Siemens. Excellent reliability of the electronic components in combination with the application of a compact servo motor with robust resolver guarantee a reliable non-stop operation. Even with respect to servicing this control is perfect as it is easy to handle. If control components should have to be exchanged complicated manual addressing or programming is not necessary because the configuration data are stored on a memory board. When the control is started the data are automatically transferred. Hence, the commissioning times and downtimes in case of servicing are short, the training effort for the service staff is less. Fault and operating messages that appeared are registered by the control unit with date and time and can be read in detail on the touchscreen anytime.

The synchronisation and phase adjustment of the shears to a zero-signal is automatically carried out by the control. By means of a control box located near the shears all operating conditions can be controlled.

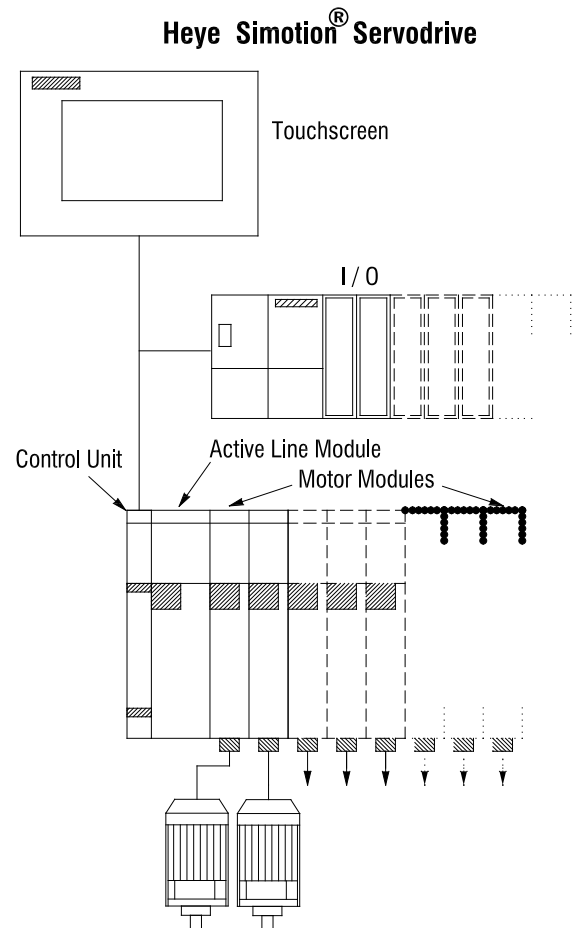
Shear Blade Spraying

The control supplies - based on the system pulse - an intermittent signal to the shear blade spraying. The spray begin and the spray duration can either be set via the touchscreen or by means of the control box.

Lubrication

All bearings of the dual motor shears are supplied with grease via a central lubrication unit. Lubrication is effected periodically by the control unit.

®= Simotion is a registered trademark of Siemens



Installation

The control box has to be arranged in such a way that the shear cut can be observed during adjustment. The control cabinet should be located in an air-conditioned room (see technical data).

OVERVIEW

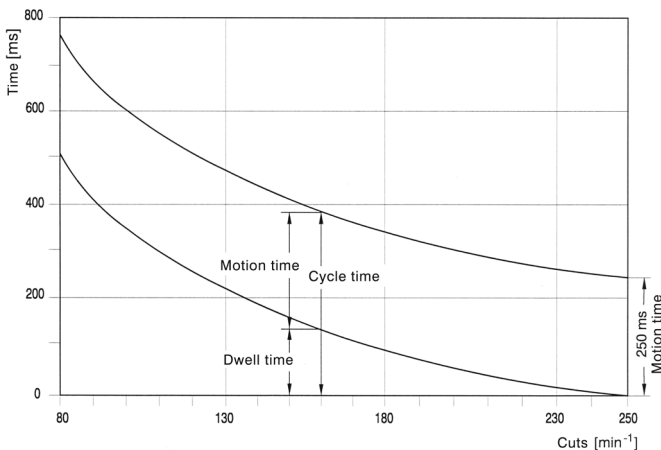
Advantages

- Blade motion rectangular to the centre line (at the time of cut)
- Reproducible motion and thus improved constant weight of gobs (max. possible timing error 0.2 ms)
- Preselectable motion profiles
- Production speeds of up to 250 cuts per minute
- Dwell time of the shears in the opened position and thus improved cooling conditions for the shear blades
- Long lifetime of the shear blades
- Long lifetime of the shears mechanism
- Almost maintenance-free operation

Scope of Delivery

- Shears with feeder connection console
- Control unit in a closed cabinet, completely wired
- Remote control
- Set of cables
- Central lubrication

Performance limits



Technical Data

- Cutting rate max. 250 cuts/min
- Weight of the shears approx. 150 kg
- Dimensions width/height/depth 1300 / 630 / 520 mm
- Power consumption approx. 0.3 kW (at 200 cuts/min)
- Supplies compressed air 6 bar, fan air 500 mm water column 1 m³/h

Emissions

- The A-weighted permanent sound pressure level of this system is below 70 dB(A)

Compatible control units*

Heye Simotion® Servodrive

Up to 10 servo axes can be operated (depending on combination of drives and cabinet width)

- Dimensions width/height/depth 800 / 2200 / 600 mm
1000 / 2200 / 600 mm
1200 / 2200 / 600 mm
- Weight 320 - 400 kg
- Power input with two active ventilators depending on the number of axes
- Mains supply three-phase 400 - 480 V ± 10% PE, no neutral wire
- Mains frequency 50/60 Hz ± 6%
- Mains fuse 35 A slow-blow (to be made available by the customer)
- Ambient temperature for the control unit max. 35°C

Heye Simotion® Servodrive Compact

Up to 4 servo axes can be operated (depending on combination of drives)

- Dimensions width/height/depth 400 / 2200 / 600 mm
- Weight 170 kg
- Power input depending on the number of axes
- Mains supply three-phase 400 - 480 V ± 10% PE, no neutral wire
- Mains frequency 50/60 Hz ± 6%
- Mains fuse 35 A slow-blow (to be made available by the user)
- Ambient temperature for the control unit max. 35°C

* For further information on the control unit and respective combination of drives please have a look at our separate brochure.

Heye International GmbH
Lohplatz 1, 31683 Obernkirchen
Germany

T +49 5724 26 452
F +49 5724 26 229

www.heye-international.com

